Lanner



Industrial Edge

Rugged Edge Computing and OT Security Appliances for Critical Infrastructure


















Purpose-built Computing and OT Security for Industrial Edge

The rapid adoption of industrial IoT technology in recent years is driving solution providers to reallocate the resources for data analysis from the centralized cloud to the distributed edges, where tremendous volume of data is generated from the edge devices and sensors. Reallocating computing and analytics to Intelligent Edges can reduce the latency, cost and security arise from communications between the data source and the data centers.

Over the past ten years, Lanner has dedicated itself in supplying millions of state-of-the-art industrial computing platforms that have been deployed worldwide as Intelligent Edge Appliances to perform analysis, connectivity and storage of the data generated within proximity of sensor and devices. Our comprehensive rugged computing platforms have met various specifications and standards required by the mainstream Intelligent Edge verticals. Today, we have comprehensive product lines designed and manufactured for industrial AI, machine vision, transportation, intelligent video analytics, substation automation and OT network security.

As we are entering the age of 5G, Lanner's Intelligent Edge BU will continue to strengthen our product range by designing tailor-made hardware platforms that consolidate the latest technologies in x86 computing, versatile I/Os, rugged design and LTE connectivity, to help accelerate real-time data analysis at the edge, while reducing deployment efforts and costs for intelligent edge solutions.

Jeans Tseng
CTO

Industrial Edge Solution Overview





Industrial Edge Computers

Lanner delivers top-of-the-line x86 industrial Appliances designed for data acquisition and analysis. Featuring compact design, flexible I/O and PCIe expansion, Lanner fanless industrial platforms have been meeting many challenging specifications required by most IIoT edge computing applications.



- Machine Automation Controller
- Building Automation
- Substation Automation
- Environment Monitoring
- Physical Security

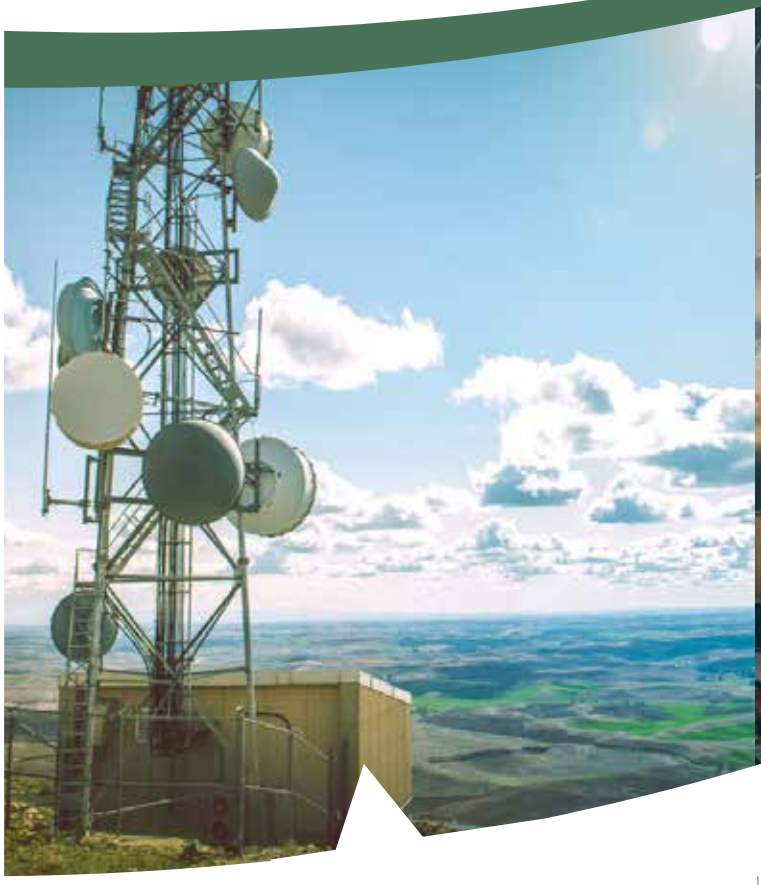
In-vehicle Computers

Lanner offers E-Mark and EN50155 certified computers designed to revolutionize edge computing and network security in the realm of smart transportation. These rugged computers will enable the deployment of roadside traffic monitoring, in-vehicle surveillance and railway network cybersecurity.



- Fleet Management
- Traffic Monitoring
- Public Transit NVR/Surveillance
- Passenger Information System
- Railway Cybersecurity

The rise of industrial IoT has been an enormous driving force for automation, control technology and industrial communications. To meet the requirements for mission-critical applications for smart manufacturing, substation automation, intelligent transportation and industrial cyber security, Lanner offers a wide selection of fanless industrial computing platforms featuring the cutting-edge technologies, rugged design, versatile I/Os and customizable options.





Industrial SD-WAN Platforms

Lanner provides fanless rugged Multi-WAN uCPE platofms, featuring IoT-enhanced CPU with 5G/LTE connectivity and environmental endurance. These uCPE platforms consume low volume of power and delivers the required performance for SD-WAN deployed at remote, distributed locations or mobile vehicles



- 5G Outdoor Gateway for Remote Sites
- Mobile SD-WAN and 5G/LTE Failover
- Rugged Gateway for Vehicle and Railway
- Wayside / Roadside communication Gateway

Industrial Security Appliances

Our rugged industrial cyber security platforms provide the needed network security protection for ICS/SCADA networks in critical infrastructures. Our platforms are designed to conduct protocol filtering, packet inspection, white-listing and network traffic monitoring.



- Critical Infrastructure Cyber Security
- Industrial UTM / Firewall / DPI
- ICS/SCADA Cyber Security
- IIoT Security Gateway
- IT-OT Security Convergence

Industrial Edge Computers

Lanner's industrial computing appliances are designed for edge gateway and smart manufacturing applications, offering stability, longevity, high availability and a perfect balance between size, cost, performance and power consumption.

