iCubes Industrial

PRODUCT

SOLUTION GUIDE

2024

INDUSTRIAL COMPUTING SOLUTIONS FROM THE EDGE TO THE CLOUD

BEYOND THE RUGGED EDGE

YOUR TOP CHOICE PARTNER IN
INDUSTRIAL COMPUTING FROM THE

EDGE TO THE CLOUD

Established in 2011, Taipei, C&T Solution Inc. is becoming one of the fastest-growing companies in the Industrial Computing Systems field. With its obsession with creating the best rugged edge computers as the core of great industrial leading solutions, C&T has become one of the top enterprises in providing world-class industrial embedded systems.

C&T is a global solutions provider specializing in industrial computer and embedded fields. We are committed to developing and manufacturing rugged edge computers, industrial panel PCs, industrial display systems, and industrial motherboards. C&T strives for the highest standards in innovation and technology to stay ahead of competitors in terms of design, technology, reliability, and versatility.

Our teams have worked strongly and closely with the customers to provide the high-quality and high-value creation of robust embedded computers. Moreover, our engineering specialty and agile manufacturing push the technical boundaries in embedded IoT computers. As a result, C&T is determined to become your top choice partner in industrial computing solutions. Therefore, C&T has an extensive customer base through global network and distribution partners from offices located worldwide.

C&T proudly offers diverse industrial technologies to meet various customers' needs based on their applications and industries. Our application-ready solutions are contributing to escalating advancement in a varied array of industrial sectors, including:

- Industrial Automation
- Transportation
- Food & Beverage
- Military
- Kiosk & Retail
- Security & Surveillance
- Intelligent Healthcare
- Machine Vision & Robotics

OUR MISSION

C&T is dedicated to creating and delivering world-class technology solutions that empower our clients to reach their business goals. We will apply the highest creativity, integrity, quality, and innovation standards to our products and concepts.

OUR VISION

Our vision is to create the best rugged edge computers as the core of great solutions that transform people's life. We will relentlessly innovate to deliver world-class edge computers for industry-leading solutions.

OUR SERVICES

We strive to exceed our customers' expectations with innovative and competitive solutions. For us, this means providing unsurpassed service, delivering premium value, and offering a competitive edge to tour customers. Additionally, our OEM and ODM collaboration constantly aim to deliver high-quality products, reliable partnerships, professional service, and competitive price, service, and competitive price.

OUR CORE VALUES

We deliver our core brand values through the way we conduct business. C&T's core values of Innovation, Commitment, Collaboration, Agility, and Accountability guide our decisions to exceed expectations.

AGILITY
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.

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

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

ACCOUNTABILITY
We always hold ourselves accountable for our products, services, and actions to our employees, customers, and partners.

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

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INDUSTRIAL COMPUTERS 12

C&T'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/0 connections, wide range power input, smart management functions, and rugged reliability, C&T fanless embedded systems deliver a compelling platform that is needed in today's demanding workloads and industrial needs.

EDGEBoost Nodes deliver an industrial-grade modular approach for accelerated computing performance at the rugged edge.

EDGEBoost I/O modules are a scalable and modular solution that integrates into C&T's industrial computers and provides enhanced reliability with plug-and-play expandability.

INDUSTRIAL PANEL PCS AND TOUCH MONITORS 42

C&T'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 C&T industrial panel PCs and touch monitors as human machine interfaces to achieve better productivity and operational efficiency in their enterprise projects.

INDUSTRIAL MOTHERBOARDS 54

C&T 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.

BEYOND THE RUGGED EDGE

Work-Station Grade Industrial Computer With
Intel® 12/13/14th Gen Processor

RCO-6000-RPL Series

AI Edge Inference Computer

NEW

VISIT P.17

DDR5
Up to 64GB
5,600 MT/s

Triple 5K Displays
Support up to 8K
2x Display, 1x DVI-I

2x EDGEBoost I/O
Customizable I/O, PoE Ports
and M.2 Modules

EDGEBoost Nodes
Scalable PCIe Gen 4 GPU &
NVMe Storages

VCO-6000-RPL Series

NEW

VISIT P.24

Industrial Machine Vision Computer

DDR5
Up to 64GB
5,600 MT/s

Triple 5K Displays
Support up to 8K
2x Display, 1x DVI-I

Full-Length Dual GPU
Support Dual PCIe
Gen 4.0 GPU

Scalable NVMe & SATA Storage
Scalable Hot-Swappable
SSD Storages

WORLD CLASS CERTIFICATION

UL 62368-1 I EN50155
In-Vehicle Ready Industrial Solutions

RCO-3000-RPL Series

Coming soon

VISIT P.15

Small Form Factor Fanless Computer

Intel® 13th/12th Gen
LGA1700

MIL-STD-810G Compliance
50G Shock &
5Grms Vibration

1x EDGEBoost I/O
Customizable I/O, PoE, Ports
and M.2 Modules

Quad 4K Displays
Support 4K up to 8K
3x DP, 1x DP/HDMI

ECO-1000 Series

NEW

VISIT P.40

Industrial-Grade SuperCAP UPS

8x/16x SuperCAP
High-Density
Supercapacitors

200W
Robust Max.
Power Output

10-Year
500K Lifecycle
Longevity

3x Smart Modes
Configure through Display
Module or GUI

FANLESS INDUSTRIAL-EDGE COMPUTER

Deployment Ready at the Rugged Edge

Alder Lake N97
12W TDP

Compact Form Factor
192 x 67.5 x 140 mm
(W x H x D)

Dual 4K Displays
3x Displays
1x DP, 1x HDMI, 1x LVDS

2.5 GbE
3x 2.5 GbE Ports

BCO-1000-ADLN Series
Fanless Mini Computer

NEW VISIT P.31

NEW VISIT P.38

JCO-1000-ORN Series
Mini Fanless AI Computer

Jetson Orin Nano
Up to 40 TOPS

7-15W
4/8 GB RAM

512-1024 CUDA Cores
16-32 Tensor Cores

6-Core Arm® Cortex®-A78AE

NEXT-GENERATION EDGE AI SOLUTION

NVIDIA JETSON ORIN INDUSTRIAL COMPUTER

BCO-3000-RPLS Series
Small Form Factor Edge Computer

NEW VISIT P.31

Intel® 12th/13th
LGA 1700
Alder/Raptor Lake S CPU

10x USB
USB 3.0 Ports
(10Gbps, 5Gbps)

2.5 GbE
3x 2.5GbE

Triple 4K
2x DP,
1x HDMI

BCO-6000-RPLS Series
Fanless AI Edge Computer VISIT P.31

NEW

Slim GPU Factor
330 x 69 x 240
(W x H x D)

Expandable GPU
Support PCIe Gen 4 GPU

Smart Fan
Adaptive Smart Fan

JCO-3000-ORN Series
SFF AI Edge Computer VISIT P.38

Coming soon

Jetson Orin NX
Up to 100 TOPS

10-25W
8/16 GB RAM

Jetson Orin Nano
Up to 40 TOPS

7-15W
4/8 GB RAM

Up to 4x 2.5 GbE
Support LAN/PoE

LPDDR5
Up to 16 GB

JCO-6000-ORN Series
Robust AI Edge Computer VISIT P.39

NEW

Jetson Orin AGX
Up to 275 TOPS

LPDDR5
Up to 64GB RAM

Up to 8x GMSL
8x HD Camera at 30 FPS

4x EDGEBoost I/O
Customizable I/O, PoE Ports and M.2 Modules

UNLEASH THE POWER OF MODULARITY

Deliver Personalized Performance Upgrade Instantly with the EDGEBoost Series

EDGEBoost Nodes SERIES

Scalable performance accelerators for C&T's AI Edge Computer.

Provide an easy and cost-effective upgrade for the rugged, fanless computer. They elevate computer performance through additional PCIe Gen 4 Expansion, GPU, NVMe, and SATA storages. EDGEBoost Nodes are more than just performance upgrade, they also equipped with hardware security features. (Compatible with RCO-6000 Series)

NEW VISIT P.18

EDGEBoost I/O SERIES

NEW VISIT P.20

Plug and play modular I/O daughterboards for customizable IoT sensor connectivity

C&T standard computing solutions can support a variety of modular add-on daughterboards and carrier boards for more wired connectivity, digital and analog I/O, and edge AI scalability. Browse through our selection of EDGEBoost I/O modules and discover how to maximize your I/O requirements with plug and play ease.

PoE | M12 | 10GbE | USB 3 | M.2 | AI | 5G | NVMe

FANLESS COOLING TECHNOLOGY FOR INDUSTRIAL PCS

Rugged. Reliable. Tested.

7Steps

Of Building A Fanless PC

C&T's industrial solutions follow the 7 key steps to build reliable fanless solution that are capable 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.

