



SPECIALIZED INDUSTRIAL COMPUTERS & POWER BACKUP SOLUTIONS

PERFORMANCE, EXPANDABILITY, AND
DURABILITY AT THE RUGGED EDGE



MISSION-CRITICAL SOLUTIONS FOR THE RUGGED EDGE

Premio's line of specialized industrial solutions tackles very specific application-based deployments that require specialized certifications or specific configurations that are essential to the success of industrial-grade edge computing solutions.



IoT

IoT Centric
Connectivity



Industrial Grade
Reliability



World Class
Certifications



Edge AI
Performance

Specialized Solutions to Fit Your Mission Critical Deployments

				
ACO-6000 Series	WCO-3000 Series	VCO-6000 Series	KCO Series	ECO-1000 Series
Railway & In-Vehicle Computers	Waterproof IP Protection Computers	Machine Vision Computers	Short-Depth Industrial Computers	Supercapacitor EDGEBoost EnergyPack

Rugged Applications



I ACO-6000 Series

The ACO-6000 Series is an in-vehicle high-performance industrial computer optimized to consolidate and streamline intelligent transportation deployments. It features EMC conformity with EN50155 and EN50121-3-2 standards to be incorporated into rolling stock. This in-vehicle computer is engineered to support up to 16x PoE ports for various IoT devices while balancing edge performance and rugged durability for railway signaling and surveillance applications.



- Intel® Xeon® W & Core™ TE Processor
- Support up to 16x PoE ports
- EMC Conformity with EN50155 & EN50121-3-2
- On-board CAN Bus & Power Ignition Management
- Wide Power Supply Input 9-48VDC and 48-110VDC



I WCO-3000 Series

The WCO-3000 Series unifies advanced CPU compute capabilities, I/O expandability, and AI acceleration for dynamic industrial deployments that require the utmost IP protection. Equipped with fanless design and IP68/IP69K ratings, the WCO series expands the limitation of regular embedded systems for extremely harsh deployments.

- Intel® Atom® Processor
- IP68/IP69K Rated
- High Speed I/O Ports with M12 Connectors
- Optional CAN Bus & Power Ignition Management



Industrial Applications

I VCO-6000 Series

The VCO-6000 Series is an industrial GPU computer that streamlines complex AI workloads with support for dual-GPU configurations. It supports full-height, full-length (FHFL) GPUs for unrestricted edge AI computer vision workloads at the industrial edge. This high-performance edge computer has seen deployments in performance-heavy machine vision applications such as high-speed metrology inspection and analysis.

- Intel® Core™ TE Processor
- Dual-GPU (FHFL) Configurations
- Front Accessible I/O
- Hot-swappable NVMe Storage Bays



I KCO Series

Designed with a COTS approach for rapid time to market to deliver maximum edge AI performance with GPU Support. The KCO Series supports mid-sized GPUs or smaller to bring workstation performance to industrial edge applications.

- Intel® Core™ E/TE Processor
- 2U Short Depth or 3U Rack Mountable
- Hot-swappable SATA Drive or Dual GPU Support



Supercapacitor UPS Solution

I ECO-1000 Series

The ECO-1000 Series EDGEBoost EnergyPack is an industrial-grade supercapacitor tailored to re-define power backup redundancy for industrial computers and HMI displays during mission-critical computing deployments in unstable operational technology deployments.

- 3 Configurable Smart Modes
- Remote GUI and LCM Display
- World Class Certifications
- 10 Years Operating Longevity





Certified For Mission-Critical Edge Deployments

Ensure seamless productivity and performance at the edge. Premio's specialized industrial solutions deliver reliable and safe performance while deployed in the most challenging environments. Each solution has been tested and validated for world class safety compliance, with specific models achieving unique certifications that allow them to deploy in the most demanding industrial applications.



Built Rugged. Built Ready.

Engineered to meet rigorous industrial standards, Premio's specialized solutions are purpose-built to ensure utmost resilience in mission critical deployments.

■ Wide Operating Temperatures

Often facing harsh and extreme conditions, each industrial solution is designed with wide operating temperatures that can range from as low as -40°C to as high as 70°C .