- High-Performance CPU
- Compact Design
- MIO Expansion Layer
- Mounting Options
- Easy-to-open Chassis
- Wide Temperature Range
- Fanless Design
- 5G/LTE/Wifi6 Ready
- Easy Access to Power Switch



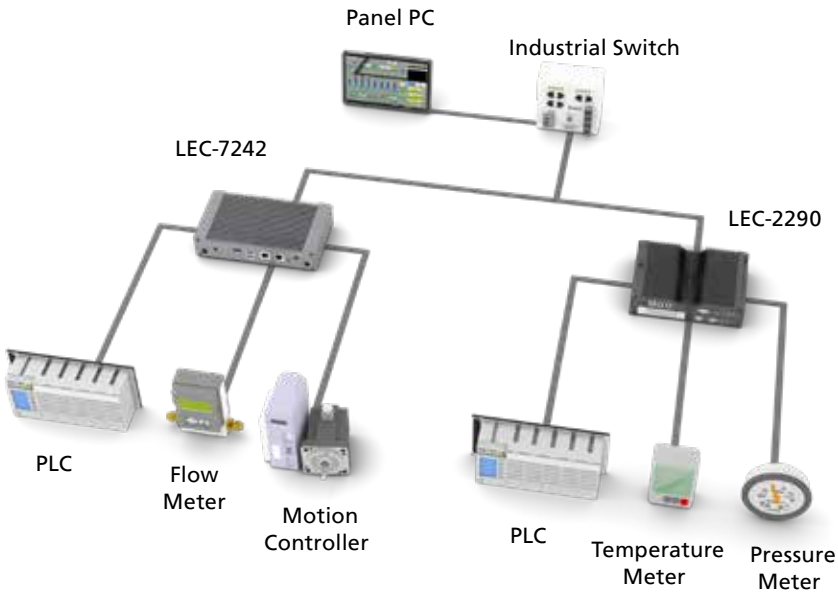
Factory Automation

LEC-7242

- Intel® Celeron® N3350 / Atom® X5-E3940 CPU
- 2x LAN, 1x COM
- 2x USB 3.0, 1x Display Port, 1x HDMI
- 1x M.2 w/ Dual SIM
- TPM Support
- 20°C~70°C Operating Temperatures

LEC-2290

- Intel® Core™ i7-8700T/i7-8700
- 2x DDR4 2133/2400 SO-DIMM, Max. 32GB
- 2x RJ45 GbE LAN, 4x PoE,
- 4x USB3.0, 6x COM, 8x DI & 8x DO
- 2x Removable HDD/SSD External Slot
- 1x PCIe Express, 1x Mini-PCIe , 1x M.2



Industrial Edge Computers



Intel Bay Trail



Intel Bay Trail



Intel Apollo Lake

Model Name	LEC-7230/7230M/7230L	LEC-7233	LEC-7242
Processor System	Intel® Celeron® J1900/N2930 or Intel® Atom™ E3845/E3825	Intel® Celeron® N2807	Intel® Celeron® N3350/J3455 or Intel®Atom® X5-E3940
Memory	8GB/4GB	8GB	8GB
Graphics	1x VGA, 1x HDMI	1x HDMI	1x HDMI, 1x Display Port
Storage	1x 2.5" HDD/SSD Drive Bay 1x CF Type I/II Socket	1x mSATA 1x SATA Connector (Reserved)	1x SATA 2.5" Drive Bay or 256GB SSD
Ethernet	2x RJ45	3x RJ45	2x RJ45
I/O	2x COM, 2x DIO, 2x USB 2.0, 1x USB 3.0	2x COM, 4x DIO, 2x USB 2.0, 1x USB 3.0	1x COM, 2x USB 3.0
Expansion	1x Full-sized Socket with SIM Card Reader	1x Full-sized socket with SIM Card Reader 1x Half-sized Socket	1x M.2 3042 Socket for LTE or WiFi 1x Mini PCIe Socket for LTE
Power Supply	12VDC	12VDC	12VDC
Dimensions (W x H x D)	LEC-7230: 198 x 42 x 144.8 mm LEC-7230L: 195.6 x 41 x 146.8 mm LEC-7230M: 198 x 42 x 145 mm	164.5 x 30 x 143 mm	168 x 40 x 145 mm
Weight	LEC-7230: 1.07 kg LEC-7230L: 0.9 kg LEC-7230M: 1.2 kg	0.9 kg	1 kg
Operating Temperature	LEC-7230: 0°C~55°C, LEC-7230L: 0°C~40°C, LEC-7230M: 0°C~60°C	0°C~50°C	0°C~50°C / -20°C~70°C
Driver Support	WES 7 E/Win 7 Pro FES WE 8.1 Industry Pro, Linux	WES 7 E/Win 7 Pro FES WE 8.1 Industry Pro, Win 10 IoT, Linux	Win 10 IoT 2019, Linux
Certification	CE/FCC Class A, UL	CE, FCC Class A	CE/FCC Class A, UL

Industrial Edge Computers



Intel Apollo Lake



Intel Tiger Lake



Intel Tiger Lake

Model Name	IIoT-I300	IIoT-I530	IIoT-I531
Processor System	Intel® Celeron® N3350/J3455	11th Gen Intel® Core™ i Up to i7-1185GRE	11th Gen Intel® Core™ i Up to i7-1185GRE
Memory	8GB	64GB	64GB
Graphics	2x Display Ports	2x HDMI	2x HDMI
Storage	1x SATA, 1x mSATA	1x 2.5" HDD/SSD Drive Bay 1x CF Type I/II Socket	1x mSATA, 1x SATA
Ethernet	3x or 2x RJ45	2x 2.5Gbps RJ45, 6x GbE RJ45 For PoE+	2x 2.5Gbps RJ45, 4x GbE RJ45 For PoE+
I/O	2x COM, 4x DIO, 2x USB 2.0, 2x USB 3.0	2x COM, 8x Isolated DI, 4x Isolated DO 4x USB 3.0	4x COM, 4x DIO, 4x USB 3.0
Expansion	1x M.2 3042/3052 B-Key For LTE 1x M.2 2230 E-Key For WiFi	1x 3042/3052 B-Key For 5G 1x 2230 E-Key For WiFi-6 1x 2280 M-Key For PCIe Gen4 x4	1x PCIe 3.0 x1 FHHL 1x 3042/3050/3052 B-Key For 5G 1x 2230 E-Key For WiFi-6
Power Supply	24VDC	24VDC	24VDC
Dimensions (W x H x D)	198 x 45.8 x 142 mm	270 x 76 x 180 mm	270 x 76 x 220 mm
Weight	1 kg	TBC	TBC
Operating Temperature	0°C~55°C	-40°C~55°C	-40°C~70°C
Driver Support	Win 10 IoT, Linux Debian 11	Win 10 IOT, Linux Dabian 11	Win 10 IOT, Linux Dabian 11
Certification	UL, CB, CE/FCC Class A	CE/FCC, Class A	CE/FCC, Class A