Select A CPU
10W - 65W TDP

Utilize Heatsinks
Ultra-Conductive Materials

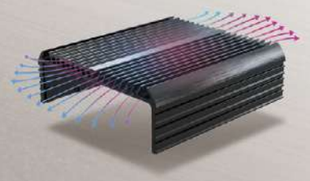
Select EDGEBoost Nodes
Performance Accelerators

Test And Validate
Ensure Durabillity

1 2 3 4 5 6 7

Implement SSDs
NVMe SSDs

Use an Extruded Aluminum PC Case
One-Piece Heatsink Chassis



Put Pieces Together
Ruggedized Design

C&T FANLESS EMBEDDED SYSTEMS

PRODUCT FAMILY

RCO SERIES
CUSTOMIZABLE
INDUSTRIAL
EDGE COMPUTER

DCO SERIES
DIN RAIL FANLESS
INDUSTRIAL COMPUTER

VCO SERIES
MACHINE VISION
COMPUTER

WCO SERIES
IP67/IP69K WATERPROOF
COMPUTER

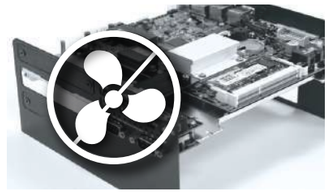
ACO SERIES
IN-VEHICLE FANLESS
COMPUTER

BCO SERIES
COMPACT INDUSTRIAL
COMPUTER

KCO SERIES
FANNED INDUSTRIAL
COMPUTER

JCO SERIES
EDGE AI INDUSTRIAL
COMPUTER

ECO SERIES
SUPERCAPACITOR UPS
BACKUP SYSTEM



FANLESS DESIGN

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

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

SHOCK & VIBRATION

RCO & ACO Series comply with MIL-STD 810G on shock & vibration in order to sustain in environment like industrial automation, transportation, military, etc.

EXPANDABLE & MODULARIZATION

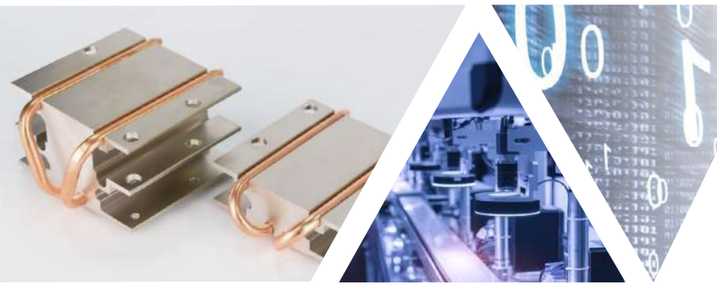
The modular design approach helps with the ease of installation to achieve rapid deployment, and provide wide variety of configurable options to achieve scalability.

EXTENDED OPERATING TEMPERATURE RANGE

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

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



INDUSTRY LEADING SAFETY CERTIFICATIONS

Tested and validated with safety certifications ensure product reliability against safety hazards and allow customers to comply with industry-specific regulatory requirements.

E-Mark Certification

EN50155 & EN50121-3-2

MINI FANLESS EMBEDDED COMPUTER

RCO-1000-EHL SERIES

More info

intel. Elkhart Lake

Model	RCO-1000-EHL-10	RCO-1000-EHL-20	RCO-1000-EHL-30	RCO-1000-EHL-30-2P
CPU Support	Support Intel® Atom™ x6425E / Celeron® J6413 Processor (Up to 12W TDP)			
Memory	1x 260-Pin DDR4 2400/2667/3200MT/s SO-DIMM. Max. up to 32 GB			
Graphic Output	Dual Independent Display by 2x DisplayPort			
I/O	2x RJ45 (2.5 & 1 GbE), 3x USB 3.2 Gen 2 (10 Gbps), 1x USB 2.0 2x RS-232/422/485, 1x Mic-in, 1x Line-out			
PoE				2x GbE RJ45
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			
Operating Temperature	-40°C to 70°C			-40°C to 50°C
Certification	UL 62368 Ed. 3, CE, FCC Class A			CE, FCC Class A
Dimensions (WxDxH)	150 x 105 x 49 mm	150 x 105 x 66 mm	150 x 105 x 83 mm	
EDGEBoost I/O Expansion	Up to 1x EDGEBoost I/O	Up to 3x EDGEBoost I/O	Up to 5x EDGEBoost I/O	Up to 3x EDGEBoost I/O

BCO-1000-EHL SERIES

More info

intel. Elkhart Lake

Model	BCO-1000-EHL-10	BCO-1000-EHL-20	BCO-1000-EHL-30
CPU Support	Support Intel® EHL Processor (Up to 10W TDP) Intel® Celeron® Processor J6413, Quad Core, 1.5 MB Cache, 1.8 GHz		
Memory	1x 260-Pin DDR4 2400/2667/3200MT/s SO-DIMM. Max. up to 32 GB		
Graphic Output	Dual Independent Display by 2x DisplayPort		
I/O	2x RJ45 (2.5 & 1 GbE), 3x USB 3.2 Gen 2 (10 Gbps), 1x USB 2.0, 2x RS-232/422/485, 1x Mic-in, 1x Line-out		
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		
Operating Temperature	0°C to 50°C		
Certification	UL 62368 Ed. 3, CE, FCC Class A		
Dimensions (WxDxH)	142 x 101.2 x 41.5 mm	142 x 101.2 x 58 mm	142 x 101.2 x 75 mm
EDGEBoost I/O Expansion	Up to 1x EDGEBoost I/O	Up to 2x EDGEBoost I/O	Up to 4x EDGEBoost I/O

RUGGED MINI (SFF) INDUSTRIAL COMPUTER

RCO-3000-CML SERIES

More info

intel. Comet Lake S

Model	RCO-3000-CML
CPU Support	Support 10th Gen Intel® CML S Processor
Memory	2x 260-Pin DDR4 2666/2933MHz SODIMM. Max. up to 64GB
Graphic Output	3x DisplayPort (1x DP Port Co-layout HDMI Connector)
LAN	2x RJ45 (2.5 & 1 GbE)
I/O	5x RS-232/422/485 (2x internal), 6x USB 3.2 Gen 2, 16x isolated digital I/O, 1x Line-out
Storage	2x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x internal; 1x removable & hot-swappable), 1x mSATA
Internal Expansion Slot	1x Full-size mini-PCIe, 1x M.2 B Key, 1x M.2 E Key
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block
Certification	UL, CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2
Operating Temperature	-25°C to 70°C
Dimensions (WxDxH)	192 x 197 x 60.3 mm
EDGEBoost I/O Expansion	Up to 1x EDGEBoost I/O

RCO-3000-RPL SERIES

intel. Raptor Lake

Model	RCO-3000-RPL
CPU Support	Support 13th/12th Gen Intel® RPL & ADL Processor
Memory	2x 260-Pin DDR4 3200 MHz SODIMM. Max. up to 64GB
Graphic Output	4x DisplayPort (1x DP Port Co-layout HDMI Connector)
LAN	2x 2.5 GbE RJ45
I/O	5x RS-232/422/485 (2x internal), 6x USB 3.2 Gen 2, 16x isolated digital I/O, 1x Line-out
Storage	2x 2.5" SATA HDD bay with RAID 0, 1, 5 support (1x internal; 1x removable & hot-swappable), 1x M.2 2242 SATA
Internal Expansion Slot	2x M.2 B Key, 1x M.2 E Key
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block
Certification	CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2
Operating Temperature	-25°C to 60°C
Dimensions (WxDxH)	192 x 227 x 57.6 mm
EDGEBoost I/O Expansion	Up to 1x EDGEBoost I/O

RCO-6000 SERIES

AI EDGE INDUSTRIAL COMPUTER

MOST CUSTOMIZABLE
HIGH-PERFORMANCE
INDUSTRIAL COMPUTER

AI EDGE INFERENCE COMPUTER

The RCO-6000 Series is a workstation-grade, fanless computers that incorporates cutting-edge technologies including DDR5, PCIe Gen 4, GPU accelerators, and NVMe storage, ensuring swift and high-performance operations. Ideal for the rigorous demands of Industry 4.0 and edge-native applications, the RCO-6000 Series features a rugged, fanless design and is backed by multiple safety certifications, guaranteeing reliable performance in edge computing environments.

