

# Lanner

## *Innovating for the Future*



Self-driving vehicles



Remote healthcare



Telecom Applications



Network security



Smart Grid



Smart Factory



Smart Security



Smart farming



**CSR** 2020  
Report  
企業社會責任報告書

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# Message from the Chairman

A large, stylized logo for 5G. It features the letters '5G' in a bold, white, sans-serif font, centered within a circular graphic. The circle is composed of several concentric rings of varying shades of green, creating a sense of depth and motion. The background of the entire page is a vibrant green with a hexagonal grid pattern and various icons representing technology and communication, such as a hand with signal waves, a cloud with a downward arrow, a location pin, a star, a Wi-Fi symbol, a speech bubble, and a refresh symbol.

5G



## Message from the Chairman

Lanner Electronics has adopted a sustainable business philosophy since it was founded in 1986. The Company observes the 17 sustainable development goals (SDGs) introduced by the United Nations as a guideline for its corporate governance practices, and strives to create value for customers and other stakeholders by offering professional products, quality services, and creative energy, while taking actions to address environmental, social, and business issues and risks. Despite the spread of Covid-19 and ongoing political and economic conflicts around the world, Lanner Electronics still achieved solid growth in 2020 owing to its robust business structure and sustainable global partnership built upon decades of dedication to ESG values.

### Economic

#### Leading technology 14% CAGR over 10 years

Lanner advocates SDG 8: Decent Work and Economic Growth. We actively promote inclusive and sustainable economic growth, while assuring our employees plenty opportunities to work in a productive and dignified manner.

With respect to contributions to economic growth, the Company generated NT\$7,502,682,000 in operating revenues in 2020, down 3% from the NT\$7,724,798,000 last year due to the COVID-19 pandemic, whereas net income was reported at NT\$595,898,000, up 21% from the NT\$492,428,000 reported in 2019. Lanner Electronics is especially grateful to the employees for their contribution, which enabled the Company to achieve compound annual growth rate (CAGR) of 14% in the last 10 years, while maintaining EPS above NT\$3 for 9 consecutive years, including record-high EPS in 2020. In terms of network security, Lanner has established its reputation as a leading manufacturer in Taiwan by supplying quality products and advanced technologies to customers and industry peers.

As a response to trends such as network virtualization, software-defined network and 5G, the Company ventured into the telecommunication market offering new solutions such as AI, edge computing, MEC, 5G Cloud RAN, ORAN, vCPE, SD-WAN, and network security virtualization (SASE) service platform at a relatively early stage, which enables it to react to future changes. The Company continued to secure its leading position in network security applications, and managed to market solutions to several sizable carriers including Verizon, thereby sustain high growth in new telecommunication applications. Not only was Lanner the first Taiwanese company to receive multiple recognitions for Intel Select Solution, it has also established collaborative relationship with NVIDIA on AI and edge computing, and continues to expand cooperation with strategic partners.

### Environmental

#### Energy efficiency upgrades and green product

Lanner advocates SDG 13: Climate Action. We adopt emergency actions in response to climate change and its impacts, and have long-term environmentally friendly policies as well as stringent requirements in place to ensure compliance within Lanner and from suppliers toward our goal of combating climate change. We also adhere to SDG 12: Responsible Consumption and Production and take steps to ensure sustainability in the consumption and production of our products.

Furthermore, we conducted a greenhouse gas survey in 2019 and followed up with a number of improvements, including replacement of outdated chillers among other GHG reduction and environmental protection measures that were aimed to increase power efficiency. In an attempt to mitigate the impacts of climate change and help businesses adjust and adapt to the new norm, Lanner has been actively developing green products that conform with RoHS, REACH, and WEEE directives as well as the 3R principles (Reuse, Recycling, Recovery). Products featuring industrial wide temperature range standards such as R6S, IEC-6032C, and NCR-1567 have been introduced to address customers' needs for energy efficiency, wide temperature tolerance, and portability.

Lanner also requires all raw material suppliers to sign the "Supplier Commitment to Refrain Use of Prohibited and Restricted Substances," and has recovered signed documents from 100% of suppliers. In addition, we conduct random inspections on our raw materials using XRF by following our "Input Material Inspection Procedures." By imposing strict requirements on itself and suppliers, Lanner hopes to rally business partners and stakeholders toward combating climate change, and in doing so create a sustainable, healthy, and environmentally friendly global partnership.

## Social

### Talent development, industry-academia collaboration, and creation of a learning organization

Lanner cares for internal stakeholders (employees) as well as external stakeholders (non-profit organizations), and advocates SDG 1: No Poverty of any form anywhere in the world, SDG 4: Quality Education and inclusive/fair life-long learning opportunities for all, SDG 5: Gender Equality, and SDG 17: Partnerships For The Goals in this regard.

We have implemented a robust training system along with a management training roadmap and a wide range of skill development courses to support our talent development plans, which are devised systematically based on the Company's business strategies, the core skills required for each role, and characteristics of the talent development system. The Company uses a number of training methods including internal/external courses, online learning, and department self-learning/sharing. To further improve learning outcome, trainees are guided toward applying the knowledge they learned at work, and a post-learning assessment system has been implemented to improve employees' competency. Meanwhile, Lanner continues to engage National Yang Ming Chiao Tung University in an industry-academia collaboration, and plans to work with National Taiwan University in 2021 on the development of high-speed signals and issues concerning wireless network security. Through industry-academia collaborations, we hope to spark new ideas with the greatest minds in ways that improve corporate competitiveness.

## Governance

### Emphasis on corporate governance and business integrity

Lanner respects its customers, values customers' needs, and promotes sustainable growth by supporting UN SDG 8: Promote inclusive and sustainable economic growth, employment and decent work for all; SDG 12: Ensure sustainable consumption and production patterns; and SDGs 17: Revitalize the global partnership for sustainable development.

Through compliance with laws and adherence to integrity, non-corruption, and moral values, Lanner has created a strong and sustainable value chain with suppliers and customers. To further expand scope of operations, Lanner sourced another potential partner for the vertical market in 2020, issuing NT\$900 million of unsecured convertible bonds to Delta Electronics through private placement. This transaction was intended to create synergies from the strengths of the two organizations, thereby achieve higher level of production automation while exploring more diverse and more sophisticated customers and products. It enables the Company to provide customers with integrated solutions from edge to core and from cloud to terminal, which will speed up the development of industrial IoT and 5G edge computing applications.

Lanner will continue exploring applications of 5G edge computing in the future, including computers for self-driving vehicles, industrial automation, and IoT for the benefit of all stakeholders, while at the same time commit to sound governance for the sustainable growth of the organization. Through sustainable practices, we hope to contribute to economic growth, social inclusion, and environmental sustainability.

Chairman Chou I Wen

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# Sustainability performance



## ESG performance summary

Sustainability commitment	SDGs	Company events 2020
<p>Value corporate governance and business integrity, and refrain from illegal dealings</p>	<p>SDG 16 Peace, justice and strong institutions</p> 	<ol style="list-style-type: none"> <li>Ethical behavior guidelines and protection of business secrets. <ul style="list-style-type: none"> <li>Lanner Ethical Behavior Guidelines Course: New recruits are required to complete a 15-minute classroom course upon commencing duty, whereas existing employees are required to complete refresher courses online each year. A total of 768 people had completed the course in 2020, covering 100% of employees.</li> <li>Business secrecy course: All employees, especially those involved in key roles, are required to complete a 30-minute online course each year.</li> </ul> </li> <li>Integrity behavior guidelines and anti-corruption. <ul style="list-style-type: none"> <li>Anti-corruption commitment: New recruits are required to sign commitments to integrity behavior and anti-corruption when reporting to duty, whereas existing employees are subjected to annual training on ethical behaviors and the integrity commitment for enhanced ethical awareness.</li> <li>Conflict of interest self-assessment: Employees are required to report to the Company any conflict of interest involving them or 2nd-degree relatives or closer.</li> </ul> </li> <li>Lanner observes RBA guidelines and adheres strictly to the following recruitment principles: <ul style="list-style-type: none"> <li>Reasonable wages and benefits, and ongoing improvements.</li> <li>Enforce humane treatment and arrange reasonable workload and rest hours.</li> <li>Respect freedom of association and rights to collective bargaining.</li> <li>Respect religious freedom, provide place of worship, and adjust work hours for special requirements.</li> <li>For foreign workers, the Company enforces a "zero commission" policy and returns any agency commission they paid.</li> <li>Prohibit use of child labor and forced labor, and refrain from slavery and human trafficking.</li> </ul> </li> <li>The Company ranked in the 4th tier (36% - 50%) of TWSE's 7th Corporate Governance Evaluation.</li> </ol>
<p>Enhance personal data management; protect customers' information and transaction data</p>	<p>SDG 9 Industry, innovation and infrastructure</p> 	<ol style="list-style-type: none"> <li>Access to USB drives, memory cards, and optical disc write-in has been restricted, whereas anti-virus software is installed on all computers; percentage of unlocked USB ports was reduced to 13% in 2020.</li> <li>Firewalls have been established to protect external network connection and critical internal systems; the types of web pages that employees may visit are also being controlled.</li> <li>Data encryption and e-mail management have been implemented; data transmission is controlled by file size and security access to prevent negligent leakage of secret information and inappropriate use of data.</li> <li>A WSUS host has been created, and regular upgrades/updates are being made to PCs and servers. Critical systems and production/operating activities are subject to third-party cybersecurity certification and regular review.</li> <li>Cybersecurity awareness is being promoted organization-wide through e-learning.</li> </ol>
<p>Lanner strives to deliver mutual benefit with suppliers and customers, and create a sustainable value chain</p>	<p>SDG 17 Partnerships for the Goals</p> 	<ol style="list-style-type: none"> <li>Suppliers: Supplier audits are conducted to ensure that no conflict minerals are used, and in doing so create a green supply chain.</li> <li>Customer satisfaction: Lanner averaged a score of 91.4 in 2020, representing an improvement over the 86.8 in 2019.</li> <li>Performance highlights: <ul style="list-style-type: none"> <li>Lanner was the first industry-grade networking and communication company in Taiwan to be certified for Intel Select Solution for uCPE.</li> <li>Creation of next-generation 5G mobile computing platform.</li> <li>Partner of uCPE 2.0 project for Verizon, the second largest carrier in North America.</li> <li>Lanner Electronics ranked 367th in CommonWealth Magazine's "Top-2000 Manufacturers" survey 2020</li> <li>Leading manufacturer of whitebox solutions for SD-WAN.</li> <li>Participated in the U.S. Smart farming project.</li> <li>Participated in ITRI's national 5G development.</li> <li>Crated the SDN/NFV/IIoT ecosystem.</li> <li>Assembled a R&amp;D team in Hsinchu to enhance wireless communication capacity of products offered.</li> </ul> </li> </ol>

Sustainability commitment	SDGs	Company events 2020
Pro-active protection of intellectual property rights	SDG 9 Industry, innovation and infrastructure 	Lanner gained 14 patents (7 utility model patents and 7 invention patents) in the Republic of China in 2020 alone.
Protection of employees' rights and gathering of employees' opinions	SDG 8 Decent work and economic growth 	<ol style="list-style-type: none"> <li>1. Regular labor-management meetings: held once every three months, or on an ad-hoc basis if deemed necessary.</li> <li>2. Lanner Electronics convened 4 labor-management meetings in 2020, which were the 2nd, 3rd, 4th, and 5th meetings of the 4th board. Issues concerning religion, work hours, attendance rules etc. were discussed in the meetings.</li> <li>3. Employee grievance channels and resolution: grievance hotline and email have been made available.</li> <li>4. Employee satisfaction surveys have been conducted on a yearly basis since 2020.</li> </ol>
Comply with government policies, laws, and rules, and fulfill duties as a citizen of the nation.	SDG 16 Peace, justice and strong institutions 	<ol style="list-style-type: none"> <li>1. The Company has a Management Review Committee in place to ensure that management systems are free of unauthorized alterations and critical defects. The committee may call urgent meetings and conduct ad-hoc reviews whenever deemed necessary.</li> <li>2. An Occupational Safety and Health Committee has been assembled to supervise functionality of the environmental safety and health management system.</li> <li>3. An RBA management system has been established to oversee compliance with RBA Code of Conduct.</li> <li>4. Compliance policies have been implemented, and legitimacy of the Company's operations is being examined on a yearly basis.</li> </ol>
Providing healthy and safe work environment, and raising employees' knowledge and skills	SDG 4 Quality education  SDG 12 Responsible consumption and production 	<ol style="list-style-type: none"> <li>1. A flexible work hour policy has been implemented to provide employees with better and more flexible work condition and environment.</li> <li>2. Comprehensive employee training and development:             <ul style="list-style-type: none"> <li>▶ A manager training roadmap supported by systematic training and compulsory/optional courses has been implemented, giving managers the ability to develop management skills and common language for the duties involved.</li> <li>▶ In 2020, the IDL program delivered 7,076.8 hours of training to 516 people in total, averaging 14.59 hours per person.</li> <li>▶ e-Learning newsletters are distributed from time to time to keep employees updated on and help them learn from current affairs. A total of 29 e-newsletters were issued in 2020.</li> </ul> </li> <li>3. Health checkups are arranged on a yearly basis to gain insight into employees' health conditions and needs.</li> <li>4. Reasonable means of promotion have been provided.             <ul style="list-style-type: none"> <li>▶ Regular performance evaluation: with the exception of direct labor, employees are subjected to "annual performance evaluation" once in the first half and once in the second half of each year.</li> <li>▶ Promotion and training: employees who excel in performance are rewarded with additional promotion opportunities, and those who receive grade A in the latest performance evaluation are identified as key talents, from which Lanner will select the top 3% to undergo advanced training.</li> </ul> </li> <li>5. No employee was tested positive for COVID-19 in 2020 under the Company's disease control measures.</li> <li>6. Since May 2020, the Company has been maintaining backups of its premise access system on a daily basis to keep track of personnel access, and thereby ensure security of the work environment.</li> <li>7. Fire safety training and emergency response drill were completed in November 2020).</li> </ol>

Sustainability commitment	SDGs	Company events 2020
<p>Encouragement for club activities and CSR/charity efforts</p>	<p>SDG 1 No Poverty</p> 	<ol style="list-style-type: none"> <li>Subsidies for club activities: Lanner promotes healthy recreational and entertainment activities as means to improve interaction and health among employees, and subsidizes "fitness," "charity," and "education" clubs above a certain participant size.</li> <li>Activities of Lanner Culture and Education Foundation.                     <ul style="list-style-type: none"> <li>▶ Elementary school basketball promotion program in New Taipei City: Cooperated with Mustang Junior Basketball Association to the benefit of nearly one thousand Grade 3 to Grade 5 elementary students.</li> <li>Infinite Love - Art Education Program:                             <ul style="list-style-type: none"> <li>▶ Cooperated with Light Children Association for the benefit of 35 children in the Pediatric Ward of Linkou Chang Gung Memorial Hospital.</li> <li>Promotion program for international education and UN SDGs in New Taipei City: With the assistance of Taipei City Education Department, junior and senior high schools in New Taipei City were informed of this program, and nearly 400 teachers and students had signed up for a series of experience-based courses.</li> </ul> </li> <li>Supporting equal employment of the ex-mentally ill: "Easy Coffee" by Taipei Mental Rehabilitation Association was invited to the Company's office at New Taipei City Science Park (Section 2, Datong Road, Xizhi District).</li> <li>Job opportunities for persons with disability: Chia-Chen Li, Taiwan's first visually impaired barista to receive City &amp; Guilds International Award in Barista Skills, has been invited to brew coffee on Lanner's office premise.</li> <li>Safe Farming Education Program: The program involves contracted purchase of safely farmed rice, volunteer activities, farming experience, and sustainability education (with junior high school and elementary school teachers). 3,000 catty of safely farmed rice was purchased and distributed as gift through the Employee Welfare Committee, so that every employee may have a taste of eco-friendly rice that is free of toxin.</li> <li>Vanilla Farm Sponsorship Program: Support is given to Changbin Township, Taitung County for eco-friendly farming of vanilla.</li> <li>Environmental sustainability action - coastal cleanup: Chen-Wei Yang, Chairman of Lanner Culture and Education Foundation, led employees and family members to clean up Wang Kung Fishing Port.</li> <li>Arts for Charity: Arts and cultural activities including performance, flower arrangement, and theme exhibitions are organized from time to time (at various venues such as: National Theater, National Dr. Sun Yat-sen Memorial Hall, Lanner Gallery etc.). A cumulative number of more than one hundred employees had participated in 2020.</li> <li>Certification of appreciation from Keelung Employment Service Station for supporting local employment</li> </ul> </li> </ol>
	<p>SDG 2 Zero hunger</p> 	<p>Lanner continued cooperating with Keelung Employment Service Station in 2020 and released many highly sought-after positions such as: assembly/packaging technician, SMT engineer, AOI engineer etc. that pay NT\$26K-NT\$35K per month. This collaboration not only allows the Company to source the right talents, but also brings favorable job opportunities to local residents. For this reason, the Company was awarded certificate by Keelung Employment Service Station, a subordinate of Workforce Development Agency.</p>
	<p>SDG 10 Reduced inequalities</p> 	<p>Lanner continued cooperating with Keelung Employment Service Station in 2020 and released many highly sought-after positions such as: assembly/packaging technician, SMT engineer, AOI engineer etc. that pay NT\$26K-NT\$35K per month. This collaboration not only allows the Company to source the right talents, but also brings favorable job opportunities to local residents. For this reason, the Company was awarded certificate by Keelung Employment Service Station, a subordinate of Workforce Development Agency.</p>



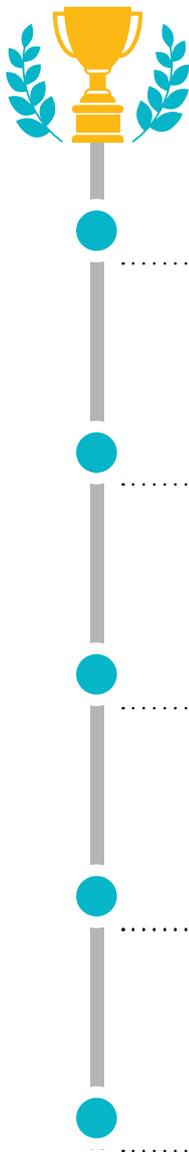
Sustainability commitment	SDGs	Company events 2020
<p>Emphasis has been shifted towards energy efficiency upgrades and green product development as a response to climate change</p>	<p>SDG 13 Climate action</p> 	<p>1. Promote green products and create an environmental safety and health management system in accordance with ISO14001 and OHSAS18001 standards.</p> <ul style="list-style-type: none"> <li>▶ Governance: A dedicated legal affairs department has been established to ensure that all products conform with standards.</li> <li>▶ Product: Energy efficiency and environment friendliness are taken into consideration and strictly enforced during product design and manufacturing. The Company adopts environment-certified production procedures and strives to reduce use of hazardous substances.</li> <li>▶ Management: The Company has passed certification for ISO 14001 - Environmental Management System and IECQ QC080000 - Hazardous Substance Process Management, complies with RoHS, REACH, and WEEE directives and the 3R principles, and plans to introduce ISO45001 to replace OHSAS 18001 - Occupational Health and Safety Management System</li> </ul> <p>2. AI-managed factory: The Company has already introduced equipment such as DIP, smart warehouse, X-ray component counter, automated IC writer etc., and expects to replace air compressor in 2021 to improve energy use. Furthermore, smart monitoring systems are being implemented to keep track of energy usage for sustainability.</p> <p>3. GHG reduction performance.</p> <ul style="list-style-type: none"> <li>▶ Centralized pipe control for chillers: Efficiency of chiller pipelines is highly relevant to temperature control; through centralized pipe control and alternating activation of chillers, the Company has been able to improve air conditioning performance and energy efficiency to lessen greenhouse gas emission.</li> <li>▶ Printing management system: Lanner remains persistent in the digitalization of internal documents, forms, and processes; training is being delivered via e-Learning, whereas digital slides are used in meetings and seminars to minimize paper. The Company also introduced a printing management system in 2017 with optimized processes to prevent wasteful prints and to develop more comprehensive control over the use of printing equipment.</li> </ul>
<p>Enhanced supply chain management and prohibition against hazardous substances and conflict minerals</p>	<p>SDG 10 Reduced inequalities</p>  <p>SDG 12 Responsible consumption and production</p> 	<p>Lanner prohibits conflict minerals for the creation of green supply chain.</p> <ul style="list-style-type: none"> <li>▶ Lanner strictly demands all suppliers to refrain from purchase and use of conflict minerals, and has implemented "Conflict Minerals Management Procedures" in compliance with RBA requirements. All new suppliers are required to complete "Supplier Declaration of Conflict Mineral Policy" according to law - "Restricted Substance Content Limits and Testing SOP" and the Company's supplier management policy. Disclosure of smelter's information is mandatory for suppliers that make use of conflict metals.</li> <li>▶ In 2020, Lanner adopted CMRT survey version 5.12 and investigated a total of 211 suppliers, from which it received 211 (100%) responses and 0 non-responses. Outcome of the survey was satisfactory, and the Company will continue surveying and auditing suppliers' performance as part of its corporate social responsibilities.</li> </ul>



# Recognitions and honors

# Recognitions and honors

Lanner's products won favor of the jury for having exhibited innovation and excellence in several areas from R&D, design, quality, marketing, and production. The award further affirms Lanner's accomplishment in telecommunication, information security, and smart transportation.



**Award-winning products**

Award Year	Award Name	Product Details
The 23rd	Taiwan Excellence Award	<ul style="list-style-type: none"> <li>FX-7220 - cloud-based modular firewall</li> <li>FW-8877 - wireless IoT security gateway</li> </ul>
The 24th	Taiwan Excellence Award	<ul style="list-style-type: none"> <li>NCA-1010 - wireless IoT security gateway</li> <li>UP-2010 - Poe network security platform</li> </ul>
The 25th	Taiwan Excellence Award	<ul style="list-style-type: none"> <li>FW-8896 - high-performance modular SDN/NFV platform</li> </ul>
The 26th	Taiwan Excellence Award	<ul style="list-style-type: none"> <li>NCA-1611 - high-performance virtual network platform</li> <li>HTCA-6200 - hybrid telecommunication platform</li> <li>R6S - shock and water-resistant fanless embedded platform for rail systems</li> </ul>
The 29th	Taiwan Excellence Award	<ul style="list-style-type: none"> <li>NCA-1020 series - uCPE for mobile medical kit</li> </ul> <p>To satisfy the needs for responsive, consistent, and secured remote healthcare in remote areas, Lanner has incorporated its NCA-1020 series solutions into an uCPE for mobile medical kit, which provides several advantages including low power consumption, multi-core computing, and portability.</p> <p>NCA-1020 has 3 wired and LTE wireless connection modules built into an ultra-thin fanless chassis. The miniaturized structural design allows it to be placed inside a mobile medical kit, so that paramedics may connect with a physician remotely via LTE for consultation, and bring high quality video, audio, communication as well as healthcare service to people in remote locations. The NCA-1020 series was awarded The 29th Taiwan Excellence Award as a result.</p>

NCA-1020 series



### Patent investments

As a "platform supplier for vertical application," Lanner invests substantial budget into development of innovative technologies and products each year, and has assembled R&D teams in Taipei, Hsinchu, and Beijing to house a strong team of high-tech talents from around the world and coordinate them towards developing competitive advantage. Lanner gained a total of 14 patents in the R.O.C. in 2020.

List of patents awarded to Lanner Electronics in the R.O.C. in 2020

- |  |  |
|--|--|
| <p><b>01</b><br/>Patent type - Invention<br/>Server chassis with security mechanism</p> <p><b>02</b><br/>Patent type - Invention<br/>Anti-shock structure for server</p> <p><b>03</b><br/>Patent type - Invention<br/>Anti-theft structure</p> <p><b>04</b><br/>Patent type - Invention<br/>Tool-less disassembly device</p> <p><b>05</b><br/>Patent type - Invention<br/>Method and system for testing the operations of automatic testing systems</p> <p><b>06</b><br/>Patent type - Utility model<br/>Anti-peep device</p> <p><b>07</b><br/>Patent type - Utility model<br/>Locking and fixation device</p> | <p><b>08</b><br/>Patent type - Utility model<br/>Quick-disassembly adapter</p> <p><b>09</b><br/>Patent type - Utility model<br/>Power supply with reverse voltage protection</p> <p><b>10</b><br/>Patent type - Utility model<br/>Cooling device with layered structure</p> <p><b>11</b><br/>Patent type - Utility model<br/>Heatsink structure</p> <p><b>12</b><br/>Patent type - Invention<br/>Cooling fan module with backflow prevention, and systems incorporating such module</p> <p><b>13</b><br/>Patent type - Utility model<br/>Accommodating device with heatsink structure</p> <p><b>14</b><br/>Patent type - Utility model<br/>PCB fixation device</p> |
|--|--|

### Technology leadership

NCA-4020 was certified for Intel Select Solution for uCPE in May 2018, which made Lanner Electronics the first industry-grade networking and communication company in Taiwan to pass the certification. Through reference design and performance validation, this solution provides carriers the foundation needed to develop uCPE products and services, and realize agile development.



**Building next-generation 5G mobile computing platform**

Lanner Electronics has committed significant resources into the research of MEC for 5G small cells in recent years. By increasing computing capacity at network edge, the Company may help relieve network equipment of increasing stress, and allow service operators to deliver unique 5G service experience. Lanner Electronics has been cooperating with National Chiao Tung University (NCTU) since 2018 to co-found a 5G MEC joint laboratory that combines expertise from NCTU Department of Computer Science and Department of Mechanical Engineering on 5G studies and Lanner's know-how on telecommunication network computing platform to explore low-latency, high bandwidth 5G edge computing applications. Lanner Electronics also began collaboration with Bell Canada to develop a telecommunication-grade MEC platform capable of high-speed computing, connection, and storage in 2020.

**uCPE 2.0 project partnership with Verizon, the second largest carrier in North America**

During the SDN NFV World Congress held in October 2019, Lanner Electronics announced its official partnership in the uCPE 2.0 project for Verizon, a U.S. carrier, in which it supplies the latest uCPE MEC platform. Based on a network disaggregation design, the project will have multiple virtual network functions (VNF) running on Lanner's edge computing platform, which not only reduces hardware maintenance costs but also allows flexibility and agility in service deployment.

**Best partner to Intel Network Builders Winners' Circle**

Lanner Electronics was named best partner among Intel Network Builders Winners' Circle in November 2020, which recognizes Lanner's contribution to network transformation and development of communication technologies.



**Lanner Electronics ranked 367th in CommonWealth Magazine's "Top-2000 Manufacturers" survey 2020**

366	323	302	鍊德科技	77.79	-16.88	1132	-22.55	1209	-28.99	1209	-20.19	209.55	46.70	128.42	電腦週邊與零組件	*C
367	392	422	立端科技	77.25	3.54	456	4.92	330	6.37	502	14.17	60.88	42.95	11.80	通訊與網路	*C
368	395	394	偉訓科技	76.90	3.46	459	2.81	472	3.65	717	7.82	82.37	56.36	11.33	電腦週邊與零組件	*C

**Leading manufacturer of whitebox solutions for SD-WAN.**

According to Gartner's 2020 Magic Quadrant Report on WAN Edge Infrastructure, more than 10 out of the world's 16 leading SD-WAN service providers use Lanner's uCPE networking equipment. Through coordination with leading technology partners in the vertical market, Lanner Electronics is capable of providing whitebox solutions for network virtualization (SD-WAN and NFV), and has been certified by world's top-20 telecommunication operations including Verizon. More than 200,000 enterprise SD-WAN points have been deployed to date.

**Participated in the U.S. smart farming project**

Lanner joined the U.S. Rural Cloud Initiative in June 2020 and participated in the "Farm of the Future" project that uses 5G edge computing technology to analyze crop, weather, and environmental data in real time, which helps raise production efficiency and increase profit margin by more than 10%. Farm of the Future project incorporates a number of solutions including private 5G/LTE network, edge storage, multi-access edge computing (MEC), image analysis, industry automation, and drones; the project won Network Transformation Awards and the 2020 Innovative Network Application Award from Layer123 SDN. This project adopts the use of Edge as a Service (EaaS) architecture, in which Lanner provides an open hardware platform that integrates with the service provider for fast deployment without farm users having to commit substantial investment into equipment.

**Participation in national 5G development**

Lanner received invitation from ITRT (Industrial Technology Research Institute) in August 2020 to participate in national 5G development. Lanner's role was to help develop systems for network virtualization, SDWAN, and edge computing as the nation progresses into the 5G era.

**Creation of the SDN/NFV/IIoT ecosystem**

Lanner founded a telecommunication ecosystem 5 years ago and worked closely with more than 30 German carriers and software partners to create a 5G edge computing platform. Technical conferences are being held regularly to share the latest proof of concept (PoC) and exchange opinions with customers. Meanwhile, Lanner Electronics also works with software partners from various fields of expertise to create software+hardware solutions for applications such as intelligent transportation solution, edge AI, industrial IoT, AI-assisted surveillance etc. that help reduce development timeline for system integrators.

**Assembly of a R&D team in Hsinchu and enhancement of wireless communication capacity for the products offered**

Lanner Electronics has been committed to the development of wireless communication capacity in recent years to take advantage of the 5G's high bandwidth and low latency. In 2020, Lanner's RF engineering team developed a new LTE antenna design that was highly optimized for MIMO wireless data transmission. Additionally, Lanner assembled a wireless communication R&D team in Hsinchu in 2020, whose responsibilities are to develop integrated wireless communication equipment that support 5G mmWave/Sub-6 and WiFi 6.



CHAPTER

# About Lanner

Company profile

Financial performance

Critical technical service



# Company profile

## Global leader in networking and communication hardware

Lanner Electronics Inc. was incorporated in 1986 and has since grown into a leading brand of networking and communication hardware in the world. Headquartered in New Taipei City, the Company currently has more than 1,000 employees worldwide. Lanner shares were listed on the Taipei Exchange on May 19, 2003 with the stock code 6245. Lanner first started with a focus on industrial computers and later expanded product line to network security. It currently has close working relationship with world's major network security companies.

Lanner envisions itself as the pioneer of the new Internet age. We embrace our mission to lead the development of networking, security, communication, and Internet technologies in the world. We possess the technological capacity and competitiveness to accomplish these goals, including the ability to respond quickly and flexibly to customers' needs with customized solutions.

The Company's main product lines include Network & Communication (NC), Embedded Computing (EC), Industrial Cyber Security (ICS), Smart Grid (SG), Intelligent Transportation Solution (ITS), and Telecom Applications (TA).

With regards to TA, Lanner actively invests into multi-purpose 5G mobile solutions, and more than 60% of SD-WAN service providers in the world's top-20 WAN Edge Infrastructure suppliers now choose our vCPE/uCPE, which makes us the preferred platform for software-defined wide area network (SD-WAN) service and places us ahead of competitors in the network security segment.

## 22% revenue contribution from TA

As 5G technology emerges on a global scale, Lanner began expanding its involvement into the telecommunication field, working with carriers and software partners for the creation of a 5G edge computing platform 5 years ago to support the telecommunication ecosystem. After 5 years of devotion, Lanner's vCPE/uCPE have been widely adopted by major carriers as a solution for SD-WAN; as a result, the telecom segment currently accounts for approximately 22% of the Company's total revenues. The Company expects significant growth in the demand for MEC equipment and applications, given that 5G offers a number of advantages including low latency and high bandwidth.

MEC reduces the time taken for data to be transmitted back and forth the cloud, which reduces cost of bandwidth. This makes MEC suitable for smart city applications including high-definition video streaming, cloud computing, e-sports, game streaming, and AR/VR. Consistency of edge computing applications depends largely on the stability and performance of a hyper-converged networking and computing platform. Lanner supplies optimized hardware and participates in the development of 5G standards at an early stage, and in doing so increases the level of involvement in edge computing.

## Partnering with Delta Electronics for improved competitiveness in IIoT

Driven by a focus towards edge computing technology, Lanner Electronics continues to develop networking and communication equipment that integrate multiple features including high-speed computing, cybersecurity, and AI. However, given the uncertainties of the 5G technology, Lanner is also actively expanding exposure to broader diversity of technologies, services, and strategic alliances. In November 2020, the Company issued NT\$900 million of securities to Delta Electronics through private placement in an attempt to seek complement for Lanner's technologies and products, and thereby speed up development of IIoT and 5G edge computing applications.

Delta Electronics is a leader in IIoT with respect to building automation, energy management, surveillance, and smart manufacturing. By cooperating with Delta Electronics, Lanner Electronics hopes to leverage Delta's automated manufacturing resources so that it may increase production to a scale capable of satisfying the needs of large carriers, and introduce more complete data and edge computing solutions to increase global market share of SD-WAN and uCPE even further.

## First choice for SD-WAN service, trusted by more than 60% of prominent businesses

The 5G era calls for tighter collaboration between software and hardware partners of an ecosystem. Lanner's investments in 5G edge computing have been fruitful, as the Company joined Intel to become a supply chain partner for the new-generation uCPE edge computing platform of Verizon, the leading carrier in the U.S. The uCPE network computing equipment supplied by Lanner Electronics delivers 2.5 times the performance of the previous generation, and this persistent drive for improvement provides a strong foundation for long-term collaboration between two parties.

Lanner Electronics was accepted by Verizon, the second largest carrier in the U.S., in 2019 as an official partner for the uCPE 2.0 project, in which it supplies the latest uCPE MEC platform. In 2020, more than 50% of SD-WAN service providers and carriers in world's top-20 WAN Edge Infrastructure suppliers selected by Gartner adopted Lanner's vCPE/uCPE solutions, which makes Lanner the preferred platform for enterprise SD-WAN service. Today, Lanner has deployed more than 200,000 enterprise SD-WAN points in total.