Industrial Edge Computers



Intel Apollo Lake



Intel Skylake



Intel Coffee Lake S

Model Name	LEC-2137	LEC-2580	LEC-2290A
Processor System	Intel® Celeron® N3350 or Atom™ x7-E3950	Intel® Core™ i7-6600U/ i5-6300U/i3-6100U	Intel® Core™ i7-8700T/i7-8700/i7-9700TE Intel® Xeon® E-2278GEL
Memory	8GB	16GB	32GB
Graphics	1x HDMI, 1x VGA	2x HDMI	2x HDMI
Storage	1x mSATA Socket 1x 2.5" HDD/SSD Drive Bay	1x mSATA Socket 2x 2.5" HDD/SSD with RAID 0/1	2x Removable HDD/SSD Drive Bays
Ethernet	6x RJ45 or 2x RJ45 + 4x PoE	6x RJ45	2x GbE RJ45, 4x PoE RJ45
I/O	1x COM, 2x USB 2.0, 2x USB 3.0	4x COM, 2x USB 2.0, 4x USB 3.0	6x COM, 8x DIO, 4x USB 3.0
Expansion	1x Full-sized Socket 1x Half-sized Socket with SIM Card Reader	1x Full-sized Socket with SIM Card Reader 1x Half-sized Socket	1x Mini-PCIe, 1x M.2 B-Key 1x PCIe*16 & 1x PCIe*4
Power Supply	12VDC ~ 36VDC	24VDC	9VDC ~ 30VDC
Dimensions (W x H x D)	198 x 57 x 143.8 mm	240 x 60 x 173.8 mm	275 x 115 x 225 mm
Weight	1.6 kg	2 kg	6.2 kg
Operating Temperature	0°C ~ 55°C	0°C ~ 60°C	-20°C ~ 55°C (35W CPU) -20°C ~ 45°C (65W CPU)
Driver Support	WES7E, Win 7 Pro FES, WE 8.1 Industry Pro (64-bit), Linux	WES7, Win 7 Pro FES, WE 8.1 Industry Pro, Win10 IoT, Linux	Windows 10 IoT 64bits, Ubuntu 16, Fedora 25, Cent OS 7, Linux
Certification	CE/FCC, Class A	CE/FCC, Class A, UL	CE/FCC, Class A

Industrial Edge Computers



Intel Bay Trail



Intel Bay Trail



Intel Apollo Lake

Model Name	LEC-3030	LEC-3031	IIoT-I330 NEW
Processor System	Intel® Celeron N2807 or Intel Atom E3815	Intel® Atom™ E3825	Intel® Atom™ X7-E3950/N3350
Memory	4GB	4GB	8GB
Graphics	1x VGA	1x VGA	1x Display Port
Storage	1x SATA port and HDD kit	1x SATA, 1x mSATA mini	Onboard eMMC 64GB 1x SATA,1x mSATA
Ethernet	2 x RJ45	2 or 4 x RJ45 1.5KV Magnetic Isolation Protection	4x RJ45 (1x pair Bypass) or 2x RJ45 (one pair Bypass)+ 2x SFP
I/O	2x COM, 4x DIO, 1x USB 2.0, 1x USB 3.0	4~8x COM, 2x DIO, 1~3x USB 2.0 1x USB 3.0	2x COM, 2x CAN Bus 4x DIO, 2x USB 3.0
Expansion	N/A	N/A	1x M.2 B-Key For LTE, 1x M.2 E-Key For Wifi-6
Power Supply	12VDC ~ 36VDC	12VDC ~ 36VDC	12/24VDC
Dimensions (W x H x D)	52 x 130 x 127 mm	69 x 169.5 x 127 mm	160 x 156.5 x 81 mm
Weight	1 kg	1.2 kg	2 kg
Operating Temperature	-20°C ~ 55°C	-20°C ~ 70°C	-40°C ~ 70°C (Industrial-grade SKU) 0°C ~ 50°C (Commercial grade SKU)
Driver Support	Windows 7, Windows 7 Embedded, Linux	Windows 7, Windows 7 Embedded, Linux	Win 10 IoT, Linux Debian 10
Certification	CE/FCC Class A	CE/FCC Class A	CE/FCC Class A, UL