- EDGEBoost I/O Support
- EDGEBoost Nodes Support
- Scalable NVMe, SATA, and RAID Card
- Scalable Robust GPU Cards

RCO-6000-RPL SERIES

More info

intel. Raptor Lake
Alder Lake

UL CERTIFIED E357184

Model	RCO-6000-RPL	RCO-6000-RPL-2E16
CPU Support	Support 12/13/14th Gen Intel® RPL & ADL Processor (LGA 1700, 65W/35W TDP)	
Memory	2x 262-Pin DDR5 4800/5600MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)	
Graphic Output	1x DVI-I, 2x DisplayPort	
I/O	2x 2.5 GbE RJ45, 8x USB 3.2 Gen 2 (10 Gbps), 1x USB 3.2 Gen 1 (Internal), 2x USB 2.0 (internal), 1x Mic-in, 1x Line-out 6x RS-232/422/485 (4x internal), 16x isolated digital I/O	
Storage	2x 2.5" SATA HDD bay with RAID 0, 1 support (1x internal, 1x removable & hot-swappable)	
SIM Socket	2x External SIM socket (Mini PCIE/M.2 B Key attached)	
Power	9-48 VDC, AT/ATX Select, 5-pin Terminal Block	
Operating Temperature	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU, i9 CPU Requires an External FAN Kit)	
PCIe		RCO-6000-RPL-2E16: 1x PCIe x16 (Gen4), 1x PCIe x1 (Gen3) RCO-6000-RPL-2E8: 1x PCIe x16 (8-lane, Gen4), 1x PCIe x8 (8-lane, Gen4)
EDGEBoost I/O Expansion	Up to 2x EDGEBoost I/O	

RCO-6000-CML SERIES

More info

intel. Comet Lake S

UL CERTIFIED E357184

Model	RCO-6000-CML	RCO-6000-CML-2C
CPU Support	Support 10th Gen. Intel® CML S Processor (LGA 1200, 65W/35W TDP)	
Memory	2x 260-Pin DDR4 2666 /2933MHz SO-DIMM, up to 64GB	
Graphic Output	1x DVI-I, 2x DisplayPort	
I/O	2x GbE RJ45, 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal), 2x USB 2.0 header (internal), 1x Mic-in, 1x Line-out 8x RS-232/422/485 (6x internal), 16x isolated digital I/O	
Storage	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	
Certification	UL 62368 Ed. 3, CE, FCC Class A	
Operating Temperature	-25°C to 70°C (35W/65W CPU)	
EDGEBoost I/O Expansion	Up to 2x EDGEBoost I/O	

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-(CML/RPL) for more performance accelerators.

Learn More

Top - Compatible RCO-6000 Series	
RCO-6000-RPL	RCO-6000-CML
• Intel® 12/13/14th Gen ADL/RPL CPU 1x Hotswap SATA SSD (7mm) 1x Internal SATA SSD (9mm) 1x M.2 B Key 2242 	• Intel® 10th Gen CML CPU 2x Hotswap SATA SSD (7mm) 1x Internal SATA SSD (9mm) 1x M.2 E Key 2230 

Bottom - RCO-6000-RPL EDGEBoost Nodes	
PCIe Gen 4	GPU Gen 4
EBND-2-EXP-G4	EBND-2-PWR-G4
SATA Storage Series	
EBND-2-2SATA-G4, EBND-2-4SATA-G4	
NVMe Series	NVMe and GPU Series
EBND-2-2NVME-G4, EBND-8NVME-S, EBND-4NVME-S, EBND-4NVME-H	EBND-4NVME-GPU, EBND-2NVME-GPU, EBND-4NH-1E

Bottom - RCO-6000-CML EDGEBoost Nodes	
PCI/PCIe Expansion	GPU Series
EBND-2-EXP	EBND-2-PWR
SATA Storage Series	
EBND-2-2SATA, EBND-2-4SATA	
NVMe Series	NVMe and GPU Series
EBND-8NVME-S, EBND-4NVME-S, EBND-4NVME-H	EBND-4NVME-GPU, EBND-2NVME-GPU, EBND-4NH-1E

EDGEBoost Nodes Bene(ts

- Scalable, Expandable, and Flexible.
- Cost Effective Solution
- Faster Time-To-Market
- Quick Upgrade
- Easy Maintenance
- Portable Design
- Future-Proof Technology

Modular · Cost Effecient · Faster Delivery · Easy Maintenance · Future-Proof

Bottom - Modular "EDGEboost Nodes" Con(gurations			
PCI or PCIe Expansion Series		GPU Series	
	• **EBND-2-EXP-G4** (RCO-6000-RPL) 1x PCIe x16 (Gen 4), 1x PCIe x1 (Gen 3) or 2x PCIe x8 (Gen 4) • **EBND-2-EXP** (RCO-6000-CML) PCIe x16/ PCI Expansions		• **EBND-2-PWR-G4** (RCO-6000-RPL) 1x PCIe x16 (Gen 4), 1x PCIe x1 (Gen 3) or 2x PCIe x8 (Gen 4) 12~48VDC Power Supply (280W) • **EBND-2-PWR** (RCO-6000-CML) PCIe x16/ PCI Expansions 12~48VDC Power Supply (280W)
SATA Storage Series			
	• **EBND-2-2SATA** 2x Hot-Swap 2.5" SATA Drives (15mm) RAID 0, 1, 5, 10		• **EBND-2-4SATA** 4x Hot-Swap 2.5" SATA Drives (7mm) RAID 0, 1, 5, 10
NVMe Series			
	• **EBND-2-2NVME-G4** (RCO-6000-RPL only) 2x Hot-Swap 2.5" NVMe SSD Bay (15mm) PCIe Gen 4 Expansion		• **EBND-8NVME-S** 8x Hot-Swap 2.5" U.2 NVMe Drives (7mm) RAID 0, 1
	• **EBND-4NVME-S** 4x Hot-Swap 2.5" U.2 NVMe Drives (15mm) RAID 0, 1		• **EBND-4NVME-H** 4x Hot-Swap 2.5" U.2 NVMe Drives (15mm) Hardware RAID 0, 1, 5, 6, 10
NVMe and GPU Series			
	• **EBND-4NVME-GPU** 1x GPU Expansion 4x Hot-Swap 2.5" U.2 NVMe Drives (7mm)		• **EBND-2NVME-GPU** 1x GPU Expansion 2x Hot-Swap 2.5" U.2 NVMe Drives (15mm)
	• **EBND-4NH-1E** 1x PCIe x8 Slot Hardware RAID 0, 1, 5, 6, 10 4x Hot-Swap 2.5" U.2 NVMe Drives (7mm)		

EDGEBoost I/O SERIES

BOOSTING FLEXIBILITY AT THE EDGE

PCIe Speeds

EDGEBoost Bracket

Rugged Resistance

Modular Expansion

Learn More

C&T 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 C&T 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.

Connectivity & Network				
EBIO-4ETH	EBIO-4ETH-M12	EBIO-4LAN	EBIO-4LAN-M12	EBIO-D10G
• Intel® Ethernet Controller I350 • 1x PCIe x4 Gold finger (x4 Lane) • 4x 1GbE LAN, RJ45 Port • Support Power over Ethernet by an optional PoE module	• Intel® Ethernet Controller I350 • 1x PCIe x4 Gold finger (x4 Lane) • 4x 1GbE LAN, M12 Port • Support Power over Ethernet by an optional PoE module	• Intel® Ethernet Controller I210 • 1x PCIe x1 Gold finger • 4x 1GbE LAN, RJ45 Port • Support Power over Ethernet by an optional PoE module	• Intel® Ethernet Controller I210-AT • 1x PCIe x1 Gold finger • 4x 1GbE LAN, M12 Port • Support Power over Ethernet by an optional PoE module	• Intel® Ethernet Controller X710-AT2 • 1x PCIe x1 Gold finger (x4 Lane) • 2x 10GbE LAN, RJ45 Port
				
EBIO-4ETH-POE	EBIO-4ETH-POE-M12	EBIO-4LAN-POE	EBIO-4LAN-POE-M12	
• Up to 25.2 watt per port • Complies with IEEE 802.3at				

EDGEBoost I/O Boosting Flexibility at the Edge

Edge AI / Storage		
EBIO-2M2BK	EBIO-M2MK	EBIO-M2BK
• 2x M.2 B Key for AI/5G/NVMe module • 2x M.2 B Key slot, Support 2x AI/5G Module (Support 1x 5G Only) • M.2 B Key, PCIe x2, 2242/3042/3052 • 1x SIM slot • Support 1x Universal Slot Only	• 1x M.2 M Key for AI/NVMe module (PCIe x4) • M.2 M Key slot, Support AI/NVMe Module • M.2 B Key, PCIe x4, 2242/2260 • Support 1x Universal Slot Only	• M.2 B Key for 5G module • 2x SIM slot • 1x SIM Switch • Support 1x Universal Slot Only

Digital & Analog I/O				
EBIO-HDMI	EBIO-DP-DIO	EBIO-2COM	EBIO-4USB	EBIO-4U3
• Designed for RCO-1000 & BCO-1000 models only • 50-Pin High-Speed Connection				• 4x USB 3.0, Type-A Ports
• 1x HDMI Port (Full-HD)	• 1x DP (4K UHD), 1x DIO (4 in / 4 out, Isolated)	• 2x COM Ports	• 4x USB 2.0, Type A Ports (with USB hub)	