## Flexible SD-WAN deployment - the key to commercial operation of 5G

### High-performance and low-cost IT solution

Software-defined wide-area-network (SD-WAN), as the name implies, involves applying software defined network (SDN) technology in the management of wide area network (WAN). SDN incorporates virtualization technology to simplify hub management and maintenance; from an application standpoint, it has the potential to simplify WAN control for enterprise users. Using this technology, businesses are able to create high-performance WAN at low cost based on LTE/5G broadband, and increase the deployment speed of mobile IT network services for enhanced competitiveness.

### Advantages of SD-WAN in the post-pandemic era

SD-WAN operates outside of hardware constraints and frees enterprise users from physical deployment of equipment such as spokes and routers. It gives network administrators the ability to deploy equipment, allocate resources, monitor status, confirm capacity, and perform maintenance and debugging tasks at the spoke end entirely over the cloud using a centralized interface. As a result, it simplifies spoke deployment and removes restrictions on the connection between spokes. One other advantage of SD-WAN is its ability to deliver the best transmission quality for user's core application through different mechanisms. Whether the task involves application recognition (recognition of public or enterprise/private applications) or tier-based transmission (routing policy for different types of application), SD-WAN is capable of ensuring service quality for critical tasks. These advantages allow businesses to dynamically allocate network resource and bandwidth for their flexible work hour arrangements, particularly in the post-pandemic era.

### Joining U.S. RCI for smart farming opportunities

In June 2020, Lanner Electronics joined the U.S. RCI (Rural Cloud Initiative) to provide whitebox solutions for 5G/LTE networking and computing for smart agriculture application. The "Farm of the Future" project that Lanner is a part of uses 5G technology to analyze crop, weather, and environmental data in real time, which helps raise production efficiency and increase profit margin by more than 10%.

Lanner's 5G/LTE edge computing platform is an Intel-based x86 server; the platform offers multi-core computing, supports LTE/WiFi MIMO and 5G connection, and has been optimized for 5G distributed network architecture, so that rural areas without public network coverage may still have access to low-latency edge computing.

Farm of the Future project incorporates a number of solutions including private 5G/LTE network, edge storage, multi-access edge computing (MEC), image analysis, industry automation, and drones; the project won Network Transformation Awards and the 2020 Innovative Network Application Award from Layer123 SDN. This project adopts the use of Edge as a Service (EaaS) architecture, in which Lanner provides an open hardware platform that integrates with the service provider for fast deployment without farm users having to commit substantial investment into equipment.

# Financial performance

## CAGR of revenues at 14% for the last 10 years

Driven by a customer-centric philosophy, Lanner is dedicated to offering professional products and quality services, and distinguishes itself from market competitors through high degree of integration and high-end offerings. As a response to trends such as network virtualization, software-defined network and 5G, Lanner ventured into the telecommunication market offering new solutions such as AI, edge computing, MEC, 5G Cloud RAN, ORAN, vCPE, SD-WAN, and network security virtualization (SASE) service platform at a relatively early stage, which enables it to react to future changes.

In terms of market management, the Company continued to secure its leading position in network security applications, and managed to market solutions to several sizable carriers, thereby sustain high growth in new telecommunication applications. Not only was Lanner the first Taiwanese company to receive multiple recognitions for Intel Select Solution, it has also established collaborative relationship with NVIDIA on AI and edge computing, and continues to expand cooperation with strategic partners. By growing the SDN/NFV Partner Ecosystem and Whitebox Solutions™ business model for telecommunication, the company hopes to contribute to the world's digital transformation. Meanwhile, initiatives are being taken to fine-tune operations in line with market changes, and thereby achieve our vision for increased market presence, coordination, diverse services, and mutual benefits.

The COVID-19 outbreak in 2020 has had significant changes on people's lifestyle, particularly with respect to remote activities and work-from-home arrangements, which give rise to demands for remote equipment and cybersecurity. As a leader of network security in Taiwan, Lanner Electronics has built up strong reputation of outstanding product quality and technological capacity among customers and peers. Owing to the contributions of our employees, the Company was able to achieve a compound growth rate of 14% in terms of revenues in the last 10 years, while maintaining EPS above NT\$3 for 9 consecutive years, including record-breaking EPS in 2020.

## Economic performance

Lanner Electronics reported net operating revenues of NT\$7,502,682,000 for 2020, down 3% from the NT\$7,724,798,000 reported for 2019 due to the COVID-19 outbreak. Lanner Electronics is committed to improving operating costs, and an improvement in gross profit margin combined with gain on disposal of business investments contributed to current net income of NT\$595,898,000, up 21% from the NT\$492,428,000 reported for 2019; meanwhile, gross profit widened 0.7% from 28.7% in 2019 to 29.4% in 2020, operating expenses rate remained comparable to 2019 at 20.6%, net profit margin increased 0.1% year-on-year, and net income increased by 21% compared to the previous year.

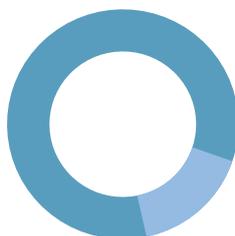
Note 1: Information was prepared based on International Accounting Standards 19 - Employee Benefits (IAS 19).

Year	Unit	2018	2019	2020
Capital	Thousand	1,089,934	1,180,084	1,180,044
Consolidated revenues	Thousand	7,460,780	7,724,798	7,502,682
Gross profit	Thousand	2,030,668	2,216,080	2,206,438
Income tax	Thousand	127,244	144,265	188,806
Consolidated net income	Thousand	477,039	560,917	638,971
After-tax EPS	\$	3.92	4.18	5.05
Net worth per share	\$	27.13	26.94	29.09
Employee salary and benefits (Note 1)	Thousand	1,187,169	1,251,073	1,234,951
Distribution of stock dividends (stock dividends/share)	\$	0.8	0	0
Distribution of cash dividends (cash dividends/share)	\$	2	2.8	3.3

### Product sales weight

Network & Communication 83.50%

Others 16.50%



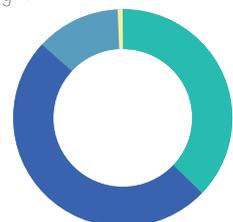
### Markets served and weight

Asia 37.87%

America 47.97%

Europe 13.20%

Others 0.96%



# Critical technical service

## LEAP LAB

Lanner EvAluation Platform (LEAP LAB) is a remote laboratory created by Lanner for the purpose of improving product and service quality to the next level. LEAP LAB mainly offers the three services below:

Remote Evaluation

**Expedite Business**

- ⊙ Debugging
- ⊙ Platform Evaluation
  - Early Access
  - Performance Test

**Go-to-market Faster with Automated Testing.**



Technology Demo

**Explore Possibility**

- ⊙ Intel – Watchman peak, OpenNess, ISel, etc
- ⊙ AMI TrueE
- ⊙ NCTU- Multi-Site/Multi-Server Scalable Mobile Edge Computing
- ⊙ Noviflow – Visual Analytics



ECO System Onboarding

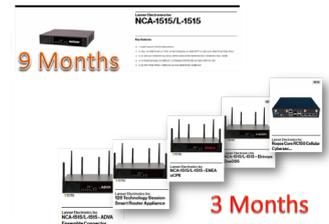
**Expand Business**

- ⊙ Solution integration
  - HW + NFVi + NFV + Orchestrator
- ⊙ Solution Certification
  - ISV Certification.
- ⊙ Solution Performance test.
  - Single Site or Multi Sites



### 1. Remote evaluation

It used to take an average of 9 months to certify a product, but following the outbreak of COVID-19 in 2020, the LEAP LAB introduced an innovative remote assessment solution that enabled Lanner to complete certification for six products with customers in just three months. The solution not only allows customers to validate proof of concept remotely, but also increases the efficiency of business activities by a significant extent.



### 2. Technology Demo

Through demonstration of new technologies or proof of concept, Lanner continues to explore opportunities to collaborate with potential clients.

### 3. Ecosystem onboarding

Lanner provides a virtualized and integrated platform where it is able to engage multiple partners of a strategic alliance in tests to minimize issues during implementation, which in turn speeds up project development.



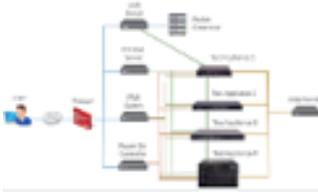
## Demonstration of service model

### (1) Remote Evaluation Service



Remote Evaluation Service has been launched on Lanner's website. Customers may submit requests over the website to have products evaluated remotely, and therefore speed up business development. Furthermore, as a response to the pandemic, Lanner offered its customers the option to perform remote POC, and in doing so overcame regional limitations without delaying product implementation timeline, and sometimes even sped up the POC process.

### (2) Network Architecture Demo



Lanner Electronics has been successful at creating a user-friendly online virtualized environment where customers are able to perform controls and tests to their preference or requirements using different management interfaces, all under the protection of firewall. Customers may even structure their solutions using products of different grades to meet the testing requirements of different networking scenarios.

### (3) Technology Demo-intel WATCHMAN PEAK



By incorporating Intel's Software Guard Extensions (SGX), Lanner is able to market additional features on top of its new technologies to customers for POC.

### (4) Technology Demo - Visual Analytic



Lanner products carry 3 main advantages: high level of integration, flexible structure, and carrier-class management. Given the current edge computing trends, customers need highly integrated solutions to support remote deployment.

Lanner's products also have a highly flexible structure that allows them to be adjusted for different applications and scenarios. In addition, Lanner engages business partners in software integration, collecting information from more than 1,000 sensors on each main board to provide customers with total, real-time data monitoring, and therefore ensure 99.9999% uptime of telecommunication service.

Lanner currently provides visual analysis for demonstrations of trusted technologies to Bell Canada, a telecom carrier in Canada. In the future, we will continue using Lab Demo to introduce this solution to other carriers.

### (5) ECOSYSTEM on boarding



We understand the importance of pre-integration as it is crucial to assisting customers with timely deployment and quality services. As edge computing becomes popular, customers will have significantly higher expectations on the quality and quantity of high-end products.

Lanner has co-founded a new laboratory with 128 Technology, an entity recently acquired by Juniper Networks, to create the virtualization spaces needed to cooperate with other partners of the ecosystem. In the future, Lanner will also engage other partners in various strategic alliances, and integrate functions such as SDWAN, ROUTING, Security etc. into total solutions.

CHAPTER

# Sustainable governance

Corporate social responsibility framework

Corporate governance

Stakeholder engagement

Identification and response of material topics

Supplier sustainability management

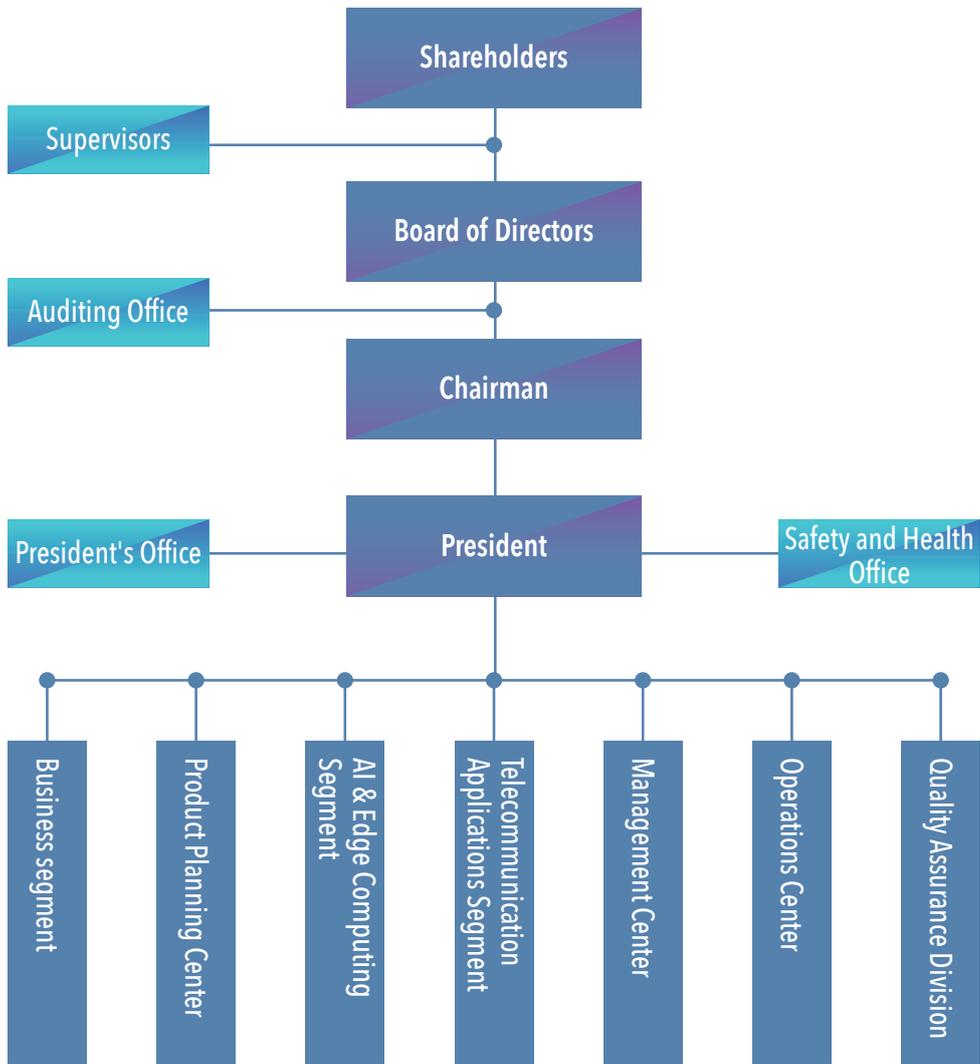
# 2

# Corporate social responsibility framework



# Corporate governance

## Organizational structure



## Responsibilities of Main Departments within Lanner Electronics

Name of department	Responsibilities
Board of Directors	The Chairman convenes board of directors meetings, oversees corporate operations, and determines key strategies, future operational emphases and goals for the Company.
President's Office	A subordinate unit under the President; responsible for the planning and execution of operational plans and projects.
Auditing Office	<ol style="list-style-type: none"> <li>1. Audits and evaluates the rationality and effectiveness of the Company's internal control and management systems.</li> <li>2. Investigates and evaluates the performance of various departments with respect to the execution of assigned tasks, policies, and duties.</li> <li>3. Conducts audit on asset, liability, income, and expenditure figures to determine whether they are reasonable, and determines whether the bookkeeping basis, classification criteria, and calculation conform with the accounting system.</li> <li>4. Compares, analyzes, and reviews operating performance, cost, budget execution, and financial position of the Company, and suggests effective strategies to improve operating efficiency.</li> </ol>
Safety and Health Office	<ol style="list-style-type: none"> <li>1. Establishment, amendment, and execution of safety and health policies, plans, procedures, and standards.</li> <li>2. Responsible for the management of the safety and health system.</li> <li>3. Establishment, planning, supervision, and promotion of safety and health issues. The department also provides guidance to others on the implementation of related policies.</li> </ol>
Business segment	<ol style="list-style-type: none"> <li>1. Responsible for customer development, product sale, and accomplishment of sales target for KA products.</li> <li>2. Responsible for customer development, product sale, and accomplishment of sales target for Region products.</li> <li>3. Responsible for customer development, product sale, and accomplishment of sales target for TA.</li> <li>4. Gains insight to SDN/NFV trends among global carriers and in telecom applications, as well as customers' needs and complaint handling.</li> <li>5. Gains insight to market trends and customer requirements, and handles customer complaints.</li> <li>6. Recommends product design and development focus based on the information gathered.</li> <li>7. Policy execution and system management.</li> </ol>
Product Planning Center	<ol style="list-style-type: none"> <li>1. Determines product R&amp;D strategy and focus.</li> <li>2. Evaluates feasibility and adopts new products and technologies.</li> <li>3. Responsible for project management at the Product R&amp;D Center.</li> <li>4. Responsible for circuitry design, research, development, and early-design-stage specifications testing and confirmation of new products.</li> <li>5. Proposes engineering modifications based on existing product performance and defects to meet the market's quality requirements.</li> <li>6. Performs heat flux design and makes decisions over the selection of parts.</li> <li>7. Performs product safety certification.</li> <li>8. Responsible for power design and selection/management of power-related parts (including power supply).</li> <li>9. Executes development projects in line with design principles; performs Layout Design and makes PCB plans.</li> <li>10. Mechanical parts fabrication for products and research/development of industrial computer chassis.</li> </ol>

Name of department	Responsibilities
Management Center	<p>Finance and accounting Division</p> <ol style="list-style-type: none"> <li>1. Financial planning, capital management, and management of banking relations.</li> <li>2. Budget preparation, control, and analysis.</li> <li>3. Handling of director/supervisor meeting and annual general meeting affairs.</li> <li>4. Handling of share-related affairs, cash issues, and share subscription.</li> </ol> <p>IT Division:</p> <ol style="list-style-type: none"> <li>1. Planning and implementation of rational IT process.</li> <li>2. Planning, design, maintenance, and implementation of computerized processes.</li> <li>3. Development of information security system and compilation of operating manuals and management rules.</li> <li>4. Planning and installation of IT equipment, and recommendation for equipment purchase.</li> <li>5. Enforcement of information policy and management of related affairs including information system security.</li> </ol> <p>Human capital Division :</p> <ol style="list-style-type: none"> <li>1. Recruitment, assignment, training, development, promotion, and evaluation of employees, and planning and execution of HR-related affairs.</li> <li>2. Employee relations and welfare.</li> <li>3. General affairs and sundry purchase.</li> <li>4. Asset bookkeeping and management of property insurance.</li> <li>5. Enforcement and execution of quality management issues, including property and premise security, entry control, and employee safety.</li> </ol>
Operations Center	<p>Logistics Division:</p> <ol style="list-style-type: none"> <li>1. Price comparison, price negotiation, ordering, and contracting for purchases of production equipment, materials, supplies, and outsourced jobs.</li> <li>2. Procurement, inspection, and claim for purchases of raw material and supply.</li> <li>3. Determines and controls purchasing cost of raw materials/supplies; plans and executes cost reduction solutions.</li> <li>4. Sale of obsolete and slow-moving materials.</li> <li>5. Coordinates production/sales planning, forecasting, and inventory transfer/allocation.</li> <li>6. Management and control of inventory sale.</li> <li>7. Management and control of import/export shipment and shipping expenses.</li> <li>8. Real-time monitoring of production schedule and inventory level; review and approval of procurement requests.</li> <li>9. Responsible for the review and approval of sales orders and shipment schedule.</li> <li>10. Warehousing of production orders.</li> <li>11. Makes arrangements such as production plan/trial production of new products/scheduling for special requirements.</li> <li>12. Arrangement, execution and coordination of production/shipment plans such as outsourcing, warehousing, import/export etc.</li> <li>13. Planning and allocation of subcontractor resources to fulfill capacity demands.</li> <li>14. Planning and establishment of collaboration model between subcontractors and supporting departments of various plants for improved management of outsourced jobs.</li> <li>15. Management and control of import/export shipment and shipping expenses.</li> </ol>

Name of department	Responsibilities
Operations Center	<p><b>Global Services Division:</b></p> <ol style="list-style-type: none"> <li>1. Manages operation of global logistics center to ensure timeliness of shipment demanded by customers.</li> <li>2. Develops robust maintenance service process for the logistics center to deliver quality and speedy service for customers.</li> <li>3. Expands service and customer coverage of the logistics center in ways that help business departments secure more deals.</li> <li>4. Provides customized assembly and testing service post-production for customer-specified, mass-produced products, and thereby satisfy customers' diverse needs in small volumes.</li> <li>5. After-sale maintenance: enforcement and execution of quality management tasks, including security control during the product materialization process, import/export logistics and process security, management of secured supply chain partners, cargo security, and container security.</li> </ol> <p><b>Manufacturing Division:</b></p> <ol style="list-style-type: none"> <li>1. Oversees production quality, delivery timeline, and customer service to ensure target accomplishment.</li> <li>2. Controls and improves production cost for greater price competitiveness.</li> <li>3. Monitors production anomalies and applies the PDCA cycle for effective improvement and prevention of recurrence.</li> </ol>
Quality Assurance Division	<ol style="list-style-type: none"> <li>1. Document management (acceptance, consolidation, issuance, computer login, and filing).</li> <li>2. Ongoing quality improvement, instrument calibration, and control of supplier quality.</li> <li>3. Technical support, problem identification/resolution, after-sale service, and related matters.</li> <li>4. Provides DA (defect analysis) to assist with quality improvement.</li> <li>5. Establishment, amendment, and execution of quality management certification/supply chain safety policies, plans, procedures, and standards.</li> <li>6. Establishment, planning, supervision, and enforcement of quality policies and related issues. The department also provides guidance to others on the implementation of related policies.</li> </ol>

Note 1: For detailed responsibilities of departments below each division, please refer to the organization and work duty summary of the respective departments.



## Corporate governance

### The Company ranked in the 4th tier (36% - 50%) of TWSE's 7th Corporate Governance Evaluation

All directors have placed the Company's and shareholders' long-term interests at the top of their priority, and are able to exercise their duties in an independent and objective manner. For this reason, we continue to adopt the best corporate governance practices by having shareholders elect a board of directors and creating functional committees to support the board's duty. We adopt the highest standard of corporate governance practice to ensure functionality of the board of directors, and thereby protect shareholders' interests.

There were 7 directors in the year of the report, 2 (28.57%) of whom were independent directors, whose presence not only enhanced independence and diversity of the board, but also contributed to strategic thinking and guidance. Service of the current board of directors began June 19, 2019 and ends June 18, 2022. The board of directors convenes meetings at least once per quarter. A total of 4 board meetings were held in 2020, which averaged an attendance rate of 92%. The position of Chairman was assumed by Chou I Wen, who oversaw all corporate governance affairs and hosted board meetings.

Lanner complies with "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies," which requires board of directors to be elected after taking multiple factors into consideration, including: decision-making capability, management skills, analytical skills in accounting and finance, crisis management, industry knowledge, global vision, leadership, decision-making capabilities etc.

#### ▼ Board members and board function

Designation	Name	Gender	Age group	Academic and career background	No. of attendance	Attendance rate (%)
Chairman	Chou I Wen	Female	61-70	Pacific Western University	4	100%
Director	Yang Chen Wei	Male	71-80	Air Force Institute of Technology	2	50%
Director	Chou Hsu Lung	Male	51-60	Department of Mathematics, Fu Jen Catholic University	4	100%
Director	Chen Ruei Hsu	Male	61-70	Academic background Graduate Institute of Management Science, National Chiao Tung University Career experience President of D-Link, Vice President of BankBoston Taiwan Branch, Assistant Vice President of Citibank Taiwan	4	100%
Director	Cheng An	Male	51-60	Sanctae Clarae Universitas	4	100%
Independent Director	Lu Hung Te	Male	61-70	Academic background Ph.D. in Marketing, Graduate Institute of Business Administration, National Taiwan University Career experience Head of RCTRB, Chung Yuan Christian University; Chief Secretary, Office of the Secretariat, Chung Yuan Christian University; full-time lecturer, associate professor, and professor of Business Administration; Consultant for Chang's Service, Mainland Affairs Council, Executive Yuan	4	100%
Independent Director	Tsai Hsing Tao	Male	71-80	Academic background Ph.D., Chinese Culture University Career experience Visiting Scholar of Stanford University; Professor and Dean of Student Affairs, National Taipei University of Technology	4	100%
Supervisor	Wen Feng Chiao	Female	61-70	Dept. of Business Administration, Soochow University	4	100%
Supervisor	Li Chung Wang	Male	61-70	Master of Electrical Engineering, National Taiwan University	3	75%

For sound corporate governance, information such as directors' performance review, major board resolutions, Articles of Incorporation, conference rules, and handling of interest-conflicting motions has been published and made accessible by local and foreign investors over Market Observation Post System.

Lanner has supervisors and a Remuneration Committee comprising independent directors and outside experts/scholars in place to support the board of directors. The board of directors also complied with "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies" by making arrangements to have directors undergo external training. Directors' 2020 training, professional skills, and characters have been listed in the table below.

Designation	Name	Training date	Organizer	Course name	Hours	Professional knowledge and character				
						Industry knowledge	Business administration	Accounting and financial analysis	Law	International markets
Chairman	Chou I Wen	11/17	Securities & Futures Institute	The Latest Tax Law Reform, Impacts on Corporate Operations and the Response	3	✓	✓	✓		✓
		12/09		Corporate M&A Case Study - Hostile Takeover						
Director	Yang Chen Wei	11/18	Securities & Futures Institute	Employee and Director Compensation - Interpretation of Article 14 of Securities and Exchange Act	3	✓	✓	✓	✓	
		11/23		Latest Securities Investor and Futures Trader Protection Act Amendments and Effect on Directors'/Supervisors' Rights and Obligations						
Director	Chou Hsu Lung	12/23	Securities & Futures Institute	Trends of Group Taxation Management in the Post-pandemic Era	3	✓	✓	✓		✓
		12/23		Recent Case Studies of Management Dispute - Shareholder Structure Planning and Exploitation of the Board/Shareholder Meeting System						
Director	Chen Ruei Hsu	07/29	Securities & Futures Institute	Advanced Practical Workshop for Directors, Supervisors (including Independent Directors) and Corporate Governance Officers [Cyber Crime]	3	✓	✓	✓	✓	✓
		09/22	Taiwan Institute of Directors	KPMG Leaders Forum: Corporate Governance Enhancement as a Response to Changing Risks						
Director	Cheng An	04/29 07/29	Taiwan Corporate Governance Association	Corporate Strategy Development Opportunities and Challenges of Mobile 5.0 - From the Perspective of Telecommunication Development	3	✓	✓	✓		✓
Independent Director	Lu Hung Te	07/24	Taiwan Institute of Directors	Group Governance and Performance Management	3	✓	✓	✓		✓
		10/23		Corporate Response to Digital Economy and Talent Transformation of the Next Decade						
Independent Director	Tsai Hsing Tao	09/04	Taiwan Corporate Governance Association	Best Practices for the Board of Directors and Functional Committees	3	✓	✓	✓		✓
		12/22		Independent Directors' Role in Business Management and Corporate Governance						
Supervisor	Wen Feng Chiao	07/22	Securities & Futures Institute	International Taxation Trends under the New Corporate Governance Roadmap and Practical Responses	3	✓	✓	✓		✓
		08/21		Corporate Financial Crisis Alert and Analysis						
Supervisor	Li Chung Wang	09/02	Securities & Futures Institute	Case Study on Financial Statement Fraud	3	✓	✓	✓	✓	✓
		09/02		AML and CTF Best Practices						

## Internal audit and internal control systems

The Company does not have an Audit Committee, but has 2 supervisors, a Remuneration Committee, and a Supply Chain Safety Committee in place. Supervisors, directors, the chief internal auditor, and CPAs meet up at least once a year to supervise the Company's business and financial performance, review budgets, discuss earnings distribution or loss reimbursement, investigate misconducts and negligence, and audit other major issues concerning the Company.

Lanner has assembled its Remuneration Committee in accordance with the independence and professional requirements of relevant laws. The committee regularly reviews the appropriateness of directors' and managers' salary/compensation policies, systems, standards, and structures based on the prevailing competitive environment, operating policy and market rates, and reports findings to the board of directors. The Remuneration Committee comprises 2 independent directors and 1 expert; information concerning members' background and concurrent employment or role in the board of directors or functional committees can be found on the Market Observation Post System. The Remuneration Committee held 3 meetings in 2020 and achieved a 100% attendance rate.

### Members of the 4th Remuneration Committee (term: 2019/7/18 - 2022/6/18)

Name	Gender	Academic and career experience
Lu Hung Te	Male	Academic background Ph.D. in Commerce, National Taiwan University Career experience Professor of Business Administration, Chung Yuan Christian University
Tsai Hsing Tao	Male	Academic background Ph.D., Chinese Culture University Visiting Scholar of Stanford University Career experience Independent Director of Sunvic Technology Co., Ltd. Director/Supervisor/Consultant of TTE Engineering Co., Ltd. Professor and Dean of Student Affairs, National Taipei University of Technology Professor and Dean of Humanities and Social Sciences, National Taipei University of Technology
Kung-Pu Wang	Male	Academic background Bachelor of Psychology, Chung Yuan Christian University Master of Educational Psychology, Loyola University at Chicago Career experience Editor at Institute of Revolutionary Practice Part-time Lecturer at Chinese Culture University Deputy Manager of Administration Department, Grand Pacific Petrochemical General Manager of Guangzhou Panyu Zhongyi Electronics Company Member of Jiangsu Xuzhou Xuhai College Foundation Team Executive Vice President of Guangdong Dongguan B&F Electronics Company

## Compliance and performance

### Enforcement of anti-corruption, business integrity, and compliance

We adopt rules of the Responsible Business Alliance (RBA) and The Company Act as our ultimate guiding principles, and have implemented internal policies including "Corporate Governance Code of Conduct," "Business Integrity Code of Conduct," "Subsidiary Management Policy," "Group Affiliate, Special Entity and Related Party Transaction Procedures," "Insider Trading Prevention Procedures," and "Supplier and Employee Integrity Behavior and Anti-corruption Guidelines" to guide our actions. New recruits are required to sign commitments to integrity behavior and anti-corruption when reporting to duty, whereas existing employees are subjected to annual training on ethical behaviors and the integrity commitment for enhanced ethical awareness. The Company also demands suppliers to duly comply with integrity and anti-corruption guidelines in all business activities. For more details on supplier management and policy, please see P49 - Supplier Management.

### Compliance performance and improvements

The Company constantly monitors changes in local and foreign policies and regulations, and identifies risks that may affect the Company's operations or financial position. It has robust compliance procedures in place, and assigns legal affairs and relevant departments to oversee compliance and improve procedures on a regular basis. The Company complies strictly with the Fair Trade Act and was not involved in any litigation concerning anti-competition, anti-trust, or monopolistic behavior in 2020. The Company also adopts GRI Standards and discloses compliance with economic, environmental, and social laws. No monetary fine or non-monetary penalty of material nature was imposed for non-compliance with laws during the year.

#### ► Compliance with environmental regulations:

Lanner Electronics was not fined for any major violation of environmental laws in 2020; there had also been no official filing and resolution of complaints concerning environmental impacts.

#### ► Compliance with social and economic regulations:

Lanner Electronics received no complaint concerning corruption, violation customers' privacy, or loss of customers' data in 2020. However, there was one complaint of workplace bullying in 2020. The Company had responded to the complaint on the day it was raised, and convened a disciplinary committee meeting in the next 30 days to decide on disciplinary actions. All disciplined employees were each issued one count of misconduct to serve as warning. Outcome of this incident was reported in labor-management meeting and used as case study material in production line manager meetings to facilitate proper response and prevention.

#### ► Compliance with product marketing regulations:

With respect to product sales, none of Lanner's products and services violated any health and safety regulations in 2020; in terms of marketing and labeling, there had been no violation of laws concerning product/service labeling or marketing/communication.



**Education and training**

Lanner has implemented a Regulatory Compliance Policy internally and promotes training and awareness regularly through its e-Learning system so that all employees are made aware of their obligations to comply with laws such as Personal Data Protection Act, Trade Secrets Act, Business Integrity Procedures, Commercial Ethics, and Electronic Industry Code of Conduct.

▼ Mandatory courses for all employees - 2020

Course type	Target audience	Course information	Remarks
Lanner Ethical Behavior Guidelines	All employees	Time of course: May - August, 2020 Course duration: 15 minutes	Re-training once a year
Business secrecy awareness course	Key roles, all employees	Time of course: September - October, 2020 Course duration: 30 minutes	Re-training once a year

**Grievance and whistleblower system**

Whistleblowing hotline: +886-2-86926060 ext 2703

Whistleblowing e-mail: HR@lannerinc.com

Employee opinion box: Opinion boxes have also been made available at plant areas and dormitories; all grievance channels have been conveyed to employees during behavior training.



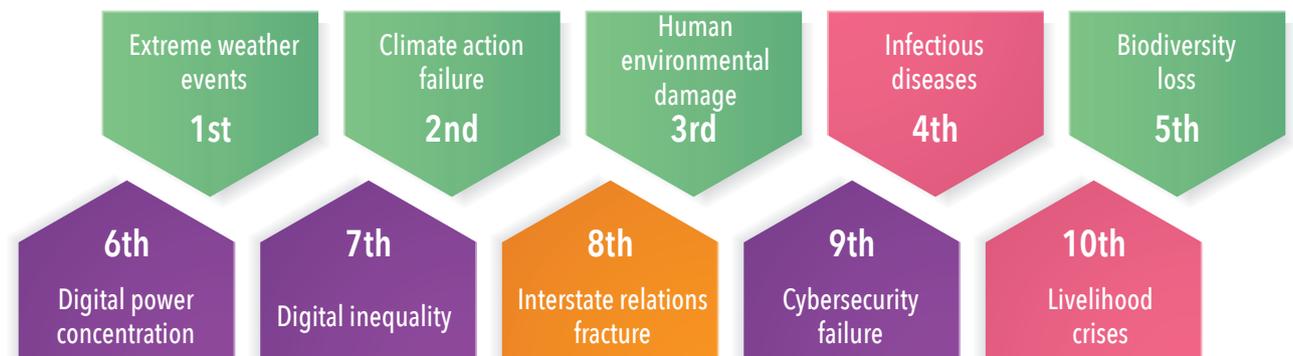
## Globally accepted risk management practice

In the Global Risks Report 2021 published by World Economic Forum (WEF), "Extreme weather" was identified as "Highest likelihood risk" for the 5th consecutive year, whereas "Climate action failure" (2nd place) and "Human-led environmental damage" (3rd place) were also environment-related risks. Meanwhile, "Infectious diseases" was named "Highest impact risk" in 2020 due to the COVID-19 pandemic; nevertheless, 3 of the top-5 risks were still environment-related.

