

# **PRODUCT** SOLUTION GUIDE



INDUSTRIAL COMPUTING SOLUTIONS FROM THE EDGE TO THE CLOUD

**BUILT RUGGED. BUILT READY.** 

intel partner <sub>Titanium</sub>



# "EDGE TO THE CLOUD"

Premio is a global solutions provider specializing in computing technology from the edge to the cloud. We design and manufacture highly reliable, world-class computing solutions for enterprises with complex, highly specialized requirements for over 30 years. Our engineering specialty and agile manufacturing pushes the technical boundaries in Embedded IoT Computers, Rugged Edge Computers, and HMI Displays.

At Premio, we go to extraordinary lengths to solve the most formidable challenges faced by our customers. We do so by becoming more than their partner: we become their 'Inside Outsource' - an extension of their businesses, work cultures, manufacturing processes and operations, modulating our solutions to answer their special needs with speed, agility and precision.

Headquartered in Los Angeles, California with a state-of-the-art facility (ISO9001, ISO2001, ISO13485) and strategic locations in worldwide, Premio provides robust product engineering, flexible speed to market, and unlimited manufacturing transparency. Premio shares a promise to deliver the best possible next generation industrial PC solutions compliant with the highest standards and certifications for our customers in:



- Industrial Automation
- Transportation
- Food & Beverage
- Military
- Kiosk & Retail

Security & Surveillance

- - Intelligent Healthcare
  - Machine Vision & Robotics



### **OUR MISSION**

Premio dedicates its engineering resources and manufacturing services to meet the incredible demands of computing across industrial and enterprise deployments. Our global teams strive for the highest standards in innovation and technology that translates into the design and mass production of our purpose-built computing solutions.



# **OUR VISION**

"Your Success, Our Commitment." With this simple vision, Premio aims to address computing challenges with purpose-built products. Premio solves challenges for our customers by delivering solutions around the design, integration, validation, and deployment of our computing products in IoT and edge markets. Our 30+ years of industry-knowledge enable our customers to leverage high quality products and application ready hardware for a faster time to market.



### **OUR VALUE**

Apart from our standard computing offerings, Premio also provides unique value to our customers through our robust engineering resources, environmental testing validation, manufacturing scale, supply chain & product lifecycle management, reverse logistics, and next generation computing design and innovation.

### **OUR CORE VALUES**

We deliver our core brand values through the way we conduct business. Premio's core values of Innovation, Commitment, Collaboration, Agility, and Accountability guide our decisions to exceed expectations.

- AGILITY INNOVATION COLLABORATION ACCOUNTABILITY employees, customers, and partners. COMMITMENT

We are flexible, adaptable, and responsive to the change in demands of our customers, the market, and our environment. We are willing to learn and create new ideas to drive and embrace changes actively.

We constantly strive to drive innovation into all aspects of our business to provide products that deliver reliability, quality, performance, and value creation.

We work together to contribute to the development of new products and services that will ensure the success of our customers.

We always hold ourselves accountable for our products, services, and actions to our

We offer our valued customers the highest possible standards of solutions. At Premio, we treat customers with dignity, respect, and courtesy. We listen objectively to their needs and respond in a timely, efficient, and responsible manner.

# **US BASED COMPANY WITH** WORLDWIDE OPERATIONS

A STORY OF GROWTH & EVOLUTION

### 1989-2000

Premio, which means "Prize" in Spanish, emerged as "Premio PC", a personal computer manufacturer providing computers nationwide to many educational programs (K-12) around the nation. From its inception in 1989 to 2000, Premio pioneered and remained a trusted partner and manufacturer for many educational institutions in the United States.

### 2000

As computing technology advanced and became more commoditized, Premio proved to be resilient and achieved another milestone by evolving itself from its own personal computer in 2000 into a respectable contract manufacturer - providing a variety of highly specialized turnkey OEM integration processes and business services for some of the world's elite computing companies; many of which still exist today in its global operations.

CALIFORNIA

This monumental shift demanded Premio to move its operational infrastructure into a fully automated 150,000 square feet Los Angeles based manufacturing facility that was fully customized for ultimate flexibility and unlimited scalability. Even today Premio's world-class manufacturing facility continues to be a testament for state-of-the-art automation and assembly for many leading OEMs in computing technology.

### 2000-2011

ILLINOIS

Starting from the year 2000, "Premio PC" transformed its brand identity into "Premio Inc." – becoming a pivotal partner and key advisor in manufacturing and servicing premier technology companies around the world. Furthermore, Premio also restructured its mission and core values around a customer-centric business model with "total customer satisfaction" driving its core. By 2010, Premio Inc. achieved yet another milestone by successfully engaging with over 50+ customers worldwide ranging from enterprise level companies to startups that were eventually acquired by major fortune 500 companies.

In 2011 Premio decided to once again refine its business operations and developed more advanced technologies by investing into the research and development of home grown purpose-built Premio products in:

time.

- Industrial Embedded **Computing Solutions** 

By combining our home grown products with our design capabilities plus our renowned OEM services, Premio's advantage lies within its ability in providing a customized turnkey solution that can scale efficiently but also seamlessly align with the goals of our customers, resulting in ROI growth and measurable success over



### 2011-2017

- Enterprise Servers and Storage Solutions
- Industrial Touch Display Solutions

### Present

Today, Premio has successfully evolved into a full-service technology company that specializes in top-notch computing designs, scalable manufacturing for both variety and volume, and robust end-to-end business services that result in streamlined growth and success with global expansion

\_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

(Design - Manufacturing -Services)

# FANLESS EMBEDDED SYSTEMS 14

Premio's fanless embedded systems are extremely flexible and reliable to provide integrated solutions to meet different needs. With its superior features integration, exceptional system performance, flexible I/O connections, wide range power input, smart management functions, and rugged reliability, Premio fanless embedded systems deliver a compelling platform that is needed in today's

demanding workloads and industrial needs.

### 08 ▶ 2023 FEATURED INDUSTRIAL SOLUTIONS

FANLESS MINI PC		RUGGED		EDGEBOOST NODE
BC0 series	16	RCO series	19	AI EDGE 27



N-VEHICLE	MACHINE VISION	
ACO 34	VCO 37	
AI EDGE NFERENCE	IP65/67 WATERPROOF	
EDGE 40	WCO 45	



Premio provides ethernet daughterboard modules that integrate easily into Premio embedded and edge computers through standard PCIe protocols. These flexible add-in modules provide additional ethernet I/O ports and scalable connectivity for IoT deployments that require ethernet connections in multiple RJ45 and M12 locking connectors.

# **INDUSTRIAL DISPLAY SYSTEMS** 48

Premio's Industrial Panel PCs and Touch Monitors are purpose-built for the toughest embedded deployments requiring mission-critical reliability. System integrators and automation engineers can easily deploy Premio industrial panel PCs and touch monitors as human machine interfaces to achieve better productivity and operational efficiency in their enterprise projects.





# MOTHERBOARD SYSTEMS 62

Premio offers industrial-grade scalability with standard motherboards and OEM system design. Standard form factors include: Single board computers (1.8" FEMTO-ITX, 2.5" PICO-ITX, and 3.5" SBCs); Mini-ITX; and Micro-ATX.

### **CERTIFICATION-READY INDUSTRIAL COMPUTERS**

Certification-Ready industrial computers are embedded computing solutions that act as sub-assembly building blocks or final OEM system configuration in key enterprise and IoT applications.











## 2023 FEATURED INDUSTRIAL SOLUTIONS

### coming soon RCO-6000-ADL series

Annua Mille

Al Edge Inference Computer EDGEBoost Nodes VISIT P.29

12/13<sup>th</sup> Intel<sup>®</sup> 12/13<sup>th</sup> Gen Processor

(Alder Lake)

EDGEBoost GPU/NVMe/SATA

Performance

Upgrade

**2**x Support 2x Universal I/O

**Brackets** 

# PCle 4.0

ISIT P39

Up to 16 GT/s per lane



LAN/PoE/USB

enox



Expandable Performance Accelerators

Now available! Configure 5G, AI, and NVMe accelerator modules with various industrial computers through universal I/O brackets. The innovative expandable modules enable industrial solutions to unlock intelligent computing at the rugged edge.

# VCO-6000-ADL series coming soon

High-Performance Machine Vision Computer



Industrial-Grade

8

**Full-Length GPU Support** 

-25°C to 70°C

**4**x p to 4x PCIe









rating and corrosion-proof materials to ensure smooth operations in various kinds of

- AMD Ryzen<sup>™</sup> Embedded R1000/V1000 Series
- Rich Industrial I/O Ports
- · 2x DDR4 RAM up to 32GB

industrial environments.

# RYZEN EMBEDDED

Premio introduces a 1.8" and 3.5" single board computer powered by AMD Ryzen R1000/V1000 Processors. The AMD CT-DR101 and CT-NR101 are industrial-grade motherboards that are small, compact, and provide power-efficient performance in a system-on-chip design (SoC). Despite their small form factor, they provide a balance between performance and cost-effectiveness for intelligent industrial applications.

# **FEMTO FORM** FACTOR 1.8" SBC

VISIT P.64

- AMD Ryzen™ Embedded R1000 Series
- DDR4 Memory up to 8GB
- Dual Independent 4K Displays
- USB Type-C
- Industrial-grade Ruggedized Design



- Triple Independent Displays
- Industrial-grade Ruggedized Design
- 50x PCIe Pin for Customizable I/O



\* **\*\*\***\*\*\*\*\*\*\*

Mini

Fanless

Computer

BCO-2000

AMD Ryzen™

R1000/V1000

Series



### In-Vehicle Fanless

Computer

ACO-6000-CML

Comet Lake S

### ACO-6000-KBL

Skylake & Kabylake-S 6 -> \_ 0000

### IP65/IP67 Waterproof Fanless

Embedded

WC0-3000-KBL-U

Kabylake-U



Machine Vision System

VCO-6000-ADL

Alder Lake S

VCO-6000-CFL CFL-R S

### VCO-6000-KBL Skylake & Kabylake-S

BCO-2000-WHL-U Whiskey Lake

### BCO-1000-J1900

Bay Trail



Rugged

Fanless Embedded System

RCO-6000-ADL

Alder Lake S

RCO-6000-CML Comet Lake S

RCO-6000-CFL CFL-RS

RCO-6000-KBL Skylake & Kabylake-S

RC0-3000-CML Comet Lake S

RC0-3000-CFL S Coffee Lake R

RCO-3000-KBL Skylake & Kabylake-S

RC0-3000-KBL-U Kabylake-U

RCO-1000-EHL Elkhart Lake

RCO-1000-J1900 Bay Trail



# **FANLESS DESIGN**

- Prevent failure/repair/
- replacement caused by fan part
- Venting holes no longer needed
- Extended MTBF

**SHOCK & VIBRATION** 

MIL-STD 810G on shock &

RCO & ACO Series comply with

vibration in order to sustain in

environment like industrial

automation, transportation,

military, etc.

No noise



### THERMAL PERFORMANCE

Utilize ultra-conductive materials (copper and aluminum) to accomplish fast heat dissipation through integrated heat pipes and heat sinks. The unique thermal design allows the computers' CPU (up to 35W) to operate without a fan in an extended temperature range

### INDUSTRIAL GRADE COMPONENT

Strict component selection adopting industrial grade parts like capacitors, power chokes, etc. Better electrical performance and more stable system performance. Product longevity supported Less RMA + Longer Product Lifecycle = Lower TCO (Total Cost of Ownership)





### **ONE-PIECE DESIGN**

- Robust structure
- Less joint parts and screws for
- higher shock & vibration tolerance
- Easy assembly, disassembly,
- maintenance
- Sealed housing to prevent dust



### **POWER PROTECTION**

- Over voltage protection
- Over current protection
- Reverse protection



### **EXPANDABLE &** MODULARIZATION

The modular design approach helps with the ease of installation to achieve rapid deployment, and provide wide variety of configurable options to achieve scalability.



### **EXTENDED OPERATING TEMPERATURE RANGE**

Premio fanless embedded systems support extended temperature to allow applications to function in difficult and harsh environment.





# BC0-1000-J1900 SERIES

- Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Processor (Quad Core, 2.0GHz)
- Dual Independent Display
- Rich I/O Features with up to 6x RS-232/422/485
- 2x Full-size Mini-PCIe Slot for Communication or Expansion Modules
- 9 to 30 VDC Wide Range Power Input Supporting AT/ATX Mode



- Ultra Compact Size Design
- Fanless & Cable-less in Design

• TPM 2.0 Supported (Optional)

### intel. Bay Trail







Model	BCO-1000-J1900	BCO-1000-J1900-10	BCO-1000-J1900-20	BCO-1000-J1900-30
	Basic Fanless System ideal for space- constrained applications	Support up to 1x I/O module	Support up to 2x I/O module	Support up to 3x I/O module
CPU Onboard		Intel <sup>®</sup> Cele	ron <sup>®</sup> J1900	
Memory		1x 204-pin DDR3L-1066/13	33MHz SO-DIMM, up to 8GB	
Graphic Output	1x DVI-I (optional Dis	splayPort: BCO-1000-J1900-1	IOA, BCO-1000-J1900-20C &	BCO-1000-J1900-30)
LAN		2x GbE RJ45 (Support \	Wake-on-LAN and PXE)	
Storage	1x mSATA (shared by 1x Mini PCIe)	1x   1	mSATA (shared by 1x Mini PC Ix Internal 2.5" SATA HDD Ba	cle), y
Internal Expansion Slot		2x Full-size mini-PCIe	(1x shared with mSATA)	
Power	9-30 VDC, AT/ATX Select, 3-pin Terminal Block			
Audio	Line-out / Mic-in Phone Jack			
Operating Temperature	-20°C to 50°C			
Dimensions (WxDxH)	142 x 101 x 30 mm	142 x 101 x 41.5 mm	142 x 101 x 58 mm	142 x 101 x 75 mm
Weight	0.46 kg	0.58 ~ 0.62 kg	0.68 kg	0.72 kg
Universal Expansion Slot	0	1 (rear)	2 (rear)	3 (rear) 1 (front)
DP, 8-bit Isolated DIO (rear)		BCO-1000-J1900-10A		
2x COM (rear)		BCO-1000-J1900-10B		
4x USB (rear)		BCO-1000-J1900-10U		
DP, 8-bit Isolated DIO, 2x COM (rear)			BCO-1000-J1900-20C	
4x COM (rear)			BCO-1000-J1900-20D	
DP, 8-bit Isolated DIO, 4x COM (rear)				BCO-1000-J1900-30

MINI FANLESS EMBEDDED COMPUTER

# BCO-2000-WHL-U SERIES

- Support 8<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i5 & Intel<sup>®</sup> Celeron<sup>®</sup> Processor
- 1x 260-pin DDR4 2400 SO-DIMM. Max. up to 32GB
- 2x Intel<sup>®</sup> GbE (Support Wake-on-LAN and PXE)
- Dual display by 1x HDMI and 1x DisplayPort support
- 2x Mini PCIe (Gen3) with 1x SIM slot support

intel

• 4x USB 3.2 Gen 2, 4x RS-232/422/485 (w/ 2x Internal)

Whiskey Lake	
Model	
	B
CPU Support	I
Memory	
Graphic Output	
LAN	
USB, Serial	4x L
Storage	
Internal Expansion Slot	
Power	
Audio	
Operating Temperature	
Dimensions (WxDxH)	
Weight	
Universal Expansion Slot	
Expansion (Option)	<ul> <li>2x LAN</li> <li>2x COM</li> <li>4x COM</li> </ul>