EDGEBoost I/O SERIES | Compatible Industrial Computers

In-Vehicle Computers

Rugged, Fanless Embedded Computing

Small Form Factor Computer

Fanless Mini Computer

Fanless Mini Computer

COMPATIBLE LIST	ACO-6000 (CML / KBL)	RCO-6000 (RPL / CML / CFL)	RCO-3000 (CML / CFL)	RCO-1000 (EHL / J1900)	BCO-1000 (EHL / J1900)
EBIO-2M2BK	● CML ● KBL: AI/NVMe only	●	● CML ● CFL: AI/NVMe only		
EBIO-M2MK	●	●	●		
EBIO-M2BK	● CML ● KBL: AI/NVMe only	●			
EBIO-4U3	●	●	●		
EBIO-D10G	●	●	●		
EBIO-4ETH	●	●	●		
EBIO-4ETH-POE	●	●			
EBIO-4ETH-M12	●	●	●		
EBIO-4ETH-M12-POE	●	●			
EBIO-4LAN		●			
EBIO-4LAN-POE		●			
EBIO-4LAN-M12		●			
EBIO-4LAN-POE-M12		●			
EBIO-HDMI				●	●
EBIO-DP-DIO				●	●
EBIO-2COM				●	●
EBIO-4U3				●	●

Coming soon

DCO-1000 SERIES

INDUSTRIAL-GRADE DIN RAIL COMPUTER

C&T offers DIN Rail mountable computers that are available in various configurations. You can configure your DIN rail PC with the CPU, Memory, Storage, I/O Ports, and Operating System that you want. DIN rail industrial PCs can be easily and quickly mounted to a standard DIN rail.

- World Class Certifications C1D2, ATEX Zone 2, UL, FCC Class B
- Rich I/O Configurations
- Compact & Slim Form Factor

Model	DCO-1000-ASL	DCO-1000-ORN
CPU Support	Intel® Atom® Processor x7425E, Quad Core, 6 MB Cache, HFM 1.5 GHz, TDP 12W Intel® Atom® Processor x7211E, Dual Core, 6 MB Cache, HFM 1.0 GHz, TDP 6W	NVIDIA® Jetson Orin™ Nano 4/8GB GPU with 32 Tensor Cores
Memory	1x 262-Pin DDR5 4800MHz SODIMM. Max. up to 32 GB (ECC/Non-ECC)	
Graphic Output	Dual Independent Display by 2x DisplayPort 1.4, DP++ (4096 x 2160@60Hz)	
LAN	4x 2.5 GbE LAN	
I/O	2x RS-232/422/485, 2x USB 3.2 Gen 2 (10 Gbps), 2x USB 3.2 Gen 1 (Shared PCIe Gen 2 x1 Lane bandwidth), 4 in / 8 out (Isolated)	
Storage	1x M.2 (B Key, 3042/3052, PCIex 1 + USB 3.2 Gen2, Support 4G/5G, SATA Module)	
Power	9-36 VDC, AT/ATX, 3-pin Terminal Block	
Operating Temperature	-40°C to 70°C	
Certification	CE, FCC Class B, UL, C1D2, ATEX Zone2	
Dimensions (WxDxH)	150 x 105 x 49 mm	
Mounting	DIN-Rail Mounting, Wall Mounting (Optional)	

VCO-6000 SERIES

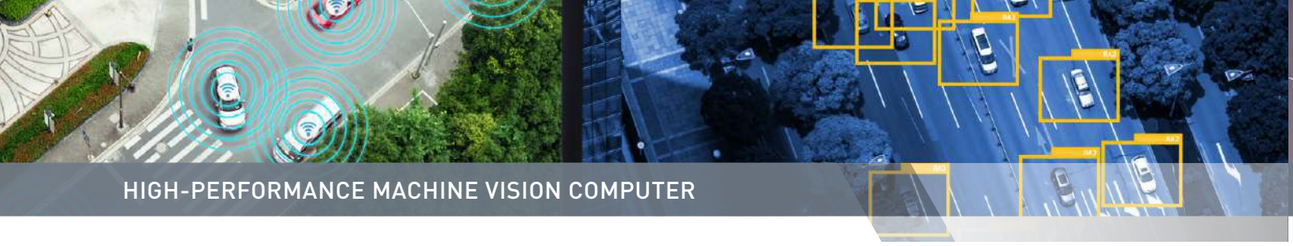
MACHINE VISION COMPUTERS

POWERFUL AI VISION AT THE RUGGED EDGE

WORKSTATION-GRADE INDUSTRIAL MACHINE VISION COMPUTER

The VCO-6000 Series is engineered for seamless integration of dual FHFL GPU cards through PCIe Gen 4 and industry-leading external storage expansion drives, delivering optimized processing and data aggregation. Deploy machine vision and AI inference applications with utmost reliability and performance to the rugged edge.

- Dual GPU Support
- PCIe Gen 4 Expansions
- Scalable NVMe & SATA Storage
- Shock & Vibration Resistance



HIGH-PERFORMANCE MACHINE VISION COMPUTER

VCO-6000-RPL SERIES

More info

intel
Raptor Lake
Alder Lake

Model	VCO-6000-RPL-3E	VCO-6000-RPL-4E
	3x PCIe Expansion Slots	
CPU Support	Support 12/13/14th Gen Intel® RPL & ADL Processor (LGA 1700, 65W/35W TDP)	
Memory	2x 262-Pin DDR5 4800/5600MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)	
Graphic Output	1x DVI-I, 2x DisplayPort	
LAN	2x 2.5 GbE RJ45 (Support Wake-on-LAN and PXE)	
I/O	4x USB 3.2 Gen 2 (10 Gbps) 5x USB 3.2 Gen 1 (Internal), 1x USB 3.2 Gen 1 header (internal) 6x RS-232/422/485 (4x internal), 8x DI + 8x DO with isolation	
Storage	2x 2.5" SATA HDD bay with RAID 0, 1 support (1x Internal, 1x Removablel) 1x mSATA (Shared by 1x Mini PCI Express)	
SSD/HDD	optional: • 4B7M: 4x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10 • 2B15M: 2x Removable 2.5" SATA HDD Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1, 5, 10 • 2N15M: 2x Removable 2.5" U.2 NVMe Bay (support H=15mm, Hot-swappable, Optional) Support RAID 0, 1	
Internal Expansion Slot	1x Full-size Mini PCIe (1x shared by 1x mSATA) 1x M.2 B Key, 2242/3042/3052	
Power	AT/ATX Select 5-pin Terminal Block, 9-48 VDC 4-pin Terminal Block, 12~48VDC for GPU Card (optional)	
Audio	Line-out / Mic-in Phone Jack (internal)	
Operating Temperature	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU)	
Dimensions (WxDxH)	157 x 340 x 240 mm	177 x 340 x 240 mm
PCIe	1x PCIe x16 (Gen4) 2x PCIe x1 (Gen3)	2x PCIe x16 Slot (x8 Lane, Gen 4) 1x PCIe x4 (x1 Lane, Gen 3)

HIGH-PERFORMANCE MACHINE VISION COMPUTER

VCO-6100 SERIES

More info

intel
Coffee Lake R

Model	VCO-6122	VCO-6133	VCO-6144	VCO-6155
	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	Support 8th/9th Gen. Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP) Core™ i7-9700E/9700TE/8700T, Core™ i5-9500E/9500TE/8500T, Core™ i3-9100E/9100TE/8100T, Pentium® G5400T, or Celeron® G4900T			
Memory	2x 260-pin DDR4-2400/2666MHz SO-DIMM, 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)			
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/O			
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 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 (internal)			
Operating Temperature	-25°C to 70°C (35W CPU) -25°C to 60°C (65W CPU)			
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	• VCO-6122E : 2x PCIe x8 • VCO-6122P : 2x PCI • VCO-6122C : 1x PCIe x16 1x PCI	• VCO-6133E : 2x PCIe x1 1x PCIe x16 • VCO-6133P : 3x PCI • VCO-6133C : 1x PCIe x16 2x PCI	• VCO-6144P : 4x PCI • VCO-6144C : 2x PCIe x4 1x PCIe x16 (8-lane) 1x PCI	• VCO-6155C : 2x PCIe x4 1x PCIe x16 (8-Lane) 2x PCI

WCO-3000 SERIES

IP67/IP69K WATERPROOF COMPUTERS

DELIVER INTELLIGENCE
WHERE IT COUNTS

BUILT RUGGED. BUILT READY.