Apart from climate change risk, Lanner also noticed rising concern for data scam/theft and cyber attacks, which is why we have taken the initiative to conduct total risk assessment and develop security strategies, governance framework, and solutions that are suitable given the organization's distinctive characteristics by adopting a risk-based approach. For more information on relevant control measures, please see P52 - Supplier Sustainability Management.

### ▼ Global risk landscape 2021

Global risks ranked by probability of occurrence



Global risks ranked by degree of impact



Economic
Environmental
Geopolitical
Social
Technological

**Operating strategies**

**Disaster recovery plan**

Lanner adopts PDCA-based quality management approach for customers that request disaster recovery plan (DRP). The following is a brief description on the timing and tasks involved for each of the PDCA stages in 2020:



**Supply chain safety**

Lanner continued to be certified for ISO 28000 and AEO in 2020. To address the issue of supply chain security, the Company adopts ISO 28000 standards and uses a supply chain security management system to identify and grade risks throughout the supply chain. The PDCA principles are adopted as part of the risk assessment exercise. Through reliable and robust practices such as document control, key performance indicators, internal audit/training, and supply chain security awareness training, we are able to assure the security of our supply chain.

▼ Action taken by Lanner included:

- 01 Enhanced premise access control
- 02 Locks at the cargo area
- 03 Installation of CCTV at warehouses and production lines
- 04 Enforcement of visitor entry logging
- 05 Enhanced supply chain safety training and emergency drill
- 06 Completed certification for ISO 27001 - Information Security Management System in July 2019
- 07 No employee was tested positive for COVID-19 in 2020 under the Company's disease control measures
- 08 The premise access system has been backed up since May 2020
- 09 Fire safety training and emergency response drill were completed in September 2020



## Financial strategies

Lanner upholds stability and pragmatism as its main philosophy, and focuses entirely on core business activities. The Company did not engage in any high-risk or highly leveraged investment in the last year. Derivative transactions undertaken in the last year consisted entirely of currency forwards, and the main purpose of which was to hedge foreign currency debt entitlements against risks of exchange rate variation. In anticipation of the rapidly changing environment and impact from unforeseeable risks, Lanner has devised strategies and response measures targeting financial risks that it considers to be probable, as described below:

### ➤ 1 Interest rate changes

The Company adopts a conservative and stable approach towards capital planning; consolidated interest expenses amounted to NT\$6,991,000 in 2020 and NT\$7,865,000 in 2019, representing 0.09% and 0.1% of consolidated revenues for the respective years. Given the insignificance of interest expense, a change in interest rate should not pose any material effect on the Company.

### ➤ 2 Exchange rate changes

The Company's exchange rate risk arises primarily from the conversion of cash, cash equivalents, accounts receivable, and accounts payable denominated in foreign currencies (mostly USD). Conversion of foreign currency-denominated amounts gives rise to gains/losses on exchange. The finance & accounting department constantly gathers exchange rate information and monitors trends in order to determine the best timing to convert NTD or hedge using currency forwards. The Company also requests its key suppliers to accept payment in designated currencies, and thereby reduce the size of position that is susceptible to exchange rate risks. Consolidated loss on exchange amounted to NT\$5,470,000 in 2020 and NT\$7,672,000 in 2019, representing 0.07% and 0.1% of consolidated revenues for the respective years. Given the insignificance of exchange difference, a change in exchange rate should not pose any material effect on the Company.

### ➤ 3 Inflation

The Company maintains productive relationship with suppliers and customers; it constantly monitors changes in market price and makes flexible adjustments to mitigate inflationary effects.

### ➤ 4. Credit risk

The Company has implemented a robust credit policy that analyzes the repayment capability and assigns credit grade for each customer. Payment terms, delivery terms, and sales limits are determined based on risk characteristics of each customer and are re-examined on a regular basis. Customers that do not meet credit standard are only allowed to transact with the Company by making full upfront payments, which minimizes credit risk. Lanner has a dedicated department in charge of tracking collection of receivables on a regular basis. An allowance account has been created to reflect estimate of actual and possible losses on accounts receivable and other receivables. These measures have been taken to minimize credit risk exposure in accounts receivable.

### ➤ 5. Liquidity/financial structure risk

The Company manages liquidity in a manner that ensures that the Company has adequate working capital to repay liabilities when due, under both normal and stressed scenarios, and therefore prevent occurrence of intolerable losses and risk of damage to the Company's reputation. Generally speaking, the Company ensures that it has sufficient cash to cover 60 days of expected operating expenditure. As of the end of 2020, the Company had undrawn credit lines totaling NT\$1.13 billion.



## Cybersecurity strategy

Lanner's cybersecurity strategy covers 14 main issues, and is intended to protect information against improper use, leakage, unauthorized modification, corruption, external influence, and attack, whether due to human error or natural disaster, that may pose risks or hazards to the Company. The main issues mentioned above are presented on the right-hand side:

### Enhanced cybersecurity protection

The Company acquires certification for ISO 27001 - Information Security Management System to protect customers' and suppliers' information as well as any personal data held in possession. Lanner imposes strict controls over data source validation, data access, e-mail, and Internet access, and prohibits installation of unauthorized software and unauthorized access in order to prevent confidential information from being compromised. Business continuity plans (BCP) have been devised for critical sales-related management systems such as SAP, PLM, and MES to enable responses under different circumstances, and thereby prevent disruption of business operations. Existing cybersecurity protection measures:

1. Access to USB drives, memory cards, and optical disc write-in has been restricted, and anti-virus software is installed on all computers to prevent intrusion, loss of important business information, and violation of customers' privacy. Percentage of unlocked USB ports was reduced to 13% in 2020.
2. Firewalls have been established to protect external network connection and critical internal systems; the types of web pages that employees may visit are also being controlled. Employees are unable to open unverified links and websites; these restrictions protect computers against virus infection and theft of data.
3. Data encryption and e-mail management have been implemented; data transmission is controlled by file size and security access to prevent negligent leakage of secret information and inappropriate use of data that may compromise customers' interest.
4. AWSUS host has been created, and regular upgrades/updates are being made to PCs and servers to prevent security vulnerabilities.
5. Critical systems and production/operating activities are subject to third-party cybersecurity certification and regular review.

- 1 Establishment and evaluation of information security policy.
- 2 Responsibilities and coordination between cybersecurity organizations.
- 3 Security of human resources.
- 4 Management of information assets.
- 5 Control of information access.
- 6 Encryption control for data storage and transmission.
- 7 Security of information equipment and server room.
- 8 Security of information operations.
- 9 Security in networking, data transmission, and communication.
- 10 Acquisition, development, and maintenance of information system.
- 11 Information service outsourcing.
- 12 Management of cybersecurity incidents.
- 13 Business continuity management on information security aspect.
- 14 Compliance.

### Enforcement of cybersecurity drills and accident response measures

To ensure that the entire organization and employees are fully capable of handling business and system disruptions, Lanner not only incorporates cybersecurity policy into its e-learning system, but also promotes cybersecurity awareness through e-mails and hosts BCP and cybersecurity drills on a regular basis. Outcomes of each drill exercise are evaluated to determine the impact of each risk event, so that proper responses can be established and improved upon to enhance cybersecurity. Details of drill exercises and operational impact analysis are presented in the chart below.

#### Business and operational impact analysis

Business activities	Evaluation tier	Degree of impact	Maximum tolerable downtime	Target duration to recovery	Target time of recovery	Principles for subsequent actions	Time of drill
External network connection	Medium	Poses challenge to business/operations	6 hour(s)	4 hour(s)	The last profile change	Develop BCP and organize drills when resources are adequate	April 2020
Internal network connection	Medium	Poses challenge to business/operations	6 hour(s)	4 hour(s)	The last profile change	Develop BCP and organize drills when resources are adequate	December 2020
AD system	Medium	Poses challenge to business/operations	8 hour(s)	4 hour(s)	1 day(s)	Develop BCP and organize drills when resources are adequate	December 2020
PLM (application software)	Medium	Disrupts business activities	8 hour(s)	8 hour(s)	1 day (database) 1 week (files)	Develop BCP and organize drills when resources are adequate	May 2020
SAP (application software)	Medium	Poses challenge to business/operations	4 hour(s)	2 hour(s)	1 day(s)	Develop BCP and organize drills when resources are adequate	June 2020
CSP (application software)	Low	Disrupts business activities	8 hour(s)	8 hour(s)	1 day(s)	Data backup	NA
FMS (application software)	Low	Disrupts business activities	8 hour(s)	8 hour(s)	1 day(s)	Data backup	NA
MES (application software)	High	Poses challenge to business/operations	4 hour(s)	4 hour(s)	1 day(s)	Develop backups; prioritize business continuity planning and regular drills	June 2020

Note:

1. Processes rated "High" or above should be supported by backup systems to ensure availability. If establishment of backup system is not feasible, other external resources or alternative strategies must be explored for operational support.
2. Processes rated "Medium" must be covered by an information BCP; the various scenarios and procedures outlined in the BCP must be thoroughly rehearsed in a systematic manner.

## Environmental strategy

### Risks and opportunities of climate change

WEF's Global Risks Report has identified "Extreme weather events" as one of the top risks for 7 years in a row and the number one risk for 5 consecutive years. This is why Lanner has been especially mindful of climate changes as well as the risks that extreme weather conditions may have on its operations. We gather prospective financial information on potential impacts that may assist our decisions, so that we may properly identify risks and opportunities while transitioning into low-carbon economy. The Company has adopted the framework introduced by "Task Force on Climate-related Financial Disclosures (TCFD)" and developed its own suggestions for voluntary disclosure of climate-related financial information. The TCFD framework has enabled the Company to identify risks that are significant to the organization, and evaluate climate-related risks and opportunities at greater precision. For details on responses and strategies to climate change risks, please see Ch4 - "Risks and opportunities of climate change"

### Actions in response to climate change

1. Development of wide temperature range products

In light of the increasingly extreme temperatures under which equipment is being required to operate, Lanner has begun incorporating wide temperature range designs into our industrial products so that they can withstand even the harshest environment. The following dust-proof, water-resistant products featuring industrial wide temperature range standards (e.g. operating temp of -40°C to 75°C) have been developed to date:



#### R6S

R6S is a fanless vehicle embedded PC that passes vibration and shock test and conforms with EN50155 standards. Powered by high-performance Intel Core i7-7600U CPU, R6S also allows I/O and internal expansion. Features such as dual video output (DVI-D / VGA), USB and DIDO sockets make R6S suitable for several applications including vehicle control and surveillance, information, entertainment, CCTV and fleet management.



#### LEC-6032C

LEC-6032C is a fanless industrial cybersecurity platform powered by Intel Bay Trail Atom™ E3845 CPU. The product has a LAN socket that features Gen.3 LAN bypass and is designed to operate at wide temperature range from -40°C to 70°C. It supports multiple installation options and incorporates enhanced, flexible designs that make it suitable for deployment at remote, unmanned and extreme environments. The product has been designed to carry out network security measures at key infrastructures such as: oil refineries, substations, power stations, and manufacturing plants.



#### LEC-3340

A 3U industrial edge computing service equipment featuring a wide variety of I/Os including: 4 PCIe slots, 4 RJ-45 GbE LAN sockets, 5 USB 3.0 sockets, 2 interchangeable 2.5-inch brackets, DP / DVI display ports, and 2 isolated COM ports. The rugged design conforms with IEC-61850 and IEEE 1613 standards, and is commonly used as rack controller in substations.



#### NCR-1567

NCR-1567 is a fanless networking equipment that supports both 5G and Wi-Fi 6. Featuring a wide temperature range design (-40°C to 70°C), the unit can be stored in environments up to 85°C, and has been optimized for IoT, SD-WAN, uCPE, and edge computing. It uses Intel's QuickAssist technology to increase encryption speed, and offers industry-grade LAN functions to support better quality WAN service in harsh environments.

2. Climate change backup plans

To address the risks associated with environmental and climate change, Lanner has established collaborative relationships and signed outsourcing contracts with key manufacturers in Taiwan to designate them as backup factories. These arrangements are subjected to identification and assessment of climate change risks, with response strategies devised and scenario-based drills conducted to ensure continuity in the event of a natural disaster.

3. Climate change mitigation actions

Lanner contributes to the mitigation of climate change by supervising energy and carbon reduction and enforcing the 3R principles within the organization. Outdated equipment is progressively replaced to reduce energy consumption, and a new automated monitoring system has been implemented to facilitate real-time tracking and pro-active greenhouse gas survey.

#### 4. Environmental protection activities

Motivated to contribute to the mitigation of climate change, Lanner continues to support Lanner Culture and Education Foundation in various environmental protection activities including coastal cleanup and farmland sponsorship; both of which mitigate the indirect economic impacts that our infrastructure facilities and supporting services have on the environment.

##### ◆ Coastal cleanup:

Lanner Culture and Education Foundation co-hosted a coastal cleanup event with Hao Shi Social Enterprise in 2020, during which the Chairman led 25 employees and family members to clean up Wang Kung Fishing Port in Changhua.

##### ◆ Vanilla Farm Sponsorship Program with Blueseeds:

By sponsoring farmland restoration and making contracted purchases of crops, we convey our support for eco-friendly farming, natural materials, and total contract farming as ways to minimize damage of chemical substances on humans and the land. In 2020, Lanner organized a charity trip to Changbin Township, Taitung, where the Chairman and employees were given a tour on how contract farming works for the vanilla farm, and how such an arrangement is beneficial to the land.

##### ▼ Coastal cleanup - by Lanner Culture and Education Foundation and Hao Shi Social Enterprise



##### ▼ Vanilla Farm Sponsorship Program - Charity trip to Taitung



#### 5. Food appreciation

In addition to participating in the Farm of the Future project, Lanner also runs a Safe Farming Education Program to educate employees on food safety and minimizing food waste. In 2020, the Company organized three one-day farming experience events where employees can participate physically in weeding, plantation, harvesting, and jam-making. 3,000 catty of safely farmed rice was purchased and distributed among employees during Mid-autumn Festival. Small farmers are invited to set up stalls and sell eco-friendly produce every Friday at the 1F lobby. Through these measures, the Company hopes to promote good habits of zero food waste and healthy diet among employees, and turn food choices into positive changes for the land.

##### ▼ Safe farming education and rice harvest: One-day farming experience



#### 6. Green supply chain

Lanner monitors suppliers using four general principles: Quality, Cost, Delivery, and Service (QCDS), and has developed its own supplier management procedures in line with on local and international initiatives/regulations. We have implemented an internal materials management system to control raw materials at the source of the supply chain. In addition to enforcing the 3R principles (Reuse, Recycling, and Recovery), the Company also promotes the same value among suppliers and calls for their support. Through the supplier platform, we communicate with suppliers on issues concerning RoHS(EU)2015/863, conflict minerals, WEEE requirements, and the Company's CSR policy. We also audit suppliers' performance while at the same time encourage and ensure that all of Lanner's suppliers are committed to reducing/preventing potential pollution in design, production, service, and other operating activities.

The following actions have been taken for the purpose of creating a green, sustainable supply chain:

- ◆ 1. Ongoing certification for management systems such as ISO14001 and IECQ QC 080000.
- ◆ 2. Ongoing request for suppliers to comply with green regulations.
- ◆ 3. Ongoing supply chain audit in response to green regulations.

## Social responsibility strategies

### Prohibition against conflict minerals and creation of green supply chain

Lanner strictly demands all suppliers to refrain from purchase and use of conflict minerals, and has implemented "Conflict Minerals Management Procedures" in compliance with RBA requirements. All new suppliers are required to complete "Supplier Declaration of Conflict Mineral Policy" according to law - "Restricted Substance Content Limits and Testing SOP" and the Company's supplier management policy. Through the above, the Company ensures that all parts, components, materials and finished goods used by Lanner do conform with the standards outlined in "Conflict Minerals Policy."

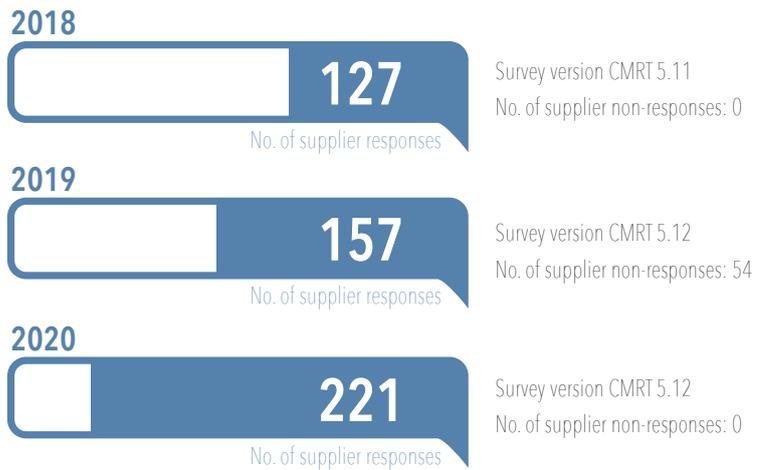
Lanner pays ongoing attention to issues concerning conflict minerals and conducts diligent investigations on its supply chain to ensure that metals including tin (Sn), coltan (Ta), tungsten (W), and gold (Au) are not mined from the Democratic Republic of the Congo or any mining site in nearby countries that are controlled by armed organizations, and that we do not contribute to the profiting of armed conflict in any way.

Lanner and its supply chain partners have made the following commitments to corporate social responsibilities and human rights:



Lanner has incorporated this policy as one of the prerequisites for all products provided and designed by suppliers. Suppliers that are found to have used conflict metals will be required to disclose information of the smelter. In 2020, Lanner adopted CMRT survey version 5.12 and investigated a total of 211 suppliers, from which it received 211 (100%) responses and 0 non-responses. Outcome of the survey was satisfactory, and the Company will continue surveying and auditing suppliers' performance as part of its corporate social responsibilities.

➤ Conflict mineral survey and report in the last three years



### Third party assurance

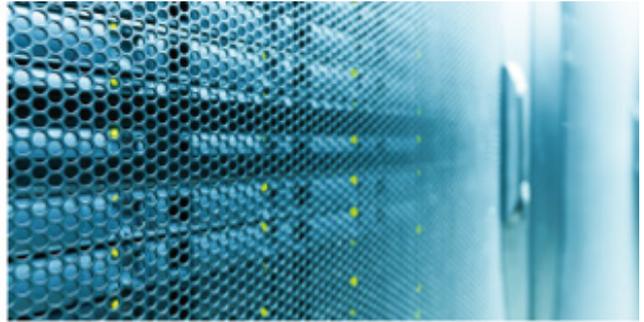
Lanner has obtained independent third-party assurance and passed certification for ISO 9001, ISO 27001, ISO 14001, ISO 45001, TL9000, ISO 28000, IECQ QC080000, and AEO (Authorized Economic Operator) by the customs of the Republic of China. Together, they represent the Company's compliance with international standards in regards to quality, environment, occupational safety, supply chain safety, and cybersecurity, as well as its commitment to adopting international management standards at the highest level of stringency. For details on assurance timing and procedures, please see Appendix - Third Party Assurance Statement.

## Customer service

As the world's leading brand in networking and communication hardware, Lanner not only provides customers with reliable and cost-effective high-performance computing solutions, but offers design and development service for advanced network applications and rugged computers as well. As 5G and edge computing technologies evolve, the Company has been able to market its services and solutions customers of varying sizes and industries including networking/computer, telecommunication, transportation, power and energy, industrial automation, and intelligent systems. Meanwhile, network disaggregation and open-ended multi-core computing architecture provide our products with the expandability to be used in a broad number of applications.



Network Computing



Telecommunication



Transportation



Power and Energy



Industrial Automation

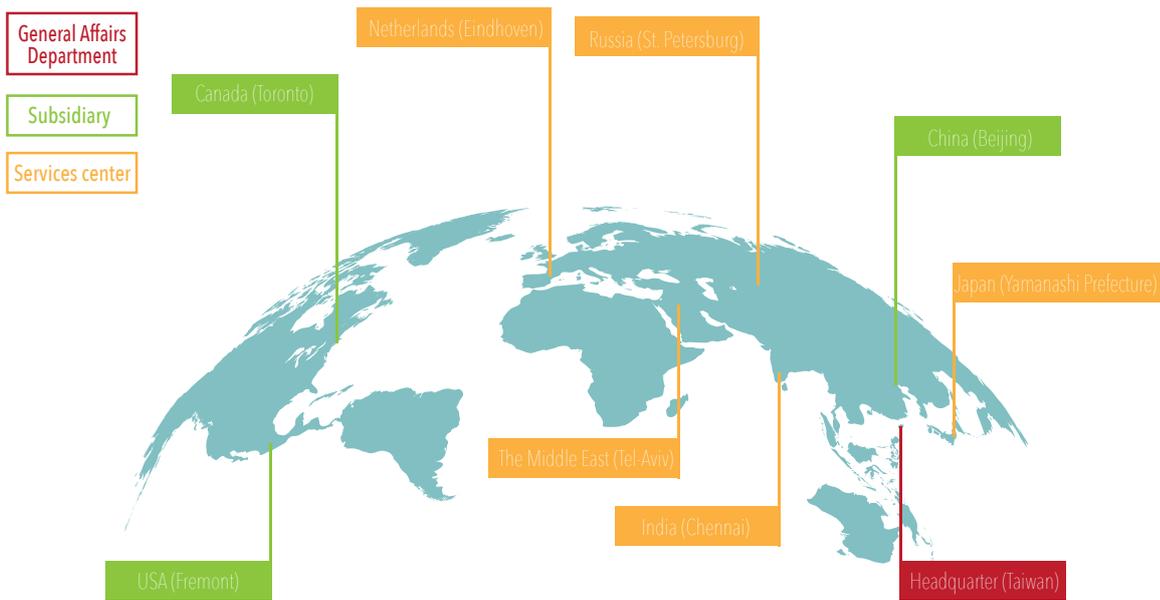


Intelligent systems

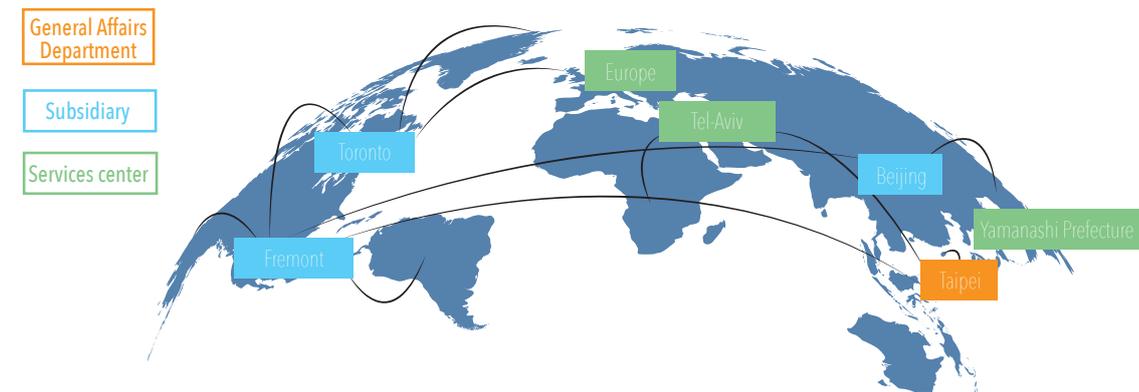
## Customized and specialized service

Lanner has Hubs (Order fulfillment)/RMA (Repair Service) facilities deployed locally and overseas to serve customers around the world. The Company continues to cooperate with carriers, software partners, and reputable universities in the development of customized solutions.

### Scope of global services



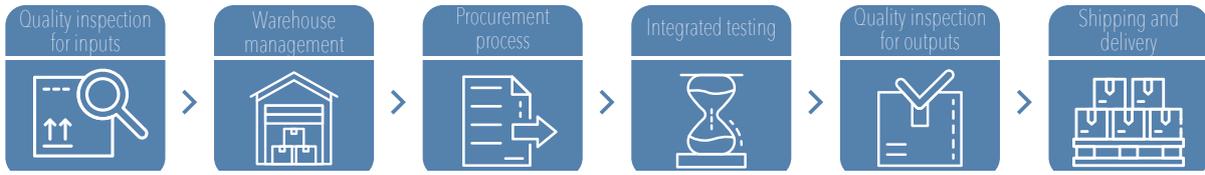
### Fulfillment of hub orders



Global hub service:

- ◆ Through transport
- ◆ Shipment to customer after brand packaging

Order fulfillment process:

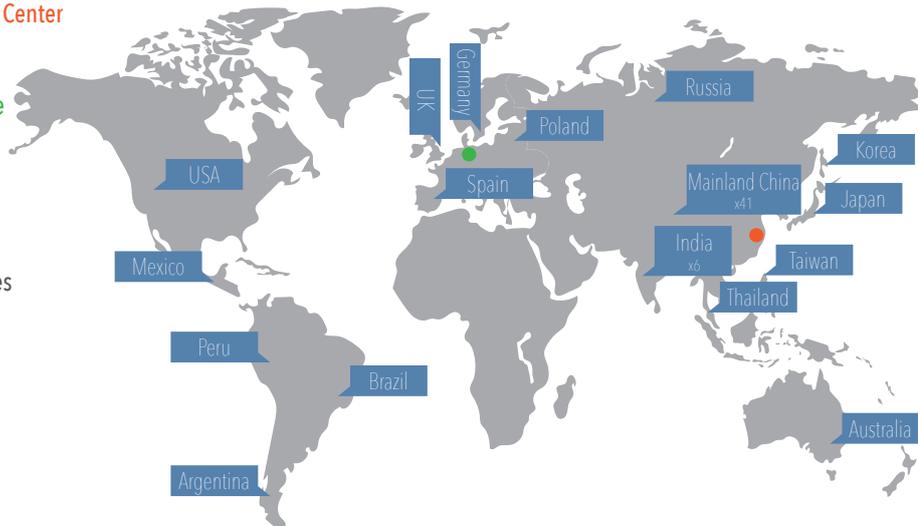


After-sale service from Lanner's partners:

- Ningbo International Service Center
- National Service Center
- Netherlands Regional Service

**Authorized partner**

- Bangladesh
- Dubai
- Egypt
- Hong Kong
- Indonesia
- Iraq
- Israel
- Malaysia
- The Philippines
- Russia
- Saudi Arabia
- Singapore
- Turkey
- Vietnam



**Responsible and efficient after-sale service**

Lanner values customers' needs, and uses three online methods (Chat, Contact-us, and Technical-support) to communicate with customers. Depending on the method of communication and type of query, responses are given by TSD and sales representatives within 3 working days. Lanner also has standard repair and return procedures and time limits implemented for products that are returned for repair.

▼ Average statistics on returned products are as follows:

1. Returns of 01-20 pieces were repaired and delivered back to customers within an average of 20 working days.
2. Returns of 21-50 pieces were repaired and delivered back to customers within an average of 30 working days.
3. Returns of 51 pieces and above were repaired and delivered back to customers within an average of 40 working days.
4. Products not manufactured by Lanner were forwarded to the original manufacturer for repair and delivered back to customers 3 working days in addition to original manufacturer's turnaround time.

**Customer care and mutual benefit**

Lanner maintains open communication channel with customers, engages customers in regular meetings (weekly, monthly, QBR), and actively gathers voice of customer (VOC). The Company conducts annual customer satisfaction surveys to reflect issues that are of concern to industry participants and customers. Survey results are announced within 2 months, discussed to formulate improvement plans, and followed up to raise customer satisfaction.

In 2020, the Company issued questionnaires to a total of 30 major customers chosen from the top-50 customers shortlisted by the finance and accounting department. From the 16 (53%) questionnaires recovered, the Company achieved a total score of 91.4, which was higher than the 86.8 average score concluded in 2019.

Survey category	2018	2019	2020
Price Competitiveness	80.0	77.5	82.1
Sales Service Quality	89.3	90.0	96.9
Schedule Control & On time Delivery	84.3	85.6	88.9
Electronic Engineering Design	86.9	85.6	91.6
Mechanical Engineering Design	86.9	88.8	93.4
BIOS Performance	86.9	88.1	91.6
Product Reliability	87.9	85.6	91.3
Product Quality	86.9	87.5	91.0
Technical Support	83.6	88.1	93.8
Supply Chain Security	87.9	86.3	90.4
Product Repair Services	84.7	86.2	90.0
Marketing Collateral	87.7	87.9	93.7
Overall Value of Products	87.9	86.3	93.1
Overall average	86.2	86.4	91.4

# Stakeholder engagement

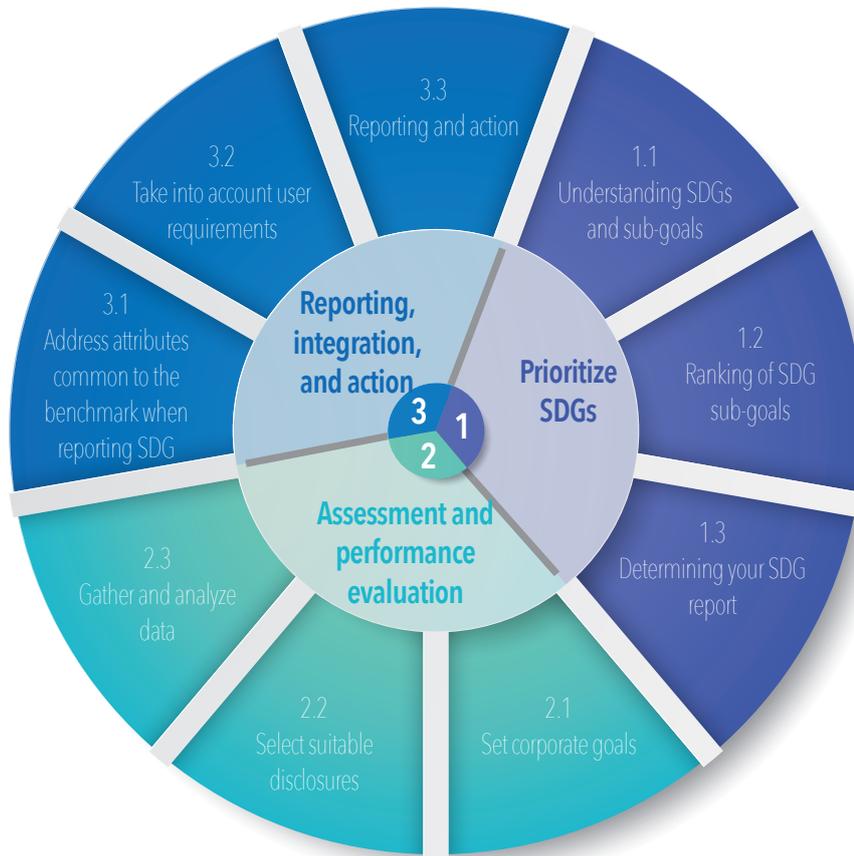
## Identification of stakeholders

Lanner has created a stakeholders section up on its website and set up an e-mail address: kenny@lannerinc.com exclusively for stakeholders as part of its pursuit for sustainability. These effective and open communication channels have enabled us to gain insight into the needs of our stakeholders. We adopted the 2015 Stakeholder Engagement Standard (AA1000 SES 2015) established by non-profit organization - AccountAbility and applied the five principles (dependency, responsibility, tension, influence, and diverse perspective) to rate all stakeholders we have identified. Members of the Corporate Social Responsibility Committee then engaged in a series of internal meetings to determine the 6 stakeholders that were of utmost priority to the Company, including: (1) employees, (2) investors, (3) government institutions, (4) customers, (5) suppliers, and (6) communities/non-profit organizations.

## Stakeholder engagement

Lanner engages each of the 6 main categories of stakeholders using different approaches, including unilateral, bilateral, one-to-many, and many-to-one. We adopt Business Reporting on the SDGs jointly established by GRI and The UN Global Compact as one of our management approaches.

### Management approach for stakeholders' concerned issues



### Response procedures for stakeholders' concerned issues

- ◆ Issues that are of concern to stakeholders are discussed in regular department meetings.
- ◆ All department heads report regularly to the senior management on stakeholders' concerned issues and future plans.
- ◆ Lanner has a CSR Committee that analyzes how each issue may pose risks and opportunities to the Company's operations.
- ◆ The CSR Committee reports to the senior management on material issues for the year, and proposes response solutions for the Company.
- ◆ A CSR professor from National Sun Yat-sen University has been invited to provide guidance on how each issue corresponds to the GRI Index, and how the sustainability report should be prepared.
- ◆ Sustainability report and news release are used as means to respond to stakeholders' concerned issues.