- supports 1-225 sec. system reset
- TPM 2.0 Supported



BCO-2000-WHL-U

sic Fanless System ideal for space-constrained applications

Support 8<sup>th</sup> Gen. Intel<sup>®</sup> WL-UE Processor (15W TDP) ntel<sup>®</sup> Core™ i5-8365UE Processor 6M Cache, up to 4.10 GHz Intel<sup>®</sup> Celeron<sup>®</sup> Processor 4305UE 2M Cache, 2.00 GHz

1x 260-Pin DDR4 2400MHz SO-DIMM, up to 32GB

1x DisplayPort, 1x HDMI (Optional)

 $2x\ RJ45\ GbE$  (Support Wake-on-LAN and PXE)

JSB 3.2 Gen 2, 2x USB 2.0 header (internal), 2x RS-232/422/485

1x mSATA (shared by 1x Mini PCIe), 1x Internal 2.5" SATA HDD Bay

2x Full-size Mini-PCIe (1x shared with mSATA)

AT/ATX 12V Select, 3-pin Terminal Block

Line-out / Mic-in Internal

-20°C to 60°C

140 x 192 x 61 mm

1.4 kg

2

- 2x PoE (Support 1x Universal Slot Only)
- 2x USB 2.0 (Support 1x Universal Slot Only)
- 2x USB 3.2 Gen1 (Support 1x Universal Slot Only)

MINI FANLESS EMBEDDED COMPUTER

# BC0-2000-V1605B SERIES

- Support AMD Ryzen™ Embedded R1000/V1000 Series Processor
- 2x 260-pin DDR4 2400 MHz SO-DIMM. Max. up to 32GB
- 2x Intel<sup>®</sup> GbE (Support Wake-on-LAN and PXE)
- Triple Independent Display by 1x DisplayPort, 1x LVDS, 1x HDMI (Optional)
- 1x M.2 B Key for 4G/5G Communications & Storage
- 1x full-size Mini PCIe for expansion modules



- 2x USB 3.2 Gen 2, 2x USB 2.0, 2x RS-232/422/485
- 1x Internal 2.5" SATA HDD Bay, 1x inernal SIM socket
- Watchdog timer 1-255s system reset
- TPM 2.0 Supported





Model	BCO-2000-V1605B	BC0-2000-R1606G
	Basic Fanless System ideal for	space-constrained applications
	Support AMD Ryzen™ Emb	pedded R1000/V1000 Series
CPU Support	AMD Ryzen™ Embedded V1605B with Radeon™ Vega 8 Graphics, 4M Cache, 4 Cores, 8 Threads, Up to 3.6 GHz	AMD Ryzen™ Embedded R1606G with Radeon™ Vega 3 Graphics, 4M Cache, 2 Cores, 4 Threads, Up to 3.5 GHz (Optional)
Memory	2x 260-Pin DDR4 2400 M	IHz SO-DIMM. Max 32 GB
Graphic Output	1x DisplayPort, 1x 24-bit dual ch	nannel LVDS, 1x HDMI (Optional)
LAN	2x RJ45 GbE (Support )	Wake-on-LAN and PXE)
USB, Serial	2x USB 3.2 Gen 2 (10 Gbps), 4x USB 2.0 (2x internal), 2x RS-232/422/485	
Storage	1x M.2 B Key, 3042, Support SATA, 1x Internal 2.5" SATA HDD Bay (support H=9.5mm)	
Internal Expansion Slot	1x M.2 B Key (PCIe x1 & USB 3.0, 3042/3052, SATA, USIM, Support 4G/5G) 1x Full-Size Mini PCIe for expansion modules	
Power	AT, ATX 12VDC	
Operating Temperature	-20°C to 55°C (25W CPU)	
Dimensions (WxDxH)	140 x 192 x 61 mm	
Weight	1.5 kg	
Universal Expansion Slot	2	
Expansion (Option)	<ul> <li>2x COM</li> <li>2x USB 2.0 (Su</li> <li>4x COM</li> <li>2x USB 3.2 Ge</li> </ul>	upport 1x Universal Slot Only) n1 (Support 1x Universal Slot Only)

MINI FANLESS EMBEDDED COMPUTER

# **RCO-1000-J1900** SERIES

- Intel<sup>®</sup> Atom<sup>®</sup> processor E3845, 1.91GHz or Intel<sup>®</sup> Celeron<sup>®</sup> J1900, 2.0GHz
- Dual Independent Display
- Rich I/O Features with up to 6x RS-232/422/485
- 2x Full-size Mini-PCIe Slot for Communication or Expansion Modules
- 9 to 48 VDC Wide Range Power Input Supporting AT/ATX Mode

### intel. Bay Trail



Model	RCO-1000-J1900
	Ultra Compact Fanless System ideal for space-constrained applications
CPU Onboard	
Memory	
Graphic Output	1x DVI-I (optional Disp
LAN	
Storage	1x mSATA (shared by 1x Mini PCIe)
Internal Expansion Slot	
Power	
Audio	
Operating Temperature	
Dimensions (WxDxH)	150 x 105 x 37 mm
Weight	0.69 kg
Universal Expansion Slot	0
DP, 8-bit Isolated DIO (rear)	
2x COM (rear)	
Power Ignition Management (internal)	
DP, 8-bit Isolated DIO, 2x COM (rear)	
4x COM (front)	
DP, 8-bit Isolated DIO, 4x COM (rear)	



• Fanless & Cable-less in Design



RCO-1000-J1900-20D

RCO-1000-J1900-30

MINI FANLESS EMBEDDED COMPUTER

# RCO-1000-EHL SERIES

- Intel<sup>®</sup> Atom<sup>™</sup>/Celeron<sup>®</sup> Processor (Up to 12W TDP)
- Dual Independent Display by 2x DisplayPort
- 1x 2.5GbE, 1x GbE supporting (Wake-on-LAN and PXE)
- 1x 2.5" SATA HDD Bay, 1x mSATA,
- 1x M.2 (B Key, 2242/3042/3052, Support 4G/5G)
- 1x Full-size mini PCIe for communication or expansion modules
- 2x RS-232/422/485, 3x USB 3.2 Gen2, 1x USB 2.0









• TPM 2.0 Supported

• 9 to 36 VDC Wide Range Power Input

• Wide Operating Temperature -40°C to 70°C

Supporting AT/ATX Mode



Model	NCO-1000-LIIL-10	NCO-1000-LIIL-20	
	Ultra Compact Fanless System ideal for space-constrained applications		rained applications
CPU Support	Support Intel <sup>®</sup> EHL Processor (Up to 12W TDP) Intel <sup>®</sup> Atom <sup>®</sup> Processor x6425E, Quad Core, 1.5 MB Cache, 2.0 GHz, ECC supported Intel <sup>®</sup> Celeron <sup>®</sup> Processor J6413, Quad Core, 1.5 MB Cache, 1.8 GHz		
Memory	1x 260-Pin DDF	R4 2400/2667/3200MT/s SO-DIMM. I	Max. up to 32 GB
Graphic Output	Dua	al Independent Display by 2x Display	yPort
LAN	2x RJ45 (	2.5 & 1 GbE), Support Wake-on-LA	N and PXE
USB, Serial	3x USB 3.2	Gen 2 (10 Gbps), 1x USB 2.0, 2x RS-	-232/422/485
Storage	1x Internal 2.5" SATA HDD Bay (support H=9.5 mm)		
Internal Expansion Slot	1x Full-size Mini PCIe		
Power	9-36 VDC, AT/ATX Select, 3-pin Terminal Block		
Audio	1x Mic-in, 1x Line-out		
Operating Temperature	-40°C to 70°C		
Dimensions (WxDxH)	150 x 105 x 49 mm	150 x 105 x 66 mm	150 x 105 x 83 mm
Weight	0.9 kg	1 kg	1.2 kg
Universal Expansion Slot	Up to one Universal Expansion Slots	Up to three Universal Expansion Slots	Up to five Universal Expansion Slots
Expansion	<ul> <li>Expansion Modules (Optional) :</li> <li>2-port COM module with Super I/O Chipset (Up to 2x Slot)</li> <li>4-Port USB module with USB hub (1x Slot Only)</li> <li>1-Port DP 1.4 and DIO (4 in / 4 out, Isolated, 1x Slot Only)</li> <li>1-Port HDMI 2.0 (1x Slot Only)</li> </ul>		to 2x Slot) ) Slot Only)

RUGGED MINI (SFF) INDUSTRIAL COMPUTER

# RCO-3000-KBL-U SERIES

- Support 7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i5 / i3 Processor
- Triple Independent Display
- Support up to 6x LAN or 4x PoE by Unique Modular Design
- Multiple Expansion Capability including PCIe, PCI, and Mini PCIe
- Wide Operating Temperature -40°C to 70°C
- 9 to 50 VDC Wide Range Power Input Supporting AT/ATX Mode

intel. Kaby Lake-U		••••••	
Model	RCO-3000-KBL-U	RCO-3000-KBL-U-1	RCO-3000-KBL-U-2
	Advanced Fanless System based on Intel <sup>®</sup> Kabylake-U processors	Up to one PCI or PCIe x4 expansion slot	Up to two PCI or PCIe x4 expansion slot
CPU Onboard	Intel <sup>®</sup> 7 <sup>th</sup> Gen. (Kab	oylake-U) Processor Core™ i5-7300U	J, Core™ i3-7100U
Memory	1x 260-pi	n DDR4 1866/2133MHz SO-DIMM, up	o to 16GB
Graphic Output		1x VGA, 2x DisplayPort	
LAN	2x Gb	E RJ45 (Support Wake-on-LAN and	PXE)
USB, Serial, & Digital I/O	4 5x RS-232/4	x USB 3.2 Gen1 (5 Gbps), 2x USB 2.0 422/485 (w/ 3x internal), 16x isolated	), d digital I/O
Storage	2x 2.5" SATA HDD Bay (1x internal, 1x removable) with RAID 0, 1, 5, 10 support, 1x mSATA (shared by 1x Mini PCIe), and 1x CFast (shared by 1x mSATA)		
Internal Expansion Slot	2x Full-size mini-PCIe		
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block		
Audio	Line-out / Mic-in Phone Jack		
Operating Temperature	-40 °C to 70 °C		
Dimensions (WxDxH)	185 x 197 x 57.4 mm	185 x 197 x 85 mm	185 x 197 x 105 mm
Weight	2.17 ~ 2.66 kg	2.73 ~ 3.1 kg	2.95 ~ 3.32 kg
1x PCIe x4		RCO-3000-KBL-U-1E	
1x PCI		RC0-3000-KBL-U-11	
2x PCIe x4			RC0-3000-KBL-U-2E
2x PCI			RCO-3000-KBL-U-21
Proprietary Module Expansion	Up to 1x Module : DTB-4LAN DTB-4LAN-M12 DTB-4LAN-PWR DTB-4LAN-PWR-M12		



- Fanless & Cable-less in Design
- TPM 2.0 Supported





### RUGGED MINI (SFF) INDUSTRIAL COMPUTER

# RCO-3000-KBL SERIES

- Support 6<sup>th</sup>/7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i7/i5/i3 or Pentium<sup>®</sup> / Celeron<sup>®</sup> Desktop Processor
- Intel<sup>®</sup> Q170 chipset
- 2x DDR4 1866/2133MHz SO-DIMM. Max. up to 32GB
- Intel<sup>®</sup> HD Graphics 530 / 630
- Triple Independent Display
- 2x internal 2.5" SATA HDD bay with RAID 0, 1, 5, 10 support, 2x mSATA (shared by 2x Mini PCIe), 1x CFast
- 2x full-size Mini PCIe (shared by 2x mSATA) for communication or expansion modules, 2x external SIM socket

# intel



•	4x RS-232/422/485 (w/ 2x internal),
	6x USB 3.2 Gen1. 2x USB 2.0

- 9 to 50 VDC Wide Range Power Input Supporting AT/ATX Mode
- TPM 2.0 Supported



<b>intel</b> . Coffee Lake R	
Model	RC0-300
	Superior Fanless Embedde for Intel 8 <sup>th</sup> /9 <sup>th</sup> Gen (
CPU Support	Support Core™ Core™ i3-
Memory	
Graphic Output	
LAN	
USB, Serial, & Digital I/O	5×
Storage	
Internal Expansion Slot	2x F
Power	
Audio	
Operating Temperature	
Dimensions (WxDxH)	192 x 197 x 0
Weight	2.28
PCI Express	0
Proprietary Module Expansion	Up to 7

Model	RC0-3000-KBL
	Advanced Fanless System based on Intel® Skylake & Kaby Lake-U processors
CPU Support	Support 6 <sup>th</sup> & 7 <sup>th</sup> Gen Intel <sup>®</sup> Core™ i7 / i5 / i3 / Pentium <sup>®</sup> / Celeron <sup>®</sup> Desktop Processor (LGA 1151) 7 <sup>th</sup> Gen Intel <sup>®</sup> Core™ i7-7700T / i5-7500T / i3-7101TE, 6 <sup>th</sup> Gen Intel <sup>®</sup> Core™ i7-6700TE / i5-6500TE / i3-6100TE, Intel <sup>®</sup> Pentium <sup>®</sup> G4400TE / Celeron <sup>®</sup> G3900TE
Memory	2x DDR4 1866/2133MHz SO-DIMM. Max. up to 32GB
Graphic Output	Intel <sup>®</sup> HD Graphics 530 / 630 1x DisplayPort, and 1x HDMI (optional)
LAN	2x GbE RJ45 (Support Wake-on-LAN and PXE)
USB, Serial, & Digital I/O	6x USB 3.2 Gen1 (5 Gbps), 2x USB 2.0 (internal), 4x RS-232/422/485 (2x internal), 16x isolated digital I/O
Storage	2x internal 2.5" SATA HDD Bay with RAID 0, 1, 5, 10 support, 2x mSATA (shared by 2x Mini PCIe), and 1x Cfast
Internal Expansion Slot	2x Full-size mini-PCIe
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block
Audio	Speaker-out / Mic-in Phone Jack
Operating Temperature	-25°C to 60°C
Dimensions (WxDxH)	185 x 197 x 57.4 mm
Weight	2.28 kg

RUGGED MINI (SFF) INDUSTRIAL COMPUTER

# RCO-3000-CML SERIES

- Support 10<sup>th</sup> Gen Intel<sup>®</sup> CML-R S Processor (LGA 1200, 35W TDP)
- Intel<sup>®</sup> Q470E Chipset

comet Lake S

- Triple Independent Display by DisplayPort, Support Resolution 4096 x 2304
- 2x Intel<sup>®</sup> GbE supporting Wake-on-LAN and PXE
- 1x Full-size Mini PCIe (shared by 1x mSATA), 1x M.2 B Key Support AI Module/NVMe Storage/4G/5G, and 2x SIM socket
- 2x 2.5" SATA HDD Bay with RAID 0, 1, 5 support, 1x mSATA (Shared by 1x Mini PCIe)
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)



- 6x USB 3.2 Gen 2, 2x USB 3.2 Gen 1, 5x RS-232/422/485 (2x internal)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- TPM 2.0 Supported