In-Vehicle Computers

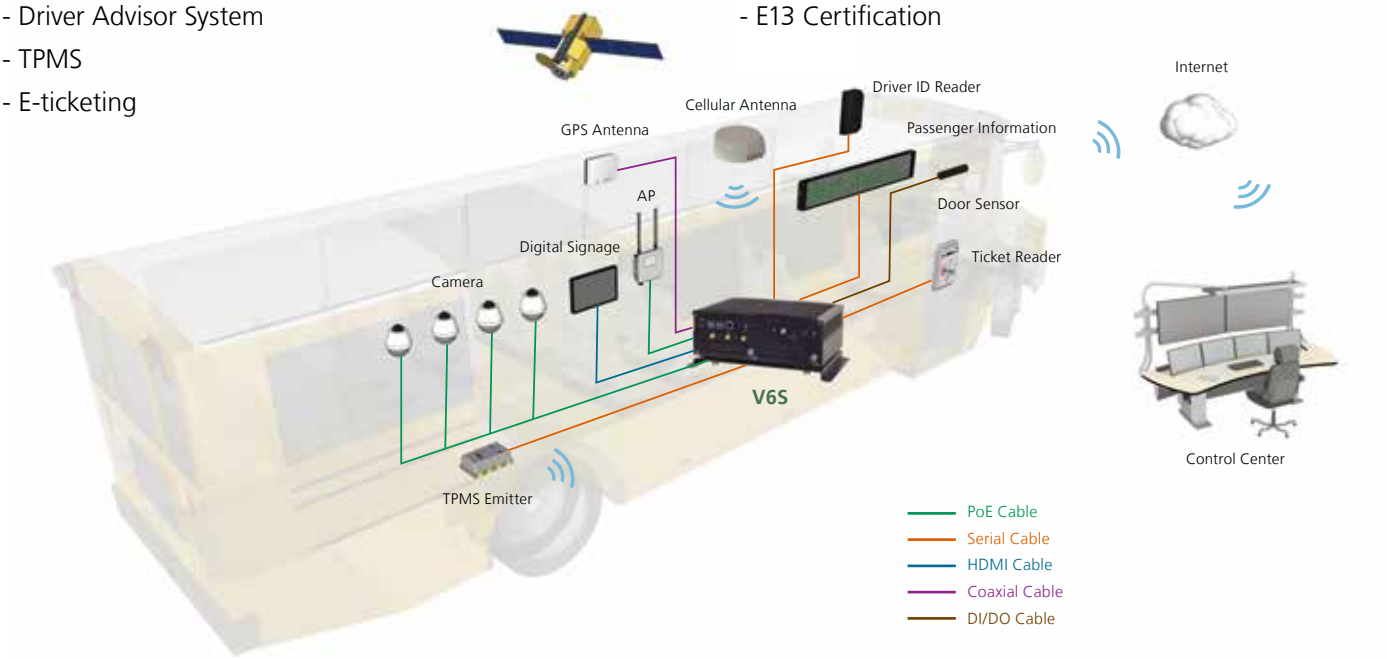
Vehicle Video Analytics

Target Applications

- Passenger Information
- Wi-Fi Hot Spot & LTE Connectivity
- Job Dispatch & GPS Tracking
- Emergency Alarm System
- Driver Advisor System
- TPMS
- E-ticketing

V6S

- Intel® Core i7-7600U CPU
- 10 x PoE, 1x Mini-PCIe with 2 SIM sockets for 4G/LTE
- 1x Removable 2.5" Drive Bay
- Suspension Kit
- E13 Certification



In-Vehicle Edge Computers



Intel Bay Trail



Intel Apollo Lake, 4x PoE



Intel Kaby Lake,10x PoE

Model Name	LVC-2001	V3S	V6S
Processor System	Intel® Atom™ E3825 or E3845	Intel® Atom™ x7-E3950	Intel® Core™ i7-7600U
Memory	4GB	8GB	32GB
Graphics	1x VGA, 1x HDMI	2x DVI-D	1x DVI-D, 1x VGA
Storage	1 x Internal 2.5" 9.5 mm Drive Bay	1x Removable 2.5" Drive Bay	2x Removable 2.5" Drive Bays
Ethernet	2x RJ45	6x RJ45 (4x PoE or 2x PoE+)	10x PoE (5x PoE+ & 5x PoE) and 1x RJ45
I/O	2x COM, 1x CAN Bus, 2x DIO, 1x USB 2.0, 1x USB 3.0	2x COM, Optional CAN Bus, 8x DIO, 2x USB 2.0,	2x COM, 1x CAN Bus 6x DIO, 2x USB 2.0, 2x USB 3.0
Expansion	2x Full-size mini-PCIe socket, 1x Half-size mini-PCIe socket	1x Full Size Mini-PCIe, 1x Half Size Mini-PCIe	1 x Full-sized Mini-PCIe for LTE/ Wi-Fi, 1x Removable PGN Caddy
Power Supply	9VDC ~ 36VDC	9VDC ~ 36VDC	9VDC ~ 36VDC
Dimensions (W x H x D)	198 x 52 x 185 mm	273.8 mm x 73 mm x 185 mm	307 x 188 x 105.2 mm
Weight	1.8 kg	4 kg	20.8 kg
Operating Temperature	-20°C ~ 60°C	-40°C ~ 70°C	-20°C ~ 60°C
Driver Support	WES7 (WS7E)/W7 Pro SP1/WE8 STD/WIN 10 IOT, Linux	Windows 10, Linux	Win10 IoT, Linux
Certification	CE/FCC Class A, E13	CE Class A, FCC Class A, E13 include ISO 7637-2, MIL-STD-810G compliant	CE Class A, FCC Class A, E-13 include ISO-7637-2

In-Vehicle Computers

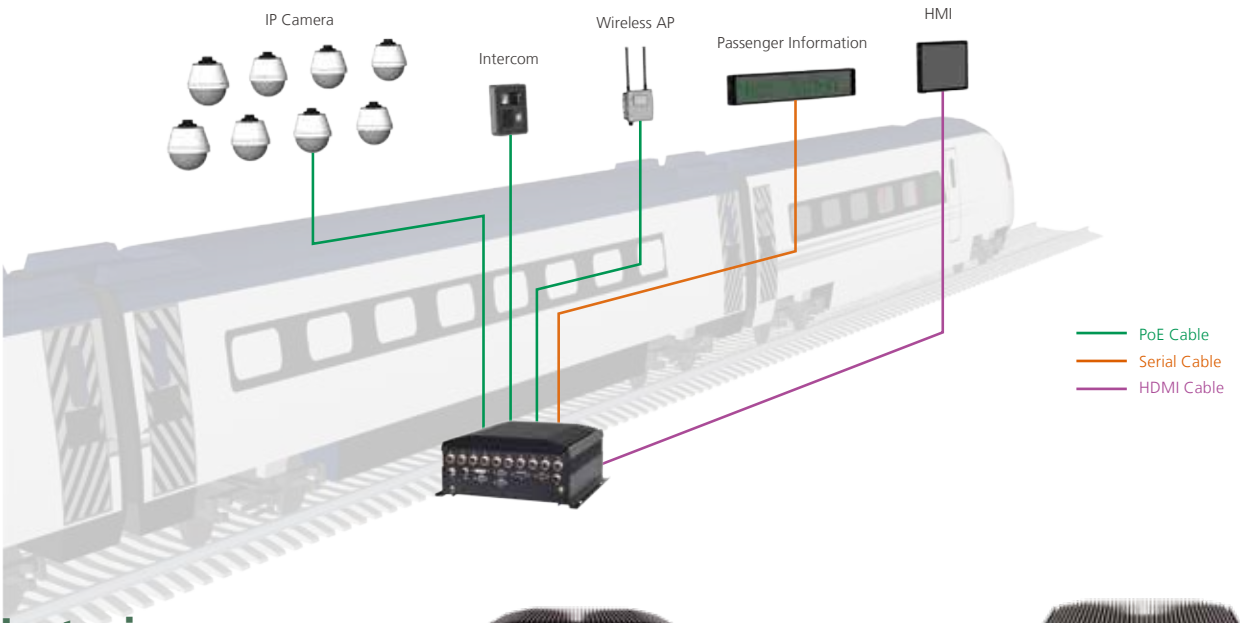
Railway Video Analytics

Target Applications

- Onboard Video Surveillance
- Audio Intercom
- GPS Location-Based Service
- Emergency Alarm System
- Passenger Information System
- Wi-Fi Hot Spot