▼ Stakeholders' concerned issues and communication

Stakeholders	Concerned issues	Communication channels	Frequency of communication	Relevant records
Employees	Talent development	Labor-management meetings	Once a quarter	Labor-management meeting minutes
	Employment	Employee mailbox	Unscheduled	The issues discussed are tracked for subsequent development
	Occupational safety and health	Labor-management meeting, Occupational Safety and Health	Once a quarter Twice a year	Meeting minutes
	Talent sourcing and retention	Committee meeting	Once a quarter	Employee performance evaluation worksheet
	Welfare system	Employee performance evaluation	Unscheduled	Welfare committee meeting minutes
	Innovative R&D	Welfare committee meetings	Once a year	The issues discussed are tracked for subsequent development
	Code of Conduct	Internal and external website	Once a year	
Investors	Corporate governance	Employee satisfaction survey	Unscheduled	Online survey
	Operational prospect	Annual general meetings	Once a year	Shareholder meeting report, meeting manual, meeting minutes
	Economic performance	Company website	Once a year	
	Long-term strategy	Financial report Monthly revenue announcements	Once a year Unscheduled	Announcement of monthly revenues and news release on MOPS and company website
Government agencies	Regulatory compliance	CSR Report	Unscheduled	
	Corporate governance	Exchange of correspondence	Unscheduled	Correspondence
Customers	Product quality	Market Observation Post System, company website	Once a quarter	
	Non-discrimination	RBA audit	Once a year	Customers' audit records
	Environmental protection	Quarterly business meetings Customers' environmental protection requirements	Once a year Unscheduled	International standards/initiatives (RBA), meeting minutes
	Innovative product	Customer satisfaction survey	Once a year	Customers' specifications
	Customer relation	Compliance survey	Once a year	Customers' response records
	Cybersecurity	ISO27001 annual audit	Unscheduled	Customer survey sheet
	Customer service	Customers' supplier conferences	Upon addition of new supplier	External audit reports
	Suppliers	Corporate image	Company website	Once a year
Community/ Non-profit organizations	Sustainable supply chain	Documentary review	Once a year	Website information
	Conflict minerals	On-site audit	Unscheduled	Supplier contract
	Business integrity	Supplier integrity behaviors policy	Unscheduled	Supplier audit records
	Non-discrimination	Supplier training	Unscheduled	Agreements
Community/ Non-profit organizations	Community engagement	Charity events through foundation	Once a year	RBA Code of Conduct, training records
	Environmental protection	CSR Report	Unscheduled	Event plans, photos



# Identification and response of material topics

Lanner gathers a wide range of sustainability indicators to serve as measurement for best CSR practices. We have also determined our material topics by adopting a 4-step process: Identification, Prioritization, Validation, and Review.

## Step 1: Identification

The CSR Committee held a series of internal meetings and applied GRI Standards, TWSE's Corporate Governance Evaluation criteria, WEF Global Risks Report 2020, and local and foreign CSR assessment standards and sustainability indicators to compile a list of relevant topics that deserved to be addressed in this report.

## Step 2: Prioritization

In this stage, we adopted the 4 principles of GRI Standards to rank relevant topics by their significance.

1. Stakeholder Inclusiveness: The reporting organization shall identify its stakeholders, and explain how it has responded to their reasonable expectations and interests.
2. Sustainability Context: The report should disclose the organization's improvements and mitigation measures taken to address local or global economic, environmental and social trends over the long term.
3. Materiality: The report shall cover topics that reflect the reporting organization's significant economic, environmental, and social impacts, or substantively influence the assessments and decisions of stakeholders.
4. Completeness: Material topics should be disclosed with defined scope, boundary, and timing; information should be presented in an appropriate manner.

## Step 3: Validation

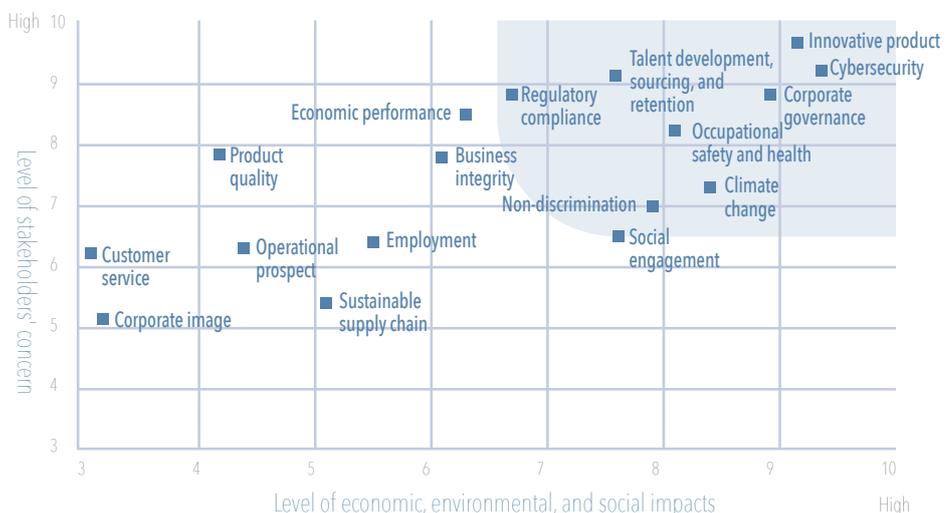
We performed internal validation to improve the quality of information disclosed, and in doing so deliver the six requirements of GRI Standards on Accuracy, Balance, Clarity, Comparability, Reliability, and Timeliness.

## Step 4: Review

Once the sustainability report has been published, the Company will continue gathering stakeholders' feedback, so as to prepare for the next reporting cycle.

The 2020 pandemic has stimulated digital transformation in the business world and the society at such a fast rate that cybersecurity risks have begun to surface. In light of this development, Lanner decided to include "Cybersecurity" as an additional material topic compared to the 2019 report; meanwhile, issues that are relatively stable and pose smaller risks to operations, such as: economic performance, indirect economic impacts, training and education, effluents and waste, anti-corruption, employment, labor-management relations etc. have been consolidated to maintain focus on certain issues. Overall, our material topics and boundaries have been redefined for 2020.

► Lanner Electronics 2020 Material Topics Matrix



Material topics and boundaries

● Impacts directly linked to    ■ Impacts caused/contributed to    ▲ Impacts through business relationships

Rank	Material topic	Importance to corporate operations	Stakeholders					
			Employees	Investors	Government agencies	Customers	Suppliers	Community/ non-profit organizations
1	Innovative product	<p>(1) Through research and development of innovative products, employees not only are able to improve professional skills, accumulate project experience, and develop internal as well as external communication/coordination of the project team, but also minimize the time and risks associated with future R&amp;D projects.</p> <p>(2) 5G brings potentials such as cloud computing and virtualization that allow carriers to forgo a close-ended system and instead adopt a hyper-converged dynamic programmable system can be adopted as part of the network infrastructure. This presents Lanner with the opportunity to market solutions directly to carriers under its own brand, which reduces operating cost for carriers while raising awareness and profitability of brand Lanner.</p> <p>(3) Through proprietary development of whitebox solutions for 5G networking, Lanner hopes to contribute to the growth of 5G industry in Taiwan and support downstream applications and services such as video streaming, unmanned vehicles, VR/IR, Industrial Internet of Things etc.</p> <p>(4) Making entry into the 5G market and increasing market share help maintain competitiveness and the technological capacity needed to sustain operations.</p>	●			■	▲	
2	Cybersecurity	Lanner is fully aware of the cybersecurity risks associated with the industry and has devised defensive plans to protect information against improper use, leakage, unauthorized modification, corruption, external influence, and attack, whether due to human error or natural disaster, and therefore ensure business continuity. By controlling the use of USB devices and promoting cybersecurity awareness through e-learning, the Company takes the initiative to reduce risk of disaster and strengthen customers' trust.		●		●	▲	
3	Corporate governance	Lanner enforces sound corporate governance for the long-term value and best interest of the organization as well as shareholders. Motivated by goals toward environmental protection, social care, human culture, and economic performance, the Company strives to protect the interests of all stakeholders and makes ongoing improvements to business performance.	■	●	■	▲	▲	
4	Talent development, sourcing, and retention	"A progressive learning environment is key to business success"; this has been the idea behind Lanner's motivation to offer a broad diversity of training courses from orientation, general knowledge, specialized skills, managerial skills, self-inspiration to online learning, and therefore ensure that every employee has the means to fulfill their desired career path. The Company also encourages employees to compete internationally and expand their visions through practice.	●		■			

● Impacts directly linked to    ■ Impacts caused/contributed to    ▲ Impacts through business relationships

Rank	Material topic	Importance to corporate operations	Stakeholders					
			Employees	Investors	Government agencies	Customers	Suppliers	Community/ non-profit organizations
5	Occupational safety and health	"Employees are the most important advantage to the Company." In order to realize its corporate visions and targets, Lanner is wholly committed to building a strong corporate culture of safety and enforcing occupational safety and health management as means to promote employees' physical and mental health in all aspects.	●		■			
6	Compliance	Compliance is a prerequisite for sustainable growth, one that Lanner upholds by adhering strictly to proper commercial practices and ethics, anti-corruption rules, and social/environmental regulations. In doing so, the Company hopes to develop good corporate culture and create an environment that enables businesses to thrive.	■	■	●	▲	▲	■
7	Climate change	Climate change-related risks and opportunities now pose a major concern for the sustainable growth of all businesses. Impacts of climate change on business operations will have to be carefully assessed, managed, and mitigated, and Lanner plans to adapt to climate changes by increasing the efficiency at which energy is used.	■	●	●		▲	■
8	Non-discrimination	Lanner envisions a harmonic, efficient, and friendly environment, and is dedicated to developing an employment system that addresses employees' interests, human rights, and best work practices. The Company also cares for employees' physical and mental health, and eliminates all forms of discrimination in the workplace.	●		■		▲	
9	Social engagement	Sustainability lies at the heart of Lanner's business philosophy. Inspired by the idea of giving back to the society, Lanner has devoted significant efforts into charity service for the local community, and by participating in and caring for social affairs, we hope to grow alongside our neighbors and contribute to the sustainability of the environment, the society, and the economy.			■			●



Management approach and assessment of material topics

Rank	Material topic	Policies and targets of management approach	Evaluation and performance of management approach	Corresponding GRI standard
1	Innovative product	<ul style="list-style-type: none"> <li>(1) Ultra-low latency 5G and MEC platform development project</li> <li>(2) LEAP lab and Intel lab cooperated in the development of remote immersive virtualization experience, offering: 1. Remote evaluation, 2. Technology Demo, and 3. Eco system onboarding services</li> <li>(3) Hyper-converged dynamic programmable system</li> </ul>	<ul style="list-style-type: none"> <li>(1) Through this project, Lanner hopes to develop a MEC platform and work with telecom carriers to create a versatile yet price-competitive 5G network system, and in doing so disrupt the oligopolistic competition currently dominated by large, international brands,</li> <li>(2) while at the same time reduce the high cost of deployment. The platform contributes to ongoing projects with customers and partners by: improving the efficiency of tests conducted, shortening the time taken for product development and launch, supporting sales efforts, enabling Remote POC, and allowing new technologies to be demonstrated for collaborative opportunities.</li> <li>(3) Lanner also provides a virtualization platform where multiple partners may engage in strategic alliance and tests to speed up project development.</li> <li>(4) A hyper-converged dynamic programmable system not only provides advanced networking functions to customers and operators, but also connects to multiple data points for total system management. Networking/communication product - NCA-1020 series won the 29th (2021) Taiwan Excellence Award. The</li> <li>(5) miniaturized design of NCA-1020 allows it to be carried inside a mobile medical kit, and by utilizing LTE connection, it brings high-quality remote healthcare service to remote locations. Lanner Electronics has R&amp;D teams stationed in Taipei, Hsinchu, and Beijing; the Company commits enormous amount of budget into product R&amp;D each year, and gained 17 patents in 2020 alone.</li> </ul>	Self-defined topic
2	Cybersecurity	<ul style="list-style-type: none"> <li>(1) Percentage of unlocked USB ports aimed to reduce to 4% in 2020.</li> <li>(2) Online promotion of cybersecurity policy</li> </ul>	<ul style="list-style-type: none"> <li>(1) Percentage of unlocked USB ports was reduced to 13% in 2020.</li> <li>(2) Cybersecurity policy is being promoted throughout the Company as part of e-learning.</li> </ul>	GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data
3	Corporate governance	<ul style="list-style-type: none"> <li>(1) Protect shareholders' interests. Enforce shareholders' rights to learn and participate in major issues within the Company</li> <li>(2) Enhance functionality of the board of directors. Diversity of board members is determined primarily based on two main concerns: character and value, and professional knowledge and skills</li> <li>(3) Support supervisor's role. Enhance risk management and financial/operational control within the Company.</li> <li>(4) Respect for stakeholders' interests. Maintain open communication channel and enforce stakeholders' legal rights by upholding principles of integrity.</li> <li>(5) Enhance information transparency. Create an open online reporting system and spokesperson system in accordance with laws to ensure that material information can be disclosed in a timely adequate manner.</li> </ul>	<ul style="list-style-type: none"> <li>(1) The Company convenes shareholder meetings once a year. The 2020 shareholder meeting was held on June 19 in Xizhi District, New Taipei City; this meeting allowed exercise of voting rights using electronic method.</li> <li>(2) The board consisted of 7 directors including 2 independent directors in 2020, one of whom was female. Board members were elected after taking multiple factors into consideration, including: decision-making capability, management skills, analytical skills in accounting and finance, crisis management, and industry knowledge.</li> <li>(3) The Company has complied with "Securities and Exchange Act" and created two supervisor positions, whose responsibilities are to audit business performance, financial position, execution of duties by employees, and investigation of illegal and negligent conducts.</li> <li>(4) The Company engages each category of stakeholders with a different approach. After gathering information on stakeholders' concerned issues, a sustainability report is published to disclose the organization's policies, management approaches, and performance in economic, environmental, and social aspects.</li> <li>(5) By supporting independence of the Remuneration Committee, making transparent disclosures of director/supervisor compensation, and enforcing board performance evaluation and board compensation reviews.</li> <li>(6) The Company ranked in the 4th tier (36% - 50%) of TWSE's 7th Corporate Governance Evaluation</li> </ul>	Self-defined topic

Rank	Material topic	Policies and targets of management approach	Evaluation and performance of management approach	Corresponding GRI standard
4	Talent development, sourcing, and retention	<ul style="list-style-type: none"> <li>(1) Enhance communication with employees through the use of employee satisfaction survey</li> <li>(2) Improve managers' management skills through the "manager training roadmap"</li> <li>(3) Build a learning organization and increase training hours for indirect labor (IDL).</li> <li>(4) In addition to classroom courses, the Company also promotes e-learning as a way to learn without the constraint of time and location.</li> <li>(5) Courses of alternative focus are being introduced to help employees achieve work-life balance and skill diversification.</li> </ul>	<ul style="list-style-type: none"> <li>(1) Lanner conducted its first employee satisfaction survey in 2020 as a means to "communicate with employees," "gather opinions and feedbacks," and "improve management approach," which complements the Company's PDCA cycle. Opinions gathered from the survey will provide reference for future directions and improvements.</li> <li>(2) A manager training roadmap supported by systematic training and compulsory/optional courses has been implemented, giving managers the ability to develop management skills and common language for the duties involved.</li> <li>(3) In 2020, the IDL program delivered 7,076.8 hours of training to 516 people in total, averaging 14.59 hours per person. e-Learning newsletters are distributed from time to time to</li> <li>(4) keep employees updated on and help them learn from current affairs. A total of 29 e-newsletters were issued in 2020.</li> <li>(5) Lanner organizes one arts/human culture/skill development course per month to expand employees' learning horizon. Examples of these activities include: DIY Chinese New Year decorations, uses of natural vanilla, painting, performance viewing at National Theater &amp; Concert Hall, and macaron making for Christmas. The Company also encourages employees to participate in cultural and arts activities, and a total of 150 people took part in Christmas charity concert in 2020.</li> </ul>	<p>GRI 404-1 Average hours of training per year per employee</p> <p>GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees</p>
5	Occupational safety and health	<ul style="list-style-type: none"> <li>(1) Enforcement of tier-based health management</li> <li>(2) Reducing workers' operating hazards and risks</li> <li>(3) Employee health promotion</li> </ul>	<ul style="list-style-type: none"> <li>(1) Monitor and assess workers' work environment as well as risk exposure, and improve hazard controls to provide workers with a more comfortable and healthy work environment.</li> <li>(2) All new organic solvents introduced to production must be analyzed, evaluated, and discussed for potential risks during storage, use, and disposal. Adequate control measures and protections should then be implemented to minimize risk of accident, and reduce or prevent adverse impact on employees' health.</li> <li>(3) Health promotion activities such as weight loss challenge, basketball tournament, hiking etc. are being organized to facilitate inter-department interaction, and to create a healthy work environment that contributes toward employees' health while lowering attrition and absenteeism rates.</li> </ul>	<p>GRI 403-8 Workers covered by an occupational health and safety management system</p>
6	Compliance	<ul style="list-style-type: none"> <li>(1) Adhere to corporate governance principles</li> <li>(2) Conform with RBA guidelines</li> <li>(3) Zero violation</li> <li>(4) Regularly identify applicable laws; monitor and ensure compliance with the latest regulations in a timely manner</li> </ul>	<ul style="list-style-type: none"> <li>(1) Shareholders elect a board of directors, and functional committees are assembled under the board to support directors' duty.</li> <li>(2) New recruits are required to sign commitments to integrity behavior and anti-corruption when reporting to duty, and must be re-trained on a yearly basis to enhance ethical awareness.</li> <li>(3) Lanner was not fined for any violation against environmental, environmental, or social regulation in 2020, and neither was it involved in any legal suit concerning anti-competitive, anti-trust, or monopolistic behavior.</li> <li>(4) The Company evaluates compliance with Occupational Safety and Health Act, Fire Services Act, Ionizing Radiation Protection Act, applicable environmental protection laws, and customers' requirements, and in doing so ensures compliance of its operations.</li> </ul>	<p>GRI 307-1 Non-compliance with environmental laws and regulations</p> <p>GRI 419-1 Non-compliance with laws and regulations in the social and economic area</p>

Rank	Material topic	Policies and targets of management approach	Evaluation and performance of management approach	Corresponding GRI standard
7	Climate change	<ul style="list-style-type: none"> <li>(1) Development of innovative wide temperature range products</li> <li>(2) Development of climate change backup plans</li> <li>(3) Execution of climate change mitigation actions</li> <li>(4) Support and participation in environmental protection activities</li> </ul>	<ul style="list-style-type: none"> <li>(1) Products featuring industrial wide temperature range standards such as R6S, LEC-6032C, and NCR-1567 have been developed in response to extreme climate.</li> <li>(2) Lanner has established collaborative relationships and signed outsourcing contracts with key manufacturers in Taiwan to designate them as backup factories. In the event of a disaster, their production capacity will help Lanner sustain operations.</li> <li>(3) Lanner contributes to the mitigation of climate change by supervising energy and carbon reduction within the organization, and surveying greenhouse gas on a voluntary basis.</li> <li>(4.1) Lanner Culture and Education Foundation co-hosted a coastal cleanup event with Hao Shi Social Enterprise in 2020, during which the Chairman led 25 employees and family members to clean up Wang Kung Fishing Port. Support for Vanilla Farm Sponsorship Program. Through the Safe Farming Education Program, Lanner purchased 3,000kg of safely farmed rice and organized 3 farm experience events for a total participant count of 40.</li> <li>(4.2) Small farmers are invited to set up stalls and sell eco-friendly produce every Friday at the 1F lobby.</li> <li>(4.3)</li> <li>(4.4)</li> </ul>	GRI 305-5 Reduction of GHG emissions
8	Non-discrimination	<ul style="list-style-type: none"> <li>(1) Lanner follows RBA's worker standards and ensures that all worker-related policies and management practices conform with human rights and principles of justice.</li> <li>(2) Lanner strives to maintain a gender-equal workplace and enforce gender-equal treatments</li> </ul>	<ul style="list-style-type: none"> <li>(1) There was no incident of child labor, slavery, labor trafficking, or forced labor in 2020. Corresponding amendments have been made to the employee handbook, and more emphasis is being placed on foreign workers' wellbeing by respecting religious activities, returning agency commissions, enhancing communication, and providing compliant dormitories.</li> <li>(2) Lanner strives to provide equal pay and equal opportunities for employees engaged in the same line of work; in comparison, basic salary between female and male employees was 1:1 in 2020.</li> </ul>	GRI 406-1 Incidents of discrimination and corrective actions taken
9	Social engagement	<ul style="list-style-type: none"> <li>(1) Values of UN SDGs are being enforced within the organization</li> <li>(2) Values of UN SDGs are being conveyed outside the organization and into the campus, thereby bringing sustainability values into living activities and studies</li> </ul>	<ul style="list-style-type: none"> <li>(1) Lanner received Tier 3 Award in the "2020 Buying Power - Social Innovative Procurement Award" organized by the Small and Medium Enterprise Administration, Ministry of Economic Affairs, which was indicative of the Company's efforts toward SDG 12 - Responsible consumption and production.</li> <li>(2) Lanner received certificate of appreciation from New Taipei City Education Department in 2020 for excellence in teaching support. The Company engaged certified instructors to host courses on lifestyle issues and possible ways to resolve the society's problems, using board game - "My Formosa" as the teaching material.</li> </ul>	GRI 203-1 Infrastructure investments and services supported



# Supplier sustainability management

Lanner upholds sustainability as its business philosophy and commits to maintain stable and growing relationship with supply chain partners. In addition monitoring suppliers' quality and services, issues including supply chain risk, conflict minerals, local purchase, and business continuity are also being addressed as part of our supplier sustainability management. It is our goal to work with business partners toward mitigating supply risks. With the support of a sustainable supply chain, we shall contribute to environmental protection, social security, and business integrity to better fulfill our corporate social responsibilities.

## Supplier policies

Lanner requires all suppliers to sign Business Partner Safety Statement, Conflict-free Mineral Statement, Supplier and Employee Integrity Code of Conduct, Anti-corruption Guidelines, and "Supplier Commitment to Refrain Use of Prohibited and Restricted Substances," and provide supporting documents to show that all products or components supplied, including accessories, packaging materials and parts, are fully compliant with RoHS, WEEE, and the Company's "Prohibited and Restricted Substance Content and Testing Procedures." The Company may terminate supply contract with partners that fail to comply with rules, and by strictly enforcing the above, we exert influence over our suppliers to take pro-active steps toward corporate social responsibilities.

### Requirements for new suppliers

In addition to imposing strict requirements on suppliers' performance and quality, all suppliers are required to sign Anti-corruption Guidelines, Commitment to Prohibition against Conflict Minerals, and Supply Chain Safety Policy before commencing business relationship in order to ensure that they are aware of our expectations with regards to social and environmental responsibilities. All new suppliers are required to sign "RoHS Self-declaration" before commencing business relationship, whereas existing suppliers are also requested to furnish the same declaration. The Company's internal auditors are being assigned to review the abovementioned documents. Assistance is offered to suppliers that do not meet the requirements. Meanwhile, we maintain regular contact with suppliers and conduct annual audits, unscheduled surveys etc. to make sure that they keep up the expected standards. Suppliers that do not meet the requirements will be instructed to make satisfactory improvements within a given time. If improvements cannot be made to satisfaction, Lanner will look for other suppliers that meet our moral and environmental protection standards.

### ▼ RoHS Self-declaration

機密 Confidential 限閱 Restricted 一般 General

#### RoHS 自我宣告書 RoHS Declaration of Conformity

1. \_\_\_\_\_ (以下稱本公司)特此保證售予貴公司之所有產品,皆符合歐盟(EU)2015/863 指令與立端 QD-B09 環境禁限用物質含量與測試標準作業程序關於 RoHS 之規範要求

\_\_\_\_\_ (Company name) declares that all products sold to the company, are complied with European Union RoHS Directive (EU) 2015/863 requirement & Lanner QD-B09 The restriction of the use of certain hazardous substance control processes.

2. 本公司同意因本保證書或與本保證書相關事宜有所爭議時,雙方宜友好協商,達成協議。

Our company agrees that both parties shall settle any dispute arising from or in connection with this Declaration of Conformity by friendly negotiations.

No.	限制物質	Restriction Substance (Full name)	Restriction Substance	Content (wt% or ppm)
1	鉛及鉛化合物	Lead and lead compounds	Pb	< 1000PPM
2	鎘及鎘化合物	Cadmium and cadmium compounds	Cd	< 100PPM
3	汞及汞化合物	Mercury and mercury compound	Hg	< 1000PPM
4	六價鉻	Hexavalent chromium	Cr 6+(VI)	< 1000PPM
5	多溴聯苯	Polybrominated biphenyls	PBB	< 1000PPM
6	多溴二苯醚	Polybrominated diphenyl ethers	PBDE	< 1000PPM
7	鄰苯二甲酸二異丁酯	Diisobutyl phthalate	DIBP	< 1000PPM
8	鄰苯二甲酸二(2-乙基己基)酯	Bis(2-ethylhexyl) phthalate	DEHP	< 1000PPM
9	鄰苯二甲酸二丁酯	Dibutyl phthalate	DBP	< 1000PPM
10	鄰苯二甲酸甲苄基丁酯	Butyl benzyl phthalate	BBP	< 1000PPM

### Supplier consolidation and local purchases

Lanner makes local purchases where possible, as doing so not only stimulates business activities and economic development, but also reduces pollution from transportation, saves unnecessary transportation costs, and lowers overall carbon footprint. Supplier categories include: materials manufacturers, materials distributors, contractors, and others (consultants, mold producers, service providers...). There had been no material change in the Company's relationship with supply partners during the reporting period.

### Tiered supplier evaluation

Lanner has devised a "Supplier Management Policy" to achieve effective management of suppliers. Under this policy, all suppliers are evaluated for attainment of third-party certification. Third-party certification includes but is not limited to the following systems: ISO 9001 - Quality management system, IECQ 08000 - Hazardous Substance Process Management, ISO14001 - Environmental Management System, ISO 45001 - Occupational health and safety system, ISO 28000 - Supply chain security management, Authorized Economic Operator (AEO), and C-TPAT. Suppliers are assigned one of four grades (P/A/C/U) based on the outcome of the evaluation; suppliers that fail the evaluation are required to make improvements within a given time or banned from further dealing. Below are outcomes of supplier evaluation in the last three years:

Year \ Grade	Grade A: 80-100	Grade B: 70-84	Grade C: 60-71	Grade D: below 60
	Preferred Vendor List	Acceptable	Conditionally Acceptable	Unacceptable
2018	4 (31%)	6 (46%)	3 (23%)	0 (0%)
2019	22 (56%)	7 (18%)	9 (23%)	1 (3%)
2020 H1	23 (79%)	5 (17%)	1 (4%)	0 (0%)
2020 H2	25 (61%)	15 (37%)	1 (2%)	0 (0%)

## Supplier sustainability audit and assessment

Lanner encourages and requires all suppliers to share CSR burdens and incorporate sustainability issues as part of their management. By having suppliers contribute individually to environmental protection, we as a supply chain will be able to exert greater influence. For the sustainability of the supply chain, the Company conducts documentary or on-site audit either regularly or on an ad-hoc basis, by itself or through an independent third party, according to its supplier management system. We would provide counseling for suppliers that do not exhibit satisfactory performance and help them develop improvement measures, for which they are expected to complete within a given time. We will audit suppliers on the improvements made, and continue following up on defects that we have highlighted; those that are unable to make the required improvements will be removed from the Company's list of approved suppliers.

The Company assesses supply chain partners on the following four main aspects:

- 1/** QSA (Quality System Audit): Focuses on documentation of the quality system.
- 2/** QPA (Quality Process Audit): Focuses on process documentation, material certification, equipment/procedure standardization, analysis of defects, and environment safety. Applies to PCB/ Chassis / EMS suppliers.
- 3/** CSR (Corporate Social Responsibility) audit: Lanner conducts audits based on the 5 aspects of RBA, namely Labor, Health & Safety, Environmental, Management System, and Ethics.
- 4/** HSF (Hazardous Substances Free)audit: Focuses on Hazardous Substances Management System, Parts Approval and Supplier Management System, and Process Management System.

In 2020, we conducted QPA on 22 suppliers, of which 13 were rated excellent and 9 were rated satisfactory; as for QSA, we assessed 7 suppliers, of which 4 were rated excellent and 3 were rated satisfactory; in terms of CSR audit, we assessed 23 suppliers, of which 19 were rated excellent and 4 were rated satisfactory; in terms of HSF audit, we assessed 22 suppliers, of which 16 were rated excellent and 6 were rated satisfactory.



# Environmental friendliness and green products

- Environment friendliness principles
- Risks and opportunities of climate change
- Energy/resource management
- Green product and solutions
- Waste treatment

## Environmental goals and performance

### 2020

Goal

- To reduce 2020 overall carbon emission by 0.47 kg/NT\$1,000 of revenue, or 11.3% year-on-year.
- To reduce the volume of waste generated by the Company and keep additional waste treatment cost to less than NT\$200 per NT\$10 million of revenue.

Performance

- Overall carbon emission in 2020 was calculated at 0.47 kg/NT\$1,000 of revenue, down 11.3% year-on-year.
- Average waste treatment cost per NT\$10 million of revenue was 1.94%

### 2021

Goal

- To reduce the volume of waste generated by the Company and decrease additional waste treatment cost per NT\$10 million of revenue by 1.90%.

## Environment friendliness principles

Motivated by the idea of protecting the environment and giving back to the society, Lanner actively promotes green products and has created an environmental safety and health management system in accordance with ISO14001 and OHSAS18001 standards. From product, raw materials, production, prohibition of hazardous substances to waste management, the Company complies strictly with relevant rules and requirements and lives up to its commitment as a green enterprise.

1. Governance: Lanner has a specialized legal affairs department that is responsible for consolidating laws, rules, and requirements on producers' liabilities from various countries in the EU, and ensuring that products do conform with RoHS directives and standards of relevant countries before they are sold.
2. Product: Energy efficiency and environment friendliness are taken into consideration and strictly enforced during product design and manufacturing. The Company adopts environment-certified production procedures and strives to reduce use of hazardous substances, while making sure that all products and production procedures do conform with relevant standards and laws.
3. Management: The Company has passed certification for ISO 14001 - Environmental Management System and IECQ QC080000 - Hazardous Substance Process Management, complies with RoHS, REACH, and WEEE directives and the 3R principles, and plans to introduce ISO45001 to replace OHSAS 18001 - Occupational Health and Safety Management System

On June 4, 2015, the EU announced Directive (EU) 2015/863 that amended Annex II - Restriction of Hazardous Substances of RoHS Directive 2011/65/EU, adding 4 phthalates to the list of restrictions. The new restrictions have taken effect since July 22, 2019. Since July 1, 2019, all of Lanner's products have conformed with EU RoHS Directive 2011/65/EU and the amended (EU)2015/863.

Restricted substances	Limit	Directive requirements
Lead (Pb)	0.1% (1000 ppm)	2011/65/EU
Cadmium (Cd)	0.01% (100 ppm)	
Mercury (Hg)	0.1% (1000 ppm)	
Hexavalent Chromium (Cr6+)	0.1% (1000 ppm)	
Polybrominated biphenyls (PBBs)	0.1% (1000 ppm)	
Polybrominated diphenyl ethers (PBDEs)	0.1% (1000 ppm)	
Bis (2-ethylhexyl) phthalate (DEHP)	0.1% (1000 ppm)	(EU) 2015/863
Butyl benzyl phthalate (BBP)	0.1% (1000 ppm)	
Dibutyl phthalate (DBP)	0.1% (1000 ppm)	
Diisobutyl phthalate (DIBP)	0.1% (1000 ppm)	

## Raw material control practices that conform with RoHS and REACH

RoHS is a set of mandatory standards imposed by the EU that took effect on July 1, 2006. On June 4, 2015, the EU announced Directive (EU) 2015/863 that included an amendment to Annex II - Restriction of Hazardous Substances of RoHS Directive 2011/65/EU. The standard is mainly to regulate the quality of materials and technology in electronic and electrical products for better protection of health and the environment. The purpose of the standard is to eliminate the presence of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr6+), polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), and 4 phthalates (DEHP, BBP, DBP, DIBP) for a total of 10 toxic/hazardous substances.

This raw material retake system requires support from suppliers, which is why we have implemented "Supplier Commitment to Refrain Use of Prohibited and Restricted Substances" in 2017 that requires suppliers to disclose 2 major details: (1) "Material weight," and (2) Exact figures to the third decimal place, e.g.: 0.001g. The Company requires all raw material suppliers to sign "Supplier Commitment to Refrain Use of Prohibited and Restricted Substances," and has recovered signed documents from 100% of suppliers.

In addition, we conduct random inspections on our raw materials using XRF by following our "Input Material Inspection Procedures." Below is a description of the test categories and test standards involved:

Restriction substances (Chinese)	Restriction Substance (Full name)	Restriction Substance	Content (wt% or ppm)
(1)鉛及鉛化合物	Lead and lead compounds	Pb	< 1000 PPM
(2)鎘及鎘化合物	Cadmium and cadmium compounds	Cd	< 100 PPM
(3)汞及汞化合物	Mercury and mercury compound	Hg	< 1000 PPM
(4)六價鉻	Hexavalent chromium	Cr 6+(VI)	< 1000 PPM
(5)多溴聯苯	Polybrominated biphenyls	PBB	< 1000 PPM
(6)多溴二苯醚	Polybrominated diphenyl ethers	PBDE	< 1000 PPM
(7)鄰苯二甲酸二異丁酯	Diisobutyl phthalate	DIBP	< 1000 PPM
(8)鄰苯二甲酸二(2-乙基己基)酯	Bis(2-ethylhexyl) phthalate	DEHP	< 1000 PPM
(9)鄰苯二甲酸二丁酯	Dibutyl phthalate	DBP	< 1000 PPM
(10)鄰苯二甲酸甲苯基丁酯	Butyl benzyl phthalate	BBP	< 1000 PPM



We also have "Production Testing Procedures" in place to control the presence of hazardous substances in our production process. IECQ QC080000 is implemented throughout all factories, and managers are adequately trained to monitor and control all production procedures that contain possible contaminants such as Pb, Sn, and halogen.

A printed circuit board assembly (PCBA) line typically involves mounting electronic components onto PCB using solder paste, a process known as Surface Mount Technology (SMT). To ensure a "lead-free process," Lanner invested in the purchase of Lead Free certified reflow oven.