Model	RCO-3000-CML	
	Superior Fanless Embedded System with LGA 1200 for Intel 10 <sup>th</sup> Gen CPU & Q470E PCH	
CPU Support	Support 10 <sup>th</sup> Gen Intel <sup>®</sup> CML-R S Processor (LGA 1200 35W TDP) Core™ i9-10900TE, Core™ i7-10700TE, Core™ i5-10500TE, Core™ i3-10100TE, Pentium <sup>®</sup> G6400TE, or Celeron <sup>®</sup> G5900TE	
Memory	2x 260-Pin DDR4 2666/2933MHz SO-DIMM. Max. up to 64GB (ECC and Non-ECC)	
Graphic Output	3x DisplayPort, support resolution 4096 x 2304 (1x DP Port Co-layout HDMI Connector)	
LAN	2x GbE RJ45 (Support Wake-on-LAN and PXE)	
USB, Serial, & Digital I/O	6x USB 3.2 Gen 2 (10 Gbps) 2x USB 3.2 Gen 1 (5 Gbps, internal) 3x RS-232/422/485 (2x internal)	
Storage	3x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x internal; 1x removable & hot-swappable), 1x mSATA (shared by 1x Mini PCIe)	
Internal Expansion Slot	1x Full-size mini-PCIe (1 shared by 1x mSATA), 1x M.2 B Key Support 4G/5G/AI/NVMe, 1x M.2 E Key	
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block	
Audio	Speaker-out	
Operating Temperature	-25°C to 70°C	
Dimensions (WxDxH)	192 x 227 x 60.3 mm	
Weight	2.4 kg	
Proprietary Module Expansion	Up to 1x Module : • DTB-D10G • DTB-4ETH-PWR • DTB-M2MK • DTB-4U3 • DTB-4ETH-PWR-M12 • DTB-2M2BK • DTB-4ETH • DTB-4ETH-M12	

### HIGH-PERFORMANCE INDUSTRIAL COMPUTER

# RCO-6000-KBL SERIES

- Support 6<sup>th</sup>/7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i7/i5/i3 or Pentium<sup>®</sup> / Celeron<sup>®</sup> Desktop Processor
- Triple Independent Display
- Support up to 10x LAN or 8x PoE by Unique Modular Design
- Multiple Expansion Capability including PCIe, PCI, and Mini PCIe
- Wide Operating Temperature -25°C to 70°C
- 9 to 48 VDC Wide Range Power Input Supporting AT/ATX Mode

### intel. Skylake-S Kaby Lake-U



Model	RCO-6000-KBL	RCO-6000-KBL-1	RCO-6000-KBL-2				
	Superior Fanless System with LGA-1151 socket for Intel <sup>®</sup> Kabylake & Skylake-S processors	With one PCI or PCIe x16 expansion slot	With two PCI or PCIe x8 / x16 expansion slot				
CPU Support	Intel® 6 <sup>th</sup> /7 <sup>th</sup> ( Core™ i Per	Intel <sup>®</sup> 6 <sup>th</sup> /7 <sup>th</sup> Gen. (Kabylake & Skylake-S) Desktop Processor Core™ i7-7700T/6700TE, Core™ i5-7500T/6500TE, Core™ i3-7101TE/6100TE, Pentium <sup>®</sup> G4400TE, or Celeron <sup>®</sup> G3900TE					
Memory	2x 260-pir	n DDR4-1866/2133MHz SO-DIMM, u	p to 32GB				
Graphic Output		1x DVI-I, 2x DisplayPort					
LAN	2x Gb	E RJ45 (Support Wake-on-LAN and	PXE)				
USB, Serial, & Digital I/O	6x USB 3.2 Gen1 (5 Gbps), 2x U	SB 2.0, 4x RS-232/422/485 (w/ 2x ir	iternal), 16x isolated digital I/O				
Storage	4x 2.5" SATA HDD Bays with RAID 0, 1, 5, 10 support (2x internal, 2x removable), 2x mSATA (shared by 2x Mini PCIe)						
Internal Expansion Slot	4x Full-size mini-PCIe						
Power	9-48 V	/DC, AT/ATX Select, 3-pin Terminal	Block				
Audio	Speaker-out / Mic-in Phone Jack						
Operating Temperature	-25 °C to 70 °C						
Dimensions (WxDxH)	240 x 261 x 79 mm	240 x 261 x 107 mm	240 x 261 x 127 mm				
Weight	4.37 ~ 5.21 kg	4.67 ~ 6.40 kg	5.54 ~ 6.64 kg				
Universal Expansion Slot (front)	2	2	2				
Universal Expansion Slot (rear)	0	1	2				
1x PCIe x16		RCO-6000-KBL-1E					
1x PCI		RCO-6000-KBL-11					
2x PCIe x8			RCO-6000-KBL-2E				
2x PCI			RC0-6000-KBL-21				
1x PCIe x16 & 1x PCI			RCO-6000-KBL-2C				
Proprietary Module Expansion	Up to 2x Module : DTB-4LAN DTB-4LAN-PWR DTB-4LAN-M12 DTB-4LAN-PWR-M12						









### HIGH-PERFORMANCE INDUSTRIAL COMPUTER

# RCO-6000-CFL SERIES

- Support 8<sup>th</sup>/9<sup>th</sup> Gen. Intel<sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP)
- Intel<sup>®</sup> Q370 chipset
- 2x DDR4 2400/2666Hz SO-DIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 4x USB 3.2 Gen 2, 6x USB 3.2 Gen1 (1x internal), 6x RS-232/422/485 (w/ 2x internal)
- 4x 2.5" SATA HDD Bay and 1x mSATA. Support RAID 0, 1, 5, 10
- 1x NVMe M.2 SSD, 1x M.2 E Key for WiFi







More info

TIMITA

• Wide Operating Temperature -25°C to 70°C

• 9 to 48 VDC Wide Range Power Input

Supporting AT/ATX Mode

TPM 2.0 Supported

• Fanless & Cable-less in Design

Model	RCO-6000-CFL	RCO-6000-CFL-2C			
	Superior Fanless System with LGA-1151 socket for Intel <sup>®</sup> CFL-R S Processor				
CPU Support	Support 8 <sup>th</sup> /9 <sup>th</sup> Gen. Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP) Core™ i7-9700E/9700TE/8700T, Core™ i5-9500E/9500TE/8500T, Core™ i3-9100E/9100TE/8100T, Pentium <sup>®</sup> G5400T, or Celeron <sup>®</sup> G4900T				
Memory	2x 260-pin DDR4-2400/2666MHz S	0-DIMM, up to 64GB (Un-buffered and Non-ECC)			
Graphic Output	1x D <sup>1</sup>	/I-I, 2x DisplayPort			
LAN	2x GbE RJ45 (Su	pport Wake-on-LAN and PXE)			
USB, Serial, & Digital I/O	4x USB 3.2 Gen 2 (10 Gbps), 6x USB 3.2 Gen1 (1x internal), 6x RS-232/422/485 (2x internal), 16x isolated digital I/O				
Storage	4x 2.5" SATA HDD bay with RAID 0, 1, 5, 10 support (2x internal; 2x removable & hot-swappable), 1x mSATA (shared by 1x Mini PCIe), 1x NVMe M.2 M Key				
Internal Expansion Slot	2x Full-size mini-PCIe (1 shared by 1x mSATA), 1x M.2 E Key				
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block				
Audio	Line-out / Mic-in Phone Jack				
Operating Temperature	-25°C to 70°C				
Certification	E-Mark, EMC Confor	rmity with EN 50155, EN 50121-3-2			
Dimensions (WxDxH)	240 x 261 x 79 mm	240 x 261 x 127.3 mm			
Weight	5.97 kg	7.73 kg			
Universal Expansion Slot	1 (by mini PCIe interface)	3 (by mini PCIe interface)			
PCI & PCI Express	0	RCO-6000-CFL-2C: 1x PCI, 1x PCIe x16 2I: 2x PCI (Optional) 2E: 2x PCIe x8 (Optional)			
Proprietary Module Expansion	Up to 1x Module : DTB-M2BK DTB-D10G DTB-4U3	<ul> <li>DTB-4ETH</li> <li>DTB-4ETH-M12</li> <li>DTB-4ETH-PWR</li> <li>DTB-4ETH-PWR-M12</li> </ul>			





AI EDGE INFERENCE COM	IPUTERS			
RCO-6000- PERFORMANCE AND Premio Edge Inference Computinference analysis and boosted Our industrial computers push telematics, smart city, and me	CFL EDGEBOOS STORAGE AT THE RU Iters are specifically engineered storage for machine-learning further the capabilities of Al a trology.	Moreinfo <b>ST NODE</b> SERIES <b>JGGED EDGE</b> and with the latest technologies of a purposes in the most rigorous and machine learning for indus	that offer real-time data s IoT deployments. trial automation, vehicle	
<b>intel</b> . Coffee Lake R				
Model	RCO-6000-CFL-2N-2060S	RCO-6000-CFL-4NS	RCO-6000-CFL-4NH	
CPU Support	Support 8 <sup>th</sup> /9 <sup>t</sup> Core™ i7-97 Core™ i3-91001	<sup>h</sup> Gen. Intel <sup>®</sup> CFL-R S Processor (LI 700E/9700TE/8700T, Core™ i5-9500 E/9100TE/8100T, Pentium <sup>®</sup> G5400T,	GA 1151, 35W TDP) IE/9500TE/8500T, or Celeron <sup>®</sup> G4900T	
Memory	2x 260-pin DDR4-2400	D/2666MHz SO-DIMM, up to 64GB (	Un-buffered and Non-ECC)	
GPU	RTX 2060S			
Graphic Output	1x DVI-I, 1x DVI-D, 1x HDMI (GPU), 3x DisplayPort	1x DVI-I, 2	2x DisplayPort	
LAN	2x GbE RJ45 (Support Wake-on-LAN and PXE)			
USB, Serial, & Digital I/O	4x USB 3.2 Gen 2 (10 Gbps); 6x USB 3.2 Gen1 (5 Gbps, 1x internal); 6x RS-232/422/485 (2x internal), 16x isolated digital I/0			
SATA Storage	4x 2.5" SATA SSD/HDD bay (2x internal; 2x remov 1x mSATA (share	with RAID 0, 1, 5, 10 support able & hot-swappable), d by 1x Mini PCIe)	4x 2.5" SATA SSD/HDD bay with RAID 0, 1, 5, 6, 10 support (2x internal; 2x removable & hot-swappable), 1x mSATA (shared by 1x Mini PCIe)	
NVMe Storage	1x NVMe M.2 M Key 1x Removable 2 Bay NVMe SSD Module (15mm) *Patented NVMe drives trays are tooless and hot-swappable	1x NVMe M.2 M Key 2x Removable 2 Bay NVMe SSD Module (15mm) *Patented NVMe drives trays are tooless and hot-swappable *Software RAID Available	1x NVMe M.2 M Key 2x Removable 2 Bay NVMe SSD Module (15mm) *Patented NVMe drives trays are tooless and hot-swappable *Hardware RAID Available	
Internal Expansion Slot	2x Full-siz	e mini-PCIe (1 shared by 1x mSAT/	A), 1x M.2 E Key	
Power	9-4 12-48 VDC, 4	8 VDC, 3-pin Terminal Block, AT/A -pin Terminal Block, AT/ATX Select	TX Select, :, for GPU/Storage	
Audio		Line-out / Mic-in Phone Jack		
Operating Temperature		-25°C to 60°C		
Certification	E-Mark	a, EMC Conformity with EN 50155, E	EN 50121-3-2	
Dimensions (WxDxH)		261 x 240 x 168 mm		
Weight	11.1 kg	10.1 kg	10.2 kg	
Universal Expansion Slot		1 (by mini PCIe interface)		
PCI Express	1x PCle x	4 (x1 Lane)		
Proprietary Module Expansion	Up to 1x Module : • [ • [ • [	DTB-D10G • DTB-4ETH DTB-M2BK • DTB-4ETH-PW DTB-4U3 • DTB-4ETH-M12 • DTB-4ETH-M12	DTB-M2MK R     DTB-2M2BK 2 2-PWR	

### HIGH-PERFORMANCE INDUSTRIAL COMPUTER

# RCO-6000-CML EDGEBOOST NODE SERIES

• Wide Range Power Input

• TPM 2.0 Supported

Supporting AT/ATX Mode

- Support 10<sup>th</sup> Gen. Intel<sup>®</sup> CML S Processor (LGA 1200, 35W TDP)
- Intel<sup>®</sup> W480E chipset
- 2x DDR4 2666/2933MHz SO-DIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 8x RS-232/422/485 (6x internal), 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal)
- Wide Operating Temperature -25°C to 70°C







More info



10 **10 1** 1 1 1

Model	RCO-6000-CML	RCO-6000-CML-2C	RCO-6000-CML- 2C-4B7M	RCO-6000-CML- 2C-2PWR		
CPU Support	Supp Xeo Core™ i7-1070	Support 10 <sup>th</sup> Gen. Intel <sup>®</sup> CML S Processor (LGA 1200, 35W TDP) Xeon <sup>®</sup> W-1290TE/1270TE/1250TE, Core™ i9-10900E/10900TE, Core™ i7-10700E/10700TE, Core™ i5-10500T/10500TE, Core™ i3-10100T/10100TE				
Memory	2	2x 260-Pin DDR4 2666 /293	3MHz SO-DIMM, up to 64G	В		
Graphic Output		1x DVI-I, 2x	DisplayPort			
LAN		2x GbE RJ45 (Support \	Wake-on-LAN and PXE)			
USB, Serial, & Digital I/O	8	6x USB 3.2 Gen 2, 3x US 2x USB 2.0 hea 3x RS-232/422/485 (6x inter	B 3.2 Gen 1 (1x internal), ader (internal), rnal), 16x isolated digital I/(	0		
Storage	3x 2.5" SATA HDD bay with RAID 0, 1, 5 support6x 2.5" SATA HDD bay with RAID 0, 1, 5, 10 support (6x removable & hot-swappable)			3x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x internal; 2x removable & hot-swappable)		
SIM Socket	2x External SIM socket (Mini PCIe attached) (2x External SIM socket : M.2 B Key attached, 5G Module only, Optional)					
Power	9-48 VDC, AT/ATX Select, 5-pin Terminal Block			9-48 VDC, AT/ATX Select, 5-pin Terminal Block, 12~48VDC for GPU/Card Expansion		
Audio		Line-out / Mic-	-in Phone Jack			
Operating Temperature	-25°C	to 70°C	-25°C to 60°C	-25°C to 70°C		
Dimensions (WxDxH)	240 x 261 x 79 mm		240 x 261 x 127 mm	·		
Weight	3.1~3.5 kg	5.6 kg	5.7~5.85 kg	5.6 kg		
Universal Expansion Slot		2 (by mini PC	Cle interface)			
PCI Express	RC0-6000-CML-2C: 1x PCI, 1x PCIe x16 2I: 2x PCI (Optional) 2E: 2x PCIe x16 (8-lane) (Optional)					
Proprietary Module Expansion	Up to 2x Module : • DTB-M2BK (Support 1x Univer) • DTB-D10G • DTB-4U3	DTI     rsal Slot Only)     DTI     DTI     DTI     DTI	B-4ETH • B-4ETH-M12 • B-4ETH-PWR B-4ETH-PWR-M12	DTB-M2MK DTB-2M2BK		

### HIGH-PERFORMANCE INDUSTRIAL COMPUTER

# RCO-6000-ADL EDGEBOOST NODE SERIES

- Support 12/13<sup>th</sup> Gen. Intel<sup>®</sup> ADL S & RPL-S Processor
- Intel<sup>®</sup> R680E chipset
- 2x DDR5 4800 MHz SO-DIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 8x RS-232/422/485 (6x internal), 2x USB 2.0 (internal)
- 1x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)



Model	RCO-6000-ADL	RCO-6000-AI 2C		
CPU Support	Support 12/13 <sup>th</sup> ( Inte <sup>®</sup> Core™ i9-13900E/i9-12 i5-13500E/i5-12500E, Penti			
Memory		2x 262-Pin DD		
GPU				
Graphic Output		1:		
LAN				
USB, Serial, & Digital I/O		6x RS-		
Storage	3x 2.5" SAT with RAID 0, (1x Internal, 1x Rem	A HDD bay 1, 5 support novablel, 1x mSA		
SIM Socket				
Power		12-48 VD(		
Audio				
Operating Temperature	-25°C t	to 70°C		
Dimensions (WxDxH)	240 x 261 x 79 mm			
Weight	3.1~3.5 kg	5.6 kg		
Universal Expansion Slot				
PCI Express				
Proprietary Module Expansion	Up to 2x Modu	ite : • DTB- (Suppo • DTB- • DTB-		



		240 x 261 x	(127 mm		
	5.7~5.85	5.6 kg		6.2 kg	
10-00	2 (by mini P(	Cle interface	)		
00-AL	21: 2x PCI (0 2E: 2x PCI e x	ptional) 16 (8-lane) (	Optional)		
42BK rt 1x l 010G 03	Jniversal Slot Only)	<ul> <li>DTB<sup>2</sup></li> <li>DTB<sup>2</sup></li> <li>DTB<sup>2</sup></li> <li>DTB<sup>2</sup></li> <li>DTB<sup>2</sup></li> </ul>	-4ETH -4ETH-M12 -4ETH-PWR -4ETH-PWR-M12	•	DTB-M2MK DTB-2M2BK

# Mix & Match EDGEBoost Nodes **Performance Accelerators Upgrade**



The AI Edge Inference Computers support modular add-on nodes through a two-piece modular design that allows the EDGEBoost Nodes to easily attach to the lower portion of the RCO-6000-(CFL/CML/ADL) for more performance accelerators.