R6S

- Intel® Core i7-7600U Processor
- EN50155 and EN45545 Certified
-10x PoE, CAN Bus,4x USB, 2 x COM, VGA, DVI-D
- 3x Mini-PCIe with SIM Card Readers
- Wide Operating Temperature -40 to 70°C
- Onboard GPS and G-sensor, 1x Removable 2.5" Drive Bay



In-train Edge Computers



Intel Apollo Lake, 6x PoE

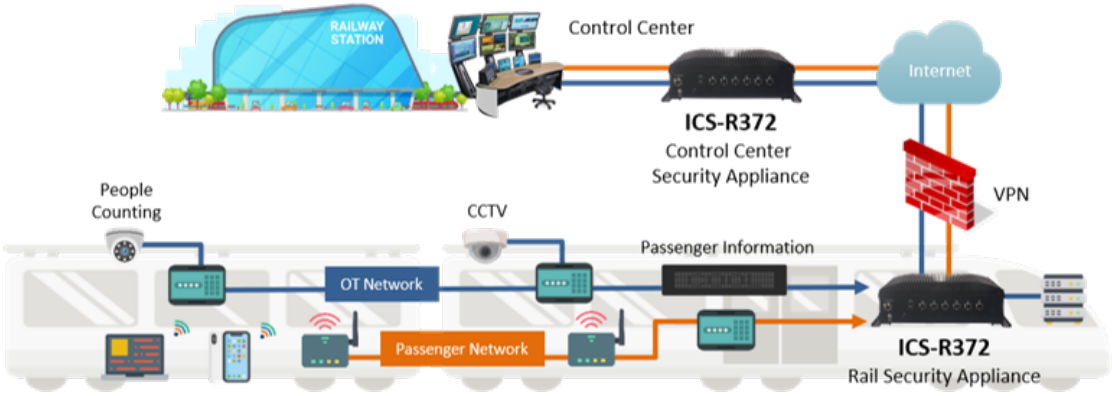


Intel Kaby Lake, 10x PoE

Model Name	R3S	R6S
Processor System	Intel® Atom™ x7-E3950	Intel® Core i7-7600U
Memory	8GB	16GB
Graphics	2x HDMI	1x VGA, 1x DVI-D or 2x HDMI
Storage	1x Removable 2.5" Drive Bay 1x mSATA Socket	1x Removable 2.5" Drive Bay 1x mSATA, 1x SDxC
Ethernet	6x PoE/PoE+ with M12 connectors 1x RJ45	10x PoE with M12 connectors 1x RJ45
I/O	3x COM, Optional CAN Bus 4x USB 2.0, 12xDI, 4xDO	2x or 4x COM (by SKU), Optional CAN Bus 7x DIO, 2x USB 2.0, 2x USB 3.0
Expansion	2x M.2 3042 B-Key	2x Full-size mini PCIe or 4x M.2 Socket For LTE + 1x Full-size mPCIe For WiFi
Power Supply	9VDC ~ 36VDC / 43VDC ~ 154VDC	32VDC ~ 96VDC or 24VDC ~ 36VDC or 72VDC ~ 110VDC
Dimensions (W x H x D)	272.4 x 114.3 x 228mm	272.4 x 121.3 x 230 mm
Weight	7 kg	20.8 kg
Operating Temperature	-40°C ~ 70°C	-40 ~ 70°C
Driver Support	Win 10 IoT, Linux	Win 10 IoT, Linux
Certification	E13, CE Class A, FCC Class A, MIL-STD-810G, EN50155, EN50121-3-2, EN50121-4, EN50125-3, EN 45545	MIL-STD-810G, EN 50155, EN 45545, EN 50121 CE Class A, FCC Class A, E13

Railway Cybersecurity

Railway cybersecurity is imperative and risk mitigation strategies need to be implemented to ensure secured operations and service continuity public safety. ICS-R372 Series is designed as a cost-effective embedded system, powered by Intel Apollo Lake CPU, providing quality performance with low power consumption for rolling stock cybersecurity application. ICS-R372 has passed extensive vibration and shock testing, earning compliance for EN50155 standard, making it exceptionally suitable for cybersecurity application in railway vehicles.



In-Vehicle OT Security Computers



Intel Apollo Lake



Intel Denverton



AMD Ryzen

Model Name	ICS-R372	ICS-R373 NEW	ICS-R570 NEW
Processor System	Intel Atom™ x7-E3950	Intel® Atom™ C3708/C3508/C3308	AMD Ryzen™ Embedded V1404I
Memory	8GB	64GB/32GB	32GB
Graphics	2x HDMI	N/A	2x HDMI
Storage	1x SATA, 1x mSATA	1x M.2 2242/2280 M-Key Onboard eMMC 128GB/32GB	1x M.2 2242/2280 M-Key Socket
Ethernet	6x GbE RJ45 with M12 Connectors	4x GbE RJ45, 2x 2.5GbE RJ45	6x 2.5GbE RJ45 with M12 Connectors 1x RJ45 Console, 1x RJ45 OOB
I/O	4x USB 2.0	2x USB 2.0, 1x RJ45 OOB	8x COM, 6x DIO, 2x USB 3.0, 2x CAN bus
Expansion	2x M.2 3042 B-Key	1x M.2 2230 E-Key For WiFi 2x M.2 3042/3050/3052 B-Key For LTE/5G	2x M.2 3042/3052 B-Key Socket or 5G 1x M.2 2230 E-Key Socket For WiFi (By SKU)
Power Supply	24VDC ~ 36VDC or 72VDC ~ 110VDC	24VDC ~ 110VDC	24VDC ~ 110VDC
Dimensions (W x H x D)	272.4 x 88.3 x 228 mm	280 x 83 x 196 mm	438 x 44 x 300 mm
Weight	5 kg	TBD	6 kg
Operating Temperature	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 75°C
Driver Support	Win 10 IoT, Linux	Dabian 10 pre-installed, Win 10 IoT	Windows 10 IoT, Linux
Certification	E13, CE Class A, FCC Class A, MIL-STD-810G, EN50155, EN50121-3-2, EN50121-4, EN50125, EN 45545	E13, CE Class A, FCC Class A, MIL-STD-810G, EN 50125-3, EN50124-1, C1D2 (By SKU), UL/IEC 62368-1, EN 50155, EN 50121-3-2, EN 50121-4, EN 45545-2, IEC-61850-3, IEEE 1613	CE Class A, FCC Class A, E13, UL/CB 62368-1 EN50155, EN45545-2, EN50121-3-2, EN50121-4, EN50125-3, IP-40, MIL-STD-810G

Industrial SD-WAN Platforms

Rugged 5G Outdoor Gateway

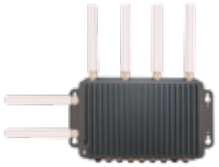
Lanner's ISD-O370 rugged gateway with 5G and micro SIM functionality is designed to provide backup cellular connectivity for intelligent traffic management infrastructure because it is reliable and secure. Indeed, operators are more motivated to offer attractive data service plans for large scale projects compatible with carrier aggregation technology, and backup SIM functionality can further provide uninterrupted connectivity by switching to a redundant operator service as needed.