- ▼ The solder paste used for surface mount technology (SMT) also conforms with RoHS requirements.
- ▼ Lead Free certified reflow oven

測試報告

Test Report

號碼(No.): CE/2019/12996 日期(Date): 2019/01/18 頁數(Page): 1 of 6

阿爾登金屬化工股份有限公司  
ALPHA ASSEMBLY SOLUTIONS (TAIWAN) LIMITED  
桃園市蘆竹區崑山路二段12巷20號  
NO. 20, LANE 12, SEC. 2, NAN-SHAN RD., LUZHU DISTRICT, TAOYUAN CITY, 33860 TAIWAN

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):  
送樣廠商(Sample Submitted by): 阿爾登金屬化工股份有限公司 (ALPHA ASSEMBLY SOLUTIONS (TAIWAN) LIMITED)  
樣品名稱(Sample Description): Sn/Ag Solder  
樣品型號(Style/Item No.): SAC300 Solder - SAC300 Solder - Sn90Ag1 Solder - Sn97.5Ag2.5 Solder - Sn96.5Ag3.5 Solder - Sn96Ag4 Solder - Sn95Ag5 Solder - SAC300 Solid Wire - Sn96.5Ag3.5 Solid Wire  
收件日期(Sample Receiving Date): 2019/01/11  
測試期間(Testing Period): 2019/01/11 to 2019/01/18

測試結果(Test Results)

測試部位(PART NAME)No. 1 : 銀色金屬 (SILVER COLORED METAL)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法檢測 極限值 (MDL)	結果 (Result)		限值 (Limit)
				No.1		
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n.d.	100	
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	52.1	1000	
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4 (2013), 以感應耦合電漿原子發射光譜儀檢測。 / With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n.d.	1000	
六價鉻 / Hexavalent Chromium Cr(VI)(#2)	µg/cm <sup>2</sup>	參考IEC 62321-7-1 (2015), 以UV-VIS 檢測。 / With reference to IEC 62321-7-1 (2015) and performed by UV-VIS.	0.10	n.d.	-	
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3050B (1996), 以感應耦合電漿原子發射光譜儀檢測。 / With reference to US EPA 3050B (1996). Analysis was performed by ICP-AES.	2	n.d.	-	



Lanner Electronics observes requirements of the EU and prohibits use of chemicals that contain hazardous substance - n-hexane. In addition to conducting thorough checks on the presence of such substance, the Company has also replaced cleaning agent C-300 with TD-15 that does not contain n-hexane, and in doing so assures the quality of production procedures as well as the safety of plant personnel.

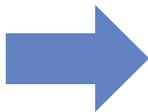
安全資料表  
NO. C300\_300

一、化學品與廠商資料  
化學品名稱: ANW100 噴霧化學物清潔劑 C-300  
其他名稱: NO. C3001-300  
建議用途及限制使用: SMT鋼網清潔、PCB除漆清潔、設備機台保養清潔、沖壓機具油清潔、膠網清潔、檢查清潔

製造者、輸入者或供應商: 嘉品企業有限公司/康諾貿易有限公司  
地址: 高雄苓雅區山區路45號/桃園龜山鄉龍崗三街78巷5號  
電話: (07)581-7917/(03)348-4188  
傳真: (07)581-0289/(03)348-4170  
緊急聯絡電話: 07-5817917/03-3484188

二、危害辨識資料  
化學品危害分類: 易燃液體第2級、腐蝕/刺激皮膚物質第3級、水環境之危害物質第2級、吸入性危害物質第1級  
標示內容:  
象徵符號: 火焰、驚嘆號、健康危險、環境  
警告語: 危險  
危害警告訊息:  
高度易燃液體和蒸氣  
吞食可能有害  
造成嚴重皮膚刺激  
造成嚴重眼刺激  
危害物接觸點:  
置容器於通風良好的地方  
遠離引燃品-禁止抽煙  
避免與眼睛接觸  
勿倒入排水溝  
防止靜電  
其他危害:-

三、成分辨識資料  
混合物:  
化學性質: 烴類, C-C  
危害物質成分之中文名稱: 烴類或烴類範圍(成分百分比)  
烴類化合物 Hydrocarbon 100 %



SDS 安全資料表

一、化學品與廠商資料  
化學品名稱: TD15  
其他名稱: GREEN CLEANER  
建議用途及限制使用: PCB維修清潔、檢查清潔  
製造者、輸入者或供應商名稱、地址及電話: 遠程有限公司  
地址: 桃園八德區東勇街20號1樓  
電話: (03)374-2735  
傳真: (03)374-2581  
緊急聯絡電話/傳真電話: (03)374-2735/(03)374-2581

二、危害辨識資料  
化學品危害分類: 易燃液體第2級、腐蝕/刺激皮膚物質第3級、水環境之危害物質(急性)第2級、吸入性危害物質第1級、嚴重損傷/刺激眼睛2A級  
標示內容:  
象徵符號: 火焰、驚嘆號、健康危險  
警告語: 危險  
危害警告訊息:  
高度易燃液體和蒸氣  
吞食可能有害  
造成嚴重皮膚刺激  
造成嚴重眼刺激  
危害物接觸點:  
置容器於通風良好的地方  
遠離引燃品-禁止抽煙  
避免與眼睛接觸  
勿倒入排水溝  
防止靜電  
其他危害:-

三、成分辨識資料  
混合物:  
危害成分之中文名稱 化學文摘社登記號碼(CAS No.) 濃度或濃度範圍(成分百分比)  
甲基環己烷(Methyl cyclohexane) 108-87-2 60-80%  
異丙醇 (ISOPROPYL ALCOHOL) 67-63-0 20-40%

四、急救措施

## Compliance with WEEE

The European Union first announced the WEEE (Waste Electrical and Electronic Equipment) Directive out of concern that electronic and electrical equipment are the fastest growing source of waste in the EU, and that they contaminate the soil and groundwater with hazardous substances, posing threats to consumers' health. Purposes of WEEE are to reduce the volume of e-waste, promote sustainable production and consumption, improve environmental protection performance of electronic/electrical equipment throughout the entire life cycle, and encourage reuse, recycling and recovery of electronic and electrical equipment. To promote WEEE awareness, we will be introducing a special column titled "E-waste Treatment" that brings the public's attention to the pressing issue of e-waste recycling.

WEEE demands manufacturers/suppliers of the 6 main categories of electrical and electronic product circulating in the EU to assume responsibility in the recycling and reuse of E-waste through a preventive approach, and thereby maintain, protect and improve the current environment as well as human health. WEEE also promotes reasonable and cautious use of natural resources. WEEE mainly regulates manufacturers and recyclers, and holds Lanner responsible for proper treatment of electrical and electronic products, as well as ensuring that used products are recycled at the percentage specified by WEEE. Through reuse and recycling, WEEE aims to minimize the volume of waste produced.

## Adherence to the 3R principles

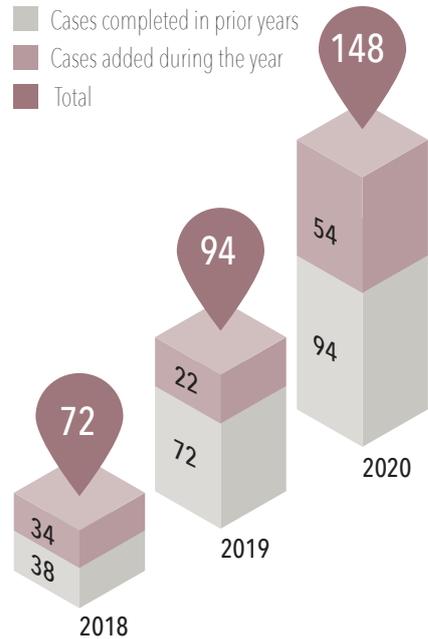
As an electronics manufacturer, Lanner actively explores ways to reduce use of raw materials and resources.

In conformity with WEEE and industry trends, we introduced a raw material inventory retake system in 2017 that enables us to classify raw materials instantaneously into (1) Reuse, (2) Recycling, and (3) Recovery categories. A total of 11,200 raw material recoveries were made in 2019, up 9,901 compared to 2018, and a total of 14,179 raw material recoveries were made in 2020, up 2,979 compared to 2019.

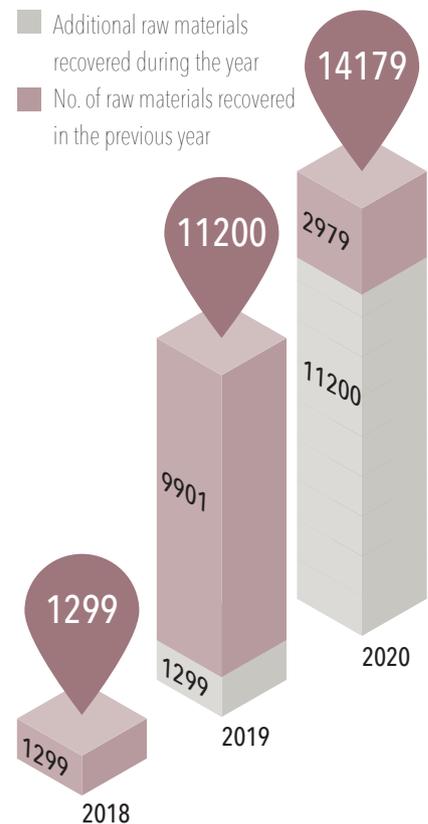
### WEEE 2012/19/EU-Definitions

Reuse	Recycling	Recovery
Operation by which WEEE or components thereof are used for the same purpose for which they were conceived, including the continued use of the equipment or components thereof which are returned to collection points, distributors, recyclers, or manufacturers.	Reprocessing in a production process of the waste materials for the original purpose or for other purposes.	Any of the applicable operations provided for in Annex IIB to Directive 75/442/EEC
<ul style="list-style-type: none"> <li>◆ Power Supply</li> <li>◆ HDD</li> <li>◆ DRAM MODULE</li> <li>◆ Adapter</li> <li>◆ Fan</li> <li>◆ Assembly CPU</li> <li>◆ Cable</li> <li>◆ Ethernet Card</li> <li>◆ Flash Card</li> </ul>	<ul style="list-style-type: none"> <li>◆ Packing</li> <li>◆ SHEET METAL / METAL</li> <li>◆ Plastic</li> <li>◆ Rubber</li> <li>◆ Manual</li> <li>◆ Heat SINK</li> <li>◆ BIOS Sticker</li> </ul>	<ul style="list-style-type: none"> <li>◆ PCB</li> <li>◆ Resistor</li> <li>◆ Transistor</li> <li>◆ Capacitor</li> </ul>

▼ Cumulative number of WEEE cases completed by year



▼ "Recovery" was added to the raw material system



# Risks and opportunities of climate change

A Corporate Social Responsibilities Committee has been assembled to oversee matters concerning corporate governance and CSR, and to protect company assets as well as the interests of stakeholders. The committee has four main task forces responsible for corporate governance, employee care, environmental care, and green development affairs. Furthermore, a set of corporate social responsibilities code of conduct has been established to guide internal compliance, and to support progress on economic, environmental, and social aspects for the sustainability of the organization. The world has seen increasing severity of disasters and losses as a result of climate change in recent years. Taiwan, given its distinctive geographical characteristics and location, is especially prone to frequent earthquakes, Typhoon, and rainfall, which therefore makes climate a major risk concern and issues such as climate regulations and climate-induced disasters some of the most pressing issues. Lanner Electronics has been trying to mitigate the impacts of climate change on its operations through enforcement of internal rules and education, development of low-energy products, compliance with green regulations, and supply chain certification. Full-scale risk assessments are being conducted to help plan proper responses in the future.

The Company has adopted the framework introduced by "Task Force on Climate-related Financial Disclosures (TCFD) and developed its own suggestions for voluntary disclosure of climate-related financial information. The TCFD framework has enabled the Company to gather prospective financial information on potential impacts for decision-making, identify the risks and opportunities involved while transitioning into low-carbon economy, and evaluate climate-related risks and opportunities at greater precision.

## Climate-related financial disclosures

Framework	Lanner's action plans
Governance	<ul style="list-style-type: none"> <li>◆ Lanner currently does not have a separate panel that is dedicated to addressing climate change issues. Given the particular nature of the industry, the Company has assigned its CSR Committee and members of the Risk Assessment Department to investigate how each of the environmental and climate issues may affect the organization and its stakeholders. Aside from identifying climate change risks and devising response measures, the Company also takes the initiative to improve its environmental management system in compliance with regulations.</li> <li>◆ Current year's CSR performance, along with next year's goals for various issues including climate change, are reported to the Audit Committee (created directly under the board of directors) on a yearly basis.</li> </ul>
Strategy	Actively market green products that conform with environmental protection requirements and certifications including RoHS, WEEE, and REACH; aim to reduce raw materials, production resources, and waste; and achieve energy/carbon reduction goals through smart factory plans, emission reduction practices, and energy monitoring systems. From a medium and long-term perspective, Lanner will enforce its performance, management, and training systems and cooperate with non-profit organizations to incorporate sustainability values into the corporate culture. Steps will also be taken to enhance environmental protection and sustainability awareness throughout the organization.
Risk management	The Company has assembled a risk assessment team to assesses organizational risks on a regular basis, which in turn prevents potential impacts or risks of extreme weathers on the Company's operations. The team also pays close attention to climate change and responds with relevant policies and goals. The Company assesses climate change risks as well as potential financial impacts based on TCFD principles; furthermore, it engages business partners in collaborative, outsourcing, and backup arrangements to allow the flexibility, responses, and measures needed to address risks.
Indicators and targets	<ul style="list-style-type: none"> <li>◆ Ongoing certification of management systems such as ISO14001 and IECQ QC 080000 for business sustainability.</li> <li>◆ Enforcement of green factory initiative as a way to increase energy/resource efficiency for the Company and its customers, and lessen environmental impact through reduction of carbon, waste, and water usage.</li> <li>◆ Create green supply chain, sign sustainability agreements with suppliers, enforce the 3R principles, and comply with green regulations.</li> </ul>



## Climate-related risks and financial impacts for Lanner Electronics

Category	Climate-related risks	Potential financial impacts	Actions taken in 2020
Transition risk	<b>Policies and regulations</b> <ol style="list-style-type: none"> <li>1. Change of domestic/foreign policy or regulation</li> <li>2. Laws and standards on product energy efficiency</li> <li>3. Climate-related litigations</li> </ol>	<ol style="list-style-type: none"> <li>1. Increased operating costs (such as increase in administrative, raw material, and parts cost)</li> <li>2. Policy changes (such as carbon pricing) may result in the write-off and early impairment of existing assets</li> <li>3. Fines and adverse judgments may increase costs or decrease demand for products and services</li> </ol>	<ul style="list-style-type: none"> <li>◆ Proactive engagement with government authorities, organizations, and relevant stakeholders for close monitoring of regulatory changes</li> <li>◆ Enforce internal energy management and data monitoring</li> <li>◆ Introduce high-performance, low-energy, and green energy-based products</li> <li>◆ Create green supply chain and conduct supplier audit</li> <li>◆ Execute energy and carbon reduction strategy</li> <li>◆ Carbon emission in 2020 reduced by 1.13%</li> </ul>
	<b>Technology</b> <ol style="list-style-type: none"> <li>1. Failed investment in new technologies</li> <li>2. Cost of transition to low-carbon technology</li> <li>3. Replacement of existing products and services with low-carbon alternatives</li> </ol>	<ol style="list-style-type: none"> <li>1. Capital investment in development of new technologies</li> <li>2. Increased R&amp;D spending on alternative technologies or products</li> <li>3. Reduced demand for products or services</li> <li>4. Cost of transition to renewable energy</li> <li>5. Cost of new process management</li> </ol>	<ul style="list-style-type: none"> <li>◆ Market green products that emphasize on conformity with standards, higher energy efficiency, and recyclability and reduction of hazardous substances for improved green competitiveness</li> <li>◆ Prohibition against conflict minerals throughout the supply chain</li> </ul>
Physical risk	<b>Immediacy</b> <ol style="list-style-type: none"> <li>1. Extreme weather conditions increase power usage and risk of power outage at peak hours</li> <li>2. Severity of disasters caused by extreme weathers such as typhoon and heavy rain continues to rise</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduced production capacity due to disruption of operations (such as production halt, difficulty in transportation, supply chain disruption etc.)</li> <li>2. Impairment or premature write-off of assets poses additional infrastructure costs</li> <li>3. Impact on workers' safety and attendance causes businesses to incur additional costs on maintaining safety</li> </ol>	<ul style="list-style-type: none"> <li>◆ Progressive replacement of outdated and energy-intensive equipment</li> <li>◆ Collaborative, outsourcing, or backup arrangement with business partners</li> <li>◆ Establishment of environmental safety and health management system in accordance with ISO 14001 and ISO 45001</li> <li>◆ Implementation of green factory and energy monitoring system</li> <li>◆ Support of smart farming project</li> </ul>
	<b>Long-term</b> <p>Long-term climate changes such as: rising temperatures, change of regional rainfall patterns, rising sea levels, and prolonged heat wave.</p>		



## Climate-related opportunities and financial impacts for Lanner Electronics

Category	Climate-related opportunities	Potential financial impacts	Actions taken in 2020
<b>Resource efficiency</b>	<ol style="list-style-type: none"> <li>1. GHG reduction</li> <li>2. Recycling and reuse</li> <li>3. Digital documentation</li> <li>4. Progressive replacement of energy-intensive equipment</li> <li>5. Reducing water usage and wastage</li> </ol>	<ul style="list-style-type: none"> <li>◆ Increased operating costs (such as increase in administrative, raw material, and parts cost)</li> <li>◆ Policy changes (such as carbon pricing) may result in the write-off and early impairment of existing assets</li> <li>◆ Fines and adverse judgments may increase costs or decrease demand for products and services</li> </ul>	<ul style="list-style-type: none"> <li>◆ Lanner adopts energy and carbon reduction strategies that aim to reduce waste at the source. By sorting waste and promoting proper awareness, the Company has been able to increase the percentage of resources recycled and reused.</li> <li>◆ Enforcement of energy performance management</li> <li>◆ Purchase of FSC-certified paper</li> <li>◆ Overall carbon emission in 2020 was calculated at 0.43 kg/NT\$1,000 of revenue, down 1.13% year-on-year.</li> </ul>
<b>Source of energy</b>	<ol style="list-style-type: none"> <li>1. Use of low-carbon energy sources</li> <li>2. AI-assisted energy-efficient factory</li> </ol>	<ul style="list-style-type: none"> <li>◆ Reduced operating costs</li> <li>◆ Improved operating efficiency and yields</li> <li>◆ Reduced labor costs</li> <li>◆ Reduced impairment of slow-moving inventory</li> </ul>	<ul style="list-style-type: none"> <li>◆ Use of green energy and replacement of LED lighting equipment</li> <li>◆ Implementation of factory energy monitoring system</li> <li>◆ Improved IT energy conservation program</li> <li>◆ Turning off lights during lunch break, encourage use of public transportation, and ride-sharing on business trips</li> </ul>
<b>Products and services</b>	<ol style="list-style-type: none"> <li>1. Development of high performance and low-carbon products</li> <li>2. Green energy and smart farming project</li> </ol>	<ul style="list-style-type: none"> <li>◆ Demands for low-carbon products and services increase revenues</li> <li>◆ Introduce new solutions to satisfy customers' requirements and increase revenues</li> </ul>	<ul style="list-style-type: none"> <li>◆ Products conform with environmental policies, standards, and laws</li> <li>◆ Enforcement of producer responsibility guidelines</li> <li>◆ Launch of high-performance cooling case for fanless environment</li> <li>◆ Participated in Farm of the Future project</li> </ul>
<b>Market</b>	<ol style="list-style-type: none"> <li>1. 5G base station market</li> <li>2. Integration of smart farming project (including networking, video analysis, automation, and drone solutions)</li> <li>3. Grants from government departments</li> </ol>	<ul style="list-style-type: none"> <li>◆ Support government policies and green energy projects, and cooperate with government institutions on obtaining energy efficiency certification for improved competitiveness and increased revenues</li> <li>◆ Expand into new applications and markets for additional revenue sources by offering green products for networking, healthcare, transportation, and production</li> </ul>	<ul style="list-style-type: none"> <li>◆ Capitalize on the cloud computing and virtualization potentials of the 5G technology by taking part in the open sourcing and standardization of base station interfaces</li> <li>◆ Develop a MEC platform and work with telecom carriers to create a versatile yet price-competitive 5G network system, and in doing so disrupt the oligopolistic competition currently dominated by large, international brands, while at the same time reduce the high cost of deployment.</li> <li>◆ Participated in Farm of the Future project</li> <li>◆ Establishment of online virtualization/remote integration testing laboratory</li> </ul>

# Energy/resource management

Energy consumption is a main cause of climate change, because the combustion of non-renewable fuel creates greenhouse gas (GHG) among other environmental impacts. Making efficient use of energy is key to mitigating climate changes, and is a goal we strive to achieve by continually improving our production procedures. Furthermore, we monitor water usage on a yearly basis using water resource consumption data we have gathered. Lanner used 13,573 kiloliters of water in 2020, which averaged 18.268 liters per person.



## Energy and CO<sub>2</sub> statistics 2020

Plant	Total power consumption Jan-Dec (Unit: kWh)	Joule (Unit: millions)	CO <sub>2</sub> (Unit: tons)
Zhongxing Plant	1,212,406	4,364,662	617.115
Datong Building B	3,435,556	12,368,002	1,748,698
Datong Building C	670,422	2,413,520	341,245
TTL	5,318,384	19,146,184	2,707,058

Remark:

1. 1 kWh = 1 kilowatt x 3600 seconds = 3,600,000 joules

2. 1 kWh = 0.509 kg of CO<sub>2</sub> (based on the 2019 emission coefficient of electricity published by Bureau of Energy, Ministry of Economic Affairs)



## Water usage per person per plant site (unit: cubic meters)

Year	Water usage by plant site			Total water usage	Total employee count at year-end	Average water usage
	Zhongxing Plant	Datong Building B	Datong Building C			
2018	2829	7271	2829	12,929.0	782	16.533
2019	3285	7030.4	2581	12,896.4	765	16.858
2020	3232	6632.7	3708.3	13,573.0	743	18.268

Remark: Total water used per plant site = Total cubic meters used by plant building x (number of units occupied by the Company / total units of plant building)

# Greenhouse gas survey and reduction

As part of the Company's commitment to environmental protection, we have set goals to reduce overall GHG emission progressively over the long term, specifically: to reduce GHG emission intensity (total GHG emission / revenues) annually by 3%.



The Company conducts its own emission surveys regularly and uses emission coefficient of electricity to calculate emission volume in CO<sub>2</sub>-equivalent terms. Survey results for the last two years are as follows:

- ◆ 2019 emission based on self-survey was calculated at approximately 0.53 kg per NT\$1,000 of revenue.
- ◆ 2020 emission based on self-survey was calculated at approximately 0.47 kg per NT\$1,000 of revenue.
- ◆ Carbon emission in 2020 was about 3% less than 2018.

In terms of emission intensity, the 0.92 kWh per NT\$1,000 of revenue calculated in 2020 was lower than the 1.01 kWh per NT\$1,000 of revenue recorded in 2019 by 0.09 kWh/NT\$1,000 of revenue.

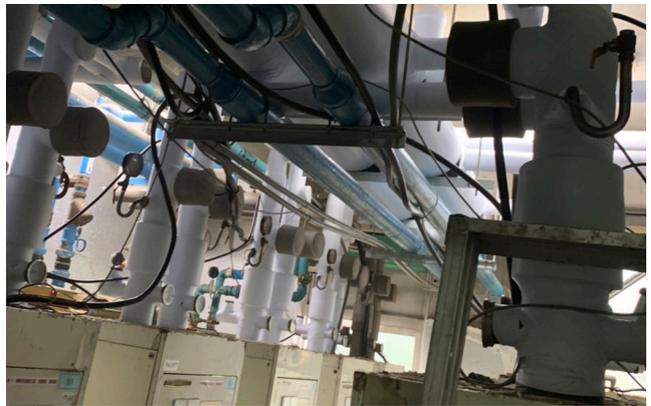
### GHG reduction performance

Considering that efficiency of chiller pipelines is highly relevant to temperature control, Lanner has progressively implemented centralized pipe control and alternating activation of chiller since 2018 as ways to improve air conditioning performance and energy efficiency. These solutions were implemented on 7F and 5F in Building C and 9F in Building B in the last year, and on 4F in Building B in January 2021. Startup rate of the chiller internal pump and compressor was reduced by 50% after improvement; as tested, the chiller compressor requires 17A of startup current, including 3A for the pump, and actual startup rate was measured at 44%. Through alternating activation of chillers, the Company is able to ensure the stability of air conditioning performance without being susceptible to the malfunction of any single unit, and extend equipment life at the same time. Current energy-saving benefits are explained below:

- ◆ 9F on Building B may save energy by 2,720,952 W/month = 2,721 kWh = 1,384 kg CO<sub>2</sub>
- ◆ 5F on Building C may save energy by 1,790,712 W/month = 1,790 kWh = 911 kg CO<sub>2</sub>
- ◆ 4F on Building B may save energy by 1,593,446 W/month = 1,593 kWh = 811 kg CO<sub>2</sub>

Remarks: 1 kWh of power is equivalent to 0.509 kg CO<sub>2</sub>

▼ Centralized pipe control and alternating activation of B9 chiller:



▼ Centralized pipe control and alternating activation of C5 chiller:



▼ Centralized pipe control and alternating activation of B4 chiller:



## Other GHG reduction and environmental protection measures

Lanner has established an environment, safety, and health system in accordance with international standards including ISO14001 and ISO45001 to monitor waste and abnormalities in raw materials, production procedures, products, activities, facilities, services, and waste treatment. This system has proven effective in managing negative environmental impact, minimizing potential hazards to employees, equipment, and property, and improving overall environment, safety and health.

The Company is dedicated to environmental protection and has long been implementing a greenhouse gas reduction program. In addition to the redesign of air conditioning equipment and establishment of environmental, safety, and health standards mentioned above, the Company has also taken progressive steps to replace lighting equipment with high-efficiency LED, upgrade IT servers, and introduce energy/carbon reduction actions into employees' daily activities. We encourage employees to make choices such as stairs over elevators, ride sharing, use of public transport, replacement of corporate vehicles with energy-efficient types, lights out during lunch break, air conditioner settings etc. so that everyone may contribute their part to climate change while at the same time inspire others to do the same.

## Paper resource management

Lanner remains persistent in digitalizing internal documents, forms, and processes as a means to reduce paper waste. Training is being delivered via e-Learning, whereas digital slides are used in meetings and seminars to minimize paper. Double-sided printing is encouraged for information that contains neither personal data nor business secret. Office copying machines are maintained regularly by professional service providers. The Company also introduced a printing management system in 2017 with optimized processes to prevent wasteful prints and to help employees exercise more control over the use of printing equipment for improved work efficiency.

The Company supports the initiatives of the Forest Stewardship Council (FSC), and has been purchasing FSC™-certified paper since March 2020 to ensure that paper is not sourced in any way that exploits forest resources, the ecosystem, or the community. FSC is a responsible way to manage and protect world's forest resources, and a positive step towards mitigating the impacts of climate change. By the end of 2020, the Company had purchased 1,070 packs of FSC-certified paper in total.

Lanner saw a significant reduction in the number of prints following the introduction of print management system; energy saving effects are explained on the right-hand side:



Volume of photocopying paper used in the last 3 years and non-consolidated revenues

Year	Total prints	Non-consolidated revenues (in multiples of NT\$10,000)
2018	720,402	\$573,881
2019	695,965	\$551,472
2020	694,236	\$575,930

## AI-managed factory

Lanner Electronics values the environment friendliness of its manufacturing process, and controls every production stage using standards that are above requirement. By making ongoing improvements to overall quality, environmental impact, and management practices, we hope to provide the safest products and services at reasonable price. The Company is committed to refining its production procedures, adopting high-performance computing, automation, and energy monitoring systems as ways to reduce energy consumption and improve operating efficiency. Solutions including DIP, smart warehouse, X-ray component counter, and automated IC writer have been adopted to date; the main benefits are explained below:

### Introduction of automated IC writer

The high level of automation improves write-in quality and prevents human interference and reworks. Writing time per IC was reduced from 12 seconds to 2.32 seconds, saving 10,480 hours of writing time and 10.48KW of power per year.

#### Writing workflow

Procedures	Material collection	Manual placement	Staff selects programming file	Start programming	Paper records	Return to materials manager once programming is completed
Operating time (SEC/piece)	0.3	5	0.06	1	0.3	6

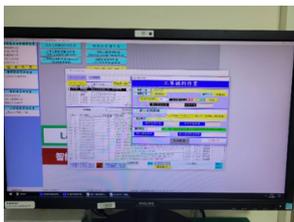
▼ Benefits of automated write-in

Programming method	Manual programming	Automatic programming
Count	500	500
Per PCS	12	2.3
Total time (seconds)	6,000	1,160
Total time (minutes)	100	19.3
Result	Saves 80.7 minutes, increases efficiency by 5.2 times	



**Introduction of smart materials rack**

The equipment automatically picks out materials and calculates slow-moving inventory based on software-configured materials disbursement and storage rules. The automation not only increases efficiency, but also reduces labor cost, impairment of slow-moving materials, and overall cost of supplies.



- ◆ The computer can be configured to automatically pick out materials on a "first-in-first-out" basis
- ◆ Automatically calculates slow-moving inventory based on software-configured materials disbursement/storage rules, which reduces impairment of slow-moving inventory.
- ◆ Improves workers' efficiency when storing, classifying, and preparing materials, and saves labor cost.

Effective control of materials disbursement and storage helps minimize impairment of slow-moving inventory and purchases

**Replacement of air compressor in 2021**

Lanner has been replacing energy-intensive equipment as a way to reduce energy wastage, and plans to replace two air compressors with energy-efficient alternatives in 2021. The Company expects to maintain room temperature at 26-28 degrees Celsius, and will implement a smart monitoring system to help track and analyze equipment data and issue early alerts. These new measures should extend equipment useful life while reducing oil waste, power consumption, and maintenance expenses by an estimated value of 61,320KW and NT\$34,350 per year.

	Equipment specifications	Count	Power consumption	Hours used	Days	Annual power consumption (KW)
Current state	30HP air compressor	2	44KW	24	365	385,440
Future	50HP air compressor	1	37KW	24	365	324,120
						Annual power savings: 61,320 KW

# Green product and solutions

## Energy-efficient and high expandability edge computing platform

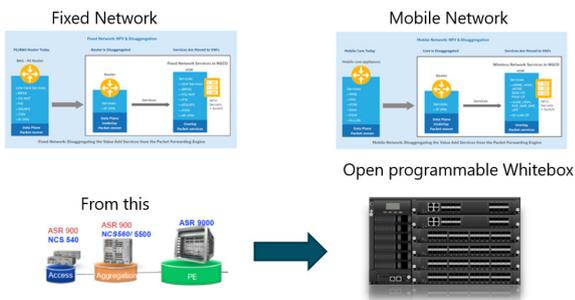
In light of how 5G technology has made low-latency, high-capacity, and distributed multi-access edge computing (MEC) the trend of the future, Lanner and National Chiao Tung University have cooperated on the development of MEC architecture and next-generation fanless cooling system that can be used for a variety of applications from small cell, core network, telecommunication, energy to self-driving vehicles. The purpose of this collaboration is to explore ways to increase the flexibility and expandability of 5G network, which helps reduce establishment and maintenance cost of infrastructures. Considering that a large number of small cells will be deployed in harsh environments, a new fin has been designed to increase cooling efficiency and air flow for high-end processors.

In March 2020, the two institutions completed proof of concept (PoC) for stage 1 development of their scalable MEC platform. The platform is based on the hardware of Lanner's telecommunication-grade edge computing platform (HTCA-6200), and uses open source software - OpenStack and Intel OpenNESS to simulate increased user count and increased demand for computing capacity and data flow. The platform then redirects user demands to small cells, RAN, core network or other idle MEC platforms. This configuration provides the 5G network with added flexibility and expandability, while keeping infrastructure establishment and maintenance costs low.



## Programmable MEC Solution

This platform makes use of Lanner's HTCA-6600 edge computing server, which supports up to 12 Intel Xeon scalable processors, Barefoot's Tofino programmable P4 Switch module, NoviFlow's SDN platform (Orchestration), and Fortinet's VNF. It offers advantages including programmable MEC, optimized information flow, and low-latency calculation of network capacity and resources. The product was shipped to large telecommunication equipment distributors and operators in North America in the third quarter of 2020, and is being used to handle distributed edge computing in conjunction with 5G technology. Compared to the conventional setup, this platform saves 89% in cost, occupies 75% less space, and saves 67% of energy. For uses of MEC in small server rooms and fanless environments, the Company has designed a high-efficiency cooling chassis that helps reduce greenhouse gas emission and energy consumption at the client end.



### HTCA-6600: 2nd Gen Intel® Xeon® x86 / Barefoot Tofino™ Switch Integration

Application Ready MEC Platform

- Compute
- Network
- Storage
- Virtualization

**P4 Programmable Edge**

Legacy silicon relies on legacy protocols. Carrier Edge needs programmable networks not based on legacy protocols.

- Adaptable to support new features
- Software defined for automation

**Better Visibility**

Provide visibility into the operational health of the platform and the performance of the VNFs.