The WCO Series expands the limitation of hardware to environment where the normal embedded computer are not suitable to be used. The WCO computers are a great solution for food and beverage processing, outdoor digital signage, surveillance, Military & defense, and automation control where the computers are in constant threat of water splash from all directions to even water immersion.

- IP67/IP69K Rating
- Wide Range Voltage 9-36V or 48-110V
- Scalable M12 Ports
- High-Quality Compact Construction

WCO-3000-EHL SERIES

More info

intel. Elkhart Lake

NEW

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

ACO-6000 SERIES

IN-VEHICLE FANLESS COMPUTERS

EN50155 RAILWAY & IN-VEHICLE FANLESS COMPUTER

DELIVER INTELLIGENCE AT THE MOBILE EDGE

The ACO-6000 Series offers robust, fanless in-vehicle computers, rigorously tested for mission-critical automotive applications. Essential for intelligent transportation, these systems adeptly handle edge data processing for machine learning and intelligence. With the need for highperformance computing in vehicles, they efficiently process data from various sensors and IoT devices, ensuring swift, low-latency communication.

- Scalable 16x PoE
- EN50155 EN50121-3-2
- Wide Power Range 9-48V and 48-110V
- MIL-STD-810G Compliant Method 514 & 517

HIGH-PERFORMANCE IN-VEHICLE FANLESS COMPUTER

ACO-6000-CML SERIES

More info

intel. Comet Lake S

NEW

NEW

Model	ACO-6000-CML	ACO-6000-CML-1E
CPU Support	Support 10th Gen Intel® CML S Processor (LGA 1200, 65W/35W TDP) Xeon® W-1290TE/1270TE/1250TE, Core™ i9-10900E/10900TE, Core™ i7-10700E/10700TE, Core™ i5-10500T/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	
I/O	2x GbE RJ45, 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal), 2x USB 2.0 header (internal), 8x RS-232/422/485 (6x internal), 8x DI + 8x DO with isolation, Line-out / Mic-in Phone Jack	
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	
Operating Temperature	-25°C to 70°C (35W/65W CPU)	
Certification	E-Mark, EMC Conformity with EN50155 & EN50121-3-2	
Dimensions (WxDxH)	240 x 261 x 79 mm	240 x 261 x 127 mm
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)
EDGEBoost I/O Expansion	Up to 2x EDGEBoost I/O	Up to 4x EDGEBoost I/O

ACO-6000-RPL SERIES

intel. Raptor Lake Alder Lake

Coming Soon

Coming Soon

Model	ACO-6000-RPL	ACO-6000-RPL-1E
CPU Support	Support 12/13/14th Gen Intel® RPL & ADL Processor (LGA 1700, 65W/35W TDP)	
Memory	2x 262-Pin DDR5 4800/5600MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)	
Graphic Output	1x DVI-I, 2x DisplayPort	
I/O	2x 2.5 GbE RJ45, 8x USB 3.2 Gen 2 (10 Gbps), 1x USB 3.2 Gen 1 (Internal), 2x USB 2.0 (internal), 1x Mic-in, 1x Line-out, 6x RS-232/422/485 (4x internal), 16x isolated digital I/O	
Storage	2x 2.5" SATA HDD bay with RAID 0, 1 support (1x internal, 1x removable & hot-swappable)	
Power	9-48VDC, 5-pin Terminal Block. 48~110VDC (Optional), 3-pin Terminal Block. AT/ATX Select	
Temperature	-25°C to 70°C (35W/65W CPU)	
Certification	Full EN50155 Railway Certification, CE, FCC	
PCI & PCI Express		ACO-6000-RPL-1E: 1x PCIe x16 ACO-6000-RPL-1I: 1x PCI (Optional)
EDGEBoost I/O Expansion	Up to 2x EDGEBoost I/O	Up to 4x EDGEBoost I/O

BCO SERIES

COMPACT INDUSTRIAL COMPUTERS

REAL-TIME DATA PROCESSING FOR RUGGED EDGE COMPUTING

COMPACT INDUSTRIAL COMPUTER

The BCO Series are designed and built to withstand deployment in challenging environments, managing workloads at the rugged edge for processing, storage, connectivity, and machine learning. Available in three series, the BCO-1000, BCO-3000, and BCO-6000 Series are capable of accommodating various edge workloads from power efficient computers to scalable GPU computers.

- Deployment Ready Solution
- Support Expandablee GPU
- Fast Time To Market
- Compact & Ruggeddized Design

FANLESS INDUSTRIAL-EDGE COMPUTER

BCO-1000-ADLN
FANLESS MINI COMPUTER

BCO-3000-RPLS
SMALL FORM FACTOR EDGE COMPUTER

BCO-6000-RPLS
FANLESS AI EDGE COMPUTER

intel.
Raptor Lake
Alder Lake

Model	BCO-1000-ADLN	BCO-3000-RPLS	BCO-6000-RPLS
CPU Support	12th Gen Intel® IoTG Alder Lake-N Processor N97, QC, 12W	Intel® IOTG Raptor Lake-S or Alder Lake-S Processor Core i9/i7/i5/i3, Pentium, Celeron (35W only)	
System Chipset	Within processor	Intel® Q670E Express Chipset	
Memory	1 x DDR5 SO-DIMM slot (262-pin)	DDR4 Memory Running at 3200 MHz (Non-ECC Supported) Max. up to 64GB	
Graphic Output	1 x HDMI 1.4b 1 x DisplayPort 1.4a	1 x HDMI 1.4b 2 x Dual Mode DisplayPort 1.4a	
LAN	2 x Intel® I225-V 2.5GbE LAN	3x 2.5GbE LAN	
I/O	2x DB9 COM, 6 x USB 3.2 Gen 2 x 1 Type-A, Line-in/Line-out/Mic-in, 1 x 8 GPIO	4x DB9 COM, 8 x USB 3.2 Gen 2 x 1 Type-A , 2 x USB 2.0 Type-A, 1 x 1*2-port Audio-jack connector for Line-out/Mic-in, 8 in / 8 out (Isolated)	
Storage	1 x M.2 B Key slot (2242/ 2280/ 3042)	1 x M.2 M key Type: 2242/2280	
Internal Expansion Slot	1 x M.2 E Key slot (2230), 1 x M.2 B Key slot (2242/ 2280/ 3042)	1 x M.2 M key Type: 2242/2280, 1 x M.2 E key Type: 2230, 1 x M.2 B key Type: 3042 with Nano SIM Holder	
PCI Express			2x PCIe x8 Slot or 1x PCIe x16 Slot (New Board)
Power	AT/ATX 9~36VDC, 3-pin Terminal Block	DTB-PWR-300-936 (New Board), AT/ATX 9~36VDC, 3-pin Terminal Block	
Audio	Line-in/Line-out/Mic-in	1 x 1*2-port Audio-jack connector for Line-out/Mic-in	
Operating Temperature	-20°C to 60°C		
Certification	CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2	CE, FCC Class A, EMC Conformity with EN50155 & EN50121-3-2, UL	
Dimensions (WxDxH)	192 x 140 x 67.5 mm	192 x 240 x 69 mm	330 x 240 x 69 mm

MINI FANLESS EMBEDDED COMPUTER

BCO-2000 SERIES

More info

- Support 8th Gen. Intel® Core™ i5 & Intel® Celeron® Processor
- TPM 2.0 Supported
- UL Listed

BCO-2000-RYZ SERIES

More info

- Support AMD Ryzen™ Embedded R1000/V1000 Series Processor
- TPM 2.0 Supported
- UL Listed

Model	BCO-2000-WHL-U	BCO-2000-RYZ-V1605B	BCO-2000-RYZ-R1606G
	Basic Fanless System ideal for space-constrained applications	Basic Fanless System ideal for space-constrained applications	
CPU Support	Support 8th Gen. Intel® WL-UE Processor Intel® Core™ i5-8365UE or Intel® Celeron® 4305UE Processor	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	1x 260-Pin DDR4 2400MHz SO-DIMM, up to 32GB	2x 260-Pin DDR4 2400 MHz SO-DIMM. Max 32 GB	
Graphic Output	1x DisplayPort, 1x HDMI (Optional)	1x DisplayPort, 1x 24-bit dual channel LVDS, 1x HDMI (Optional)	
LAN	2x RJ45 GbE (Support Wake-on-LAN and PXE)		
USB, Serial	4x USB 3.2 Gen 2, 2x USB 2.0 header (internal), 2x RS-232/422/485	2x USB 3.2 Gen 2 (10 Gbps), 4x USB 2.0 (2x internal), 2x RS-232/422/485	
Storage	1x mSATA (shared by 1x Mini PCIe), 1x Internal 2.5" SATA HDD Bay	1x M.2 B Key, 3042, Support SATA, 1x Internal 2.5" SATA HDD Bay (support H=9.5mm)	
Internal Expansion Slot	2x Full-size Mini-PCIe (1x shared with mSATA)	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 12V Select, 3-pin Terminal Block	AT, ATX 12VDC	
Audio	Line-out / Mic-in Internal		
Operating Temperature	-20°C to 60°C	-20°C to 55°C (25W CPU)	
Certification	UL 62368 Ed. 3, CE, FCC Class A		
Dimensions	140 (W) x 192 (D) x 61 (H) mm		
Weight	1.4 kg	1.5 kg	
Universal Expansion Slot	Up to 2x Universal Expansion		
Expansion (Option)	• 2x LAN • 2x PoE • 2x COM • 2x USB 2.0 • 4x COM • 2x USB 3.2 Gen1	• 2x COM • 2x USB 2.0 (Support 1x Universal Slot Only) • 4x COM • 2x USB 3.2 Gen1 (Support 1x Universal Slot Only)	

KCO SERIES

FANNED INDUSTRIAL COMPUTERS

SEMI-RUGGED.
HIGH-PERFORMANCE.
RACKMOUNTABLE.