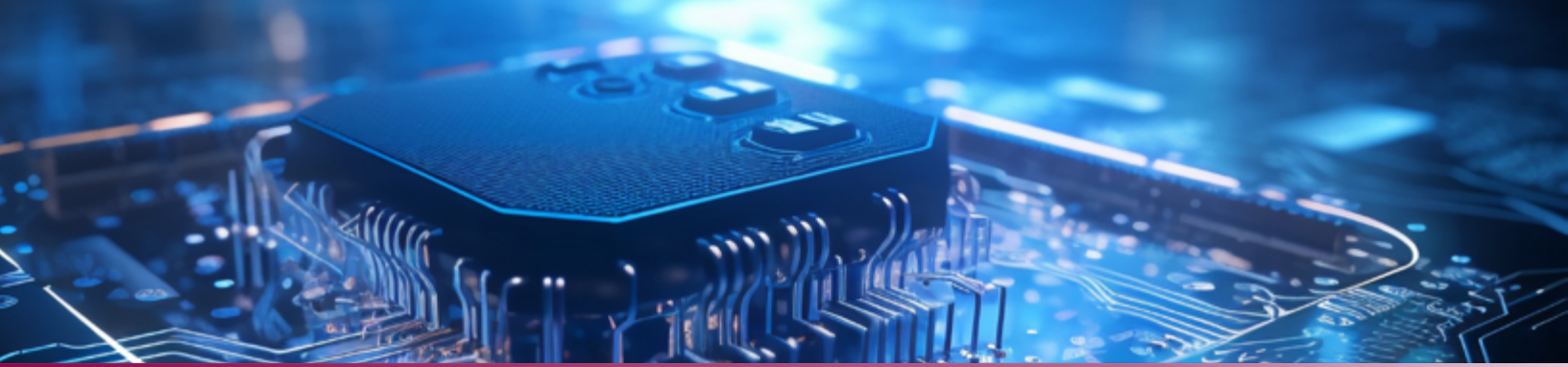
■ Shock and Vibration Resistance

Each specialized edge computer meets MIL-STD-810G standards for shock and vibration resistance. With the ability to endure up to 5Grms vibration and 20G or 50G shock, this rugged design ensures reliable operation in settings where sudden movements are common.

■ Wide Power Input

Power stability in unpredictable or unstable fluctuations is crucial for many remote settings. Able to support wide power input ranges of 9VDC to as high as 110VDC in specific models. This capability is crucial for remote, battery-powered deployments and industrial settings.





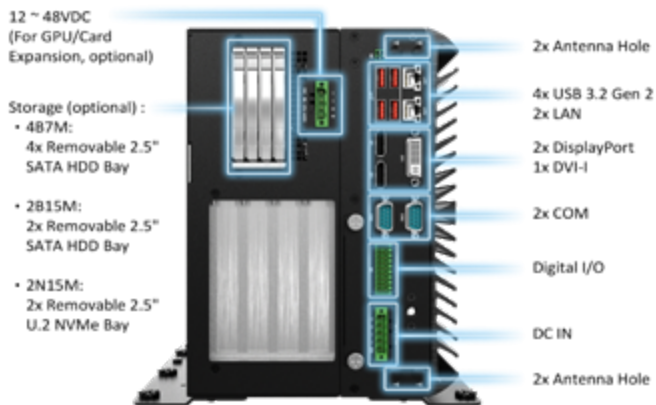
Benefits of Intel x86 Architecture

Our specialized industrial computers are powered by the latest x86 processors, delivering real-time performance at the rugged edge. By selecting edge-specific processors that align with embedded product lifecycle roadmap, each series ensures 10 to 15 years of support for long-term deployment consistency. This extensive support longevity ensures prolonged deployment consistency and reliability, mitigating system redesigns that could conflict with deployment compatibility.

Comprehensive IoT Connectivity

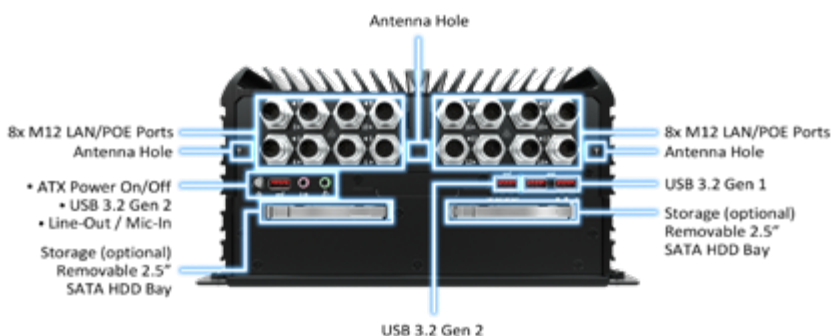
Each specialized industrial computer provides comprehensive IoT connectivity, supporting various devices and sensors, along with real time vehicle telematics, ignition control, and on-board automation switches.