- In-band Network Telemetry (INT) for VNF performance
- Monitor the operational performance of the network

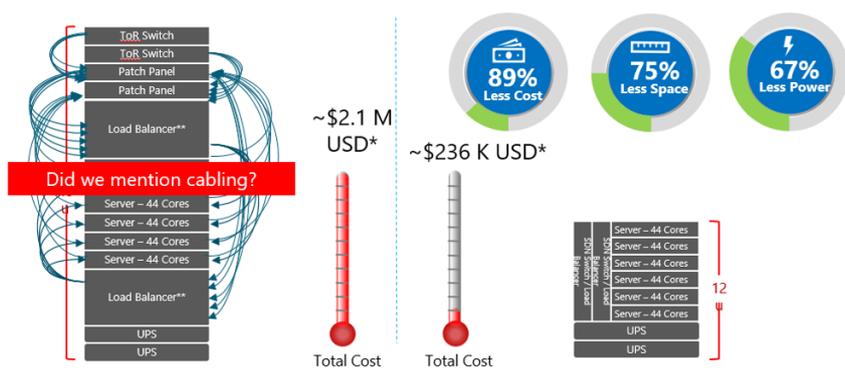
**Scalable Architectures**

Collapse multiple appliances on Tofino. Scalable network, compute and applications.

- NoviFlow uses the network to scale across multiple virtual machines and blades

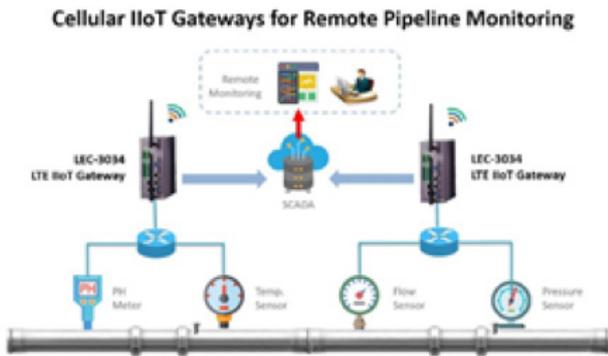
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## Cost Comparison: Compute platform with load balancing



## Remote monitoring of wastewater treatment

Wastewater treatment is a sophisticated process, one that requires robust and comprehensive channels and systems to monitor. Even a small malfunction such as pipe leak would compromise the process and affect downstream customers and the surrounding environment. To address this issue, Lanner offers a remote monitoring solution that combines LEC-3034 processor with LTE connectivity. Having a small size, low power consumption, and being capable of operating within a wide temperature range (-40°C to 70°C), the solution helps manage wastewater treatment and handle the complicated water allocation process. Data on water temperature, pressure, flow, and PH is first collected using sensors and remote I/O, and then streamed to IIOT for edge computing. This allows real-time data to be collected from many points in a highly distributed water pipeline system, transmitted to a centralized SCADA system, and forwarded to the remote monitoring system. Customers can then monitor pipeline status in real time at their end and ensure that wastewater treatment functions properly while reducing the time spent on inspection, repairing leakage/corrosion, or clearing blockage.



## Protecting renewable energy sources with infrastructure firewalls

In recent years, it is increasingly popular to see industry participants adopt IIoT technology as a way to optimize business operations, and power plants (including oil, natural gas, hydro, and wind power) are one among them. To protect renewable energy plants against network threats and malicious attacks and to ensure that the network monitoring system operates non-stop to prevent accidental closure of factory as well as the adverse impacts it has on the environment and residents, two of France's largest hydro electricity plants have teamed up with Lanner for the development of hardware-based monitoring and control systems. The NCA-4210, powered by Intel's 6th/7th generation Core-i7 / i5 / i3 CPU and DDR4, operates as a DPI firewall between the control center and power plants for its low power consumption, high processing capacity, and expandability, and provides robust support to the operation of energy facilities.



## Farm of the Future project

Lanner joined the U.S. Rural Cloud Initiative in June 2020 and participated in the "Farm of the Future" project that incorporates a number of solutions including 5G, edge computing, image analysis, automation, and drones. This project adopts the use of Lanner's multi-core computing hardware platform and is integrated with the service provider to perform real-time analysis of crop, weather, and environmental data. This project enables real-time monitoring and problem identification in rural areas that have no public network coverage without having to commit substantial investment into equipment, and has the potential to increase farming efficiency and profits by 10% or more.

The project won Network Transformation Awards and the 2020 Innovative Network Application Award from Layer123 SDN. In phase 1, the project was implemented on greenhouse farming to provide environmental data such as temperature and humidity, and to allow remote control of fans, heaters etc. as well as real-time monitoring and alerts. In phase 2, the project will be implemented at 2,300 farms across the United States; an automated platform will be adopted to monitor and control crop growth for improvements in terms of yield, cost, and resource consumption.

➤ NCR-1510



## Support for emergency aid and remote healthcare

Lanner's networking/communication product - NCA-1020 series won the 29th (2021) Taiwan Excellence Award. The product is a low power consumption, multi-core, and portable uCPE platform that can be carried in a mobile medical kit; it offers 3 wired connections as well as LTE connectivity in a fanless, ultra-thin chassis. The miniaturized structural design allows it to be placed inside a mobile medical kit, so that paramedics may connect may have the high-speed, stable, and secured connection needed to consult physicians remotely through high-quality video on rescue missions, and increase the chances of success.



## Waste treatment

In addition to reducing waste and pollution from production procedures, general industrial waste from living activities and non-contaminating consumables is reused where possible before handing over to certified treatment service providers. Non-reusable and hazardous waste is collected by professional service providers in a proper manner to prevent harm to employees or the environment. The Company reported general industrial waste of 12.7 tons and hazardous industrial waste of 4.37 tons in 2020, which were 3.92 tons and 2.13 tons less than 2019, respectively. Waste reduction performance was considered satisfactory, and no severe leakage or violation of environmental protection laws had occurred in the period reported.

### ▼ Lanner's waste management practices

Waste attribute	Waste category	Description	Treatment method)	End-of-life treatment
General waste	Aluminum cans	PET bottle, styrofoam, aluminum can etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	Paper	Newspaper, magazine, photocopying paper, printing paper, carton box, paper box etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	General glass	Beverage bottle etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	General plastics	Beverage bottle, waste container etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	Other recyclable resources	Battery, light tube, toner etc.	Administration committee's partnered supplier, and certified treatment service provider	Solidified landfill
	Kitchen waste recycling	Compost, animal feed etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	Waste from living activities	Office waste from living activities etc.	Administration committee's partnered supplier, and certified treatment service provider	Reuse, recycling
	General industrial waste	General paper, plastics, Styrofoam, PE foam	Certified treatment service providers	Reuse, recycling, incineration, solidified landfill
Hazardous industrial waste	Hazardous industrial waste	Waste PCB of accessory components, scrap materials, defective goods	Certified treatment service providers	Reuse, recycling, incineration, solidified landfill

Note: End-of-life treatment includes reuse, recycling, compost, renewal, incineration (combustion), deep-well injection, landfill, and on-site storage

### ➤ Hazardous industrial waste in 2020

Waste ID	Name	Weight (tons)
E-0221	Waste and dust of PCBs with metal content	4.32
E-0222	Waste PCB of accessory components	0.05
Total		4.37

CHAPTER

# Employee and social care

Human resource policy

Employees' rights

Occupational safety and health

Employee health, care and protection

Disease control

Social care

Lanner has created a safe, respected, ethical, equal, and diverse work environment where employees may grow and maximize their creative passion. We also invest substantially into talent training, compensation, welfare, health benefits, and occupational safety and health as a way to attract industry's best talents. These initiatives have made Lanner one of the most preferred employers for job seekers and enabled the Company to stay competitive in global R&D.



Robust talent organization and development



Inspiration of employees' passion



Improvement of corporate competitiveness

# Human resource policy

Lanner's human resources policy is tied closely to its corporate visions and strategies; it emphasizes corporate culture and value, and has profound influences on the organization's culture and management approaches. The HR policy is supported with talent "selection, recruitment, education, and retention" measures to ensure the growth of talent base and the organization, and to inspire employees' passion. As the Company expands globally, the HR policy provides guidance on the level of individual performance and competitiveness that employees are expected to achieve in order to support Lanner's growth prospects and needs.

## Employee structure - 2020

Category	Group	Male		Female		Subtotal	
		Head count	Percentage	Head count	Percentage	Head count	As a percentage of total employees
Work location	Taiwan	426	100%	314	100%	740	100%
	Age 18-20	0	0	0	0	0	0
	Age 21-30	74	17%	43	14%	117	16%
	Age 31-40	133	31%	114	36%	247	33%
	Age 41-50	178	42%	106	34%	284	39%
	Age 51-60	35	8%	48	15%	83	11%
	60 and above	6	2%	3	1%	9	1%
Academic background	Doctoral Degree	1	0.2%	0	0%	1	0.1%
	Master's Degree	70	16.4%	29	9.2%	99	13.4%
	Bachelor's Degree	199	46.8%	114	36.3%	313	42.3%
	College	87	20.4%	71	22.6%	158	21.4%
	Senior high school	69	16.2%	100	31.9%	169	22.8%
Grade of employment	Full-time	426	100.0%	314	100.0%	740	100.0%
	Contract staff	0	0.0%	0	0.0%	0	0.0%
	Temporary workers	0	0.0%	0	0.0%	0	0.0%

## Employee distribution by role and gender

Group	Male		Female		Subtotal	
	Head count	Percentage	Head count	Percentage	Head count	As a percentage of total employees
Marketing personnel	31	7.3%	35	11.2%	66	8.9%
R&D head count	168	39.4%	43	13.7%	211	28.5%
Managerial personnel	33	7.7%	36	11.5%	69	9.3%
Manufacturing personnel	194	45.6%	200	63.6%	394	53.3%

## Talent selection

### Precise work skills and behaviors interview

"Honesty, passion, responsiveness, and sharing" are four of Lanner's core values, and in order to help recruitment officers determine whether job seekers are a good fit for the Company's culture and role, we have incorporated "Work Skill Behavioral Interview" into our talent selection. We do not presume people with certain skills and knowledge to be the best candidates; instead, we look for talents that "possess the right skills for the given role." Through the use of standardized scorecard and structured interviews, we establish the suitability and potentials of every candidate, and provide basis for interview scores while removing significant amount of subjectivity from the process.

➤ Skill assessment

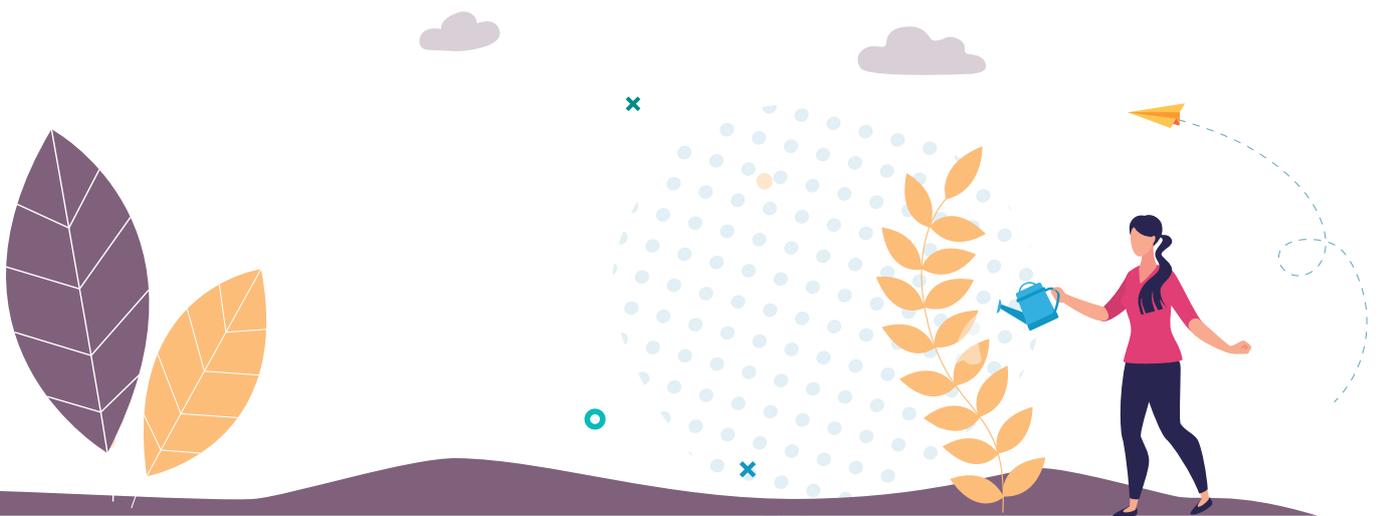
Skill category		Name of skill
Core skills	All employees	Teamwork, quality awareness, adaptability, communication & coordination
Managerial skills	Senior managers	Strategic thinking, creativity management, vision & leadership, commercial awareness
	Mid-level managers	Management performance, guidance for others, planning & organization, cost management
	Entry-level managers	Problem-solving, management performance, work guidance, team-building

Whenever an employee requests for resignation, both the head of unit and HR personnel would discuss with the employee to learn the reasons behind the resignation. These resignation discussions are taken into consideration for future improvements by the department and HR. The following is a breakdown of new recruits and resignations in 2020, distinguished by gender and age group.

➤ Total number and percentage of new and departed employees by age group and gender - 2020

		Male		Female		Subtotal	
		Count	Percentage	Count	Percentage	Count	Percentage
New employees	30 and below	40	35%	13	29%	53	33%
	31-40	36	31%	16	36%	52	33%
	41-50	33	29%	13	29%	46	29%
	51 and above	6	5%	3	7%	9	6%
	Subtotal	115	100%	45	100%	160	100%
Departed employees	30 and below	19	30%	32	26%	51	27%
	31-40	27	42%	54	44%	81	43%
	41-50	15	23%	30	24%	45	24%
	51 and above	3	5%	8	6%	11	6%
	Subtotal	64	100%	124	100%	188	100%

Note: There were 740 employees at period-end



# Talent development

## Targeting specialized skills, general knowledge, and increased training enrollment

Lanner organizes a broad variety of HR events to train and grow talents. The Company also has a robust training system comprising internal and external courses, online courses, and self-learning courses to support its efforts. Annual training plans are developed using a top-down approach starting from the Company's visions. In addition to strategy-level and specialized skills, Lanner also commits extensive efforts into developing management skills and knowledge for all levels of management. Departments may raise requests to have specialized training included into the Company's HR program, once the necessity and strategic relevance have been established and confirmed to align with the Company's goals. A management training roadmap and a key talents development program were introduced in 2020 to complement the existing training framework.

### ▼ Lanner's talent training framework



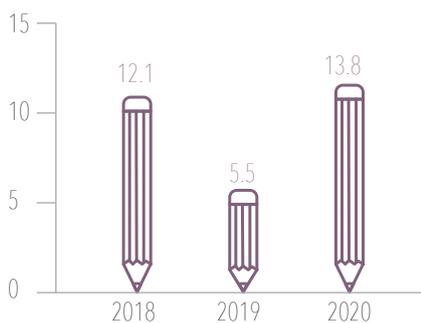
Lanner adopts "Kirkpatrick Four-level Evaluation Model" to evaluate training outcome, including the use of satisfaction survey for Level 1, post-course exam for Level 2, and post-course report for Level 3. Furthermore, trainees are guided toward applying the knowledge they learn at work, which maximizes the training effect and improves employees' competency.

### ▼ Training execution - 2020

1. Organized by department: Knowledge-sharing courses at department level; representing 40% of total man-hours.
2. Organized by Company: General knowledge and management courses; representing 38% of total man-hours.
3. External training: Employees are encouraged to learn voluntarily; representing 51% of total man-hours.

Course category	Organized by department		Organized by Company		External training		
	Total enrollments	Total man-hours	Enrollments	Total man-hours	Enrollments	Total man-hours	
Management	0	0	510	982.5	0	0	
General knowledge	459	234.3	685	1383.5	14	87	
Regulation	0	0	130	241	35	158.5	
Professional	R&D	591	630.8	75	150	1	14
	Product marketing	518	518	248	909	6	50.5
	Quality	828	899.5	0	0	1	6
<b>Total</b>	<b>2396</b>	<b>2282.6</b>	<b>1648</b>	<b>3666</b>	<b>54</b>	<b>313</b>	

### ▼ Average training hours of indirect employees increased 2.5 times in 2020 compared to 2019



Total and average training hours in 2020 were 250% higher compared to the previous year

### ▼ Average training hours per indirect employee in the last 3 years

Year	Formula	Subtotal
2018 (Total employee count at end of reporting period is 516)	Actual head count during the reporting period	A1 516
	Training hours completed during the reporting period	B1 6,230
	Average training hours completed per employee during the reporting period	C1 = B1 / A1 12.1
2019 (Total employee count at end of reporting period is 514)	Actual head count during the reporting period	A2 514
	Training hours completed during the reporting period	B2 2,802
	Average training hours completed per employee during the reporting period	C2 = B2 / A2 5.5
2020 (Total employee count at end of reporting period is 516)	Actual head count during the reporting period	A3 516
	Training hours completed during the reporting period	B3 7,076.8
	Average training hours completed per employee during the reporting period	C3 = B3 / A3 13.8

## Diversified training channels

Lanner spares no resource in talent development. In addition to providing training systems such as orientation, general knowledge, specialized skills, managerial skills, self-inspiration, and online learning, the Company also divides career paths into "specialist/engineering," "administration," and "management" to guide employees through career development as well as the general knowledge and specialist courses that they should take in order to reach their goals.

### ◆ Orientation

The Company complies with the "Occupational Safety and Health Act" and organizes 3 hours of "safety and health training" for every new recruit, which is followed by an introductory course that introduces them to the Company's culture, work rules and system operations, thereby helping new recruits familiarize with the work environment. The orientation ends with a 15-minute course on "Lanner Ethical Behavior Guidelines" that conveys the Company's anti-corruption policy and workplace ethics, which serve as guiding principles to employees' daily work activities. 100% of new employees had completed the "Lanner Ethical Behavior Guidelines Course" in 2020. Depending on the job role involved, employees are required to complete online courses and submit training reports over LMS within 90 days of commencing duty to quickly familiarize with work duties and culture.

### ▼ Mandatory courses for all employees - 2020

Course type	Target audience	Course information	Execution progress
Lanner Ethical Behavior Guidelines	New and existing employees	Time of course: August 2020 and the month onboard Course duration: 15 minutes	Course participants: 768 Attendance rate: 100%
Occupational safety and health education	New and existing employees	Training hours for new recruits: 3 hours Training hours for existing employees: 1 hour	New employees: To be completed at the time on board Existing employees: Re-training to be completed once a year
Promotion of business secrecy awareness	All employees	Classroom courses: 10/21, 10/22 Online courses: 2020/11/17-12/31	All employees to be re-trained once a year Training for all employees who came onboard before 2020/12/31
Compulsory and optional courses for job role	Existing employees	Courses have been classified into 10 categories for various job roles, with designated reading for employees of different grades	Employees are required to complete reading and submit report within 90 days after commencing duty, to be taken into consideration at the end of probation

### ◆ General knowledge training

The Company organizes general knowledge workshops and corporate culture courses regularly to enhance employees' understanding and appreciation toward Lanner's corporate values. Traffic safety programs, health seminars and health promotion activities are organized on an unscheduled basis to help employees develop the proper safety/health awareness, lifestyle habits, and achieve work-life balance.

### ◆ Specialized training

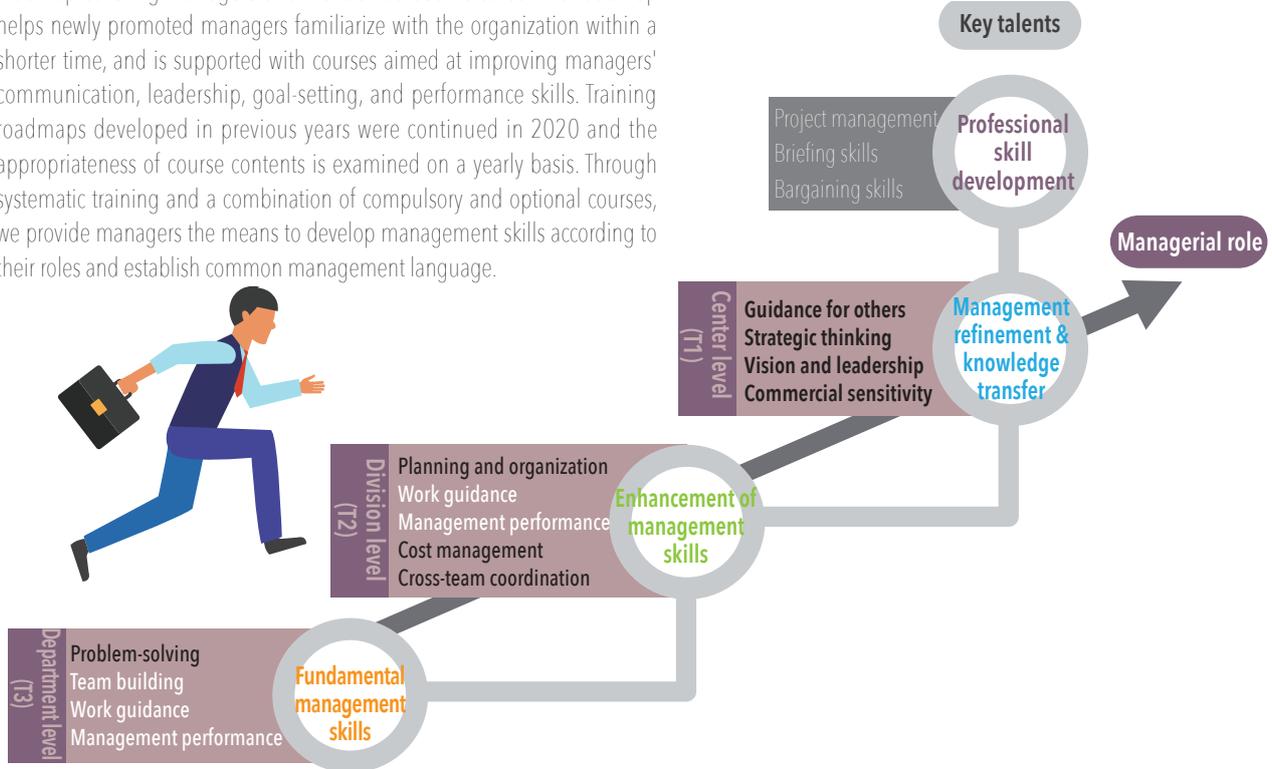
Lanner offers specialized training courses depending on the roles and duties of each individual, and assigns them to special projects from time to time in order to help them develop skills needed to succeed in their duties, while expanding their exposure to greater challenges. The Company also distributes internal e-newsletters on open courses organized by various departments and self-learning resources that are readily available. Employees may participate in department courses voluntarily to share knowledge on various fields of expertise, and help others understand the nature of works performed at each department, which in turn promotes internal communication and cooperation. Through offering of self-learning resources, the Company encourages employees to learn on their own and develop diverse skills bits by bits over the course of their careers.



◆ **Management training**

The Company has implemented a training system for new managers to help them understand their roles and duties. A management training roadmap covering managers of all levels has been created. The roadmap helps newly promoted managers familiarize with the organization within a shorter time, and is supported with courses aimed at improving managers' communication, leadership, goal-setting, and performance skills. Training roadmaps developed in previous years were continued in 2020 and the appropriateness of course contents is examined on a yearly basis. Through systematic training and a combination of compulsory and optional courses, we provide managers the means to develop management skills according to their roles and establish common management language.

▼ 2020 management skill training roadmap



Tasks executed in 2020 are presented in white

▼ Training completion rate for department managers and above - 2020

Course	Skill Awareness Workshop	Notes on Management for Managers (HR)	Notes on Management for Managers (Legal/FIN)	Successful Leadership and Communication	Management performance	Notes on Recruitment Interview
Attendances	70	70	47	46	22	37
Completion rate	75.8%	76.9%	61.0%	50.5%	24.2%	40%

◆ **Key talents**

Aside from helping managers develop skills through the management training roadmap, the Company also values growth of employees in general, and tries to nurture potential talents for critical roles from an organizational management perspective. A series of training courses on: project management, briefing skills, negotiation skills etc. has been introduced to support the critical talent training program, and by keeping track of enrollment and results on a yearly basis, the Company aims to build an adequate reserve of key talents that are critical to its growth.

◆ **Online learning management system (LMS):**

Lanner's online learning management system (LMS) not only offers a broad variety of online courses to choose from, but also incorporates useful features such as course enrollment, calendar reminder, online course inquiry, online classroom (reading / exam / questionnaire / report / learning history), personal learning history, department teaching materials etc. New employees may upload assessment results at the end of their probation period to keep managers informed of their learning progress; the system can even be configured to manage occupational safety certification, and automatically remind employees whose certifications are due for renewal to undergo retraining before expiry.

▼ Utilization and effectiveness of the LMS:

Total views have increased significantly over time, by as much as 200% in 2020 compared to the previous year.

Year	Total views	Total hours read
2018	1693	1262 hour(s)
2019	2491	1243 hour(s)
2020	5095	1333 hour(s)

### ◆ Promoting self-learning through e-newsletter

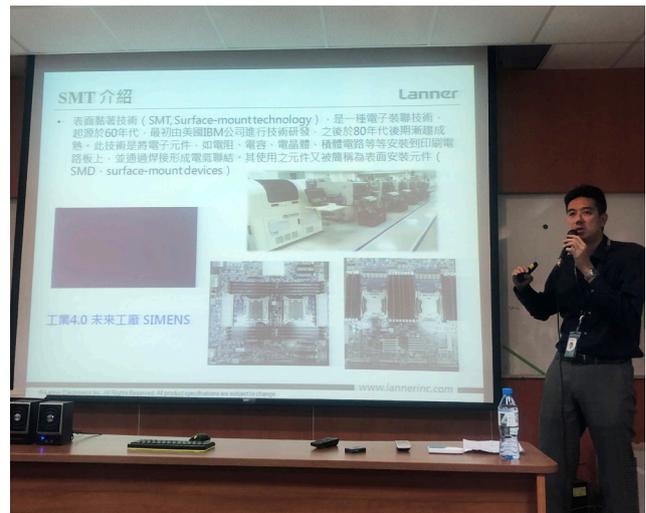
Service of the LMS was first expanded to cover the North American subsidiary in 2019, giving overseas employees unrestricted access to the same course materials. In an attempt to arouse employees' interest in learning and provide them with additional learning resources, the LMS has been issuing e-newsletters every two weeks since the second half of 2019 to cover the latest course information, self-learning resources, and external learning platforms (MOOCs, Coursera etc.). The LMS also provides updates on current affairs, shares industry information and how it relates to the Company's core values, and hosts festive events and quizzes with prizes to keep employees engaged in the exchange of knowledge.

### ◆ Self-inspiration

Aside from internal training courses, employees also have access to diverse learning channels including on-job training, work counseling, job rotation, experience sharing, online learning, and external training. Employees who wish to participate in external courses for development of personal skills and capacity that internal training does not provide will have expenses fully subsidized. To maximize the outcome of external training, all externally trained employees are required to submit reports or share thoughts internally with colleagues.

### ◆ Localized talent development

Lanner has long been cooperating with educational institutions for the development of young technical talents. The Company offers practical teaching resources as well as employment opportunities for students, and continues to recruit new talents through collaborations with the academia and talent agencies. The Company continued to participate in joint recruitment events including those organized by New Taipei city Government in Xizhi and by Keelung Employment Services Center, in which Lanner had supported by offering positions to local talents. These events provided alternative opportunities for Lanner to recruit talents up close. Lanner will also be participating in campus fairs for the first time in 2021 to interact and share with students on the industry's prospects, while at the same time recruit new talents and give them opportunities to apply theory in practice.



◆ **Annual employee opinion survey**

Lanner organized its first employee opinion survey in 2020 to help the Company identify areas where improvements can be made to provide employees with a better work environment and raise satisfaction. Outcome of the survey provides the basis for ongoing improvements within the Company. Each department was instructed to make improvements to weaknesses highlighted in the survey, and the progress of which was made known to all employees.

Survey duration: 2020/3/4 - 3/13

Respondent count: questionnaires were issued to all 754 employees in Taiwan, of which 665 (88.2%) had responded.

Responses:

	Direct employees	Indirect employees
Total head count	226	528
No. of responses	212	453
Response rate	93.80%	85.80%



## Promotion of talents

### Open and transparent performance evaluation

Lanner aims to create a quality work environment that raises employees' satisfaction. Lanner has been conducting employee satisfaction surveys in recent years as a way to help managers learn subordinates' opinions toward the Company, their line managers, and the system, so that adjustments can be made to governance practices to inspire employees' potentials and strengthen unity within the organization.

We conduct regular performance evaluation and exercise goal management to accomplish and enforce our strategic goals. Through an open and transparent performance evaluation system, we evaluate how far employees have accomplished their targets and how well they perform at work.

### Performance evaluation procedures

With the exception of direct labor, employees are subjected to "annual performance evaluation" once in the first half and once in the second half of each year, during which employees are required to compare performance to the targets they set in the beginning of the year, and submit a self-assessment of their quarterly target attainment for the period of assessment with supporting proof for approval by the line manager. Line managers may engage subordinates in performance discussion based on the information presented, and give feedbacks on work performance and behaviors before submitting results of preliminary evaluation for review by the next level of management. Line managers will notify subordinates of their performance evaluation outcome as it becomes available, and will engage them in various discussions about performance outcome and individual development, while at the same time encourage them to learn in ways that are relevant given their work targets and current state of development. Handlers are assigned to keep track of performance discussions, and thereby ensure effective communication between line managers and their subordinates.

- ▶ Percentage of employees receiving regular performance and career development reviews - 2020

Calculation	Male	Female	Subtotal
(A1) Total employee count at end of reporting period	426	314	740
(B1) Number of employees subjected to regular performance evaluation and career review	412	308	720
Percentage of (B1/A1)	96.7%	98.1%	97.3%

Note: Those who failed probation were excluded from performance evaluation.

### Talent development and performance counseling

The Company advocates a performance-driven culture, and ranks employees' annual performance results for each center/division. Employees who excel in performance are rewarded with additional promotion opportunities, and those who receive grade A in the latest performance evaluation are identified as key talents, from which Lanner will select the top 3% to undergo advanced training. Employees who lag behind in performance are required to engage their line managers in "performance counseling" for future improvement.

Performance outcome affects promotion opportunities and salary adjustment, which the Company will allocate based on growth prospect and operational requirements. For top-performing employees that are irreplaceable in nature, Lanner offers "key personnel compensations" to assist them in further career development and thereby ensure adequacy of human capital reserves.

- ▼ Percentage of managerial and non-managerial employees promoted, by gender - 2020

	Male		Female		Subtotal	
	Count	Percentage	Count	Percentage	Count	Percentage
Managerial role	13	35%	0	0%	13	26%
Non-managerial role	24	65%	13	100%	37	74%
Subtotal	37	100%	13	100%	50	100%

## Talent retention

### Competitive and market-leading compensations

Besides selecting, evaluating, and training the right talents, another important issue is to retain talents within the organization. In this respect, the Company not only upholds values that employees can identify themselves with, but also offers a variety of performance-based compensations and incentives, including competitive monthly salaries and market-leading variable bonus, that employees find worthy of committing 30 years of their lives to.

## Above-peer incentives, compensations, and benefits

Lanner recognizes the importance of competitive and fair compensation in talent retention. The Company not only offers salaries and benefits at levels above its peers, but also introduces year-end bonus, profit sharing, production challenge reward, R&D bonus, and sales bonus to serve as performance incentives. Employees' salaries are adjusted in April each year according to overall corporate performance and individual performance. The Company values employees' work-life balance, for which it caps weekly overtime at 5%, weekly work hours at 60 hours, and requires 1 off-day for every 6 days of work.

Lanner adjusts employees' salaries after taking into consideration a number of factors including statutory basic salary adjustments, consumer price index, market level salary, and employees' past performance. Non-managerial employees were paid average salary of NT\$828,336 and median salary of NT\$663,163 in 2020; average salary was slightly higher than the NT\$813,910 reported for 2019.

## Diverse welfare systems

Lanner Electronics is dedicated to creating a joyful and harmonious workplace. An "Employee Welfare Committee" (EWC) comprising representatives from various departments has been assembled according to "Organization Regulations on Employee Welfare Committee" stipulated by the Ministry of Labor. The EWC convenes quarterly meetings to discuss topics such as annual budget surplus/deficit, employee travel subsidy, Duanwu gift box, Mid-autumn gift box, and year-end banquet. The EWC is also responsible for budgeting and arranging employee benefits, including festive vouchers, gift boxes, and birthday vouchers, and providing travel subsidies that employees may claim to take their families on trips, and live a healthy life that is well-balanced between work and family. Claim rate for employee travel subsidy was reported at 70% in 2020, whereas 100% of Duanwu and Mid-autumn gift boxes were distributed during the year.

▼ Group photo of Lanner's basketball club



- ▼ Lanner encourages employees to participate in club activities as a way to stay healthy



## Compensation and welfare system

- Attendance: Employees are entitled to 2 off days a week and work hours that conform to the Labor Standards Act.
- Promotion: Annual promotion opportunities are offered to top-performing foreign workers.
- Salary: Lanner offers salaries above peer level and adjusts them on a yearly basis depending on the Company's overall operations and employees' individual performance.
- Overtime: Overtime hours are compliant with the Labor Standards Act.
- Bonus: Lanner offers incentive bonuses such as year-end bonus, profit sharing, production bonus, R&D bonus, and sales bonus.
- Insurance: Lanner subscribes to Labor Insurance, National Health Insurance and travel insurance coverage, and makes pension contributions equal to 6% of employees' salary.
- Training: Lanner offers comprehensive on-job training programs (common knowledge course, professional course, management course etc.) and has an E-Learning platform in place.
- Health: The Company organizes annual health checkups and has professional nurses stationed on-site to help maintain employees' physical and mental health.
- Welfare: Lanner offers vouchers and cash for occasions such as Labor Day, Duanwu Festival, Mid-autumn Festival, Chinese New Year, birthday, wedding, funeral and celebrations.
- Activities: The Company organizes year-end banquet, lottery, annual domestic/foreign trips, and travel subsidies.
- Gatherings: Department meal gatherings are organized on a quarterly basis.
- Clubs: Employees are encouraged and subsidized to form clubs and engage in club activities as a way to achieve work-life balance.
- Communication: Lanner has suggestions system, management mailbox and hotline in place, and hosts regular labor-management meetings and EWC meetings to facilitate communication.
- Accommodation: Lanner provides dormitory facilities that are safe and compliant with laws, and subsidizes employees for dormitory expense.