Model PCI/PCIe SATA Boost NVMe Boost **GPU Boost** 2C 2C-4B7M 2E-4N (7mm) 2C-2PWR 2C-2B15M 4NS (15mm) 20-2060S RCO-6000-ADL 4NH (15mm) 2N-2060S 8NS (7mm) 4N-2060S Model PCIe/PCI SATA Boost NVMe Boost **GPU Boost** 2C 2C-4B7M 2E-4N (7mm) 2C-2PWR 4NS (15mm) 2C-2B15M 20-2060S RCO-6000-CML 4NH (15mm) 2N-2060S 8NS (7mm) 4N-2060S PCIe/PCI **GPU Boost** Model **NVMe Boost** 2C 2E-4N (7mm) 2C-2PWR 4NS (15mm) 2N-2060S RCO-6000-CFL 4NH (15mm) 4N-2060S 8NS (7mm)

\* PCI/PCIe and SATA Boost modules have optional 2C, 2E or 2I configurations:

• 2C: 1x PCIe x16, 1x PCI

• 2E: 2x PCle x16 (8x Lane

• 21 : 2x PCI

# **MIX & MATCH EDGEBoost Nodes**

EDGEBoost nodes are highly configurable performance boosters designed to meet the demand for complex applications that require powerful data processing, high-speed data storage, and inference capabilities at the edge. EDGEBoost nodes attach to the lower portion of the AI Edge Inference Computers, providing SATA, NVMe storage, and GPU acceleration for complex edge workloads.





1x PCI and 1x PCIe x16 Expansion Slots Fanless Design







- 1x PCle x8 (for RAID Card)
  - 4x Hotswap NVMe SSD
  - Hardware RAID 0, 1, 5, 6, 10
  - Hot-Swappable Smart Fan



2N-2060S

• 1x Nvidia RTX 2060

Learn More



- 1x Internal SATA SSD (9mm)
- 1x M.2 E Key 2230
- 2x Hotswap SATA SSD (7mm)
- 1x Internal SATA SSD (9mm)
- 1x M.2 B Key 2242

• 1x PCIe x16 for GPU Expansion

• Dedicated Wide-Voltage

12~48VDC for GPU Highspeed Exhaust Fan

• 1x Nvidia RTX 2060

Dedicated Wide Voltage

• Highspeed Exhaust Fan

12~48VDC for GPU

2C-2PWR



• 1x PCI, 1x PCIe x16 (8-lane) • 2x Hotswap 2.5" SATA SSD (15mm)







- 1x PCIe x4 (1-lane)
- 8x Hotswap NVMe SSD
- Software RAID 0, 1, 5, 10
- Hot-Swappable Smart Fan

• 2x Hotswap NVMe SSD (15mm)



### 4NS (15mm)

- 1x PCIe x4 (1-lane)
- 4x Hotswap NVMe SSD
- Software RAID 0, 1, 5, 10
- Hot-Swappable Smart Fan

### 4N-2060S

- 1x Nvidia RTX 2060
- 4x Hotswap NVMe SSD (7mm)
- 1x PCIe x4 [1-lane]
- Hot-Swappable Smart Fan

# **Interested in Edge AI?**

# Download Premio's M.2 Whitepaper

Al Inference At The Rugged Edge





nce at the Rugged Edge: Meeting Performance with M.2 Accelerators ice, Thermals, and Footprint is

### What's Inside?

This paper will take a deeper look at M.2 performance accelerators at the rugged edge and how modern hardware strategies can assure the reliable performance and intelligent data handling needed to fuel Al's value further into modern life and enterprise business.

**Download Whitepaper** 

### Unlock The Full Potential Of Edge AI with **M.2 Acceleration Modules**



### Hitting an Al Wall

Compute has come a long way and AI still needs more.



### Get To Know the M.2 Interface

A compact, versatile next generation option.

### **Throughput Matters**

Understanding benchmarks for real-world AI applications.

# **Fanless Cooling Technology** For Industrial PCs



# 7 Steps Of Building A Fanless PC

The 7 key steps allow industrial fanless computers to perform real-time processing and machine learning in the harshest edge deployments. Industrial computers help provide the mission-critical foundation to manage new edge AI workloads in key automation deployments with ultimate reliability.





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HIGH-PERFORMANCE IN-VEHICLE FANLESS COMPUTER

# ACO-6000-KBL SERIES

- Support 6<sup>th</sup>/7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i7/i5/i3 or Pentium<sup>®</sup> / Celeron<sup>®</sup> Desktop Processor
- Triple Independent Display
- Support up to 18x LAN or 16x PoE by Unique Modular Design
- Multiple Expansion Capability including PCIe, PCI, and Mini PCIe
- Wide Operating Temperature -25°C to 70°C
- 9 to 48 VDC Wide Range Power Input Supporting AT/ATX Mode

### intel. Skylake-S Kaby Lake





More info



Conserver Property

• TPM 2.0 Supported

• Power Ignition Management

Model	ACO-6000-KBL	ACO-6000-KBL-16X	ACO-6000-KBL-1		
	Surveillance Applied Fanless System with LGA-1151 socket for Intel <sup>®</sup> Kabylake & Skylake-S processors	With 16 GbE in RJ-45 or M12 connectors with PoE option.	With one PCI or PCIe x16 expansion slot		
CPU Support	Intel <sup>®</sup> 6 <sup>th</sup> /7 <sup>th</sup> Gen. (Kabylake & Skylake-S) Desktop Processor Core™ i7-7700T/6700TE, Core™ i5-7500T/6500TE, Core™ i3-7101TE/6100TE, Pentium <sup>®</sup> G4400TE, or Celeron <sup>®</sup> G3900TE				
Memory	2x 260-pi	n DDR4-1866/2133MHz SO-DIMM, u	ip to 32GB		
Graphic Output		1x DVI-I, 2x DisplayPort			
LAN	2x GI	bE RJ45 (Support Wake-on-LAN and	I PXE)		
USB, Serial, & Digital I/O	6 5x RS-232/	x USB 3.2 Gen1, 2x USB 2.0 (Interna /422/485 (w/ 3x internal), 16x isolate	l), d digital I/O		
Storage	4x 2.5" SATA HDD Bays with RAID 0, 1, 5, 10 support (2x internal, 2x removable), 2x mSATA (shared by 2x Mini PCIe)				
Internal Expansion Slot	3x Full-size mini-PCIe (shared with mSATA)				
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block				
Audio	Speaker-out / Mic-in Phone Jack				
Operating Temperature	-25 °C to 70 °C				
Certification	E-Mark, EMC Conformity with EN 50155, EN 50121-3-2				
Dimensions (WxDxH)	240 x 261 x 79 mm	240 x 261 x 100 mm	240 x 261 x 107 mm		
Weight	3.94 ~ 4.98 kg	5.34 ~ 6.82 kg	5.14 ~ 6.21 kg		
Universal Expansion Slot (front)		2			
Universal Expansion Slot (rear)		2	1		
1x PCle x16			ACO-6000-KBL-1E		
1x PCI			ACO-6000-KBL-11		
Proprietary Module Expansion	Up to 2x Module : DTB-D10G DTB-4U3 DTB-4ETH DTB-4ETH-PWR DTB-4ETH-M12 DTB-4ETH-M12-PWR DTB-4ETH-M12-PWR DTB-M2MK DTB-2M2BK	Up to 4x Module : • DTB-4ETH • DTB-4ETH-PWR • DTB-4ETH-M12 • DTB-4ETH-M12-PWR	Up to 2x Module : DTB-D10G DTB-4U3 DTB-4ETH DTB-4ETH-PWR DTB-4ETH-M12 DTB-4ETH-M12-PWR DTB-4ETH-M12-PWR DTB-M2MK DTB-2M2BK		

HIGH-PERFORMANCE IN-VEHICLE FANLESS COMPUTER

# ACO-6000-CML SERIES

- LGA 1200 socket for 10<sup>th</sup> Gen. Intel<sup>®</sup> CML S Processor (35W TDP)
- Intel<sup>®</sup> W480E chipset
- 2x DDR4 2666/2933MHz SO-DIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel<sup>®</sup> GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 3x 2.5" SATA HDD Bay (1x Internal) with RAID 0, 1, 5 support
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)
- 8x RS-232/422/485 (6x internal), 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal)

### intel Comet Lake S



Model	ACO-6000-CML	ACO-6000-CML-1E			
	Surveillance Applied Fanless System with LGA1200 for Intel <sup>®</sup> 10 <sup>th</sup> Gen CPU & W480E PCH	Surveillance Applied Fanless System with LGA-1200 for Intel <sup>®</sup> 10 <sup>th</sup> Gen CPU & W480E PCH, 1x PCIe x16 expansion slot			
CPU Support	Support 10 <sup>th</sup> Gen Intel <sup>®</sup> CML S Xeon <sup>®</sup> W-1290TE/1270TE/1250 Core™ i7-10700E/10700TE, Core™ i5-10	Processor (LGA 1200, 35W TDP) ITE, Core™ i9-10900E/10900TE, 500T/10500TE, Core™ i3-10100T/10100TE			
Memory	2x 260-Pin DDR4 2666 /2933MHz SO-	DIMM, up to 64GB (ECC and Non-ECC)			
Graphic Output	1x DVI-I, 2x	DisplayPort			
LAN	2x GbE RJ45 (Support	Wake-on-LAN and PXE)			
USB, Serial, & Digital I/O	6x USB 3.2 Gen 2, 3x US 2x USB 2.0 he 8x RS-232/422/485 (6x interna	B 3.2 Gen 1 (1x internal), ader (internal), al), 8x DI + 8x DO with isolation			
Storage	3x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x internal; 2x removable & hot-swappable)				
Internal Expansion Slot	2x Full-size mini-PCIe, 1x M.2 (E Key,	PCIe x2, 2230, USB 2.0, Support CNVi)			
Power	9-48VDC, 5-pin Terminal Block. 48~110VDC (Optional), 3-pin Terminal Block. AT/ATX Select				
Audio	Line-out / Mic-in Phone Jack				
Operating Temperature	-25°C to 70°C				
Certification	E-Mark, EMC Conformity with EN50155 & EN50121-3-2				
Dimensions (WxDxH)	240 x 261 x 79 mm	240 x 261 x 127 mm			
Weight	4.4 ~ 4.7 kg	6.2 ~ 6.6 kg			
Universal Expansion Slot	2 (by mini PCIe interface)	4 (by mini PCIe interface)			
PCI & PCI Express		ACO-6000-CML-1E: 1x PCIe x16 ACO-6000-CML-1I: 1x PCI (Optional)			
Proprietary Module Expansion	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 DTB-M2MK DTB-2M2BK	Up to 4x Module : • DTB-4U3 • DTB-4ETH-PWR • DTB-4ETH • DTB-4ETH-M12-PWR • DTB-4ETH-M12			

More inf

### • 8x DI + 8x DO with isolation

- 9 to 48 VDC or 48 to 110 VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C
- TPM 2.0 Supported
- Power ignition management



# **GPU SERIES INDUSTRIAL EDGE COMPUTER**

• AI EDGE INFERENCE COMPUTER MACHINE VISION COMPUTER

Additional Expansions: SATA/NVMe/M.2 SSDs



Dedicated GPU for Inference and Machine Learning



Ruggedized Design for Harsh Edge Environments

### PCIe 3.0 and PCIe 4.0 Expansions

Premio's GPU Series Industrial Computers support robust AI accelerators for inference analysis and powerful machine learning at the rugged edge. The computers are tested and validated for their reliability and durability while performing real-time analysis in the harshest industrial environments.

### HIGH-PERFORMANCE MACHINE VISION COMPUTER

# VCO-6000-KBL SERIES

- Support 6<sup>th</sup>/7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i7/i5/i3 or Pentium<sup>®</sup> / Celeron<sup>®</sup> Desktop Processor
- Triple Independent Display
- Multiple Expansion Capability including up to 3x PCIe or 4x PCI
- Fanless Design Structure and Support Additional Fan Module
- Wide Operating Temperature -25°C to 70°C
- 9 to 50 VDC Wide Range Power Input Supporting AT/ATX Mode
- TPM 2.0 Supported



- 1

Model	VCO-6000- KBL	VCO-6000- KBL-1	VCO-6000- KBL-2	VCO-6000- KBL-3	VCO-6000- KBL-4	VCO-6000- KBL-5		
		With one PCI or PCIe expansion slot	With two PCI or PCIe expansion slot	With three PCI or PCIe expansion slot	With four PCI or PCIe expansion slot	With five PCI or PCIe expansion slot		
CPU Support		Intel <sup>®</sup> 6 <sup>th</sup> /7 <sup>th</sup> Gen. (Kaby Lake & Skylake-S) Desktop Processor Core™ i7-7700T/6700TE, Core™ i5-7500T/6500TE, Core™ i3-7101TE/6100TE, Pentium <sup>®</sup> G4400TE, or Celeron <sup>®</sup> G3900TE						
Memory			2x DDR4-1866/2133	1Hz SO-DIMM, up to 3	32GB			
Graphic Output			1x DVI-I,	2x DisplayPort				
LAN			2x GbE RJ45 (Suppor	rt Wake-on-LAN and	PXE)			
USB, Serial, & Digital I/O		4x USB 3.2 Gen1 (5 Gbps), 4x RS-232/422/485 (w/ 2x internal), 16x isolated digital I/O						
Storage	2x Removable 2.5" SATA HDD Bay with RAID 0, 1, 5, 10 support, 2x mSATA (shared by 2x Mini PCIe), 1x CFast							
Internal Expansion Slot	3x Full-size Mini-PCIe (Share by 2x mSATA)							
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block							
Audio			Speaker-out /	Mic-in Phone Jack				
Operating Temperature			-25 °	C to 70 °C				
Dimensions (WxDxH) mm	77 x 256 x 240	117 x 256 x 240	137 x 256 x 240	157 x 256 x 240	177 x 256 x 240	197 x 256 x 240		
Weight	3.83 kg	5.29 kg	5.34 ~ 5.39 kg	5.42 ~ 5.86 kg	5.94 ~ 6.02 kg	6.21 kg		
PCI & PCI Express		<ul> <li>VCO-6000- KBL-1E: 1x PCIe x16</li> <li>VCO-6000- KBL-11: 1x PCI</li> </ul>	<ul> <li>VCO-6000- KBL-2E: 2x PCIe x8</li> <li>VCO-6000- KBL-2I: 2x PCI</li> <li>VCO-6000- KBL-2C: 1x PCI x16 1x PCI</li> </ul>	<ul> <li>VCO-6000- KBL-3E: 2x PCIe x1 1x PCIe x16</li> <li>VCO-6000- KBL-3I: 3x PCI</li> <li>VCO-6000- KBL-3C: 1x PCIe x16 2x PCI</li> </ul>	<ul> <li>VCO-6000- KBL-41: 4x PCI</li> <li>VCO-6000- KBL-4C: 2x PCIe x4 1x PCIe x8 1x PCI</li> </ul>	<ul> <li>VCO-6000- KBL-5C: 2x PCIe x4 1x PCIe x8 2x PCI</li> </ul>		