FANNED INDUSTRIAL COMPUTER FOR INSPECTION & INTELLIGENT COMPUTER VISION

Introducing the KCO-RPL Series, a line of high-performance fanned industrial computers powered by Intel's latest 13th Gen Raptor Lake processor. These ruggedized edge computers deliver extensive scalability and IIoT-centric flexibility for seamless optimization in high-spec deployment applications. Additionally, the KCO-RPL Series provides a number of edge-native features to accommodate and ensure reliable performance at the rugged edge.

- Support Dual FLFH GPU
- Rich I/O
- Internal Power Supply Unit
- Rackmountable Industrial Solution

KCO-2000 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 C&T'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.

KCO-2000-CFL
Coffee Lake R

KCO-2000-RPL
Raptor Lake / Alder Lake

Model	KCO-2000-CFL	KCO-2000-RPL
	Certification-Ready Industrial Computer with LGA-1151 socket for Intel® CFL-R S Processor	Industrial Computer with 2U Certification-Ready, 12th/13th Gen Intel® Core® Processor
CPU Support	Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 35W TDP)	Support 12th/13th Gen Intel® Core™ i9/i7/i5/i3 Alder lake-S, Raptor Lake-S Processor (LGA 1700, 65W Max TDP)
Memory	4x 288-Pin DDR4 2133/2400/2666MHz DIMM. Max. up to 128GB	4x DDR4 2133/2400/2666MHz DIMM. 128 GB Max
Graphic Output	1x VGA,1xDVI, 2x DP	4x DP++
LAN	GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)	GbE1: Intel® I219LM (Support Wake-on-LAN and PXE) GbE2: Intel® I225-V (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	6x USB 3.1 Gen 2 (10 Gbps) 1x USB 3.2 Gen 2x2 (20 Gbps) Type C 6x RS-232 1x 8-bit DIO (4-in/4-out)
Storage	1x 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)	1x M.2 M / NVMe PCIe x 4 / 2242, 2260, 2280 1x M.2 M / NVMe PCIe x 4 / SATA / 2242, 2260, 2280 1x M.2 E / PCIe x2 / USB 2.0 / 2230
Internal Expansion Slot	1x PCIe x16 slot (low profile, up to 9" card length)	1x PCIe x16 Slot (Gen 5) 2x PCIe x4 Slot (Gen 4, Open End) 1x PCIe x16 Slot (Gen 3, 4-Lane)
Power	AT, ATX Internal 250W Flex Power Supply	ATX ACPI 5.0 compliant
Audio	Line-out / Mic-in Phone Jack	1x Mic-in, 1x Line-in, 1x Line-out
Operating Temperature	0°C to 35°C	0°C to 60°C
Dimensions (WxDxH)	12.73" x 10.75" x 3.45"	12.73" x 10.75" x 3.45"
Weight	11 lbs (barebone w/ chassis, mb, and PSU only)	
Certifications	CE, FCC, UL Certified	

CERTIFICATION READY INDUSTRIAL COMPUTERS

KCO SERIES

KCO-3000 SERIES

KCO-3000-CFL
Coffee Lake R

KCO-3000-RPL
Raptor Lake / Alder Lake

Model	KCO-3000-CFL	KCO-3000-RPL
	Certification-Ready Industrial Computer with LGA-1151 socket for Intel® CFL-R S Processor	Industrial Computer with 3U Certification-Ready, 12th/13th Gen Intel® Core® Processor
CPU Support	Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 35W TDP)	Support 12th/13th Gen Intel® Core™ i9/i7/i5/i3 Alder lake-S, Raptor Lake-S Processor (LGA 1700, 65W Max TDP)
Memory	4x 288-Pin DDR4 2133/2400/2666MHz DIMM. Max. up to 128GB	4x DDR4 2133/2400/2666MHz DIMM. 128 GB Max
Graphic Output	1x VGA,1xDVI, 2x DP	4x DP++
LAN	GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)	GbE1: Intel® I219LM (Support Wake-on-LAN and PXE) GbE2: Intel® I225-V (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	6x USB 3.1 Gen 2 (10 Gbps) 1x USB 3.2 Gen 2x2 (20 Gbps) Type C 6x RS-232 1x 8-bit DIO (4-in/4-out)
Storage	1x 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, PCIe x2, USB 2.0, 2230)	1x M.2 M / NVMe PCIe x 4 / 2242, 2260, 2280 1x M.2 M / NVMe PCIe x 4 / SATA / 2242, 2260, 2280 1x M.2 E / PCIe x2 / USB 2.0 / 2230
Internal Expansion Slot	1x PCIe x16 full height, up to 10" card length) 1x PCIe x4, 1x PCIe x4	1x PCIe x16 Slot (Gen 5) 2x PCIe x4 Slot (Gen 4, Open End) 1x PCIe x16 Slot (Gen 3, 4-Lane)
Power	AT, ATX Internal 300W Flex Power Supply	ATX ACPI 5.0 compliant
Audio	Line-out / Mic-in Phone Jack	1x Mic-in, 1x Line-in, 1x Line-out
Operating Temperature	0°C to 45°C	0°C to 60°C
Dimensions (WxDxH)	13.15" x 11.78" x 5.23"	13.15" x 11.78" x 5.23"
Weight	12.5 lbs (barebone w/ chassis, mb, and PSU only)	
Certifications	CE, FCC, UL Certified	

JCO SERIES

EDGE AI INDUSTRIAL COMPUTERS

CUSTOMIZABLE FANLESS COMPUTER WITH NVIDIA JETSON ORIN SERIES

NEXT-GENERATION EDGE AI COMPUTING SOLUTION

The JCO Series industrial computer, powered by the advanced NVIDIA Jetson platform, is a standout in AI and industrial computing. This series offers exceptional AI computing capabilities, making it perfect for sophisticated robotics, autonomous machinery, and high-end embedded AI tasks. Designed to withstand harsh industrial conditions, the JCO Series ensures consistent performance even in extreme environments.

- EDGEBoost I/O Support
- Rich I/O Configuration
- World-Class Certification
- Ruggedized Fanless Solution

JCO-1000 SERIES
Ultra Compact

JCO-3000 SERIES
Slim Advanced

JCO-6000 SERIES
High Performance

Jetson Orin Nano Series

Jetson Orin Nano series modules deliver up to 40 TOPS of AI performance in the smallest Jetson form-factor, with power options between 7W and 15W. This gives you up to 80X the performance of NVIDIA Jetson Nano. Jetson Orin Nano is available in 8GB and 4GB versions.

Jetson Orin NX Series

Jetson Orin NX modules deliver up to 100 TOPS of AI performance in the smallest Jetson form factor, with power configurable between 10W and 25W. This gives you up to 3X the performance of Jetson AGX Xavier and up to 5X the performance of Jetson Xavier NX. Jetson Orin NX is available in 16GB and 8GB versions.

Jetson AGX Orin Series

Jetson AGX Orin modules deliver up to 275 TOPS of AI performance with power configurable between 15W and 60W. This gives you up to 8X the performance of Jetson AGX Xavier in the same compact form factor. Jetson AGX Orin is available in 64GB ,32GB, and Industrial versions.