- ▼ Family recreation event by members of Lanner's hiking club during holiday



# Employees' rights

## Effective communication channels

Lanner hosts labor-management meetings, annual meetings, management meetings, and communication meetings to ensure the effectiveness of labor-management communications, and thereby maintain strong labor-management relations for the protection of workers' rights and the fairness of the recruitment system.

### Labor-management meetings

The purposes of labor-management meeting are to strengthen employment relations, promote collaboration, and bridge negotiation between workers and the management, and in doing so prevent worker issues. Labor-management meetings are held at least once every three months, or on an ad-hoc basis if deemed necessary. The labor and the management each appoints 6 representatives to the labor-management meeting. The number of worker representatives is determined based on the size of employees in each center/organization, division, or department, and the representatives themselves are elected by employees. The management's representatives are undertaken by people who are familiar with business and worker affairs.

▼ A total of 4 labor-management meetings were held in 2020



All labor-management meetings require attendance from at least half of employer and worker representatives, and resolutions are made through negotiation and consensus. Where consensus could not be achieved, a resolution can be made only with the support of at least three-quarters of attending representatives. Representatives are expected to carry out labor-management meetings in the utmost good faith.

Both worker and employer representatives are committed to working with each other for the enhancement of employment relations and protection of workers' interests during labor-management meetings. Lanner Electronics convened 4 labor-management meetings in 2020, which were the 2nd, 3rd, 4th, and 5th meetings of the 4th board. Issues concerning religion, work hours, attendance rules etc. were discussed in the meetings.

### Annual meetings

Lanner Electronics hosts annual gatherings once a year to examine and review performance of the previous year, facilitate internal communication, and develop consensus towards common goals. New targets and operating strategies are also established during this time. Aside from managers graded department head and above, project managers (PM), sales personnel, and research and development (RD) engineers, are also invited to annual meetings. The meeting provides key personnel with insight to the Company's full year performance in a manner that facilitates growth.

The 2020 annual meeting was held for three days from January 13 to January 15, 2021; each department was instructed to present a report of previous year's performance and next year's prospect, whereas evaluation worksheets were distributed during the meeting for participants to raise suggestions on the reported contents. The three-day meeting lasted a total of 20 hours and received 56 participants.



In addition to company-wide meetings, Lanner also convenes annual meetings in smaller groups of personnel involved in key roles. The 2020 small annual meetings were held on February 26, March 3, and March 5, 2021 during which the participants drew conclusion on performance of year 2020 and presented outlook for 2021. The three-day meeting lasted a total of 4.5 hours and received 155 participants.

### Product strategies meeting

Lanner holds product strategy meetings half way through a year, during which department and division heads are instructed to report first-half performance and second-half prospect. The 2020 product strategies meetings were held on March 23, July 22, and July 23 for a total of 9.5 hours. For this year, focuses of the meetings were to analyze and discuss product strategies and market positioning, which in turn provides the Company with a clearer vision of becoming an industry leader. Lanner also took these meetings as an opportunity to adjust market/product strategies, analyze revenues, and make future plans. Satisfaction and opinion surveys are conducted after the meeting to serve as reference for future improvements.

## Enforcement of worker rights and gender equality

Lanner follows RBA's guidelines and ensures that all worker-related policies and management practices conform with human rights and principles of justice. The following recruitment principles are strictly enforced throughout the Company.

1. Offer reasonable compensations and benefits, and make ongoing improvements.
2. Enforce humane treatment and arrange reasonable workload and rest hours for employees.
3. Respect employees' freedom of association and collective bargaining rights. There was no potential violation against freedom of association or collective bargaining right in any operating site in 2020.
4. Respect employees' religious freedom, provide spaces for religious activities (e.g.: praying), and adjust work hours for special requirements.
5. For foreign workers, the Company enforces a "zero commission" policy and returns any agency commission they paid, which conforms with RBA's philosophy.
6. Prohibit use of child labor and forced labor, and refrain from slavery and labor trafficking. There was no incident of child labor or forced labor at any operating site in 2020.

### Protection of basic rights

Lanner has established its employee retirement policy in accordance with the "Labor Standards Act" and "Labor Pension Act," and makes pension contributions for each employee as specified by laws. For employees who joined on and before June 30, 2005, the Company makes monthly contributions equal to 2% of gross salary to pension fund, which is placed under the supervision of a "Pension Fund Supervisory Committee" that comprises representatives from both workers and the management.

Lanner adopted the new Labor Pension Act after it came into effect on July 1, 2005, and under the new Act, the Company contributes an amount no less than 6% of monthly salary for new employees who came onboard after the implementation date and for employees of the old system who opted to carry forward their seniority over to the new system. Contributions to the new pension system are deposited into employees' individual pension accounts and will be available to employees upon retirement.

Lanner fully complies with Article 16 of "Labor Standards Act," which requires minimum notice to be served before terminating employment contract if it encounters a major change of operation that might severely affect employees' rights or terms of employment. Doing so helps avoid or mitigate negative impacts of such decisions.

### Protection of rights and benefits for migrant workers

Worker rights is a global issue, one that Lanner addresses by tending to the interests of migrant workers and by coordinating with customers for the adoption of practices that conform with international human rights, and thereby fulfill corporate social responsibilities. Lanner hires migrant workers by "professional skill"; it currently has more than 130 migrant workers on payroll. We pay great attention to maintaining the fairness of our employee welfare system, and all migrant workers are entitled to the same benefits as local workers. The Company also provides clean dormitories and organizes sterilization and fire safety drill on a regular basis. Information on nearby religious gatherings is posted in dormitories out of respect for religious freedom of migrant workers.

- ◆ Dormitories are sanitized and inspected regularly to ensure safety of the living environment.
- ◆ The Company and all plant sites organize monthly meetings to communicate with foreign workers and provide them with a responsive communication channel.
- ◆ The dormitory bulletin is constantly updated with the latest information, and an employee opinion box has been set up to serve as a grievance channel.



### Return of agency fee for foreign workers

Lanner makes ongoing improvements to employment terms, worker safety, environmental protection, commercial ethics, and the robustness and effectiveness of its management systems for the benefit of foreign workers. The Company follows RBA principles and supports a zero-fee policy for foreign workers. Expenses such as passport renewal and health checkup that foreign workers incur on their entry and stay in Taiwan are entirely covered by the Company.

Agency fees returned in 2019		
Nationality	No. of foreign workers	Agency fees returned
The Philippines	54	NT\$ 1,918,934
Vietnam	67	NT\$ 5,750,921

Agency fees returned in 2020		
Nationality	No. of foreign workers	Agency fees returned
The Philippines	17	NT\$ 517,871
Vietnam	10	NT\$ 793,800

## Equal workplace and pay

The Company adheres to "Act of Gender Equality in Employment" and takes strong initiative in the creation of gender-equal workplace. Aside from enforcing gender equality, we also provide equal pay and equal incentives for employees engaged in the same line of work, while at the same time discourage differential treatments based on race, ethnicity, social status, lineage, religion, disability, gender, sexual orientation, family responsibilities, marital status, political association, or age.

## Maternity health protection program

Lanner caters for the human rights and equal employment opportunities of female workers, and has implemented a "Feminine Health Protection Program" in accordance with Article 31 of "Occupational Safety and Health Act" that imposes mandatory hazard assessment/control and other relevant measures for female workers who are pregnant, have given birth for less than one year, or are involved in tier 1 or tier 2 risky work activities. Additionally, the Company makes work hour/shift adjustments, workplace improvements, and provides safe nursery spaces to ensure the physical and mental health of female workers throughout pregnancy, childbirth, and breastfeeding. Employees of the Company having completed 6 months of service are entitled to apply for unpaid parental leave until their children reach the age of 3, but subject to a maximum of 2 years. Employees who support two or more children are entitled to no more than two years of unpaid parental leave in total, before the youngest of whom reaches the age of 3. Employees may continue to participate in existing social insurance scheme during unpaid parental leave.

### Statistics on unpaid parental leave

	Male	Female	Subtotal
(a). No. of employees qualified to apply for unpaid parental leave in 2020	4	4	8
(b). No. of employees applied for unpaid parental leave in 2020	4	4	8
(c). No. of employees expected to be reinstated from unpaid parental leave in 2020	2	3	5
(d). No. of employees reinstated from unpaid parental leave in 2020	2	3	5
(e). No. of employees reinstated from unpaid parental leave in 2019	0	1	1
(f). No. of employees reinstated from unpaid parental leave in 2019 and have worked continuously for one year	0	1	1
Unpaid parental leave application rate b/a	100%	100%	100%
Unpaid parental leave reinstatement rate d/c	100%	100%	100%
Unpaid parental leave retention rate f/e	0	100%	100%

(a). Estimated based on the number of employees having applied for maternity leave or paternity leave in the last 3 years (2018-2020)

(b). Date of unpaid parental leave falling within 2020

(c). Expected reinstatement date falling within 2020

(d). Number of employees with expected reinstatement date falling within 2020 that were actually reinstated

(e). Actual reinstatements that took place in 2019

(f). Employees reinstated in 2019 who worked continuously for one year afterwards (who remained employed in 2019)



# Occupational safety and health

## Occupational safety and health management policy

Lanner follows its "Environmental, Health and Safety Policy" (EHS) and passes certification for "ISO 45001 - Occupational health and safety system. It has a dedicated team responsible for the establishment of robust policies, procedures, and management standards, implementation of environmental safety and health improvements, enforcement of occupational safety training, management of accident risks, and arrangement of health checkups and medical service, which in turn assures occupational safety and creates a work environment of low injury and absenteeism rate.

### Work injury statistics 2020

Item	Category	Male	Female	Item	Category	Value
No. of disabling injuries	Work injury	0	0	Disabling injury frequency rate (FR)	Excluding commuting to and from work	0
	Commuting to and from work	4	2		Including commuting to and from work	4.03
Total days lost due to disabling injuries	Work injury	0	0	Disabling injury severity rate (SR)	Excluding commuting to and from work	0
	Commuting to and from work	22	10		Including commuting to and from work	21.48

Note:

1. Disabling injury frequency rate (FR) = (number of disabling injuries × 10 to the power of 6) ÷ total work hours elapsed
2. Disabling injury severity rate (SR) = (total work days lost × 10 to the power of 6) ÷ total work hours elapsed

## Occupational Safety and Health Committee

The Company has established a "Safety and Health Office" and assembled an "Occupational Safety and Health Committee" in accordance with the Occupational Safety and Health Act. The committee has 18 members in total, 12 (two-thirds) of whom are employee representatives. Their presence in the committee is to assist in the supervision and recommendation of occupational health and safety-related issues.

### Minutes and summary of 4 Occupational Safety and Health Committee meetings held in 2020

Meeting session	Time of meeting	No. of participants	Meeting summary
1st	March 26, 2020	Management representatives: 1 Manager representatives: 1 Safety and health personnel: 4 Worker representatives: 11	<ol style="list-style-type: none"> <li>1. To post security SOP and operation SOP at the C5 chiller room and entrance/exit.</li> <li>2. To re-evaluate placement or addition of fire extinguishers.</li> <li>3. Smell of cigarette in staircases.</li> <li>4. The assembly line at Zhongxing Plant has severe exposure to west sun in the afternoon</li> </ol>
2nd	June 30, 2020	Management representatives: 1 Manager representatives: 1 Safety and health personnel: 3 Worker representatives: 10	<ol style="list-style-type: none"> <li>1. Completed environment monitoring for the first half</li> <li>2. Completed Q1 environmental protection filing</li> <li>3. Retraining for ionizing radiation operators</li> <li>4. Completed annual inspection of low-voltage equipment</li> </ol>
3rd	September 25, 2020	Management representatives: 1 Safety and health personnel: 3 Worker representatives: 11	<ol style="list-style-type: none"> <li>1. The C7 drinking fountain is often short on water supply, causing inconvenience.</li> <li>2. Cockroaches are often sighted at C7 rear balcony, which affect hygiene of that area.</li> <li>3. The fire extinguisher indicator points to incorrect location.</li> </ol>
4th	December 25, 2020	Management representatives: 1 Manager representatives: 1 Safety and health personnel: 3 Worker representatives: 10	<ol style="list-style-type: none"> <li>1. Waste trays should be recycled, reused, or sold to service providers, instead of being treated as industrial waste.</li> <li>2. The substance safety sheet should be placed at a location that is immediately accessible when accident occurs, and not for the convenience of auditors.</li> </ol>

## Ongoing environment, safety, and health improvements

### Workers of high-risk operations are subjected to regular health checkup

Lanner places great emphasis on the health and safety of high-risk employees; the Company conducts environmental monitoring, inspection, and assessment to assure safety of the workplace, and provides protective gear such as earplugs (muff), masks, goggles, anti-corrosion gloves etc. depending on the works involved in order to prevent occupational injury and accident. Furthermore, the Company complies with "Special Hazard Operations" section of "Regulations Governing Worker Health Protection" and requires all new employees involved in high-risk operations such as ionizing radiation and dust to undergo special physique checkup before commencing work, whereas existing employees are required to undergo annual special health checkups. Employees that have been subjected to level 2 health management are given medical consultation from physicians stationed on-site. A total of 45 employees had completed special health checkup in 2020, including 11 ionizing radiation operators, 2 dust operators, and 32 long-term night shift workers.

#### ▼ Execution of general and special hazard health checkups - 2020

Solution name	Goal/target	Current progress
Employee health management planning and implementation	<ol style="list-style-type: none"> <li>(1) Gather and monitor employee health data; achieve a checkup rate of 90% and above</li> <li>(2) Consultation by stationed physician once a month</li> <li>(3) 50% recovery of ergonomic hazard questionnaire</li> </ol>	<ol style="list-style-type: none"> <li>(1) 647 or 90% of employees completed health checkup in 2020</li> <li>(2) 647 employees completed the ergonomic questionnaire in 2020, representing a 90% questionnaire recovery rate</li> <li>(3) 137 employees received consultation from stationed physician in 2020</li> </ol>
Health assurance and reduction of ionizing radiation hazard for high-risk employees	<ol style="list-style-type: none"> <li>(1) Arrange special health checkups once a year to cover 100% of workers involved in special operations</li> <li>(2) Perform radiation reporting and monitoring 12 times a year and achieve 100% recovery rate of radiation dosimeter</li> </ol>	<ol style="list-style-type: none"> <li>(1) Results of all ionizing radiation reports were normal</li> <li>(2) 11 employees completed re-training in 2020</li> <li>(3) 45 employees were subjected to special operations checkup and no abnormality was found</li> </ol>

#### ▼ Occupational safety and health management solutions undertaken in 2020

Solution name	Goal/target	Current progress
Safety awareness enhancement and occupational hazard reduction	To reduce FR value <1.0 and SR value <10 in 2020	FR for 2020 was reported at 0, down from 1.3 in 2019; SR for 2020 was reported at 0, which was lower than 1 in 2019 (excluding traffic accidents). Number of traffic accidents in 2020 was reported at 6, which was 50% less than 12 in 2019.
Enforcement of environment monitoring and exhaust duct testing	<ol style="list-style-type: none"> <li>(1) Conduct environment monitoring once every six months and according to statutory requirements</li> <li>(2) Exhaust duct inspection once per year</li> </ol>	<ol style="list-style-type: none"> <li>(1) Workplace CO2 concentration, lighting, noise, and chemicals are tested once every six months, and the outcomes conforms with laws and ISO requirements.</li> <li>(2) Exhaust duct of ventilation equipment for SMT and DIP is tested each year to ensure that no pollutant is emitted off-premise, and that the quality of exhaust conforms with ISO requirements.</li> </ol>
Protection of employees' health against special hazards	<ol style="list-style-type: none"> <li>(1) Special health checkup once a year; 100% test rate was achieved</li> <li>(2) Report and monitoring of radiation dosimeter 12 times a year; 100% execution rate was achieved</li> </ol>	<ol style="list-style-type: none"> <li>(1) 12 workers involved in radiation and 2 workers involved in dust operation had all completed special health checkup</li> <li>(2) All 12 radiation operators were each issued a radiation dosimeter and tested for radiation exposure on a monthly basis; the test results all showed natural background value.</li> </ol>

### Emergency response and drill

Lanner has a dedicated Safety and Health Office in place to raise employees' disaster response and reduce impact of potential accidents. The office organizes fire safety drill and emergency response training at least once every six months, during which employees are taught knowledge on fire extinguishing, accident reporting, evacuation and disaster prevention. Through regular training on chemical leakage, employees are taught to exercise caution in every detail, and to react to accidents in an orderly manner. At Lanner, we place safety in the first priority and strive to avoid hazard where possible.

▼ Professional training courses for workers of high occupational risk

Operation category	Requirements	Back-training
Ionizing radiation operations	11 operators were required to complete 18 hours of training in advance	At least 3 hours a year
Organic solvent operations	2 heads of operation were required to complete 18 hours of organic solvent-related courses	At least 6 hours every 3 years

### Allocation of first-aid personnel and supplies

The Company has assigned 15 first-aid officers based on the size of its workplace, personnel distribution, hazard exposure and worker size. All first-aid officers are re-trained once every 3 years, and adequate first-aid supply and equipment are kept on site. The Company also checks the adequacy and cleanliness of its medical supply on a monthly basis. Contaminated and expired supplies are replaced and replenished regularly.

▼ Work safety certification

Operation category	Requirements	Back-training
Safety and health personnel	Occupational safety and health officer - 1	At least 12 hours every 2 years
	Occupational safety management specialist - 1	At least 12 hours every 2 years
First-aid personnel	First-aid personnel - 8	At least 3 hours every 3 years

### Total tobacco ban in plant facilities

We are committed to providing employees with a healthy and clean work environment, and therefore impose a total ban on tobacco and lighter everywhere within plant premise. Suppliers, visitors, logistics personnel, and contractors are all prohibited from smoking on plant premise.

### Attention to accommodation safety for foreign workers

Lanner Electronics strives to improve the living standard and workplace health and safety of all foreign workers. In addition to re-installing circuit breakers at dormitories and posting safety notices, the Company also reminded employees in meetings throughout the year that any relocation of electrical appliance or equipment would be subject to safety assessment of the human resource agency and Safety and Health Office. Furthermore, to assure foreign employees of every nationality, all production line warning messages have been revised and presented in Chinese, English, and Vietnamese for more thorough understanding.

### Update of environmental monitoring project

▼ Lanner evaluated a total of 82 regulations in 2020



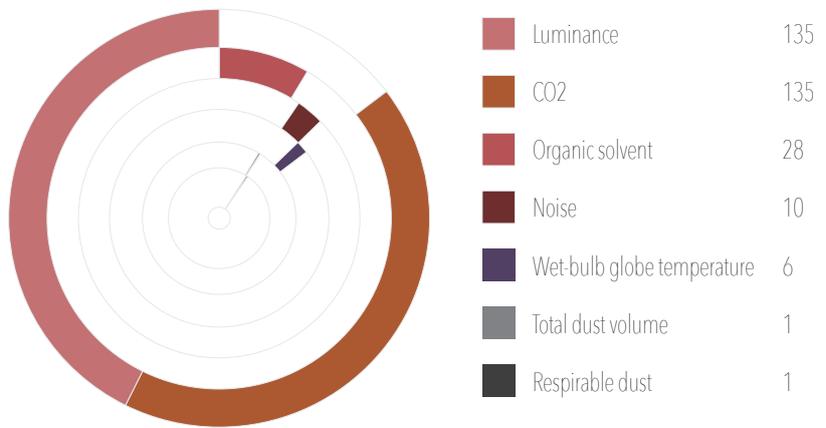
Lanner identifies and keeps track of changes in Occupational Safety and Health Act, Fire Services Act, Ionizing Radiation Protection Act, applicable environmental protection laws, and customers' requirements on a quarterly basis, and in doing so ensures compliance with legal requirements. Through data gathering, identification, record creation, maintenance, update, and auditing, the Company is able to keep track of compliance with occupational safety and health issues, environmental laws, Fire Services Act, Ionizing Radiation Protection Act, other relevant regulations, and requirements

of customers. Outcomes of such audit are taken into consideration when evaluating and planning for future risks and opportunities. Lanner evaluated a total of 82 regulations in 2020 and found 20 having been amended; 14 of which became applicable to the Company, 3 were taken into consideration, and the other 3 were not applicable.

## Operating environment monitoring

In an attempt to provide employees with a healthy and safe workplace, Lanner not only performs regular monitoring of its work environment according to "Regulations on Implementation of Work Environment Monitoring," but also conducts thorough planning, sampling, testing, and analysis of the work environment. Through these actions, Lanner ensures that workers are exposed to tolerable levels of hazard, and protects them from hazardous substances in the workplace.

▼ Locations of environmental monitoring performed by Lanner Electronics in 2020



# Employee health, care and protection

Lanner adopts a tier-based health management system. The Company organizes annual employee health checkups, arranges medical consultation by stationed physician, and hosts health seminars from time to time to address employees' health and promote a healthy work culture. A total of 639 employees had participated in the Company's annual health checkup in 2020.

## Promotion of healthy workplace

### Occupational health consultation at Lanner Electronics

#### Health consultation by on-site physician

Lanner values employees' health, and grades employees by health condition according to the standards outlined in law. For employees that have health conditions rated grade 2 and above, the Company would arrange to have an occupational health physician provide 3 hours of medical consultation and counseling service on-site on a monthly basis.

A total of 81 employees were subjected to consultation/counseling in 2019, whereas a total of 127 employees had participated in 2020, representing a 56% year-on-year increase due to a change from passive to active enrollment. Each health counseling session averaged a size of 10.

Year	Quarter	Persons selected (including active enrollments)	Maximum number of participants	Actual number of participants
2019	Q1	25	25	25
	Q2	3	3	3
	Q3	18	18	18
	Q4	52	37	35
	Total	98	83	81
2020	Q1	40	31	30
	Q2	37	31	29
	Q3	50	42	37
	Q4	41	33	31
	Total	168	137	127

Furthermore, as a response to the Ministry of Labor's goal to reduce work-related stress and musculoskeletal injury, the Company continued providing stress relief and muscle relaxation courses for high-risk workers throughout the year, and had massage specialists available on site between 3:00pm and 6:20pm Tuesday to Thursday. In April, September, and October this year, the Company hosted health seminars on "Fight Against COVID-19 - The Amazing Immune System," "Emotional and Stress Management," and "Healthy Diet DIY," and attracted the participation of 30-50 health-aware employees per session on average.

Massage specialists are stationed on premise every Tuesday and Thursday to help employees relieve stress.

3 health promotion seminars were organized in 2020



# Disease control

The spread of COVID-19 in 2020 has had a worldwide impact on economic and social activities. When the disease first spread in January 2020, Lanner responded immediately and mobilized employees to form specialized disease control teams and devise control measures to prevent the disease from spreading. The Company has also been implementing disease controls and raising employees' awareness according to government policies during this time. Furthermore, regular disease control meetings are being held to keep track of the execution of various control measures as well as their effectiveness.

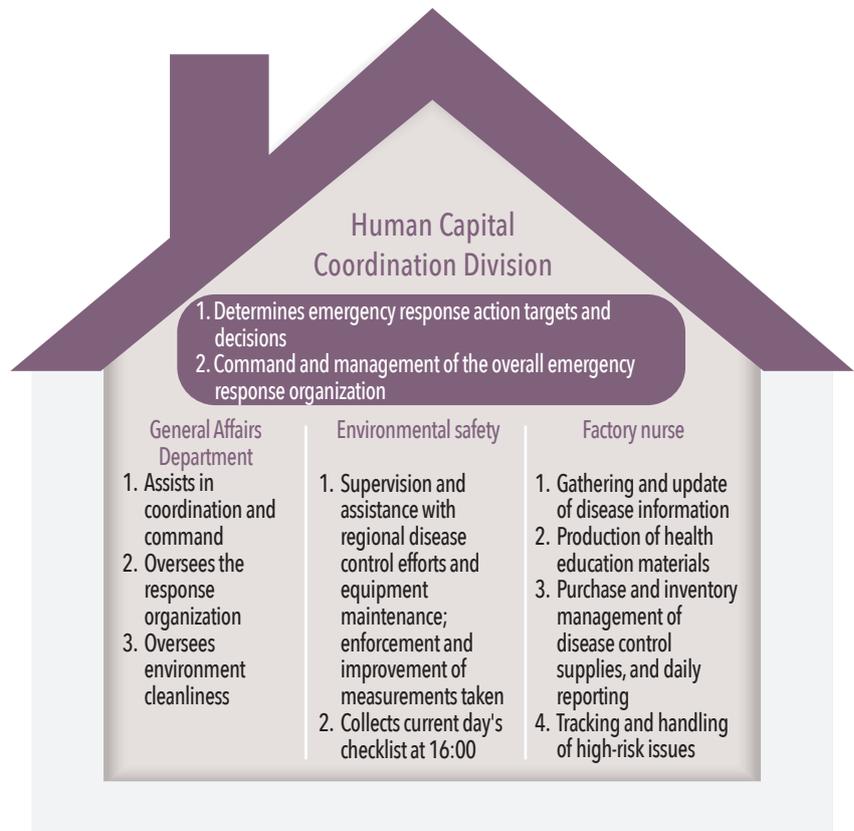
The global spread of COVID-19 shows no sign of slowdown in 2021, and virus variants make the situation even more unpredictable. Lanner Electronics has responded to the COVID-19 pandemic with a "long-term" mindset, and continues to enforce disease controls despite temporary decrease in the number of confirmed cases. A facial recognition system with automatic temperature measurement has been implemented, and any person that shows abnormal temperatures will be reported to the disease control team immediately. Meanwhile, the IT system is being upgraded to provide us with the capabilities needed to cope with the disease and reduce risks of infection.

## Assembly of dedicated disease control task force

1. A disease control team was assembled in January 2020 with defined chain of command, functional teams, team members, and responsibilities  
A LINE group was created to facilitate real-time
2. update, response, and adjustment of disease control measures for possible weaknesses  
Disease control team meetings are held on
3. a weekly basis to discuss response plans and implement response measures.

## Establishment of disease control policies

1. Lanner has introduced a tier-based disease control system based on the government's current classifications to guide preventive
2. measures and response actions  
Development of the disease is being monitored closely and preparations are being made ahead of time to prevent spread



## Disease control management and monitoring

1. Daily temperature measurement - each department is required to report temperature measurement results and abnormal cases (37.5 degrees and above) at 10am each day
2. Daily care reports are prepared to keep track of employees' travel history and care for those with abnormal temperatures
3. Inter-region access control - employees have had their movements restricted to designated areas, and contact of employees from different areas is prohibited to minimize chances of infection
4. The Company promotes employees' awareness on disease control, sanitization, segregated dining, safe distance in meetings, and wearing of mask
5. Disease control supplies are being kept above safety level
6. The IT Department conducts stress tests and makes system upgrades to make sure that the system is able to support working from home.
7. Enhanced management practices have been introduced on foreign workers' dormitory; workers of one plant site are confined to one dormitory and may not visit dormitories of other plant sites. Actions have been taken to keep track of foreign workers' travel history, and disease control information and awareness are being promoted in monthly meetings.
8. Logging of outside visitors
9. A facial recognition system has been introduced, whereas controls such as attendance management and temperature measurement are being taken to minimize contact and reduce spread of disease

## Execution of disease control measures

1. Promotion and enforcement of the government's disease control measures. Government reminders on disease control measures and long holiday infection hot spots are relayed in a timely manner
2. Employees who have contracted the disease will have travel history thoroughly surveyed. Employees whose trail overlap with infected cases are required to work from home.
3. Meetings are convened via teleconferencing or phone where possible; the size of physical meetings is limited to 30
4. Inspections and audits are being conducted; any defect or improvement identified is reported in disease control meetings
5. Workplace is sanitized regularly; 75% alcohol and alcohol-based sanitizer are distributed to employees
6. The Company distributed face masks in limited quantity in the early stage of the pandemic. Since then, each plant site is responsible for placing bulk orders to help employees acquire masks at reasonable price.
7. Deployment and renewal of disease control equipment: all plant sites and toilets are fitted with auto-sanitization equipment, whereas temperatures are being taken at the forehead instead of the ear
8. Plant employees take turns dining; dining spaces are segregated with partitions to maintain social distance

The Company offers subsidies as an encouragement for employees to buy books online and stay at home during the pandemic. 365 people had applied for the subsidy; each person was subsidized NT\$250 and a total of NT\$91,250 was paid.

The factory nurse issues two e-newsletters per month on health-related topics such as healthy lifestyle, introduction to disease, health promotion, health issues, and disease control to improve employees' health knowledge

Lanner Electronics worked with Xizhi Health Department to organize a "Subsidized Vaccination" event, and invited employees who were pregnant, above a certain age, or diagnosed with chronic illness to have their subsidized influenza vaccination at plant premise



Disease control performance of Lanner Electronics - 2020

**13** time(s)  
Disease notice

**15** time(s)  
Disease control awareness

**1** session(s)  
Disease control seminar

**Once**  
a week  
Disease control meeting

**11**  
Disease control leave



# Social care

For more than 30 years since inception, Lanner has grown consistently in revenues, profitability and asset size, and remains committed to giving back to the society through community and charity service. The Company founded Lanner Culture and Education Foundation, a non-profit organization, in July 2017 and later obtained incorporation approval from New Taipei City Education Department. The foundation promotes "Education," "Culture," "Localization," and "Act of Decency" in all of its programs, and enforces corporate social responsibilities on multiple aspects including: care for the underprivileged, arts and human culture education, sustainable environment, and talent training.



Lanner Culture and Education Foundation not only tends to the needs of charity organizations, but is also persistent towards social and environmental aspects of sustainability issues. Events such as aesthetics seminar and art exhibition are held from time to time to raise employees' interest and knowledge on human culture, arts, and aesthetics. Meanwhile, employees are encouraged to adopt environmentally friendly practices in all aspects of life, and contribute towards creating a healthy and sustainable home for themselves and future generations.

## Care for the underprivileged Infinite Love - Art Education Program

Through the "Infinite Love - Art Education Program," workers of Lanner Culture and Education Foundation visit the pediatric ward at Linkou Chang Gung Memorial Hospital, where they join Light Children Association in providing voluntary bedside drawing service and mental assistance to critically ill children. This service was temporarily suspended in the first half of 2020 due to COVID-19, but resumed in the second half and assisted 35 children with their rights to education. Through participation in art activities, Lanner hopes to help critically ill children develop independent thinking, learn to express emotions, adapt to stress, and capture life's beauty and hope despite being confined to their beds.



## Supporting equal employment of the underprivileged

Lanner Culture and Education Foundation pays constant attention to issues concerning employment of the underprivileged, and continued to host a "Wednesday Charity Coffee" event, during which it invited Taipei Mental Rehabilitation Association to set up "Easy Coffee," a sheltered coffee workshop, on the Company's premise. Through this event, the Company hopes to provide supportive and sheltered employment, and give recovering patients of mental illness the opportunity to be with people, familiarize with the workplace, and regain work skills while at the same time promote understanding and care towards mental illness and patients among the society.



Starting from the second half of 2020, Lanner has been inviting Chia-Chen Li, Taiwan's first visually impaired barista to receive barista, to brew coffee for employees on Lanner's office premise every Friday, and therefore provide real support to the employment of the underprivileged.

➤ Barista Chia-Chen Li is invited to the Company's premise every Friday



## Arts and human culture education

### Arts and cultural education in remote locations

Bu Sin Elementary School from Budai Township, Chiayi County, has been supporting a children's band since 2000, but due to lack of resources, a jury had once commented that their music instruments were out of tune during a competition. Nevertheless, the school teachers took extensive efforts to repair music instruments and source support from the outside while the children practiced diligently on their own, and the choir was able to claim multiple awards in recent years. Lanner Electronics has long been supportive of arts and cultural performance in remote areas, and after learning of the dedication of teachers and students at Bu Sin Elementary School, Chairman Chou I Wen invited the children's band to perform at National Concert Hall during "Lanner Music Salon" alongside Taipei Chinese Orchestra.

After 4 months of intensive practice, 41 students from Bu Sin Elementary School finally stood on stage on December 26, 2020 and played a number of tunes to the satisfaction of the audience. By supporting children, arts, and culture in remote locations, Lanner Electronics hopes to bring the public's attention to thriving spirits in neglected parts of the society, and help children expand vision and experience that will benefit them for a lifetime.

▼ Bu Sin Elementary School children's band performed at National Concert Hall.



## Industry-academia collaboration

### Collaboration with NCTU on 5G edge computing



Lanner Electronics has been dedicated to the development of SD-WAN and 5G edge computing applications since it created a Telecommunications Application Department 5 years ago. In 2018, the Company worked with National Chiao Tung University (NCTU) to co-found "Lanner-NCTU Joint Research Laboratory," and through collaboration with NCTU, the laboratory worked on several projects including "Preliminary Planning for 5G Base Station MEC Infrastructure," and has been able to demonstrate proof of concept in multiple exhibitions.