More inf





HIGH-PERFORMANCE MACHINE VISION COMPUTER

# VCO-6000-CFL SERIES

- Support 8<sup>th</sup>/9<sup>th</sup> Gen. Intel<sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP)
- Intel<sup>®</sup> Q370 chipset
- 2x DDR4 2400/2666Hz SO-DIMM. Max. up to 64GB (Un-buffered and Non-ECC)
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x External 2.5" SATA HDD bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCIe), 2x M.2
- Wide Operating Temperature -25°C to 70°C
- 9 to 48 VDC Wide Range Power Input Supporting AT/ATX Mode









Model	VCO-6000-CFL-2	VCO-6000-CFL-3	VCO-6000-CFL-4	VCO-6000-CFL-5		
	With two PCI or PCIe expansion slot	With three PCI or PCIe expansion slot	With four PCI or PCIe expansion slot	With five PCI or PCIe expansion slot		
CPU Support	Suppo Core Core™ i	Support 8 <sup>th</sup> /9 <sup>th</sup> Gen. Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP) Core™ i7-9700E/9700TE/8700T, Core™ i5-9500E/9500TE/8500T, Core™ i3-9100E/9100TE/8100T, Pentium <sup>®</sup> G5400T, or Celeron <sup>®</sup> G4900T				
Memory	2x 260-pin DD	R4-2400/2666MHz SO-DIMI	M, up to 64GB (Un-buffered	and Non-ECC)		
Graphic Output		1x DVI-I, 2x	DisplayPort			
LAN		2x GbE RJ45 (Support \	Wake-on-LAN and PXE)			
USB, Serial, & Digital I/O	4x USB 3.2 Gen 2, 6x internal USB 3.2 Gen1 (5 Gbps), 6x RS-232/422/485 (4x internal), 16x isolated digital I/0					
Storage	2x Internal 2.5" SATA HDD Bay (Support H=9mm) 2x Removable 2.5" SATA HDD Bay (Support H=7mm, Hot-swappable) Support RAID 0, 1, 5, 10 1x mSATA (shared by 1x Mini PCIe), 1x NVMe M.2 M Key					
Internal Expansion Slot	2x	Full-size mini-PCIe (1 shar	ed by 1x mSATA), 1x M.2 E k	Кеу		
Power		9-48 VDC, AT/ATX Selec	ct, 3-pin Terminal Block			
Audio		Line-out / Mic	-in Phone Jack			
Operating Temperature		-25°C	to 70°C			
Dimensions (WxDxH)	137 x 340 x 240 mm	157 x 340 x 240 mm	177 x 340 x 240 mm	197 x 340 x 240 mm		
Weight	8.5 Kg	9.1 Kg	9.5 kg	10.1 kg		
PCI & PCI Express	<ul> <li>VCO-6000-CFL-2E : 2x PCIe x8</li> <li>VCO-6000-CFL-2I : 2x PCI</li> <li>VCO-6000-CFL-2C : 1x PCIe x16 1x PCI</li> </ul>	<ul> <li>VCO-6000-CFL-3E : 2x PCle x1 1x PCle x16</li> <li>VCO-6000-CFL-3I : 3x PCI</li> <li>VCO-6000-CFL-3C : 1x PCle x16 2x PCI</li> </ul>	<ul> <li>VCO-6000-CFL-4I : 4x PCI</li> <li>VCO-6000-CFL-4C : 2x PCIe x4 1x PCIe x16 (8-lane) 1x PCI</li> </ul>	<ul> <li>VCO-6000-CFL-5C : 2x PCle x4 1x PCle x16 (8-Lane) 2x PCl</li> </ul>		

- Unique Expansion Module Design to
- Support 1 to 5 Expansion Cards
- TPM 2.0 Supported

More info



# VCO-6000-ADL SERIES

- Support 12/13<sup>th</sup> Gen. Intel<sup>®</sup> ADL S & RPL-S Processor (LGA 1700, 65W/35W TDP)
- Intel<sup>®</sup> R680E chipset
- 2x DDR5 4800 MHz SO-DIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel<sup>®</sup> GbE supporting Wake-on-LAN and PXE
- 1x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 3x 2.5" SATA HDD Bay with RAID 0, 1, 5 support (1x Internal, 1x Removable, 1x mSATA)
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230, Support CNVi)
- 1x M.2 (B Key, PCIe x2, 3042/3052, Support 4G/5G/AI/NVMe)

# intel Alder Lake S

Model	VCO-6000-ADL-2	VCO-6000-ADL-3	VC0-6000-ADL-4		
	Up to 2x PCI/PCIe Expansion Slots	Up to 3x PCI/PCIe Expansion Slots	Up to 4x PCI/PCIe Expansion Slots		
CPU Support	Support 12/13 <sup>th</sup> Gen. Intel <sup>®</sup> ADL-S & RPL-S Processor (LGA 1700, 65W/35W TDP) Inte <sup>®</sup> Core™ i9-13900E/i9-12900E,i9-13900TE/i9-12900TE, i7-13700E/i7-12700E, i7-13700TE/i7-12700TE i5-13500E/i5-12500E, i5-13500TE/i5-12500TE, i3-13100E/i3-12100E, i3-12100TE/i3-12100TE Pentium <sup>®</sup> G7400E/G7400TE, or Celeron <sup>®</sup> G6900E/G6900TE				
Memory	2x 262-Pin DDR5 4	800MHz SO-DIMM. Max. up to 64GB (I	ECC and Non-ECC)		
Graphic Output		1x DVI-I, 2x DisplayPort			
LAN	2x G	bE RJ45 (Support Wake-on-LAN and I	PXE)		
USB, Serial, & Digital I/O	8x USB 3.2 Gen 2 (10 Gbps, 4x internal) 2x USB 2.0 header (internal), 6x RS-232/422/485 (4x internal), 8x DI + 8x D0 with isolation				
Storage	3x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x Internal; 1x Removablel; 1x mSATA)				
Internal Expansion Slot	1x Full-size mini-PCIe (1 shared by 1x mSATA) 1x M.2 B Key (3042/3052, Support 4G/5G/AI/NVMe) 1x M.2 E Key (2230, Support Wi-Fi/Bluetooth)				
Power	5-pin Terminal Block, 9-48 VDC, AT/ATX Select, 4-pin Terminal Block, 12~48VDC, for GPU Card				
Audio	l	_ine-out / Mic-in Phone Jack (internal	)		
Operating Temperature		-25°C to 70°C			
Dimensions (WxDxH)	137 x 340 x 240 mm 157 x 340 x 240 mm		177 x 340 x 240 mm		
Weight	9.1 kg	9.5 kg	9.9 kg		
PCI Express	• VCO-6000-ADL-2E : 2x PCIe x8	<ul> <li>VCO-6000-ADL-3E : 2x PCIe x1, 1x PCIe x16</li> </ul>	<ul> <li>VCO-6000-ADL-4E : 1x PCle x1, 2x PCle x8 (Dual-Slot Width)</li> </ul>		



- 8x DI + 8x D0 with isolation
- 9 to 48 VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C
- TPM 2.0 Supported





### AI EDGE INFERENCE COMPUTERS

### AI EDGE INFERENCE COMPUTERS

# **GPU** SERIES

Premio Industrial GPU Computing Solutions deliver supreme processing and graphic performance. Our GPU Series has the capability to run complex and data-intensive applications to drive automation, mission-critical and high-performing operations, such as product line inspection, intelligent security surveillance, biomedical imaging, and vision-guided robotics/vehicles.

<b>intel</b>
Skylake-S
Kaby Lake-S
Coffee Lake R







1

Model	RCO-6000-KBL-1050TI	VCO-6000-KBL-1050TI	VCO-6000-KBL-2PWR
	Industrial GPU Computer With 6 <sup>th</sup> /7 <sup>th</sup> Gen Intel <sup>®</sup> Core™ Processor and Q170 PCH, GTX 1050Ti Integrated	Industrial GPU Computer With 6 <sup>th</sup> /7 <sup>th</sup> Gen Intel <sup>®</sup> Core™ Processor and Q170 PCH, GTX 1050Ti Integrated	Industrial GPU Computer With 6 <sup>th</sup> /7 <sup>th</sup> Gen Intel <sup>®</sup> Core™ Processor and Q170 PCH, Supports UpTo RTX 2060 Super GPU
CPU Support	Intel <sup>®</sup> ó <sup>th</sup> /7 <sup>th</sup> Core™ Core™ i3-7101T	Gen. (Kabylake & Skylake-S) Deskto i7-7700T/6700TE, Core™ i5-7500T/∂ E/6100TE, Pentium <sup>®</sup> G4400TE, or Ce	op Processor 5500TE, eleron <sup>®</sup> G3900TE
Memory	2x DC	R4-1866/2133MHz SO-DIMM, up to	32GB
GPU	GTX 1	050 TI	1x PCIe x16 for GPU
Graphic Output	2x DVI-I, 3x Disp	layPort, 1x HDMI	1x DVI-I, 2x DisplayPort
LAN	2x Gb	2x GbE RJ45 (Support Wake-on-LAN and PXE)	
USB	6x USB 3.2 Gen1 (5 Gbps), 2x USB 2.0 4x USB 3.2 G		een1 (5 Gbps)
Serial & Digital I/O	4x RS-232/422/485 (2x internal), 16x isolated digital I/O		
Storage	4x 2.5" SATA HDD Bay with RAID 0, 1, 5, 10 support (2x internal, 2x removable), 2x mSATA (shared by 2x Mini PCIe)	2x Removable 2.5" SATA HDD B 2x mSATA (shared by 2	ay with RAID 0, 1, 5, 10 support, 2x Mini PCIe), 1x CFast
Internal Expansion Slot	4x Full-size mini-PCIe (shared with 2x mSATA) 3x Full-size mini-PCIe		e (shared with mSATA)
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block	9-50 VDC, AT/ATX Select, 3-pin Terminal Block	System: 9~50 VDC, GPU: 24 VDC, AT/ATX Select
Audio	Speaker-out / Mic-in Phone Jack		
Operating Temperature	-25 °C t	co 60 °C	-25 °C to 70 °C
Dimensions (WxDxH)	240 x 261 x 127 mm	137 x 256 x 240 mm	137 x 256 x 240 mm
Weight	7.76 kg	7.71 kg	7.83 kg

2

**GPU** SERIES

intel

Skylake-S Kaby Lake-S Coffee Lake R

Model	RC0-6000-CFL-2060S	VCO-6000-CFL-3-2PWR
	AI Edge Inference Computer with 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel Core Processor and Q370 PCH, RTX 2060 Super Integrated	Al Edge Inference Computer with 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel <sup>®</sup> Core™ Processor, 3x PCIe Expansion, Dual Power Input
CPU Support	8 <sup>th</sup> /9 <sup>th</sup> Gen. Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP) Core™ i7-9700E/9700TE/8700T, Core™ i5-9500E/9500TE/8500T, Core™ i3-9100E/9100TE/8100T, Pentium <sup>®</sup> G5400T, or Celeron <sup>®</sup> G4900T	
Memory	2x DDR4-2400/2666MHz SO-DIMM, up	o to 64GB (Un-buffered and Non-ECC)
GPU	RTX 2060S	1x PCIe x16 for GPU
Graphic Output	1x DVI-I, 1x DVI-D, 1x HDMI, 3x DisplayPort	1x DVI-I, 2x DisplayPort
LAN	2x GbE RJ45 (Support V	Nake-on-LAN and PXE)
USB	4x USB 3.2 Gen 2 (10 Gbps) 6x USB 3.2 Gen 1 (5 Gbps, 1x internal)	4x USB 3.2 Gen 2 (10 Gbps) 6x internal USB 3.2 Gen 1 (5 Gbps)
Serial & Digital I/O	6x RS-232/422/485 (2x internal), 16x isolated digital I/O	6x RS-232/422/485 (4x internal), 16x isolated digital I/O
Storage	4x 2.5" SATA HDD bay with RAID 0, 1, 5, 10 support (2x internal; 2x removable & hot-swapplable), 1x mSATA (shared by 1x Mini PCIe), 1x M.2 (M Key, PCIe x4, 2280, Support NVMe)	
Internal Expansion Slot	2x Full-size mini-PCIe (1 shared by 1x mSATA)	
Power	9-48 VDC, 3-pin Terminal Block, AT/ATX Select, 12~48 VDC, 4-pin Terminal Block for GPU expansion	
Audio	Line-out / Mic-in Phone Jack	
Operating Temperature	-25 °C to 60 °C	
Certification	E-Mark, EMC Conformity with EN 50155, EN 50121-3-2	
Dimensions (WxDxH)	240 x 261 x 79.2 mm	157 x 340 x 240 mm
Weight	8.1 kg	9.4 kg
Universal Expansion Slot (front)	1 (by mini PCIe interface)	2 (by mini PCIe interface)
PCIe x16	1x PCIe x16 for GPU Card	1x PCIe x16
PCIe x4 (1-lane)	1 (by mini PCIe interface)	1 PCIe x4

Universal Expansion Slot (front)

PCIe x4 (1-lane







### PROPRIETARY MODULE

### PROPRIETARY MODULE

# MODULE SERIES

Premio supports rich expandability to boost wireless connectivity, streamline integration and unlock automation capabilities in harsh deployments. Leading edge and legacy technologies are easily incorporated into a powerful, intelligent IoT solution for better bandwidth and I/O flexibility. Our daughterboard modules integrate easily into Premio embedded and edge computers through standard PCIe protocols. These add-in modules include additional ethernet I/O ports in 1GbE (RJ45 & M12), 10GbE (RJ45), USB 3.2 Gen1, and 5G ready M.2 for scalable connectivity in IoT deployments at the edge.