JCO NVIDIA® JETSON ORIN™ SERIES

JCO-1000 SERIES
MINI FANLESS AI COMPUTER

JCO-3000 SERIES
SFF AI EDGE COMPUTER

Model	JCO-1000-ORN	JCO-3000-ORN-A	JCO-3000-ORN-B
CPU Support	NVIDIA® Jetson Orin™ Nano 4/8GB GPU with 32 Tensor Cores	NVIDIA® Jetson Orin™ NX 16G/8G & Nano 8G/4G GPU with 32 Tensor Cores	
Graphic Output	1x HDMI		
LAN	1 x GbE LAN	2 x GbE LAN	4x RJ45 (Support 4x PoE, Optional)
I/O	2x RS-232/422/485, 4 in / 4 out (Isolated), 2x USB 3.2 Gen 2 (10 Gbps), 2x USB 2.0, 1x USB Type-C (For OS Flash)	2x RS-232 or 485 (internal, Switch by Jumper), 4x USB 3.0 (Shared with USB 3.2 Gen 2 Hub), 4 in / 4 out (Isolated), 1x Micro USB (OTG)	2x RS-232/485 (Internal, switch by Jumper), 4x USB 3.0 (Shared with USB 3.2 Gen 2 Hub), 8 in / 8 out (Isolated), 1x USB Type-C (For OS Flash)
Storage	1x M.2 (M Key, 2242/2280, PCIex 4, Support NVMe)		
Expansion	1x M.2 (B Key, 3042/3052, USB 3.2 Gen1, Support 4G/5G) 1x M.2 (E Key, 2230, PCIe x1, USB 2.0, Support Wi-Fi/Bluetooth)		
Power	AT/ATX 9~36VDC, 3-pin Terminal Block	AT 12~24VDC, 3-pin Terminal Block	AT/ATX 12~24VDC, 3-pin Terminal Block
Operating Temperature	-25°C to 70°C	-20°C to 55°C (25W, NX Module) -20°C to 60°C (15W, Nano Module)	
Certification	CE, FCC Class B, UL	CE/FCC/UL	CE/FCC/UL/EMC Conformity with EN50155 & EN50121-3-2
Dimensions (WxDxH)	150 x 105 x 61 mm	192 x 140 x 58 mm	

NVIDIA JETSON ORIN INDUSTRIAL COMPUTER

JCO SERIES

JCO NVIDIA® JETSON ORIN™ SERIES

JCO-6000 SERIES
ROBUST AI EDGE COMPUTER

Model	JCO-6000-ORN-A	JCO-6000-ORN-B
	NVDIA® Jetson AGX Orin™ AI Computer with 8-core/12-core Arm® Cortex®-A78AE v8.2 64-bit CPU	
CPU Support	64G: 12-core Arm® Cortex®-A78AE v8.2 64-bit CPU (60W/275 TOPS) 32G: 8-core Arm® Cortex®-A78AE v8.2 64-bit CPU (40W/200 TOPS)	
System Memory	AGX Orin 32GB/64GB @ 3200 MHz on SOM 32GB LPDDR5 DRAM 64GB LPDDR5 DRAM	
Graphic Output	1x HDMI 2.0, 3840 x 2160 @ 60Hz	
LAN	1 x GbE LAN, 1x 10 GbE LAN	
PoE	By Optional PoE Power Module, Support up to 3x 4-port LAN Module	By Optional PoE Power Module, Support up to 3x 4-port LAN Module
I/O	2x RS-232/422/485, 2x CAN	2x RS-232/422/485 (Optional, internal), 2x CAN (Optional, internal)
	1x USB 3.2 Gen 2, 1x USB 2.0 (Flash) 1x USB 2.0, 1x USB Type C (Console) 8 in / 8 out (Isolated)	
GMSL Camera	GMSL 2 Camera Support by 2x Quad Port Mini Fakra, supporting 8x 1280x720 @ 30 FPS (Optional)	
Universal I/O Bracket	2x Universal I/O Bracket	4x Universal I/O Bracket
Storage	1x M.2 (M Key, 2242/2260/2280, PCIex 4, Support NVMe) 1x M.2 (B Key, 3042/3052,USB 3.2 Gen2, Support 4G/5G Module)	
Power	AT/ATX 9~48VDC, 3-pin Terminal Block	
Operating Temperature	-20°C to 60°C with passive cooling (at full CPU & GPU frequency with 0.6 m/s, non-throttling, 60W TDP mode)	
Certification	CE, FCC Class A, E-Mark, EMC Conformity with EN50155 & EN50121-3-2	
Dimensions (WxDxH)	270 x 190 x 95 mm	

INDUSTRIAL-GRADE SUPERCAPACITOR FOR REDUNDANT POWER

ECO-1000 EDGEBOOST ENERGYPACK

More info

- 8x/16x Industrial 370 Farads Supercapacitors
- Up to 200W Max. Power Output
- 1x COM, 1x USB for GUI Remote Management and Monitoring
- 2 IN / 2 OUT DIO
- -25°C to 55°C Wide Operating Temperature
- EN50155: EN50121-3-2, CE, FCC Class A, UL Certification
- 3x Smart Modes with Remote On/Off, Ignition Control, Delay Time
- 12V/24V Compatibility: Industrial PCs, Panel PCs, Displays

c UL us

Model	ECO-1000
Capacity	ECO-1000-8S: 8x 370 Farads Supercapacitors ECO-1000-16S: 16x 370 Farads Supercapacitors
Input Voltage	12 ~ 35 VDC
Input Connector	3-pin Terminal Block (V+, GND, IGN IN)
Output Voltage	Charge mode: DC IN Voltage bypass (DC OUT = DC IN) Discharge mode: 12 or 24V
Output Power	ECO-1000-8S: Max.100W output ECO-1000-16S: Max.200W output
Output Connector	3-pin Terminal Block (V+, GND, IGN Out)
I/O	1x RS-232, 1x USB Type A, 2x DI + 2x DO with isolation
Others	1x Remote Power On/Off 1x Smart Mode Switch, 1x Mode Reset Switch
Power Ignition	Power Ignition Management
Operating Temp	-25°C to 55°C
Certification	CE, FCC Class A, UL 62368-1 Ed. 3 EMC Conformity with EN50155, EN50121-3-2
Dimensions (WxDxH)	100 x 192 x 187.4 mm
Weight	1.8 kg ~ 2.6 kg
Mounting Options	Wall Mounting, DIN Rail Mounting (Optional)

Supercapacitor UPS System
Power Redundancy at the Rugged Edge

Power Backup | Safe Shutdown | Power Regulator

Connect ECO's GUI to an External System

Connect ECO's Graphical User Interface to an external computer through USB or COM ports for remote monitoring and setup.

LCM DisplayModule (Optional)

The LCM module provides a quick set up and monitoring for field operators at the deployment location.

Power Ignition Management

The power ignition management delays the system shutdown after engine shutoff for a pre-determined time interval.

This feature ensures that applications close properly, avoiding data loss or corruption.

8/16x
Up to 16x High-Density Industrial 370 Farads/SuperCAP

12/24V
Regulate Voltage Fluctuation

EN50155
Railway Certification for In-Vehicle Deployments

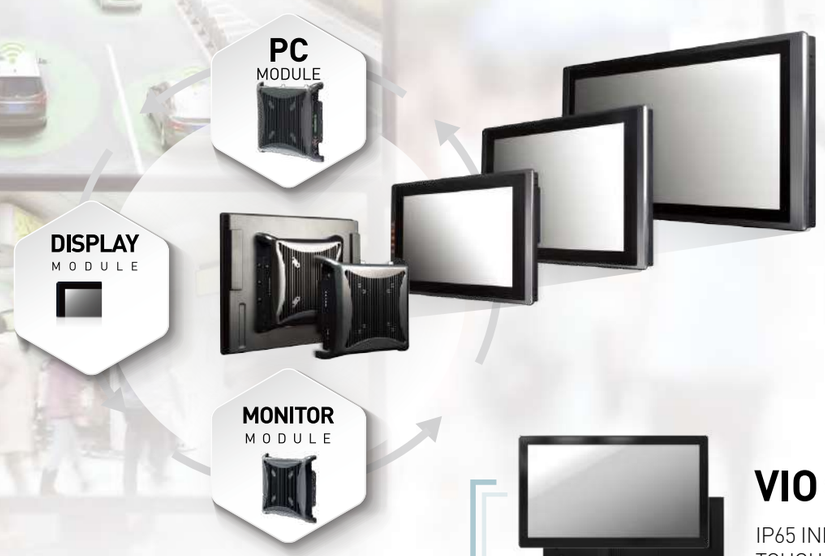
10Y
10 years longevity 500K Lifcycle

200W
Robust Max Power Output

GUI
GUI software for quick, easy setup

3x
Support 3 smart modes for various application deployments

INDUSTRIAL DISPLAY SYSTEMS



VIO SERIES

IP65 INDUSTRIAL
TOUCH PANEL PC AND
MONITOR

SIO SERIES

IP66/IP69K WASHDOWN
TOUCHSCREEN
COMPUTER

AIO SERIES

ALL IN ONE
TOUCH PANEL PC

HIO SERIES

CAPACITIVE
OPEN FRAME
TOUCH PANEL PC

C&T INDUSTRIAL DISPLAY SYSTEMS

PRODUCT FAMILY

PC/Monitor
Module

PC600-RPL Series
Raptor Lake PS
Alder Lake PS

PC100-EHL Series
Elkhart Lake

PC400 Series
Kabylake-U

PC100 Series
Bay Trail

MX200 Series
Monitor Module

IP66/IP69K
Panel PC
Stainless Steel

SIO-200 Series
Bay Trail

SIO-300-N97
Series
Alder Lake

WIO-W221C
Series
Kabylake-U

Panel PC

AIO Series
Alder Lake-N
Thin Frame

HIO Series
Alder Lake-N
Open Frame

VIO-200/PC600-RPL
Series
Raptor Lake PS
Alder Lake PS
Thin Frame

VIO-200/PC400 Series
Kabylake-U
Thin Frame

VIO-200/PC100-EHL
VIO-200/PC100 Series
Elkhart Lake
Bay Trail
Thin Frame

Display
Module

VIO-200 Series
Thin Frame

Touch
Monitor

VIO-200/MX200
Series
Thin Frame

VIO 4:3 SERIES

More info

The Display Modules VIO-100 and VIO-200 series are compatible with PC modules PC600-RPL, PC400, PC100-EHL, PC100-J1900 and monitor modules MX200 series for different display sizes and touchscreens. These modules allow to be used for configuring, upgrading and maintaining your Panel PC or touch monitor