Industrial Edge Computers



Intel Elkhart Lake
MIL-STD-810G



Intel Denverton
IP67, MIL-STD-810G

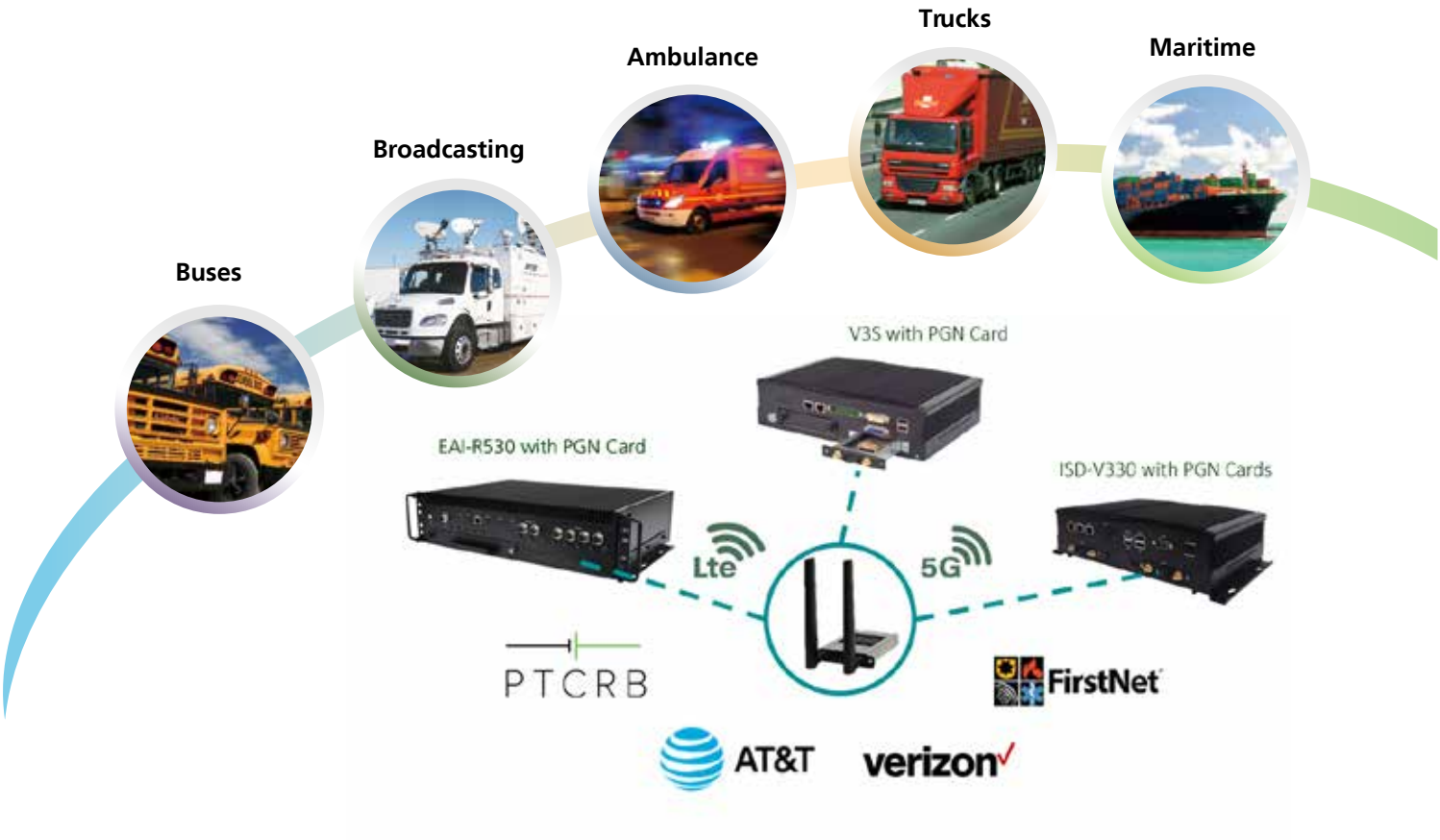


Intel Denverton

Model Name	ISD-V330 NEW	ISD-O370	NCR-1510
Processor System	Intel® Atom™ x6425RE	Intel® Atom™ C3000 Series	Intel® Atom™ C3308/C3508/C3708
Memory	32GB	64GB	32/64GB
Graphics	2x HDMI	N/A	1x HDMI
Storage	64GB eMMC, 1x SATA	128GB eMMC, 1x M.2 2242 B-Key	HDD/SSD Support 1 x 2.5" Bay (Optional)
Ethernet	2x RJ45	6x GbE RJ45 (2x POE+) or 4x GbE RJ45 (2x PoE+)+2x 2.5GbE RJ45	4x RJ45, 2x SFP or 2x RJ45 (By SKU), 1 Pair of Gen3 Bypass
I/O	2x COM, 1x CAN Bus, 4x DIO 3x USB 2.0, 1x USB 3.0	USB 2.0, 1x Console	2 x USB 3.0, 1x Mini USB
Expansion	1x M.2 3042 B-Key Socket For LTE 1x M.2 2230 E-Key Socket For WiFi	1x M.2 304(5)2 B-Key Socket For 5G 1x M.2 2230 E-Key Socket For WiFi 6	1x M.2 3042 B-Key For LTE, 1x mPCIe for WiFi,LTE
Power Supply	9VDC ~ 36VDC	24VDC ~ 36VDC	9VDC ~ 54VDC
Dimensions (W x H x D)	273.8 x 73 x 185 mm	370 x 210 x 83 mm	310 x 44 x 240mm
Weight	4 kg	4.6 kg	3 kg
Operating Temperature	-40°C ~ 70°C	-40°C ~ 70°C / -40°C ~ 60°°C (By SKU)	-40°C ~ 70°C / -40°C ~ 60°C (By SKU)
Driver Support	Windows 10 IoT Enterprise, Linux	Linux	Linux
Certification	CE/FCC Class A, E13, UL/cUL 62368-1, MIL-STD-810G	CE/FCC class A, UL 62368-1, CB, IP67, MIL-STD-810G	CE/FCC Class A

Mobile SD-WAN Platform

Certified by PTCRB, Verizon, AT&T and FirstNet, Lanner PGN Series is a swappable 4G LTE-ready radio modem for mission-critical communications. Optimally designed for intelligent VMS, mobility SD-WAN, 4G LTE failover for business continuity, the PGN Series is fully compatible with Lanner vehicle computers, industrial PCs and network appliances to offer scalability. The swappable caddy design makes the system maintenance easier in field change or upgrade for 24/7 uninterrupted operations.