These successes have enabled Lanner to become a uCPE 2.0 network equipment supplier for Verizon in 2019, and the Company will continue engaging NCTU in industry-academia collaboration to adopt international telecommunication standards as well as the latest 5G specifications, thereby strengthen Lanner's technological advantage and R&D capacity in edge computing.

To further optimize use of edge computing resources and make solutions suitable for even more highly distributed and harsher environments, Lanner collaborated with NCTU and began two major projects entitled "High Scalability Edge Computing Architecture" and "Next Generation Fanless Cooling System." After more than 7 months of research, the two institutions completed proof of concept (PoC) for stage 1 development of their scalable MEC platform in March 2020; as for the fanless cooling system, the two institutions managed to develop a next-generation heatsink after 8 months of repeated tests and validation. This industry-academia collaboration has successfully prepared the industry for 5G distributed edge computing applications and international telecommunication standards in the future.

Furthermore, Lanner Electronics founded an online virtualization/remote integration testing laboratory in 2020 that will enable all partners of the software ecosystem to take advantage of whitebox solutions in the telecommunications industry. The Company will continue planning future products closely in line with its core technology, and capitalize on the wave of digital transformation induced by 5G technology, by building a strong technological foundation that will ensure sustainable growth for the next decade.

## Collaboration with National Taiwan University on wireless network security

New technologies such as AI, edge computing, 5G, and network virtualization all call for a new network architecture that offers greater speed, security, and flexibility. As a professional manufacturer of networking and computing platforms, Lanner draws successful experience from its collaboration with NCTU and plans to engage National Taiwan University (NTU) on an industry-academia collaboration project entitled "High-speed Signal Transmission and Wireless Network Security" in 2021. Lanner will be sharing industry experience and exchanging



technical know-how with NTU Department of Electrical Engineering, sourcing assistance from academic talents to complement Lanner's software and hardware advantages while expanding the possibilities of existing technologies, and therefore create a strong foundation for IoT applications.

## Diversified learning and workplace adaptability with China University of Science and Technology

Lanner Electronics has been collaborating with China University of Science and Technology (CUST) for the third year to expand learning and career opportunities, and instant feedbacks from the administration and students of CUST have ensured the consistency of this collaborative relationship. Students are able to choose internship opportunities according to their studies and interests during the match-making stage. Once internship begins, Lanner will provide CUST administration with feedbacks on the internship program, and arrange internship seminars and support groups to deliver positive learning experience for the interns. Those who exhibit excellent performance during internship are offered employment opportunities for seamless transition into their careers.

### Story of student-turned-employee

Vincent Yeh, Manufacturing Division

I joined Lanner as an intern in July 2019 and was fortunate to be assigned to the Engineering Department for the task of amending production line SOP. I had no idea of what I was supposed to do, but my colleagues were very generous and patient at explaining to me the work details and production procedures, which allowed me to catch on quickly from scratch. The one-year internship flew by, and at the end of the program, my line manager invited me to join Lanner's Engineering Department to assist with new product testing and resolution of production line issues. I am currently learning the test program, and my colleagues have designed a set of procedures that I can follow to work, learn, and know more about Lanner's products at the same time.

It is almost two years since I first joined Lanner. I have learned much not only in terms of the procedures of each task, but also ways to communicate and use time more effectively. This has been the most fruitful time of my life, and I am grateful to my line manager for the extra encouragements and learning opportunities, and to my colleagues for their patient guidance and assistance. I look forward to my future here at Lanner.

Nash Yang, Manufacturing Division

My professor first referred me to Lanner for the opportunity to learn useful knowledge. I completed my one-year internship and transitioned into permanent role following graduation. The internship did indeed allow me to learn many things that are not taught in schools, such as working and communicating with others, and the importance of doing things properly instead of making a half-hearted effort. I am very grateful of the colleagues and line manager who guided me through my internship. They gave me tips on how to be with people and reminded me of my mistakes when I was being careless. I was fortunate to have seasoned colleagues showing and demanding the proper ways to do things, and I am especially grateful for everyone who has helped me along the way.



## Localization

### Promotion program for international education and UN SDGs in New Taipei City:

Lanner engaged Hao Shi Social Enterprise to carry out "Promotion Program for International Education and UN SDGs in New Taipei City," during which certified instructors were invited to teach students on SDGs and ways to resolve the society's problems in everyday life, using board game - "My Formosa" as the teaching material. A total of 400 teachers and students from 20 junior and senior high schools had participated in the program in 2020, and Lanner was awarded a certificate of appreciation from New Taipei City Education Department for excellence in teaching support.

### Elementary school basketball promotion program for priority education districts in New Taipei City

Lanner Culture and Education Foundation has targeted students of elementary schools located in the priority districts of New Taipei City as the primary subjects for its local charity efforts. Through collaboration with private charity organizations, the foundation supports basketball promotion program as a means to help students develop proper exercise habits as well as balanced qualities from "morality, intelligence, physique, teamwork to aesthetics."

Lanner Culture and Education Foundation has been supporting Mustang Junior Basketball Association and sponsoring "New Taipei City Elementary School Basketball Promotion Program for Priority Education Districts" in the organization of basketball summer camp, after-school basketball training, and basketball tournament since 2017. Between January and end of December 2020, the foundation organized 50 weeks of after-school basketball training for 4 hours a week that benefited 9 elementary schools in New Taipei City. Meanwhile, the "4th Lanner MJBA Basketball Tournament" attracted participation of approximately one thousand grade 3 to grade 5 students from more than 20 elementary schools. Through games and exchange of skills, the children learned to overcome tension and build teamwork in the face of competition, while the practice routines helped them develop good exercise habits that would lead to stronger physique and more matured mental qualities.

### Blood donation

Blood donation is an act of kindness that benefits both the donor and the donee. Not only does it stimulate formation of new blood cells for own health, it can also be useful or even life-saving to patients and victims in need. In 2020, Lanner Electronics called for general support to the blood donation event organized between New Taipei City Lien Hsin Lions Club and Lanner Culture and Education Foundation, and a total of 102 employees had responded to the call.



## Safe Farming Education Program

Lanner's Safe Farming Education Program comprises three major elements: contracted purchase of safely farmed rice, volunteer activities, and sustainability education. During the year, the Company made contracted purchase for 3,000kg of safely farmed rice and distributed it as gift through the Employee Welfare Committee. Through this gesture, the Company hopes to promote zero food waste and healthy diet among employees, and turn food choices into positive changes for the land.



# Appendix

## Appendices

# About the sustainability report

## Overview of the report

This is the 4th corporate social responsibility (CSR) report of Lanner Electronics. We will continue publishing CSR reports in the future as a means to disclose non-financial performance to the outside world, and show the public how we have taken actions toward achieving our corporate vision of sustainability. The previous (2019) CSR Report disclosed information from January 1 to December 31, 2019, and was published on November 4, 2020. The current (2020) ESG Report discloses information from January 1 to December 31, 2020. This report is published once a year.

## Preparation guidelines

This report has been prepared based on the core option of GRI Sustainability Reporting Standards (GRI Standards) stipulated by the Global Reporting Initiative (GRI). Refer to the appendix for more details on how the GRI Index corresponds to chapters of this report.

## Boundaries of disclosure

Economic data of this report was sourced from consolidated financial statements presented in the 2020 annual report. The consolidated financial statements include the Company and all entities under its control (i.e. subsidiaries). Boundaries of environmental and social disclosure are limited to Lanner Electronics Inc. For more details on affiliated enterprise, please see the 2020 annual report. There had been no material change to Lanner's size, structure, ownership, or supply chain during the reporting period, and neither was there any restatement of information presented in previous reports.

### Subsidiaries included in the consolidated financial statements of Lanner Electronics - 2020

Subsidiary	Business activities
LANNER ELECTRONICS USA, INC.	Trading of computer peripherals
LANNER ELECTRONICS (MAURITIUS) INC.	Investments
LEI TECHNOLOGY CANADA LTD.	Trading of computer peripherals
LANCOM HOLDING CO., LTD.	Investments
Beijing L&S Lancom Platform Tech. Co., Ltd.	Trading of computer peripherals
Dongguan L&S Haiwei Network Technology Co., Ltd.	Manufacturing and trading of computer peripherals
Likai Electronics (Dongguan) Co., Ltd.	Manufacturing and trading of computer peripherals
LANNER TECHNOLOGY JAPAN CO., LTD.	Trading of computer peripherals
Whitebox Solutions Inc.	Manufacturing and trading of computer peripherals

### Other operating locations

Zhongxing Plant
6F, No. 22, Zhongxing Road, Xizhi District, New Taipei City
Datong Building B
9F, No. 151, Section 2, Datong Road, Xizhi District, New Taipei City
Datong Building C
No. 155, Section 2, Datong Road, Xizhi District, New Taipei City

## External assurance

All financial data disclosed in this report was taken from consolidated financial statements that KPMG Taiwan had prepared and audited according to Regulations Governing the Preparation of Financial Reports by Securities Issuers and the version of International Financial Reporting Standards, International Accounting Standards, and interpretations thereof approved by the Financial Supervisory Commission. Other international standards that Lanner has been certified for include: ISO 9001 - Quality management system, TL 9000 - Communication quality management system, ISO 14001 - Environmental management system, IECQ QC 080000 - Hazardous Substance Process Management, ISO 45001 - Occupational health and safety system, ISO 28000 - Supply chain security management, Authorized Economic Operator (AEO), and ISO 27001 - Information security management system.

## External initiatives

- ◆ The 17 United Nations Sustainable Development Goals (SDGs)
- ◆ "Responsible Business Alliance (RBA) Code of Conduct"
- ◆ Act of Gender Equality in Employment (Taiwan)
- ◆ People with Disabilities Rights Protection Act (Taiwan)
- ◆ Convention on the Rights of Persons with Disabilities (United Nations)

### Contact information

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## List of SDGs

SDGs	Lanner's practices
<p><b>1</b> No poverty</p> 	<ol style="list-style-type: none"> <li>Lanner Culture and Education Foundation supports equal employment opportunities for the underprivileged, and invites charity coffee shops and blind massage specialists to perform service within company premises</li> <li>Lanner Culture and Education Foundation supports local organizations of the underprivileged by gathering supplies and making financial donations</li> <li>Lanner Culture and Education Foundation supports the underprivileged through donations of money, invoice, secondhand clothes/shoes.</li> <li>Small farmers are invited to set up stalls on company premise every Friday to sell eco-friendly produce; part of the sales proceeds is donated to organizations of the underprivileged</li> <li>Lanner Culture and Education Foundation organizes various activities aimed at the underprivileged, such as: CNY visit, delivery of CNY meals to lone elders etc.</li> </ol>
<p><b>2</b> Zero hunger</p> 	<ol style="list-style-type: none"> <li>Lanner sponsors eco-friendly farming through execution of the "Safe Farming Education Program"; 3,000 kg of safely farmed rice was purchased and distributed as gifts for the Mid-autumn Festival</li> <li>Lanner participates in the Vanilla Farm Sponsorship Program by purchasing agricultural products that have been farmed using natural, organic, and non-toxic methods with natural materials</li> <li>Small farmers are invited to set up stalls on company premise every Friday to sell organic produce at reasonable prices to employees</li> </ol>
<p><b>3</b> Good health and well-being</p> 	<ol style="list-style-type: none"> <li>The Company organizes annual employee health checkups, arranges medical consultation by on-site physician, and hosts health seminars and safety promotion events from time to time</li> <li>Employees are encouraged and subsidized to form clubs and engage in club activities as a way to achieve work-life balance</li> <li>A disease control team has been assembled whereas disease control measures and awareness campaigns are being implemented in response to the COVID-19 pandemic</li> <li>Health promotion activities such as weight loss challenge, fitness course, basketball tournament, hiking etc. are being organized</li> <li>An employee assistance program has been introduced to address employees' needs and provide care</li> <li>Persons with vision disability are invited to provide massage service in company lounge at regular times, thereby helping employees relief stress from work</li> </ol>
<p><b>4</b> Quality education</p> 	<ol style="list-style-type: none"> <li>Lanner issues regular e-learning newsletters to share with employees on the latest courses and self-learning resources</li> <li>Lanner supports arts/cultural education in remote locations, and invites children's bands to perform at "Lanner Music Salon"</li> <li>Lanner supports talent development at campus, and cooperates with NCTU on several projects including "Preliminary Planning for 5G Base Station MEC Infrastructure"</li> <li>Lanner offers a wide range of systematic training courses such as orientation, general knowledge, specialized skills, managerial skills etc.</li> <li>Lanner plans to engage National Taiwan University (NTU) in an industry-academia collaborative study titled "High-speed Signal Transmission and Wireless Network Security" in 2021</li> <li>Lanner sponsors Hao Shi Social Enterprise's efforts to educate students on SDGs, for which it received a certificate of appreciation from New Taipei City Education Department</li> </ol>
<p><b>5</b> Gender equality</p> 	<ol style="list-style-type: none"> <li>Lanner has 6 senior managers of Vice President grade and above; 3 (50%) of whom are female</li> <li>A "Maternity Health Protection Program" has been implemented; the Company provides nursery facility and birth incentives, and organizes parental courses for new parents</li> <li>Lanner strives to provide equal pay and equal opportunities for employees engaged in the same line of work; in comparison, basic salary between female and male employees is 1:1</li> <li>The Company hosts gender equality campaigns</li> <li>The Company prohibits harassment in the workplace, and provides ways to raise complaints and report misconducts</li> </ol>
<p><b>6</b> Clean water and sanitation</p> 	<ol style="list-style-type: none"> <li>Drinking fountains are cleaned and have water quality tested according to SOP on a regular basis</li> <li>Each department is required to clean up their work environment before end of Friday</li> <li>Office is waxed regularly, and toilets are cleaned and sanitized on a daily basis</li> </ol>
<p><b>7</b> Affordable and clean energy</p> 	<ol style="list-style-type: none"> <li>Products are being made in more energy-efficient ways</li> <li>The Company enforces energy-saving measures such as: use of energy-efficient chillers and backups in B4, turning off lights during lunch break, and unplugging computers after work</li> <li>Replacement and use of LED-based energy-efficient lighting equipment</li> </ol>

**8** Decent work and economic growth

1. Create a safe, equal, diverse, and competitive work environment
2. Offer market-leading variable salary
3. Offer referral bonus and organize recruitment events to source top talents
4. Offer opportunities for re-employment
5. Hire persons with disability and support employment of the underprivileged

**9** Industry, innovation and infrastructure

1. Engage NCTU in an industry-academia collaboration to adopt international telecommunication standards and the latest 5G specifications
2. Host product strategy meetings and innovation competitions, and support all creative ideas
3. Increase research spending on 5G, Wifi 6, and POE
4. Adopt Industry 4.0

**10** Reduced inequalities

1. Protect foreign workers' interests in accordance with RBA guidelines, and ensure that all foreign workers are entitled to the same benefits as local workers
2. Respect foreign workers' religious activities, enhance communication, and provide grievance channels as well as decent dormitories
3. Enforce the zero-commission policy for foreign workers. Expenses such as passport renewal and health checkup that foreign workers incur on their entry into Taiwan are entirely covered by the Company

**11** Sustainable cities and communities

1. Training is executed regularly to strengthen the Company's defense against disasters, and minimize direct economic losses
2. Donations are made to help cities and remote locations recover from disaster

**12** Responsible consumption and production

1. Create a green supply chain and require all suppliers to sign RoHS Self-declaration
2. Promote green products while ensuring that all products comply with RoHS, REACH, and WEEE directives and the 3R principles
3. Enforce waste reduction and clean production on an ongoing basis
4. Waste is recycled and reused as the first priority; suppliers' packaging materials are also recycled/reused

**13** Climate action

1. A factory energy monitoring system has been implemented to lessen environmental impact, provide early alert, keep track of energy usage, and improve energy efficiency
2. The green factory initiative is being enforced as a way to increase energy/resource efficiency for the Company and its customers, which in turn mitigates climate change
3. GHG reduction plan is being enforced on a long-term basis, and employees are encouraged to adopt energy/carbon reduction actions as part of daily life

**14** Life below water

1. Co-hosted a coastal cleanup event with Hao Shi Social Enterprise in 2020, during which the Chairman led a group of employees to clean up Wang Kung Fishing Port

SDGs

Lanner's practices

**15** Life on land

1. Supporting sustainable forest management by using FSC (Forest Stewardship Council) certified paper for printing
2. Reducing use of paper and adopting digitalization for certain production-related data
3. Employees are encouraged to participate in mountain cleanup, and seminars on the preservation of land environment were held

**16** Peace, justice and strong institutions

1. New recruits are required to sign commitments to integrity behavior and anti-corruption
2. Existing employees are subjected to annual training on ethical behaviors and the integrity commitment
3. Suppliers are instructed and reminded to sign, commit to, and comply with integrity and anti-corruption rules
4. A grievance and whistleblower system has been implemented
5. All forms of discrimination are eliminated in accordance with RBA

**17** Partnerships for the goals

1. Enforcement of supplier sustainability management. Aside from quality and service, the Company also exercises supervision over issues such as supply chain risk, conflict minerals, local procurement, and business continuity
2. Joined the U.S. RCI (Rural Cloud Initiative) to provide whitebox solutions for 5G/LTE networking and computing for smart agriculture application
3. Sponsored Hao Shi Social Enterprise's efforts to educate students on SDGs, and shared experience and resources in support of a social partnership
4. Complied with RBA requirements, and implemented "Conflict Minerals Management Procedures" that require suppliers to refrain from purchase and use of conflict minerals



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★307-1	Non-compliance with environmental laws and regulations	P 31 Compliance and performance
GRI 308:2016 Supplier Environmental Assessment		
308-1	New suppliers that were screened using environmental criteria	P 51 Supplier sustainability management

Sub-category No.	Sub-category Title	Page
GRI 401:2016 Employment		
401-1	New employee hires and employee turnover	P 70 Talent selection
★401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	P 76 Talent retention
GRI 402:2016 Labor/Management Relations		
402-1	Minimum notice periods regarding operational changes	P 80 Protection of basic rights
GRI 403:2018 Occupational Safety and Health		
403-1	Occupational health and safety management system	P 82 Occupational safety and health
403-3	Occupational health services	P 82 Occupational safety and health
403-4	Worker participation, consultation, and communication on occupational health and safety	P 82 Occupational safety and health
403-5	Worker training on occupational health and safety	P 82 Occupational safety and health
403-6	Promotion of worker health	P 86 Employee health, care, and protection
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P 87 Disease control P 82 Occupational safety and health
★403-8	Workers covered by an occupational health and safety management system	P 82 Occupational safety and health
403-9	Work-related injuries	
GRI 404:2016 Training and Education		
★404-1	Average hours of training per year per employee	P 71 Talent development
404-3	Percentage of employees receiving regular performance and career development reviews	P 76 Promotion of talents
GRI 405:2016 Diversity and Equal Opportunity		
405-1	Diversity of governance bodies and employees	P 29 Corporate governance
405-2	Female-to-male ratio of basic salary plus remuneration	P 50 Identification and response of material topics>Non-discrimination P 77 Above-peer incentives, compensations, and benefits
GRI 406:2016 Non-discrimination		
★406-1	Incidents of discrimination and corrective actions taken	P 31 Compliance and performance
GRI 407:2016 Freedom of Association and Collective Bargaining		
407-1	Operations or suppliers susceptible to risks concerning freedom of association and collective bargaining	P 80 Enforcement of worker rights and gender equality
GRI 408:2016 Chile Labor		
408-1	Operations and suppliers at significant risk for incidents of child labor	80 Enforcement of worker rights and gender equality P 39 Social responsibility strategies
GRI 409:2016 Forced or Compulsory Labor		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	P 80 Enforcement of worker rights and gender equality P 39 Social responsibility strategies
GRI 414:2016 Supplier Social Assessment		
414-1	Selection of new suppliers using social principles	P 51 Supplier sustainability management

Sub-category No.	Sub-category Title	Page
GRI 416:2016 Customer Health and Safety		
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	P 31 Compliance and performance
GRI 417:2016 Marketing and Labeling		
417-2	Incidents of non-compliance concerning product and service information and labeling	P 31 Compliance and performance
417-3	Incidents of non-compliance concerning marketing communications	P 31 Compliance and performance
GRI 418:2016 Customer Privacy		
★418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	P 31 Compliance and performance
GRI 419:2016 Socioeconomic Compliance		
★419-1	Non-compliance with laws and regulations in the social and economic area	P 31 Compliance and performance

Note:

1. Core option: GRI 102-1 to GRI 102-14, GRI 102-16, GRI 102-18, GRI 102-40 to GRI 102-56
2. ★ denotes material topic

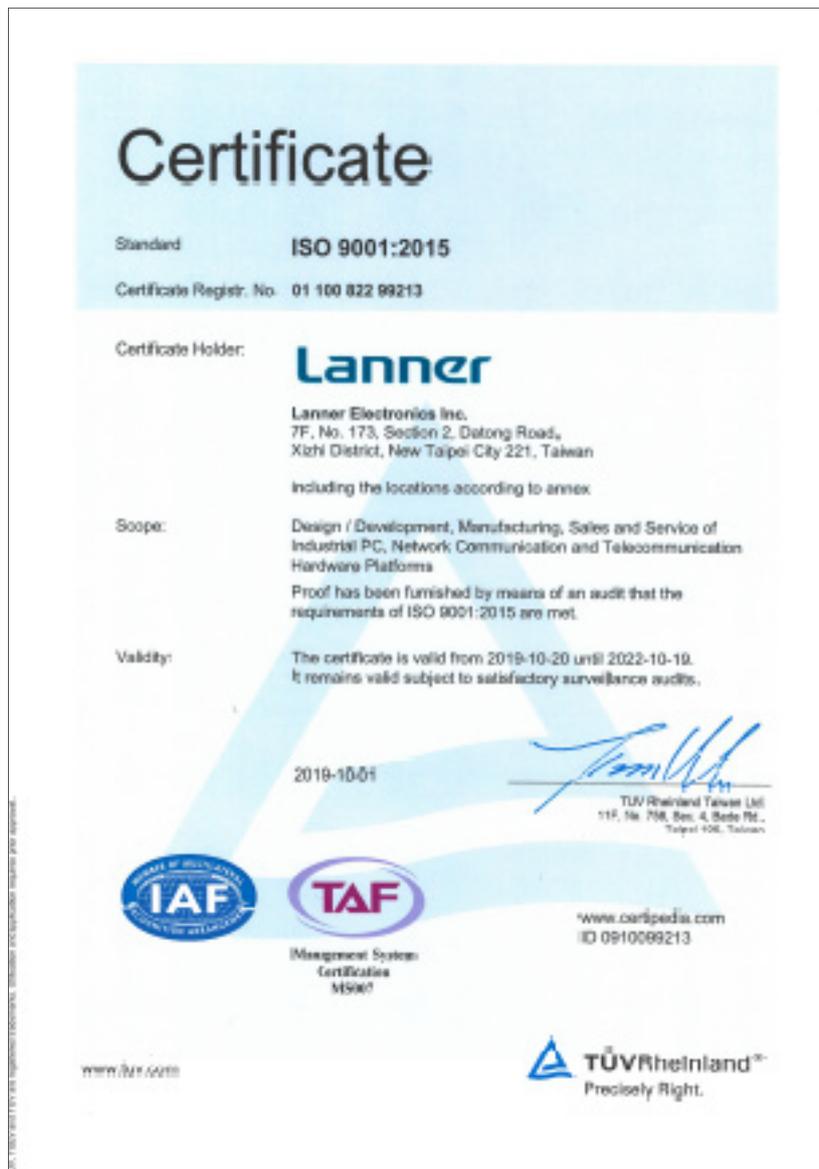


# Third Party Assurance Statement

Timeline of assurances obtained by Lanner



## ▼ ISO 9001 - Quality management system



▼ TL 9000 - Communication quality management system

## 驗證證書

**標準:** GB/T 19001-2016 / ISO 9001:2015 / TL 9000-H R6.2/R5.6

**證書登記號碼:** 17 201 99213

**證書持有人:** **Lanner**  
 立緯科技股份有限公司  
 221 新北市汐止區大同路二段 173 號 7 樓  
 所包括場址已列於證書附錄上

**範圍:** 工業高級網路通訊及電信網路平台之合約設計、製造與銷售

經完成稽核並滿足了 GB/T 19001-2016 / ISO 9001:2015 / TL 9000-H R6.2/R5.6 標準的要求。

**註冊號碼:**

產品類別代碼	產品類別描述
7.3.4	電子電機組裝

**有效期:** 證書有效期從 2020-10-13 至 2022-10-19。  
 此種認證證書符合國際的監督稽核保持有效。  
 初次發證日期 2016 年

2020-10-13

  
 TÜV Rheinland Taiwan Ltd.  
 11F, No. 758, Sec. 4, Bade Rd.,  
 Taipei 105, Taiwan




## Certificate

**Standard:** GB/T 19001-2016 / ISO 9001:2015 / TL 9000-H R6.1/R5.5

**Certificate Registr. No.:** 17 201 99213

**Certificate Holder:** **Lanner**  
 Lanner Electronics Inc.  
 7F, No. 173, Section 2, Datong Road,  
 Xizhi District, New Taipei City 221, Taiwan

**Scope:** Contract Design / Development, Manufacturing and Sales of Industrial PC, Network Communication and Telecommunication Hardware Platforms

Proof has been furnished by means of an audit that the requirements of GB/T 19001-2016 / ISO 9001:2015 / TL 9000-H R6.1/R5.5 are met.

**Certificate Registration No.:** TL9930

Product Category Code	Product Category-Description
7.3.4	Electromechanical Assembly

**Validity:** The certificate is valid from 2019-10-20 until 2022-10-19. It remains valid subject to satisfactory surveillance audits. First certification 2016

This certificate information can be searched on CNCA official website <http://www.cnca.gov.cn>

2019-09-27

  
 TÜV Rheinland (China) Ltd.  
 No. 31/33-06, Floor 7 and No. 31/04/06, Floor 11,  
 JIAC Building, No. 133 Central Road, East 3rd Ring Road,  
 Chaoyang District, Beijing 100022, P. R. China




▼ ISO 14001 - Environmental Management System

## Certificate

**Standard:** ISO 14001:2015

**Certificate Registr. No.:** 01 194 822 99213

**Certificate Holder:** **Lanner**  
 Lanner Electronics Inc.  
 7F, No. 173, Section 2, Datong Road,  
 Xizhi District, New Taipei City 221, Taiwan  
 including the locations according to annex

**Scope:** Design / Development, Manufacturing, Sales and Service of Industrial PC, Network Communication and Telecommunication Hardware Platforms

Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.

**Validity:** The certificate is valid from 2020-02-28 until 2023-02-27. It remains valid subject to satisfactory surveillance audits.

2020-02-27

  
 TÜV Rheinland Taiwan Ltd.  
 11F, No. 758, Sec. 4, Bade Rd.,  
 Taipei 105, Taiwan





▼ IECQ QC080000 HSPM - Hazardous Substance Process Management System

## IECQ Certificate of Conformity Hazardous Substance Process Management

**IECQ Certificate No.:** IECQ-H TUMRTW 14.0006 **Issue No.:** 3 **Status:** Current

**Supersedes:** IECQ-H TUMRTW 14.0006 Issue 2 **Issue Date:** 2019/09/19 **Org Issue:** 2014/05/26

**CB Reference No.:** 01 HSPM 99213 **Expiration:** 2022/06/25

**Applicable to:**

- European Directive 2011/65/EU ("RoHS – Restriction of the Use of Certain Hazardous Substances") in electrical and electronic equipment, including all published amendments
- Customer specified requirements
- China – RoHS 2 2016-01-21 (Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products)
- European Directive 2015/863/EU (amending Annex II to EU RoHS 2 (Directive 2011/65/EU) to Restrict 4 New Phthalates: DEHP, BBP, DBP and DIBP)

**Lanner Electronics Inc.**  
 7F, No. 173, Section 2, Datong Road, Xizhi District,  
 New Taipei City 221, Taiwan

The organization has developed and implemented Hazardous Substance Process Management procedures and related processes which have been assessed and found to comply with the applicable requirements for IECQ HSPM organization approval which is in accordance with the Basic Rules IECQ 01 and Rules of Procedure IECQ 03-3 "IECQ Hazardous Substances Process Management" of the IECQ Quality Assessment System for Electronic Components (IECQ), and with respect to the IECQ Specification:

- IECQ QC 080000:2017 - Hazardous Substance Process Management System Requirements

This Certificate is applicable to all electronic components, assemblies, related materials and processes for the following scope of activities:  
**Design/Development, Sales and Service of Industrial PC, Network Communication and Telecommunication Hardware Platforms**

**Issued by the Certification Body: TÜV Rheinland Taiwan Ltd.**  
 11F, No. 758, Sec. 4, Bade Rd.,  
 Songshan Dist., Taipei 105  
 Taiwan

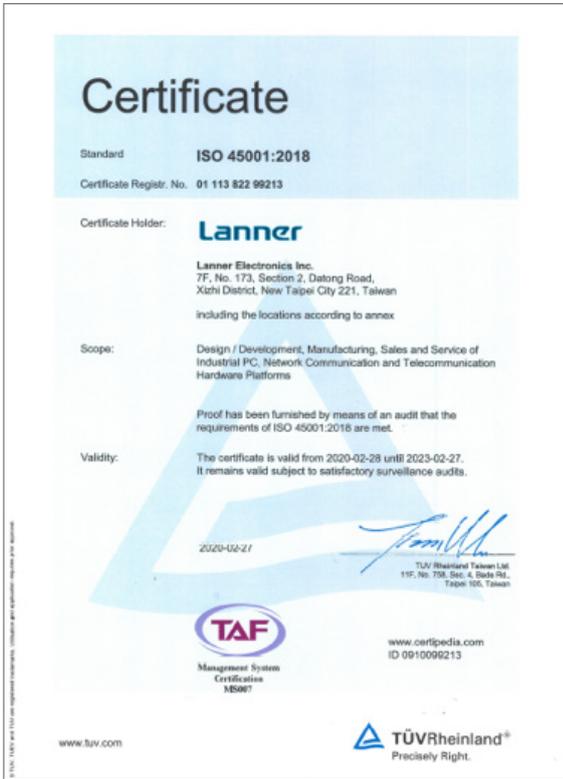
**Authorized person:** Jason J. S. Wu



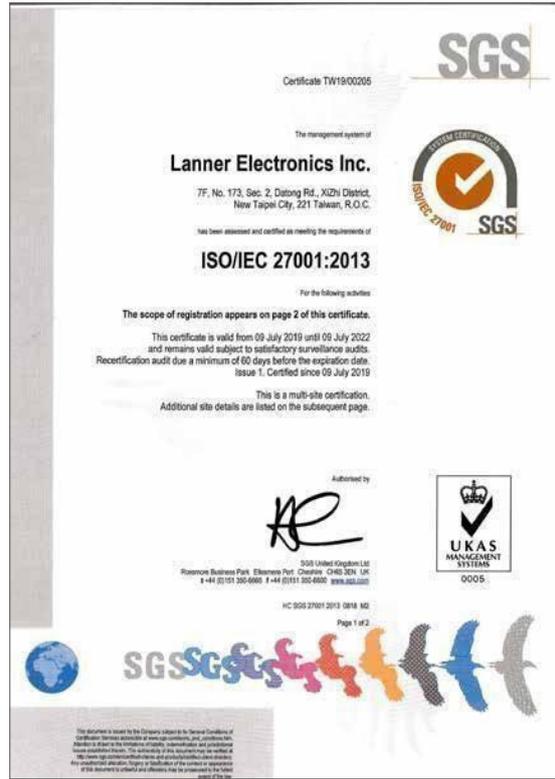



IECQ-Rev 38

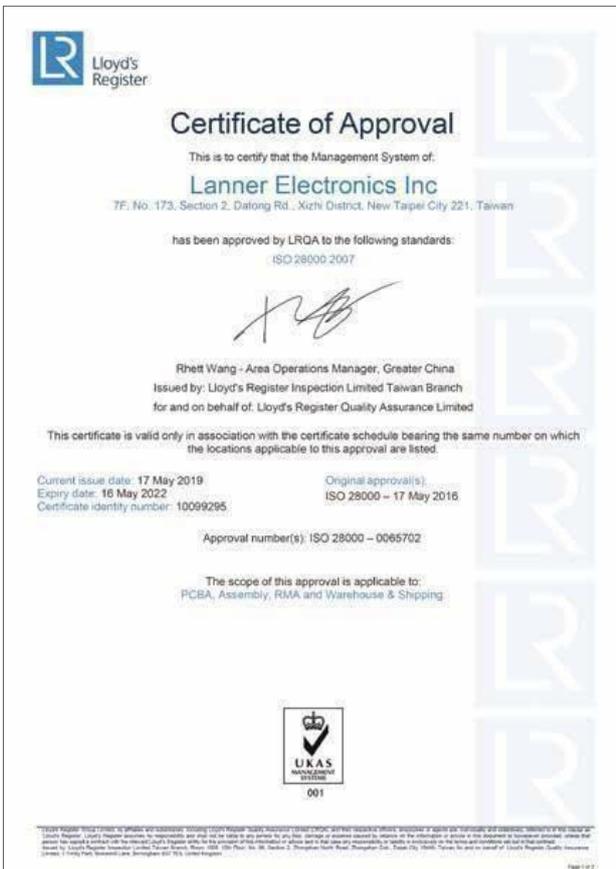
▼ ISO 45001 - Occupational Health and Safety Management System



▼ ISO 27001 - Information Security Management System Certification



▼ ISO 28000 - Supply Chain Security Management System Certification



▼ AEO Supply Chain Safety Management System Certification





7F., No. 173, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City  
<http://www.lannerinc.com/>