VCO-6000-RPL Series



▲ Built-in CAN Bus

ACO-6000-CML Series




▲ Power Ignition Management


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Rugged Applications			
 ACO-6000 Series			
Processor	Support 10th Gen Intel® CML S Processor (LGA 1200, 65W/35W TDP) or Optional Intel XEON-W Processors		
Memory	2x 260-Pin DDR4 2666 /2933MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)		
Display	1x DVI-I, 2x DisplayPort		
SATA Storage	2x External SIM socket (Mini PCIE attached), 1x Internal 2.5" SATA/SSD HDD Bay (support H=9mm) 2x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable) Support RAID 0, 1, 5		
Internal Expansion Slot	2x Full-size Mini PCIE		
I/O	6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x Internal), 2x USB 2.0 header (internal), 8x RS-232/422/485 (6x internal), 16x isolated digital I/O, 2x GbE RJ45 (Support Wake-on-LAN and PXE)		
Power	9-48 VDC, 5-pin Terminal Block or 48-110 VDC, 3-pin Terminal Block (Optional), AT/ATX Select		
Operating Temperature	-25°C to 70°C (35W/65W CPU)		
PCI & PCI Express	<ul style="list-style-type: none"> • 1x PCIe x16 (Model ACO-6000-CML-1E) • 1x PCI (Model ACO-6000-CML-1I, Optional) 		
Certification	CE, FCC Class A E-Mark, EMC Conformity with EN50155 & EN50121-3-2		
Proprietary Module Expansion	<table border="0"> <tr> <td style="vertical-align: top;"> Up to 2x Module • DTB-M2BK (Support 1x Universal Slot Only) • DTB-D10G • DTB-4U3 • DTB-4ETH • DTB-4ETH-PWR • DTB-4ETH-M12 • DTB-4ETH-M12-PWR </td> <td style="vertical-align: top;"> Up to 4x Module • DTB-4U3 • DTB-4ETH • DTB-4ETH-PWR • DTB-4ETH-M12 • DTB-4ETH-M12-PWR </td> </tr> </table>	Up to 2x Module • DTB-M2BK (Support 1x Universal Slot Only) • DTB-D10G • DTB-4U3 • DTB-4ETH • DTB-4ETH-PWR • DTB-4ETH-M12 • DTB-4ETH-M12-PWR	Up to 4x Module • DTB-4U3 • DTB-4ETH • DTB-4ETH-PWR • DTB-4ETH-M12 • DTB-4ETH-M12-PWR
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Elkhart Lake

Rugged Applications	
 WCO-3000 Series	
CPU Support	Intel® Celeron® Processor J6413, Quad Core, 1.5 MB Cache, 1.8 GHz, TDP 10W
Memory	1x 260-Pin DDR4 2400/2667/3200MT/s SODIMM. Max. up to 32 GB (non-ECC)
Graphic Output	1x DisplayPort 1.4, DP++ (4096 x 2160@60Hz) or 1x HDMI (Optional)
I/O	2x RJ45 by M12 X-Code, 2x USB 3.2 Gen 2 Type A (Waterproof), 1x RS-232/422/485 by M12 A-Code
Storage	1x Internal 2.5" SATA HDD Bay, 1x mSATA (shared by 1x Mini PCI Express)
Expansion	1x M.2 (B Key, 3042/3052, PCIe x 1 + USB 3.2 Gen2, Support 4G/5G/Hailo AI Module), 2x Internal SIM socket, 1x Full-size Mini PCIE
Power	DC IN 9-36 V, DC IN 48-110V (Optional), M12 S-code 4-pin
Certification	IP68, IP69K, CE, FCC Class A
Operating Temperature	-40 °C to 60 °C
Dimensions (WxDxH)	231 x 292 x 57 mm