DTB-4ETH	DTB-4ETH-M12	DTB-4LAN	DTB-4LAN-M12
<ul> <li>Intel<sup>®</sup> Ethernet Controller 1350</li> <li>1x PCIe x4 Gold finger (x4 Lane)</li> <li>4x 1GbE LAN, RJ45 Port</li> <li>Support Power over Ethernet by</li> <li>an optional PoE module</li> </ul>	<ul> <li>Intel<sup>®</sup> Ethernet Controller 1350</li> <li>1x PCIe x4 Gold finger (x4 Lane)</li> <li>4x 1GbE LAN, M12 Port</li> <li>Support Power over Ethernet by</li> <li>an optional PoE module</li> </ul>	<ul> <li>Intel<sup>®</sup> Ethernet Controller I210</li> <li>1x PCIe x1 Gold finger</li> <li>4x 1GbE LAN, RJ45 Port</li> <li>Support Power over Ethernet by</li> <li>an optional PoE module</li> </ul>	<ul> <li>Intel<sup>®</sup> Ethernet Controller I210-AT</li> <li>1x PCIe x1 Gold finger</li> <li>4x 1GbE LAN, M12 Port</li> <li>Support Power over Ethernet by</li> <li>an optional PoE module</li> </ul>
DTB-4ETH-PWR	DTB-4ETH-PWR-M12	DTB-4LAN-PWR	DTB-4LAN-PWR-M12

DTB-4ETH-PWR	DTB-4ETH-PWR-M12	DTB-4LAN-PWR	DTB-4LAN-PWR-M12
Up to 25.2 watt per port			
	<ul> <li>Complies with</li> </ul>	n IEEE 802.3at	

COMPATIBLE LIST	· DTB-4ETH · DTB-4ETH-PWR	• DTB-4ETH-M12 • DTB-4ETH- PWR-M12	• DTB-4LAN • DTB-4LAN-PWR	• DTB-4LAN-M12 • DTB-4LAN- PWR-M12
RCO-6000-ADL	•	•		
RC0-6000-CML	٠	٠		
RCO-6000-CFL	•	•		
ACO-6000-ADL	٠	٠		
ACO-6000-CML	٠	•		
ACO-6000-KBL	•	•		
RCO-6000-KBL			•	٠
RC0-3000-KBL-U			•	•
RC0-3000-CML	•	•		
RC0-3000-CFL	• DTB-4ETH only	• DTB-4ETH-M12 only		

# MODULE SERIES



### DTB-2M2BK

2x M.2 B Key for AI/5G/NVMe module

- 2x M.2 B Key slot, Support 2x AI/5G Module (Support
- M.2 B Key, PCIe x2, 2242/3042/3052
- 1x SIM slot
- Support 1x Universal Slot Only

COMPATIBLE LIST	DTB-2M2BK	DTB-M2MK
RCO-6000-ADL	•	•
RC0-6000-CML	•	•
RCO-6000-CFL	٠	٠
ACO-6000-ADL	٠	•
ACO-6000-CML	٠	٠
AC0-6000-KBL	<ul> <li>AI/NVMe Only</li> </ul>	٠
RC0-3000-CML	•	•
RCO-3000-CFL	<ul> <li>AI/NVMe Only</li> </ul>	•





DTB-D10G	DTB-M2BK	DTB-4U3
Intel <sup>®</sup> Ethernet Controller X710-AT2 • 1x PCIe x1 Gold finger (x4 Lane) • 2x 10GbE LAN, RJ45 Port	<ul> <li>M.2 B Key for 5G module</li> <li>2x SIM slot</li> <li>1x SIM Switch</li> <li>Support 1x Universal Slot Only</li> </ul>	<ul> <li>Supports 4x USB 3.2 Gen1 ports (share PCIe Gen2 x1 bandwidth)</li> <li>Independent 1.5A over-current protection (OCP) for each port</li> <li>Compliant with xHCl 1.0, USB 3.2 Gen1 Rev 1.0</li> </ul>

COMPATIBLE LIST	DTB-D10G	DTB-M2BK	DTB-4U3
RCO-6000-ADL	•	٠	•
RCO-6000-CML	•	٠	•
RCO-6000-CFL	•	٠	•
ACO-6000-ADL	•	•	•
ACO-6000-CML	•	•	٠
ACO-6000-KBL	•	<ul> <li>AI/NVMe Only</li> </ul>	٠
RC0-3000-CML	•	٠	٠
RCO-3000-CFL	•	<ul> <li>Al/NVMe Only</li> </ul>	•





	DTB-M2MK
1x 5G Only]	<ul> <li>1x M.2 M Key for AI/NVMe module (PCIe x4)</li> <li>M.2 M Key slot, Support AI/NVMe Module</li> <li>M.2 B Key, PCIe x4, 2242/2260</li> <li>Support 1x Universal Slot Only</li> </ul>



# DUAL-SIM 56 READY MODULE

The Dual-SIM 5G cellular network module enables Premio's industrial computers to reap the benefits of 5G wireless connectivity. 5G networks provide blazing-fast wireless connectivity for industrial computers with speeds up to 100x faster than 4G LTE.





### DTB-M2BK (5G Module)

- Global 5G Coverage for the Rugged Edge
- Dual SIM Network Redundancy and GNSS Positioning
- Expandable Modular Designs Just Plug and Play
- True Industrial-grade Design

# **KEY BENEFITS OF 5G NETWORKS**

Rugged edge computing provides a convergence of the latest technologies in compute, storage, and connectivity in hardened competing platforms. For the first time ever, new wireless technologies like 5G provide new advancements in connectivity for industrial edge computers with enhanced mobile broadband, low-latency connections, and massive machine-to-machine communications.

COMPATIBLE LIST	DTB-M2BK
RCO-6000-ADL	V
RCO-6000-CML	V
ACO-6000-CML	V
RCO-6000-CFL	V

# WCO-3000-KBL-U SERIES

IP65/IP67 WATERPROOF COMPUTER

- Intel<sup>®</sup> 7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i5 / i3 Processor
- Full system IP65/IP67 level dustproof & waterproof
- Wide Operating Temperature (up to -40°C to 70°C)
- 9 to 50 VDC Wide Range Power Input
- Lockable M12 I/O Connectors
- Fanless Design

### intel Kaby Lake-U

	Model
IP6	
Intel® 7	CPU Support
	Memory
	Graphic Output
2x G	LAN
	USB
	Serial
	Storage
	Internal Expansion Slot
	Power
	Operating Temperature
	Dimensions (WxDxH)
	Weight
	IP65
	IP67





WC0-3000-KBL-U

5/IP67 Waterproof System with Intel<sup>®</sup> Kaby Lake-U processor

<sup>h</sup> Gen. (Kaby Lake-U) Processor Core™ i5-7300U, Core™ i3-7100U

1x DDR4-1866/2133MHz SO-DIMM, up to 16GB

1x VGA (Waterproof connector)

bE RJ45 (Support Wake-on-LAN and PXE) by M12 X-Code 8-pin

1x USB 3.2 Gen1 (5 Gbps, Waterproof connector), 2x USB 2.0 by M12 D-Code 8-pin

1x RS-232/422/485 by M12 D-Code 8-pin

1x internal 2.5" SATA HDD Bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCI Express)

2x Full-size mini-PCIe

9-50 VDC, M12 A-code 4-pin

-40 °C to 70 °C

231 x 292 x 56.5 mm

4.18 Kg

WCO-3000-KBL-U

WCO-3000-KBL-U-IP67

### PORTABLE SMART HIGH-DENSITY INDUSTRIAL SUPERCAPACITOR

# ECO-1000 ENERGY PACK

- Extended Energy System for various Box/Panel PCs
- Maximum 16x High-Density Industrial Supercapacitor
- Maximum 200W output power
- 12 to 35 VDC wide range power input
- 12 or 24 VDC power output
- 4x DI + 4x DO with isolation
- -25°C to 65°C extended operating temperature
- Power ignition management



ENERGY PACK

Model	EC0-1000-8S	ECO-1000-16S (Optional)	
Capacity	8x 370 Farads	16x 370 Farads	
Input Voltage	12 ~ 3	5 VDC	
Input Coonector	3-pin Terminal Bloc	:k (V+, GND, IGN IN)	
Output Voltage	Charge mode: DC IN Discharge mode: 12 or 2	Voltage bypass (DC OUT = DC IN) 4V	
Output Power	Maximum 100W output	Maximum 200W output	
Output Coonector	3-pin Terminal Block (V+, GND, IGN Out)		
1/0	1x RS-232, 1x USB, 2x DI + 2x D0 with isolation		
Others	1x Remote Power On/Off 1x switch for 12V/24V, 1x PC/CAR Mode Switch, 1x Delay Time Switch		
Power Ignition Sensing	Power Ignition Management		
Operating Temp	-25°C to 65°C; -20°C to 65°C (Optional LCM)		
Certification	CE, FCC Class A, EMC Conformity with EN50155, EN50121-3-2		
Dimensions (WxDxH)	100 x 192 x 187.4 mm		
Weight	1.8 kg 2.8 kg		
Mounting	Wall Mounting, DIN Rail Moountung (Optional)		



The power rg... system shutdown after engine snow pre-determined time interval. This feature ensures that applications close properly, avoiding data loss or corruption. ...... The ECO Series is a power backup module that ensures power-reserve management in mission-critical applications. This standalone module leverages high-density, industrial grade supercapacitors for stable backup power during unforeseen power outages. The ECO Series uses supercapacitor technology that enables power management for extended operations in harsh environments, providing wider operating temperatures and longer operating life. This makes the ECO series incredibly durable and reliable for your embedded computing systems that require zero

downtime.

# **INDUSTRIAL DISPLAY SYSTEMS**



MONITOR MODULE

### **Mix-and-Match Solution**

The VIO Series supports various monitor and PC modules that provide mix-and-match flexibility for HMI automation, information, and communication applications for industrial deployments. This plug-and-play design enables scalable and upgradable solutions for the VIO to be configured into an industrial panel PC or a rugged touch monitor.



System



WIO-W221C-KBL-U Series Kabylake-U

Bay Trail

MX100H Monitor Module



17" / 19" / 21.5" / 23.8"

[4:3/16:9]

**Different System Options** PC Modules Monitor Modules

SEO

10 0 -

Scalability in Panel Sizes 10.4" / 12.1" / 15" / 15.6"



Flexibility in Touch Screen Resistive Touch

**Different Frame Options** Standard Frame Capacitive Touch Thin Frame



Diverse Platform Options Intel® Elkhart Lake Intel<sup>®</sup> Kaby Lake-U Intel<sup>®</sup> Bay Trail



**Easy Installation & Maintenance** Offers user-friendly mechanical design. Just three steps, a system ready for multiapplications

Elkhart Lake PC100-J1900

Kabylake-U

PC100-EHL S



Module PC100-KBL-U

> SIO-200-J1900 Bay Trail



### 8 PREMIO INDUSTRIAL DISPLAY SYSTEMS

PRODUCT FAMILY



### Panel PC

VIO-200-PC100-KBL-U Series Kabylake-U Thin Frame

VIO-200-PC100-EHL Elkhart Lake Thin Frame

VIO-200-PC100-J1900 S Bay Trail Thin Frame





VIO-200 S Thin Frame





VIO-200-MX100H Thin Frame

### INDUSTRIAL PANEL PC

# **VIO-200-PC100-J1900** SERIES

- Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Processor (Quad Core, 2.0GHz)
- 12.1" ~ 23.8" Thin Frame Multi-functional All-in-One Panel PCs
- Projected Capacitive and 5-wire Resistive Touchscreen Available
- Dual Independent Display support by VGA and DisplayPort
- Rich in I/O Features with up to 6x RS-232/422/485
- 2x Full-size Mini PCIe Slot for Communication or Expansion Modules
- 9 to 50 VDC Wide Range Power Input Supporting AT/ATX Mode
- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating

More info

# intel. Bay Trail



Model	VIO-200-PC100-J1900	VIO-200-PC100-J1900-1	
	Thin Frame Industrial Panel PC based on Intel® Bay Trail processors	Thin Frame Industrial Panel PC based on Intel® Bay Trail processors with two universal I/O bracket	
CPU Onboard	Intel <sup>®</sup> Cele	ron <sup>®</sup> J1900	
Memory	1x 204-pin DDR3L-1066/1	1333 SO-DIMM, up to 8GB	
Graphic Output	1x VGA, 1x	DisplayPort	
LAN	2x GbE RJ45 (Support V	Nake-on-LAN and PXE)	
USB, Serial, & Digital I/O	1x USB 3.2 Gen1 (5 Gbps), 3x USB 2.0, 6x RS-232/422/485 (w/ 2x internal), 16x isolated digital I/O		
Storage	1x 2.5" SATA HDD Bay, 1x mSATA (shared by 1x Mini PCIe), 1x CFast (shared by 1x mSATA & 1x Mini PCIe)		
Internal Expansion Slot	1x Full-size Mini PCIe Socket with USIM Socket (PCIe + USB + SATA) 1x Full-size Mini PCIe Socket with USIM Socket (PCIe + USB)		
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block		
Audio	Line-out / Mic-in Phone Jack		
Operating Temperature	-10 °C to 60 °C -10 °C to 50 °C (19" and 23.8" Panel PC only)		
LCD Size	4:3       12.1" / 15" / 17" / 19"         16:9       15.6" / 21.5" / 23.8"		
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch		
Universal Expansion Slot	0	2	

INDUSTRIAL PANEL PC

# VIO-200-PC100-EHL SERIES

- Intel<sup>®</sup> Atom<sup>®</sup> Processor x6425E or Intel<sup>®</sup> Celeron<sup>®</sup> Processor J6413
- 12.1" ~ 23.8" Thin Frame Multi-functional All-in-One Panel PCs
- Projected Capacitive and 5-wire Resistive Touchscreen Available
- Triple Independent Display support by DisplayPort, HDMI and LVDS
- Rich in I/O Features with up to 6x RS-232/422/485,
- 2x USB 3.2 Gen2, 1x Full-size Mini PCIe, 2x LAN, 8x DI & 8x DO

# intel. Elkhart Lake

Model	VIO-200-PC100-EHL	VIO-200-PC100-EHL-1		
	Thin Frame Industrial Panel PC based on Intel <sup>®</sup> Atom <sup>®</sup> processors	Thin Frame Industrial Panel PC based on Intel <sup>®</sup> Atom <sup>®</sup> processors with two universal I/O bracket		
CPU Support	Support Intel® EHL Pro Intel® Atom® Processor x6425E, Quad Con Intel® Celeron® Processor J6413,	Support Intel <sup>®</sup> EHL Processor (Up to 12W TDP) Intel <sup>®</sup> Atom <sup>®</sup> Processor x6425E, Quad Core, 1.5 MB Cache, 2.0 GHz, ECC supported Intel <sup>®</sup> Celeron <sup>®</sup> Processor J6413, Quad Core, 1.5 MB Cache, 1.8 GHz		
Memory	1x 260-Pin DDR4 2400/2667/3200	DMT/s SO-DIMM. Max. up to 32 GB		
Graphic Output	1x DisplayPort, 1x Dual Channel	l 24 bit LVDS, 1x HDMI (Optional)		
LAN	2x GbE RJ45 (Support )	Wake-on-LAN and PXE)		
USB, Serial, & Digital I/O	2x USB 3.2 Gen 2 (10 Gbps), 4x USB 2.0 (2x Internal), 6x RS-232/422/485 (2x internal), 16x isolated digital I/O			
Storage	1x 2.5" SATA HDD Bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCIe)			
M.2	1x M.2 (E Key, PCIe x1, USB 2.0, 2230) 1x M.2 (B Key, PCIex 2 + USB 3.2 Gen1, 2242/3042/3052)			
Internal Expansion Slot	1x Full-size Mini PCIe (USB 2.0, SATA)			
PCIe/PCI Expansion		1x PCIe x4 (PCIe x1 lanes) or 1x PCI		
Power	9-36 VDC, AT/ATX Select, 3-pin Terminal Block			
Audio	Line-out / Mic-in Phone Jack			
Operating Temperature	-10 °C to 60 °C -10 °C to 50 °C (19" and 23.8" Panel PC only)			
LCD Size	4:3       12.1" / 15" / 17" / 19"         16:9       15.6" / 21.5" / 23.8"			
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch			
Universal Expansion Slot	0	1		

- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating

• Compatible with All Premio VIO Series Display Module

• Optional PCIe/PCI expansion slot

Coming Soon

### INDUSTRIAL PANEL PC

# VIO-200-PC100-KBL-U SERIES

- 7<sup>th</sup> Generation Intel<sup>®</sup> Core i5/i3 Processor onboard (Kabylake-U)
- 12.1" ~ 23.8" Thin Frame Multi-functional All-in-One Panel PCs
- Projected Capacitive and 5-wire Resistive Touchscreen Available
- Triple Independent Display support by VGA, DisplayPort, and LVDS
- Rich in I/O Features with up to 6x RS-232/422/485, 4x USB 3.2 Gen1, 2x Full-size Mini PCIe, 2x LAN, 8x DI & 8x DO, CFast



- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating

More info

### INDUSTRIAL TOUCH MONITOR

# VIO-200-MX100H SERIES

- 12.1" ~ 23.8" Thin Frame Full Range Touch Monitors
- Projected Capacitive and 5-wire Resistive Touchscreen Available
- 9 to 48 VDC Wide Range Power Input
- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating

intel Kabylake-U



Model	VIO-200-PC100-KBL-U	VIO-200-PC100-KBL-U-1	
	Thin Frame Industrial Panel PC based on Intel® Kabylake-U processors	Thin Frame Industrial Panel PC based on Intel <sup>®</sup> Kabylake-U processors with 2x universal I/O bracket	
CPU Onboard	Intel <sup>®</sup> 7 <sup>th</sup> Gen. (Kabylake-U) Processo	or Core™ i5-7300U, Core™ i3-7100U	
Memory	1x 260-Pin DDR4 1866/2133MI	Hz SO-DIMM. Max. up to 16GB	
Graphic Output	1x VGA, 1x DisplayPort, 1x	Dual Channel 24 bit LVDS	
LAN	2x GbE RJ45 (Support V	Vake-on-LAN and PXE)	
USB, Serial, & Digital I/O	4x USB 3.2 Gen1 (5 Gbps), 16x isolated	up to 6x RS-232/422/485, I digital I/O	
Storage	1x 2.5" SATA HDD Bay v 1x mSATA (shared 1x CFast (shared	1x 2.5" SATA HDD Bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCIe, 1x CFast (shared by 1x mSATA)	
Internal Expansion Slot	2x Full-size	2x Full-size Mini PCIe	
Power	9-50 VDC, AT/ATX Selec	t, 3-pin Terminal Block	
Audio	Line-out / Mic-in Phone Jack		
Operating Temperature	-10 °C to 60 °C -10 °C to 50 °C (19" and 23.8" Panel PC only)		
LCD Size	<b>4:3</b> 12.1" / 15 <b>16:9</b> 15.6" / 21	<b>4:3</b> 12.1" / 15" / 17" / 19" <b>16:9</b> 15.6" / 21.5" / 23.8"	
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch		
Universal Expansion Slot	0	2	





VIO-200-MX100H

Resistive / Capacitive Touch

1x VGA Input

1x HDMI Input

1x DisplayPort Input

1x USB 2.0 Input

1x COM Port Input / Resistive

1x Audio Input

9-48 VDC, AT/ATX Select, 3-pin Terminal Block

-10 °C to 60 °C -10 °C to 50 °C (19" and 23.8" Panel PC only)

> **4:3** 12.1" / 15" / 17" / 19" **16:9** 15.6" / 21.5" / 23.8"

DISPLAY MODULE

# VIO-200 SERIES

The Display Modules VIO-200 series are compatible with PC modules PC400, PC100-EHL, PC100 series and monitor modules MX100H series for different display sizes and touchscreens. These modules allow to be used for configuring, upgrading and maintaining your Panel PC or touch monitor

More info

## 4:3 SERIES

Thin Frame				
Model	VIO-212	VIO-215	VIO-217	VIO-219
LCD Size	12.1"	15"	17"	19"
Max. Resolution	1024 x 768 (XGA)		1280 x 10	24 (SXGA)
Brightness	500	350		
(cd/m2)	1000 nits (Optional)			
Contrast Ratio	700:1		800:1	1000:1
LCD Color	16.	2M	16.	7M
Pixel Pitch (mm)	0.24 x 0.24 (H) x (V)	0.297 x 0.297 (H) x (V)	0.264 x 0.264 (H) x (V)	0.294 x 0.294 (H) x (V)
Viewing Angle (H-V)	160 / 160	170 / 160 170 / 160		/ 160
Internal Speaker	AMP 5W + 5W	AMP 10W + 10W		
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch			
Operating Temperature	-10°C to 60°C -10°C to 50°C			-10°C to 50°C

### DI

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DISPLAY MODU	ILE		a started
VIO-20 WIDESCREEN	<b>DO</b> SERIES I DISPLAY MODULE	(More info	
<b>16:9</b> SERIES	S		NEW
Model	VIO-W215	VIQ-W221	VID-W224
LCD Size	15.6"	21.5"	23.8"
Max. Resolution		1920 x 1080 (Full HD)	
Brightness	400	300	350
[cd/m2]	1000 nits	(Optional)	
Contrast Ratio	700:1	5000:1	1000:1
LCD Color		16.7M	
Pixel Pitch (mm)	0.17925 (H) x 0.17925 (V)	0.248 (H) x 0.248 (V)	0.274 (H) x 0.274 (V)
Viewing Angle (H-V)	160 / 140 178 / 178		
Internal Speaker		AMP 10W + 10W	
Touch Type	Resis	stive 5-wire Touch / Projected Capacitive	Touch
Operating Temperature	-10°C 1	to 60°C	-10°C to 50°C

### PC MODULE

# PC100-J1900 SERIES

- Intel<sup>®</sup> Celeron<sup>®</sup> J1900 Processor (Quad Core, 2.0GHz)
- Dual Independent Display support by VGA and DisplayPort
- Rich I/O Features including the Support up to 6x RS-232/422/485, 1x USB 3.2 Gen1, 3x USB 2.0, 2x Full-size
- Mini PCIe, 2x LAN, 8x DI & 8x DO
- Power Ignition Management Built-in
- Wide Operating Temperature -40°C to 70°C

# intel. Bay Trail





More info



•**••**•••

• 9 to 50 VDC Wide Range Power Input supporting AT/ATX Mode

• Compatible with All Premio VIO Series Display Module

• Aluminum Die-casting Front Frame

• Front Panel IP65 Rating

Model	PC100-J1900	PC100-J1900-1	
	PC Module based on Intel <sup>®</sup> Bay Trail processors	PC Module based on Intel <sup>®</sup> Bay Trail processors and with two universal I/O bracket	
CPU Onboard	Intel <sup>®</sup> Cele	ron <sup>®</sup> J1900	
Memory	1x 204-pin DDR3L-1066/	1333 SO-DIMM, up to 8GB	
Graphic Output	1x VGA, 1x	DisplayPort	
LAN	2x GbE RJ45 (Support Wake-on-LAN and PXE)		
USB, Serial, & Digital I/O	1x USB 3.2 Gen1 (5 Gbps), 3x USB 2.0, 6x RS-232/422/485 (w/ 2x internal), 16x isolated digital I/O		
Storage	1x 2.5" SATA HDD Bay, 1x mSATA (shared by 1x Mini PCIe), 1x CFast (shared by 1x mSATA & 1x Mini PCIe)		
Internal Expansion Slot	1x Full-size Mini PCIe Socket with USIM Socket (PCIe + USB + SATA) 1x Full-size Mini PCIe Socket with USIM Socket (PCIe + USB)		
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block		
Audio	Line-out / Mic-in Phone Jack		
Operating Temperature	-40 °C to 70 °C		
Universal Expansion Slot	0 2		



# PC100-EHL SERIES

- Intel<sup>®</sup> Atom<sup>®</sup> Processor x6425E or Intel<sup>®</sup> Celeron<sup>®</sup> Processor J6413
- Triple Independent Display support by DisplayPort, HDMI and LVDS
- Rich in I/O Features with up to 6x RS-232/422/485, 2x USB 3.2 Gen2, 1x Full-size Mini PCIe, 2x LAN, 8x DI & 8x DO
- Wide Operating Temperature -40°C to 70°C
- Compatible with All Premio VIO Series Display Module
- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating
- Optional PCIe/PCI expansion slot



C	o m
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Model	PC100-EHL	PC100-EHL-1
	PC Module based on Intel® Atom processors	PC Module based on Intel <sup>®</sup> Atom <sup>®</sup> processors and with two universal I/O bracket
CPU Onboard	Support Intel® EHL Pro Intel® Atom® Processor x6425E, Quad Con Intel® Celeron® Processor J6413,	cessor (Up to 12W TDP) re, 1.5 MB Cache, 2.0 GHz, ECC supported Quad Core, 1.5 MB Cache, 1.8 GHz
Memory	1x 260-Pin DDR4 2400/2667/3200	MT/s SO-DIMM. Max. up to 32 GB
Graphic Output	1x DisplayPort, 1x Dua 1x HDMI	al Channel 24 bit LVDS, (Optional)
LAN	2x GbE RJ45 (Support \	Wake-on-LAN and PXE)
USB, Serial, & Digital I/O	2x USB 3.2 Gen 2 (10 Gbps), 4x USB 2.0 (2x Internal), 6x RS-232/422/485 (2x internal), 16x isolated digital I/O	
Storage	1x 2.5" SATA HDD Bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCIe)	
M.2	1x M.2 (E Key, PCIe x1, USB 2.0, 2230) 1x M.2 (B Key, PCIex 2 + USB 3.2 Gen1, 2242/3042/3052)	
Internal Expansion Slot	1x Full-size Mini PCIe (USB 2.0, SATA)	
PCIe/PCI Expansion	1x PCIe x4 (PCIe x1 lanes) or 1x PCI	
Power	9-36 VDC, AT/ATX Select, 3-pin Terminal Block	
Audio	Line-out / Mic-in Phone Jack	
Operating Temperature	-40 °C to 70 °C	
Universal Expansion Slot	0	1





Coming Soon

### PC MODULE

# PC100-KBL-U SERIES

- 7<sup>th</sup> Generation Intel<sup>®</sup> Core i5/i3 Processor onboard (Kabylake-U)
- Triple Independent Display support by VGA, DisplayPort, and LVDS
- Rich in I/O Features with up to 6x RS-232/422/485, 4x USB 3.2 Gen1, 2x Full-size Mini PCIe, 2x LAN, 8x DI & 8x DO, CFast

XXX

More info

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- Wide Operating Temperature -40°C to 70°C
- Compatible with All Premio VIO Series Display Module
- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating







Model	PC100-KBL-U	PC100-KBL-U-1	
	PC Module based on Intel <sup>®</sup> Kabylake-U processors	PC Module based on Intel <sup>®</sup> Kabylake-U processors with two universal I/O bracket	
CPU Onboard	Intel <sup>®</sup> 7 <sup>th</sup> Gen. (Kabylake-U) Process	or Core™ i5-7300U, Core™ i3-7100U	
Memory	1x 260-Pin DDR4 1866/2133M	Hz SO-DIMM. Max. up to 16GB	
Graphic Output	1x VGA, 1x DisplayPort, 1x	Dual Channel 24 bit LVDS	
LAN	2x GbE RJ45 (Support Wake-on-LAN and PXE)		
USB, Serial, & Digital I/O	4x USB 3.2 Gen1 (5 Gbps), up to 6x RS-232/422/485, 16x isolated digital I/O		
Storage	1x 2.5" SATA HDD Bay with RAID 0, 1 support, 1x mSATA (shared by 1x Mini PCIe), 1x CFast (shared by 1x mSATA)		
Internal Expansion Slot	2x Full-size Mini PCIe		
Power	9-50 VDC, AT/ATX Select, 3-pin Terminal Block		
Audio	Line-out / Mic-in Phone Jack		
Operating Temperature	-40 °C to 70 °C		
Universal Expansion Slot	0	2	

MONITOR MODULE

# MX100H SERIES

- Configure System by Demand
- 9 to 48 VDC Wide Range Power Input
- Aluminum Die-casting Front Frame
- Front Panel IP65 Rating

Model	
VGA	
HDMI	
DisplayPort	
USB	
COM Port	
Audio	
Power	
Operating Temperature	





MX100H

Monitor Module

1x VGA Input

1x HDMI Input

1x DisplayPort Input

1x USB 2.0 Input

1x COM Port Input (Resistive Touch Only)

1x Audio Input

9-48 VDC, AT/ATX Select, 3-pin Terminal Block

-10 °C to 60 °C

IP66 WATERPROOF TOUCHSCREEN COMPUTER

# WIO-W221C-KBL-U SERIES

- 21.5" TFT FHD 16:9 LCD with Projected Capacitive Touch
- Support 7<sup>th</sup> Gen. Intel<sup>®</sup> Core™ i5 / i3 Processor
- 1x 260-pin DDR3L SO-DIMM. Max up to 8GB
- 1x mSATA (shared by 1x Mini PCIe), 2x internal SIM socket
- Single display supported by 1x VGA (waterproof connector)
- 2x LAN by M12 X-Code 8-pin
- 1x RS-232/422/485 by M12 D-Code 8-pin



- 9 to 50 VDC wide range power input
- -10°C to 60°C extended operating temperature
- Full system IP66 compliant

More info

- Two 10W internal speakers built-in
- Multi-language OSD built-in



Model	WIO-W221C-KBL-U
	21.5" 16:9 Full HD Capacitive Touch All-In-One IP66 Panel PC
CPU Onboard	Intel <sup>®</sup> 7 <sup>th</sup> Gen. (Kaby Lake-U) Processor Core™ i5-7300U, Core™ i3-7100U
Memory	8GB DDR4 SO-DIMM
Graphic Output	1x Waterproof VGA
LAN	2x LAN by M12 X-Code 8-pin
USB & Serial	2x USB 3.2 Gen1 (5 Gbps, Waterproof connector), 1x RS-232/422/485 by M12 D-Code 8-pin
Storage	1x 128GB mSATA SSD
Internal Expansion Slot	1x Full-size Mini PCIe
Power	9-50 VDC, M12 A-code 4-pin
Operating Temperature	-10 °C to 60 °C
LCD Size	21.5" (16:9) Full HD
Brightness (cd/m2)	300
	1000 nits (Optional)
Touch Type	Projected Capacitive Touch, 5 Points, 7H Surface Hardness

### IP66/IP69K WASHDOWN TOUCHSCREEN COMPUTER

# **SIO-200-J1900** SERIES

- 12", 15", 15.6", 21.5", 23.8" TFT FHD 16:9 LCD with resistive 5-wire / projected capacitive touch
- Intel<sup>®</sup> Celeron<sup>®</sup> processor J1900, 2.0 GHz or Intel<sup>®</sup> Core™ i5-8365UE Processor
- 1x 4GB DDR3L SO-DIMM, 1x 64GB mSATA
- 1x M12 LAN, 2x USB 2.0 by M12 8-pin, 1x M12 COM
- 1x Full-size Mini PCIe for expansion
- Support 110V to 240V AC power input by M12 Power Connector
- -20°C to 60°C operating temperature

intel.	
Kabylake-U	



Madal	SIO-212-J1900	SIO-215-J1900	SIO-W215-J1900	SIO-W221-J1900	SIO-W224-J1900	
Μοαει				SIO-W221-8365UE	SIO-W224-8365UE	
	12.1" (4:3) Resistive / Capacitive Touch Stainless Steel Panel PC	15" (4:3) Resistive / Capacitive Touch Stainless Steel Panel PC	15.6" (16:9) Resistive / Capacitive Touch Stainless Steel Panel PC	21.5" (16:9) Resistive / Capacitive Touch Stainless Steel Panel PC	23.8" (16:9) Resistive / Capacitive Touch Stainless Steel Panel PC	
		Intel <sup>®</sup> Celeron <sup>®</sup> Proce	essor J1900, Quad Core	, 2MB Cache, 2.0 GHz		
CPO Support				Intel <sup>®</sup> Core™ i5-8 6M Cache, u	365UE Processor p to 4.10 GHz	
Memory			4GB DDR3L SO-DIMM			
LAN		1x	LAN by M12 X-Code 8-	pin		
USB & Serial	2x USB 2.0 by M12 A-code 8-pin, 1x RS-232/422/485 by M12 A-Code 8-pin, 1x LAN by M12 X-Code 8-pin					
Storage	1x 64GB mSATA SSD					
Internal Expansion Slot	1x Full-size Mini PCIe					
Power	AC iN 110V~240V 60Hz, M12 A-code 4-pin					
Operating Temperature	-20 °C to 60 °C -20 °C to 50 °C					
LCD Size	12.1" 15" (4:3) XGA (4:3) XGA		15.6" (16:9) Full HD	21.5" (16:9) Full HD	23.8" (16:9) Full HD	
LCD	600 300 450 300					
Brightness (cd/m2)	1000 nits (Optional)					
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch / 7H Surface Hardness				SS	



- Full system IP66/IP69K with Stainless Steel SUS316 construction
- Touch Function ON/OFF Switch



Intel <sup>®</sup> Core™ i5-8365UE Processor	
6M Cache, up to 4.10 GHz	

# INDUSTRIAL BOARD SOLUTIONS

embedded single board computer applications, Premio provides reliability and

We also provide end-to-end engineering services to ensure your configuration requirements and solve your mechanical design challenges. From a full custom solution to a small change in the I/O, we can adapt each motherboard to comply with your specifications without compromising performance.