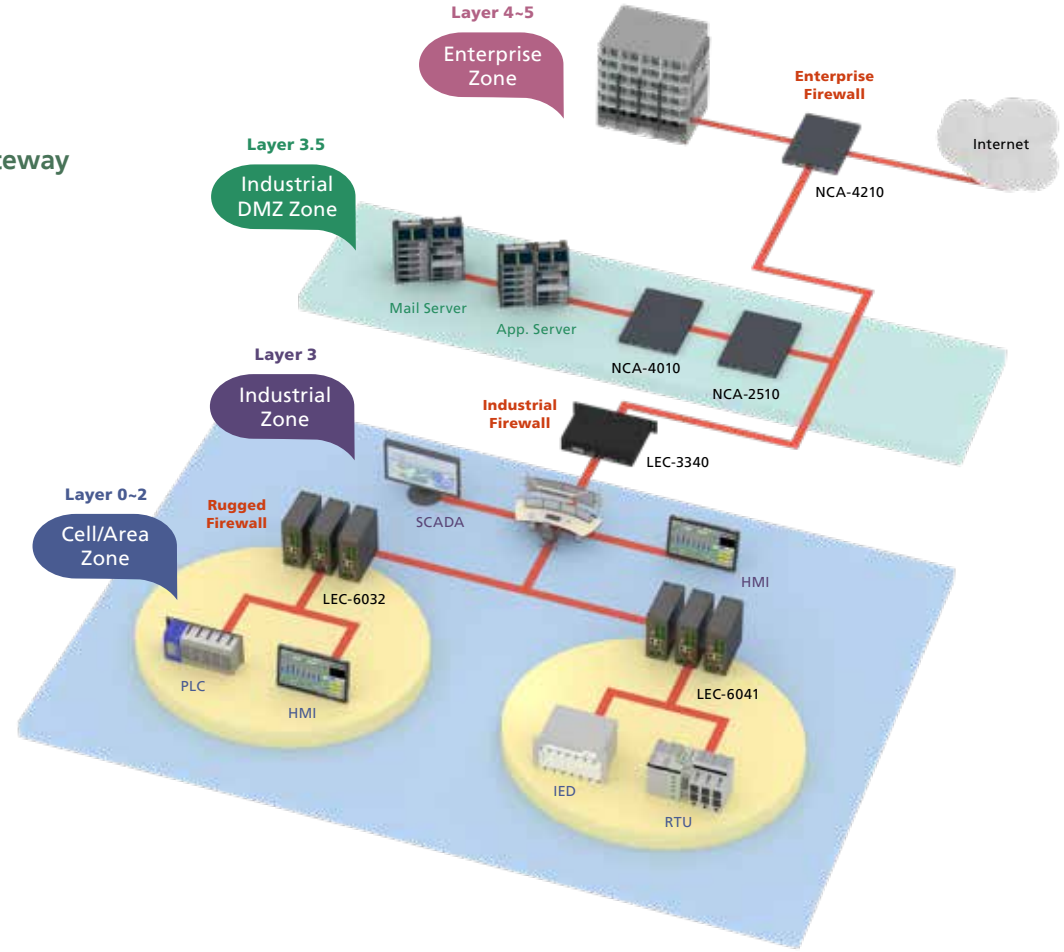
Product Name	PGN-300 Swappable 4G LTE CAT-6 Radio Modem for Critical Communications	PGN-600 Swappable 4G/LTE CAT-12 Radio Modem for Mission-Critical Communications	PGN-750 Swappable 5G Radio Modem for Mission-Critical Communications NEW
Feature	• 4G LTE CAT-6 Radio Modem Compatible for Lanner Vehicle PC, Industrial PC and Network Appliances • PTCRB and AT&T Certification Ready • 2x SIM Card Readers, 2x 4G LTE Antenna • SATA connector with USB 3.0 signal and Hot Swappable Capability • 4G LTE Failover for Business Continuity • Designed for Network Failover, Surveillance and Vehicle Applications • Swappable Caddy • Certification: PTCRB, AT&T, Verizon • System Compatibility: V3S,V6S,LEC-2290,NCR-1510D/E/F,FW-7573B, ISD-V330	• 4G/LTE CAT-12 Radio Modem Compatible with Lanner Vehicle PC, Industrial PC and Network Appliances • Certified with AT&T and PTCRB, and Compliant with CBRS and FirstNet • 2x SIM Card Readers, 2x 4G LTE Antenna • SATA connector with USB 3.0 signal and Hot Swappable Capability • 4G/LTE Failover for Constant Operations • Designed for Network Failover, Surveillance and Vehicle Applications • Swappable Caddy • Certification: PTCRB, AT&T, FirstNet • System Compatibility: V3S,V6S,LEC-2290,NCR-1510D/E/F,FW-7573B, ISD-V330	• 5G sub6 Radio Modem Compatible with Lanner Vehicle PC • 2x nano SIM Card Readers, 4x Antenna Jack, with antenna / cable kit • SATA connector with USB 3.0 signal and Hot Swappable Capability • 5G Failover for Constant Operations • Designed for Network Failover and Vehicle Applications • Swappable Caddy • Supports NSA and SA modes • System Compatibility: V3S, V6S, ISD-V330

Industrial Security Appliances

Lanner offers wide-range, customizable hardware platforms designed to secure communications in critical infrastructures including energy, power, oil and gas industries.