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Raptor Lake / Alder Lake

Industrial Applications



KCO-2000/3000 Series

	Industrial Computer with 2U/3U Certification-Ready, 12 th /13 th Gen Intel® Core® Processor	
CPU Support	Support 12 th /13 th Gen Intel® Core™ i9/i7/i5/i3 Alder lake-S, Raptor Lake-S Processor (LGA 1700, 65W Max TDP)	
Memory	4x DDR4 2133/2400/2666MHz DIMM. 128 GB Max	
Graphic Output	4x DP++	
LAN	GbE1: Intel® I219LM (Support Wake-on-LAN and PXE) GbE2: Intel® I225-V (Support Wake-on-LAN and PXE)	
USB & Serial	6x USB 3.1 Gen 2 (10 Gbps) 1x USB 3.2 Gen 2x2 (20 Gbps) Type C 6x RS-232 1x 8-bit DIO (4-in/4-out)	
Storage	1x M.2 M / NVMe PCIe x 4 / 2242, 2260, 2280 1x M.2 M / NVMe PCIe x 4 / SATA / 2242, 2260, 2280 1x M.2 E / PCIe x2 / USB 2.0 / 2230	
Internal Expansion Slot	1x PCIe x16 Slot (Gen 5) 1x PCIe x16 Slot (Gen 4, 4-Lane) 1x PCIe x4 Slot (Gen 4, Open End) 1x PCIe x4 Slot (Gen 3, Open End)	
Power	ATX ACPI 5.0 compliant	
Audio	1x Mic-in, 1x Line-in, 1x Line-out	
Operating Temperature	0°C to 60°C	
Dimensions (WxDxH)	12.73" x 10.75" x 3.45"	13.15" x 11.78" x 5.23"
Weight	11 lbs (barebone w/ chassis, mb, and PSU only)	12.5 lbs (barebone w/ chassis, mb, and PSU only)
Certifications	CE, FCC, UL Certified	

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Industrial Applications



VCO-6000-RPL 3E/4E Series

Processor	Support 12/13/14 th (Non-vPRO) Gen Intel® ADL & RPL Processor (LGA 1700, 65W/35W TDP)	
Memory	2x DDR5 4800/5600MHz SODIMM. Max. up to 64GB	
Display	2x DisplayPort, Support resolution 5120 x 3200, Up to 7680 x 4320	
Storage	2.5 GbE1: Intel I226; 2.5 GbE2: Intel I226, Support Wake-on-LAN and PXE, Support TSN	
Internal Expansion Slot	6x USB 3.1 Gen 2 (10 Gbps) 1x USB 3.2 Gen 2x2 (20 Gbps) Type C 6x RS-232 1x 8-bit DIO (4-in/4-out)	
I/O	2x RS-232/422/485 ; 4x RS-232/422/485 (internal) 8 in / 8 out (Isolated), 2x RJ45 2x Universal I/O Bracket (By mini PCIe interface) 4x USB 3.2 Gen 2 (10 Gbps) 5x USB 3.2 Gen 1 (5 Gbps, Internal) 1x USB 3.2 Gen 1 header (5 Gbps, internal)	
Power	9~48VDC • VCO-6000-RPL-4E-2PWR (optional) : 12~48VDC (Optional, For GPU/Card Expansion)	
Operating Temperature	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU)	
Dimensions (WxDxH)	157 (W) x 340 (D) x 240 (H) mm	177 (W) x 340 (D) x 240 (H) mm
Certifications	CE, FCC, UL Certified	

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Supercapacitor UPS Applications



ECO-1000 Series

	<ul style="list-style-type: none"> • ECO-1000-8S: 8x 370 Farads Supercapacitors • ECO-1000-16S: 16x 370 Farads Supercapacitors
Capacity	
Input	3-pin Terminal Block (V+, GND, IGN IN) 12 ~ 35 VDC
Output	<ul style="list-style-type: none"> • ECO-1000-8S: Max. 100W output • ECO-1000-16S: Max. 200W output <p>Charge Mode: DC IN Voltage Bypass (DC OUT = DC IN) Available Discharge Mode: 12V or 24V</p> <p>*Use 24V~35V DC IN for 24V DC OUT setting. **When your system requires a fixed voltage power input, ensure the DC OUT setting matches the system voltage. ***For example, if your system operates at 12V, set the DC OUT from 24V to 12V before connecting to the system.</p>
I/O	<p>1x RS-232, 2 in / 2 out, 1x USB Type A 1x Remote Power On/Off 1x Smart Mode Switch 1x Mode Reset Switch</p>
Operating Temperature	-25°C to 55°C
Certification	CE, FCC Class A, UL 62368-1 Ed. 3 EMC Conformity with EN50155, EN50121-3-2
Dimensions	100 (W) x 192 (D) x 192 (H) mm