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# **INDUSTRIAL MOTHERBOARDS & SINGLE BOARD COMPUTERS**













# **BOARDS** SERIES

Premio offers industrial-grade scalability with standard motherboards and OEM system design. Standard form factors include: Single board computers (1.8" Femto-ITX, 2.5" PICO-ITX, and 3.5" SBCs); Mini-ITX; and Micro-ATX.

Motherboards

### 1.8" FEMTO ITX SERIES



### Motherboards 2.5" PICO ITX SERIES

Temperature

Dimension

More info



100 x 72mm

Model	CT-NR101	Model	CT-PBT01
	AMD Ryzen™ Embedded R1606G with Radeon™ Vega 3 Graphics - Highest 2C Performance		Intel <sup>®</sup> Celeron <sup>®</sup> Processor J19 (2.0GHz/4C/10W)
Memory	DDR4-2400 signal channel Memory down, up to 8GB,	Memory	1x 204-Pin DDR3L 1066/1333MHz SO-DIMM
	Default 4GB	BIOS	AMI 64Mbit SPI BIOS
BIOS	AMI SPI 64Mbit		Software Programmable
TPM	TPM 2.0	Watchdog	Supports 1~255 sec. System Reset
Display Interface	2x Micro HDMI	Display Interface	1x HDMI, 1x LVDS
Rear I/O	1x RJ45, 2x Micro HDMI, 1x Type C USB 3.1 Gen 2	Rear IO	1x LVDS & 1x LVDS backlight, 1x RS-232/422/485,
Internal I/O	1x Front Panel, 1x 8-bit GPIO (4-in/4-out)		1x RS-232, 2x USB 2.0
Power	2-pin Terminal Block		1x LVDS, 1x LVDS backlight, 1x RS-232/422/485.
Operating Temperature	0°C to 60°C	Internal I/O	1x RS-232, 2x USB 2.0, 1x SATA 3.0Gb/s, 1x Front panel audio.
Dimension	84 x 55 mm		1x 8-bit GPIO (4-in/4-out), 1x Front panel, 1x SMBus
		Power	12V DC Input 1x 2-pin power connector
		Operating	-10°C to 70°C

INDUSTRIAL BOARDS

# **BOARDS** SERIES

Motherboards **3.5" SBC** SERIES



Model	CT-DWL01	CT-DBT02	CT-DR101
	Support 8 <sup>th</sup> Gen. Intel <sup>®</sup> WL-UE Processor (15 TDP) Int el <sup>®</sup> Core™ i7-8665UE, i5-8365UE, i3-8145UE or Intel <sup>®</sup> Celeron <sup>®</sup> Processor 4305UE	Intel <sup>®</sup> Atom™ Processor, Celeron <sup>®</sup> Processor J1900	AMD Ryzen™ Embedded R1000/V1000 Series Processor
Memory	1x 260-Pin DDR4 2400MHz SO-DIMM slot. Max. up to 32GB	1x 204-pin DDR3L SO-DIMM sockets Non-ECC/unbuffered Data transfer rates up to 1333MT/s Memory size up to 4GB	DDR4-2400 SO-DIMM slot, up to 32GB, supports ECC
BIOS	AMI uEFI 256MB SPI flash	AMI uEFI 8MB SPI Flash	AMI uEFI 256Mbit SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset	H/W Reset, 0 – 255 steps Step = 1 sec. or 1 min	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0 Through Infineon <sup>®</sup> SLB9665TT2.0 or Equivalent	TPM 1.2 supported (Optional)	TPM 2.0
Display Interface	1x DisplayPort, 1x LVDS, 1x HDMI, 1x EDP internal connector (optional)	1x HDMI, 1x VGA, 1x LVDS	1x DisplayPort, 1x LVDS, 1x HDMI
Rear IO	4x USB 3.2 Gen 2, 2x RJ45 GbE LAN, 1x DisplayPort, 1x HDMI	2x RJ45 GbE LAN, 1x HDMI, 1x VGA, 1x RS232/422/485 COM, 1x USB2.0, 1x USB 3.2 Gen1 (5 Gbps)	2x RJ45, 2x USB 3.2 Gen2 (10Gbps), 2x DisplayPort, 1x HDMI
Internal I/O	1x LVDS, 1x eDP1.4 (Optional) 4x RS-232/422/485, 2x USB 2.0 2x SATA Gen3, 1x Front panel audio, 2x 4-bit DIO	1x 2-ch 24bit LVDS, 1x SATA 2.0, 3x RS-232/422/485, 4x USB 2.0, 1x Line-In, Line Out & Mic-In 1x 8-bit GPIO, 1x PS/2 keyboard mouse, 1x microSD card socket, 1x SIM card socket, 1x FAN connector	1x 24-bit dual channel LVDS, 2x RS232/422/485, 1x SATA, 2x 6pin Audio Header, 2x 4-bit DIO, 1x 50-pin PCIe 3.0 (4-Lane) Connector for Custom I/Os
Power	AT/ ATX 12V DC Input, 4-pin CPU P4 connector	DC +12V input	AT/ ATX 12V DC Input, 4-pin CPU P4 connector
Operating Temperature	-40°C to 70°C	-20°C to 70°C	-40°C to 75°C
Dimension		146 x 102 mm	







### INDUSTRIAL BOARDS

# **BOARDS** SERIES

Premio offers industrial-grade scalability with standard motherboards and OEM system design. Standard form factors include: Single board computers (1.8" Femto-ITX, 2.5" PICO-ITX, and 3.5" SBCs); Mini-ITX; and Micro-ATX.

NEW

### Motherboards

MINI ITX SERIES





More info

# **BOARDS** SERIES

INDUSTRIAL BOARDS





Model	CT-XCL01	Model	CT-XSL01
	LGA 1151 Socket Support 9 <sup>th</sup> Gen. Intel <sup>®</sup> Core™ Desktop Processor, Q370 Chipset		LGA 1151 socket supporting 6 <sup>th</sup> Gen Intel <sup>®</sup> Core™ i3/i5/i7 Desktop Processor, Intel <sup>®</sup> Core™ i7-6700TE / i5-6500TE / i3-6100TE
Memory	2x SO-DIMM, DDR4, 2133/2400/2666 (depend on CPU) MT/s, Max 32 GB	Memory	2x 260-Pin DDR4 1866/2133MHz SO-DIMM
BIOS	AMI <sup>®</sup> UEFI BIOS 256Mb Flash	BIOS	AMI uEFI 128MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset	Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0 Through Infineon <sup>®</sup> SLB9665TT2.0 or Equivalent (Optional)	TPM	TPM 2.0 supported (optional)
Display	1x DVI-D 1x LVDS 1x HDMI 1 4	Display Interface	1x DVI-D, 1x 2-ch 24-bit LVDS, 1x DisplayPort
Rear IO	1x DisplayPort 1.2 1x RS-232, 2x RJ45 4x USB 3.1 Gen 2 1x USB-C (optional) 1x Line-in , Line-out, Mic-in	Rear IO	1x DVI-I, 1x DP, 1x HDMI, 1x RS-232/422/485, 4x USB 3.2 Gen1 (5 Gbps), 2x USB 2.0, 2x RJ45, 1x Line-out, 1x Mic-in, 1xPS/2 KB/MS
Internal I/O	4x RS-232 Headers, 1x 8-bit PIO, 1x USB 3.0 Headers (2 Ports), 1x USB 2.0 Headers (2 Ports) 1x Backlight Locking Type Header 2x 4-pin PWM Smart Fan 1x LPC Header, 1x SPI Header 1x Cable Stype CMOS Battery	Internal I/O	1x 2-ch 24-bit LVDS, 4x RS-232, 2x USB 3.2 Gen1 (5 Gbps), 2x USB 2.0, 4 x SATA 6.0Gb/s, 1x Front panel audio, 1x 8-bit GPIO (4-in/4-out), 1x LPC, 1x Front panel, 1x CPU fan, 1x System fan
Power	ATX 12V, 24 Pin ATX Power Connector	Power	ATX power, 2x12-pin and 2x2-pin power connector
Operating Temperature	0°C to 60°C	Operating Temperature	0°C to 60°C
Dimension	170 x 170mm	Dimension	170 x 170mm
			<u> </u>







CT-MSL01	CT-MCL01
1151 socket supporting 6 <sup>th</sup> Gen Intel <sup>®</sup> Core™ i3/i5/i7 Desktop Processor, el <sup>®</sup> Core™ i7-6700TE / i5-6500TE / i3-6100TE	Support 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 95W/35W TDP), Intel <sup>®</sup> Core™ i7-9700E / i5-9500E / i3-9100E or Intel <sup>®</sup> Pentium <sup>®</sup> G5400T, G5400
4x 288-Pin DDR4 1866/2133MHz DIMM	4x 288-Pin DDR4 2133/2400/2666MHz DIMM
AMI uEFI 128MB SPI flash	AMI uEFI 256MB SPI flash

Software Programmable Supports 1~255 sec. System Reset

TPM 2.0 supported (optional)

1x VGA,	1x VGA,
1x DVI-D,	1x DVI-D,
1x DisplayPort	2x DisplayPort (DP 1.2)
1x VGA, 1x DVI-D,	1x VGA, 1x DVI-D,
1x DP, 1x HDMI,	2x DP,
2x RS-232/422/485,	2x RS-232/422/485,
4x USB 3.2 Gen1 (5 Gbps),	4x USB 3.2 Gen 2,
2x RJ45 GbE LAN,	2x RJ45,
1x Line-in, 1x Line-out,	1x Line-in, 1x Line-out,
1x Mic-in	1x Mic-in
4x RS-232,	4x RS-232,
2x USB 3.2 Gen1 (5 Gbps),	1x USB 3.2 Gen 1,
6x USB 2.0,	7x USB 2.0,
4 x SATA 6.0Gb/s,	6 x SATA 6.0Gb/s,
1x Front panel audio,	1x Front panel audio,
1x 8-bit GPI0 (4-in/4-out),	1x 8-bit DIO (4-in/4-out),
1x PS/2 KB/MS,	1x SPI header,
1x LPC,	1x LPC,
1x Front panel,	1x Front panel,
1x CPU fan,	1x CPU fan,
2x System fan	2x System fan
ATX power, 2x12-pin and 2x2-pin power connector	
0°C to	0 60°C

244 x 244mm

### CERTIFICATION READY INDUSTRIAL COMPUTERS

# KCO-2000-CFL SERIES

Certification-ready industrial computers are embedded computing solutions that serve as key building blocks for enterprise and IoT applications that require processing. The KCO Series of industrial computers is a commercial off-the-shelf (COTS) computing solution that provides reliability, regulatory safety, and embedded longevity with Premio's extended lifecycle support. These certification-ready industrial computers are deployable in IoT applications in markets for kiosks, ATMs, security and surveillance, metrology and automation inspection, and mobile medical carts.

- 2U Slim Form Factor (SFF) Chassis Tool-less Mounting Options
- Micro-ATX Motherboard Q370 Chipset
- Support Intel 8<sup>th</sup>/9<sup>th</sup> Gen Core Processors
- DDR4 Memory up to 128GB
- 1x PCIe x16 slot (low profile, up to 9" card length)
- x13 USB Ports for IoT devices
- 1x Hot-swappable 2.5" SATA drive tray



•	1x M.2 (M Key); 1x M.2 (E Key)
•	Tool-less Washable Dust Filter

• CE, FCC, UL Certified

More info

**CERTIFICATION READY INDUSTRIAL COMPUTERS** 

# KCO-3000-CFL SERIES

- 3U Compact Chassis with Rack Mount Options
- Micro-ATX Motherboard Q370 Chipset
- Support Intel 8<sup>th</sup>/9<sup>th</sup> Gen Core Processors
- DDR4 Memory up to 128GB
- Expansion Slots: 1x PCIe x16 full height, up to 10" card length) ,2x PCIe x4
- x13 USB Ports for IoT devices
- 1x 3.5" SATA HDD drive or 2x 2.5" SSD/HDD
- 1x M.2 (M Key); 1x M.2 (E Key)
- Tool-less Washable Dust Filter
- CE, FCC, UL Certified

Model	KC0-2000-CFL
	Certification-Ready Industrial Computer with LGA-1151 socket for Intel $^{\circ}$ CFL-R S Processor
CPU Support	Support 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP)
Memory	4x 288-Pin DDR4 2133/2400/2666MHz DIMM. Max. up to 128GB
Graphic Output	1x VGA,1xDVI, 2x DP
LAN	GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)
USB & Serial	2x RS-232/422/485 + 2x RS-232 2x RS-232 (internal header) 6x USB 3.2 Gen1 (5 Gbps) 7x USB 2.0
Storage	1x Hot-Swappable 2.5" SATA Drive Bay (support H=7mm) 1x M.2 (M Key, NVMe PCIe x4, 2280) 1x M.2 (E Key, PCIe x2, USB 2.0, 2230)
Internal Expansion Slot	1x PCIe x16 slot (low profile, up to 9" card length)
Power	AT, ATX Internal 250W Flex Power Supply
Audio	Line-out / Mic-in Phone Jack
Operating Temperature	0°C to 35°C
Dimensions (WxDxH)	12.73" x 10.75" x 3.45"
Weight	11 lbs (barebone w/ chassis, mb, and PSU only)
Certifications	CE, FCC, UL Certified

Model	
	Certification-Ready I
CPU Support	Support
Memory	
Graphic Output	
LAN	G
USB & Serial	
Storage	1x
Internal Expansion Slot	
Power	
Audio	
Operating Temperature	
Dimensions (WxDxH)	
Weight	
Certifications	





### KCO-3000-CFL

: 8<sup>th</sup>/9<sup>th</sup> Gen Intel<sup>®</sup> CFL-R S Processor (LGA 1151, 35W TDP)

4x 288-Pin DDR4 2133/2400/2666MHz DIMM. Max. up to 128GB

1x VGA,1xDVI, 2x DP

GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)

> 2x RS-232/422/485 + 2x RS-232 2x RS-232 (internal header) 6x USB 3.2 Gen1 (5 Gbps) 7x USB 2.0

3.5" SATA HDD drive or 2x 2.5" SSD/HDD up to 15mm 1x M.2 (M Key, NVMe PCIe x4, 2280) 1x M.2 (E Key, PCle x2, USB 2.0, 2230)

1x PCIe x16 full height, up to 10" card length) 1x PCIe x4, 1x PCIe x4

> AT, ATX Internal 300W Flex Power Supply

Line-out / Mic-in Phone Jack

0°C to 45°C

13.15" x 11.78" x 5.23"

12.5 lbs (barebone w/ chassis, mb, and PSU only)

CE, FCC, UL Certified



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