IIoT Network Security Gateway

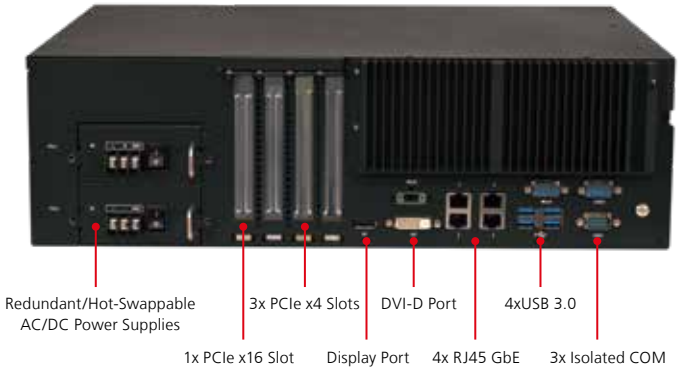
- Antivirus/Malware
- SCADA Encryption
- Virtualization Security
- DLP / SIEM
- IDS / IPS / IAM
- DDoS Protection



Substation Security

IEC 61850-3 Industrial Substation Gateways Enable Centralized Visibility

A centralized, substation-oriented gateway is required to control their PLC, EPC (engineering, procurement, and construction), and collect data generated by sensors deployed within the SCADA.



Target Applications:

- Power SCADA System
- Communication Gateway
- Automation Platform for Substation
- IED Communication Gateway



LEK-Ix401 Industrial GbE PCIe Cards

Industrial Security Appliance



Intel Bay Trail



Intel Apollo Lake
IEC61850/C1D2



Intel Kaby Lake
IEC61850

Model Name	LEC-6032	LEC-6041	LEC-3340
Processor System	Intel ® Atom™ E3845	Intel ® Atom™ x7-E3950/x5-E3930	Intel® Xeon® E3-1505L V6/W-11865MLE /11555MLE/11155MLE/Core™ i5-7442EQ
Memory	8GB	8GB	64GB
Graphics	1 x internal VGA pin-header	1x HDMI	1x DP & 1x DVI-D or 2x HDMI (By SKU)
Storage	1x SATA connector, optional 2.5" drive bay	1 x SATA	2x 2.5" Swappable HDD/SSD Bay, 1x mSATA 1x SATA M.2 2242, 1x PCIe x4 M.2 2280 (By SKU)
Ethernet	5 x RJ45 & 2 SFP ports 1x pair/ LAN bypass	5 x RJ45 & 2 x SFP 1x pair Bypass	4x GbE RJ45 or 4x 2.5GbE RJ45 (By SKU)
I/O	1x COM, 1x USB 2.0, 1x USB 3.0	2x COM, 2x USB 3.0	2x /4x COM, 1x IRIG-B, 5x USB 3.0
Expansion	N/A	1x Mini-PCIe with SIM Slot For LTE	1x PCIe x16, 3x PCIe x4 Slots
Power	12VDC ~ 36VDC/24VDC (By SKU)	Dual 20VDC ~ 54VDC	Dual Power Input (By SKU) 100~240VAC and 16.6~160VDC or 16.6~160VDC and 16.6~160VDC
Dimensions (W x H x D)	78 x 146 x 127mm	160 x 166 x 53.5 mm, 186 x 160 x 65 mm	438 x 131.8 x 300.1 mm
Weight	1 kg	1.6 kg	8.5 kg
Environment	-40°C ~ 75°C	-40°C ~ 75°C	-40°C ~ 70°C
Driver Support	Windows 7, Windows 7 Embedded, Linux	Windows 10 Pro, Linux	Windows 10 Embedded, Linux
Certification	CE/FCC Class A	CE, FCC Class A, CB, UL, IEC 61850-3, IEEE 1613	CE, FCC ClassA, CB,UL, IEC 61850-3, IEEE 1613



Intel Apollo Lake



Intel Elkhart Lake



Intel Elkhart Lake



AMD Ryzen

Model Name	ICS-I370	ICS-I372	ICS-P371	ICS-P570
Processor System	Intel® Atom™ x7-E3950/x5-E3940	Intel® Atom™ Processor X6425E/X6413E	Intel® Atom™ X6211E/X6413E/ X6425E	AMD Ryzen V1404I
Memory	8GB	32GB	32GB	32GB
Graphics	1x Display Port	1x Display Port	1x Internal Display Port pin-header	1 x internal HDMI pin-header
Storage	Onboard eMMC 64GB 1x mSATA, 1x SATA for 2.5" DISK	Onboard eMMC 64GB 1x M.2 M-Key SATA SSD 1x SATA For 2.5"SSD/HDD or 1x M.2 M-Key SATA SSD	1x SATA For 2.5" Drive Bay, Micro SD, 1x M.2 2242 M-Key	1 x M.2 M Key 2242, Micro SD
Ethernet	8x, 6x or 4x RJ45 w/ LAN Bypass, 2x SFP (by SKU)	8x, 6x or 4x 2.5GbE RJ45 2x SFP (by SKU)	6 x RJ45, 2x SFP, 2x IPMI (By SKU)	6 x GbE RJ45 or 4 x GbE RJ45 & 2x GbE SFP
I/O	1x COM, 2x USB 3.0	1x COM, 2x USB 3.0	1x COM, 2x USB 3.0	1x COM, 2x DIO, 1x USB 3.0
Expansion	M.2 B-Key For LTE/5G M.2 E-Key For WiFi	M.2 B-Key For LTE/5G M.2 E-Key For WiFi	1x M.2 B-Key For LTE/5G 1x M.2 E-Key For Wi-Fi	1x M.2 3042 B-Key For LTE
Power	12VDC ~ 36VDC	Dual 12VDC ~ 36VDC	Dual 12VDC ~ 48VDC	Dual 12VDC ~ 48VDC
Dimensions (W x H x D)	160 x 156.5 x 81 mm	160 x 156.5 x 81 mm	87 x 196 x 180 mm	65 x 201 x 196 mm
Weight	2 kg	2 kg	2.2 kg	2.5 kg
Environment	-40°C ~ 70°C	-40°C ~ 70°C	-40°C ~ 75°C	-40°C ~ 70°C
Driver Support	Win 10 IoT, Linux	Windows 10 IoT 64bits/11 IoT Linux	Windows 10/11 IoT, Linux	Linux
Certification	CE/FCC Class A, UL	CE/FCC Class A, UL/IEC 62368-1, C1D2	FCC/CE Class A, UL (IEC-62368), C1D2, IEC 61850-3, IEEE 1613	FCC/CE Class A, UL (IEC-62368) IEC 61850-3, IEEE 1613

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Lanner

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