VIO-100 SERIES

Standard Frame

Model	VIO-110
LCD Size	10.4"
Max. Resolution	800 x 600 (SVGA)
Brightness (cd/m2)	400
Contrast Ratio	700:1
LCD Color	16.2M
Life Cycle Time	70K Hours
Viewing Angle (H-V)	160 / 130
Internal Speaker	AMP 5W + 5W
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch
Operating Temperature	-10°C to 60°C

VIO-200 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 1024 (SXGA)	
Brightness (cd/m2)	600	350		
	1000 nits (Optional)			
Contrast Ratio	1000:1		800:1	1000:1
LCD Color	16.2M	16.7M		
Life Cycle Time	50K Hours			
Viewing Angle (H-V)	178 / 178	170 / 160	178 / 178	170 / 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

VIO 16:9 SERIES

More info

VIO-200 SERIES

Thin Frame

Model	VIO-W215	VIO-W221	VIO-W224
LCD Size	15.6"	21.5"	23.8"
Max. Resolution	1920 x 1080 (Full HD)		
Brightness (cd/m2)	500		450
	1000 nits (Optional)		
Contrast Ratio	1000:1		
LCD Color	16.7M		
Life Cycle Time	50K Hours	30K Hours	
Viewing Angle (H-V)	178 / 178		
Internal Speaker	AMP 10W + 10W		
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch		
Operating Temperature	-10°C to 60°C	-10°C to 50°C	

VIO-200-PC600-RPL SERIES

intel. Raptor Lake

Model	VIO-200-PC600-RPL	VIO-200-PC600-RPL-1E
	Thin Frame Industrial Panel PC based on Intel® 12th & 13th Processor	Thin Frame Industrial Panel PC based on Intel® 12th & 13th Processor 1x PCIe x4 Gen3
CPU Onboard	Intel® 12th/13th Gen. (ADL-PS /RPL-PS) Processor Core™	
Memory	1x DDR5 4800 MT/s SO-DIMM Max up to 16GB	
Graphic Output	1x DisplayPort, 1x HDMI , 1x Dual Channel 24 bit LVDS	
LAN	2x 2.5GbE i226 RJ45 (Support Wake-on-LAN and PXE)	
USB, Serial, & Digital I/O	3x USB 3.2 Gen 2 (10 Gbps),1x USB C 3.2 Gen 2, Up to 4x RS-232/422/485, 16x isolated digital I/O	
Storage	1x 2.5" SATA HDD Bay with RAID 0, 1 support, 1x M.2 M-key / NVMe PCIe x4 / 2242, 2260, 2280 2x M.2 B-key /PCIe x2 /USB / 2242, 3042, 3052	
Internal Expansion Slot	1x M.2 E-Key / PCIe x1 / USB 2.0 / 2230	
PCIe		1x PCIe x4 Gen3
Power	9-48 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"/21.5"/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

VIO-200/PC400 SERIES

More info

intel. Kabylake-U

Model	VIO-200/PC400	VIO-200/PC410
	Thin Frame Industrial Panel PC based on Intel® Kabylake-U processors	Thin Frame Industrial Panel PC based on Intel® Kabylake-U processors with 2x universal I/O bracket
CPU Onboard	Intel® 7th Gen. (Kabylake-U) Processor Core™ i5-7300U, Core™ i3-7100U	
Memory	1x 260-Pin DDR4 1866/2133MHz 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	-10 °C to 60 °C -10 °C to 50 °C (19"/21.5"/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

More info

intel. Elkhart Lake

Model	VIO-200/PC100-EHL	VIO-200/PC100-EHL-1E
	Thin Frame Industrial Panel PC based on Intel® Celeron® processors	
CPU Support	Intel® Celeron® J6413 Processor Quad core (1.5M Cache,1.8GHz up to 3.00 GHz)	
Memory	1x 260-Pin DDR4 2400/2667/3200MT/s SODIMM. Max. up to 32 GB	
Graphic Output	1x DisplayPort 1.2, 1x HDMI 2.0b (Optional)	
LAN	2x RJ45 (1 & 2.5 GbE)	
I/O	2x USB 3.2 Gen 2, 2x USB 2.0, 6x RS-232/422/485 (2x internal), 16x isolated digital I/O, 1x Mic-in, 1x Line-out	
Storage	1x Removable 2.5" SATA HDD Bay, 1x mSATA	
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		1x PCIe x4 (1-lanes)
Power	9-36 VDC, AT/ATX Select, 3-pin Terminal Block	
Operating Temperature	-10 °C to 60 °C, -10 °C to 50 °C (19"/21.5"/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	1x Universal I/O Bracket (By mini PCIe interface)

VIO-200/PC100 SERIES

More info

intel. Bay Trail

Model	VIO-200/PC100	VIO-200/PC110
	Thin Frame Industrial Panel PC based on Intel® Bay Trail processors	
CPU Onboard	Intel® Celeron® 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)	
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, Line-out / Mic-in Phone Jack	
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	
Operating Temperature	-10 °C to 60 °C, -10 °C to 50 °C (19"/21.5"/23.8" Panel PC only)	
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch	
Universal Expansion Slot	0	2

INDUSTRIAL TOUCH MONITOR

VIO-200/MX200 SERIES

More info

- 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

Model	VIO-200/MX200
	Thin Frame Industrial Touch Monitor
Touch Type	Resistive / Capacitive Touch
VGA	1x VGA Input
HDMI	1x HDMI Input
DisplayPort	1x DisplayPort Input
USB	1x USB 2.0 Input
COM Port	1x COM Port Input / Resistive
Audio	1x Audio Input
Power	9-48 VDC, AT/ATX Select, 3-pin Terminal Block
Operating Temperature	-10 °C to 60 °C -10 °C to 50 °C (19"/21.5"/23.8" Panel PC only)
LCD Size	**4:3** 12.1" / 15" / 17" / 19" **16:9** 15.6" / 21.5" / 23.8"

IP66/IP69K WASHDOWN TOUCHSCREEN COMPUTER WITH FULL SUS316

SIO-200 SERIES

More info

intel. Bay Trail Whiskey Lake

Model	SIO-215-J1900	SIO-W215-J1900	SIO-W221-8365UE	SIO-W224-8365UE
	Resistive / Capacitive Touch Stainless Steel Panel PC, Pressure Valve SUS316 VENT			
CPU Support	Intel® Celeron® Processor J1900, Quad Core, 2MB Cache, 2.0 GHz		Intel® Core™ i5-8365UE Processor 6M Cache, up to 4.10 GHz	
Memory	1x 204-pin DDR3L SO-DIMM, Max 8GB (Default 8 GB)		1x 260-Pin DDR4 2400MHz SO-DIMM slot, Max 32GB (Default 8 GB)	
LAN	2x LAN by M12 X-Code 8-pin			
I/O	4x USB 2.0 by M12 A-code 8-pin, 2x RS-232/422/485 by M12 A-Code 8-pin			
Storage	1x mSATA (Default 128 GB)			
Internal Expansion Slot	1x Full-size Mini PCIe			
Power	AC IN 110V~240V, M12 S-code 4-pin			
Operating Temperature	-20 °C to 55 °C		-20 °C to 50 °C	
LCD Size	15" (4:3) TFT XGA	15.6" (16:9) Full HD	21.5" (16:9) Full HD	23.8" (16:9) Full HD
Brightness (cd/m2)	300	450	350	450
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch			
IP Level	Full System IP66/IP69K			
Dimensions (WxHxD)	385 x 310 x 49.5 mm	425 x 276 x 49.5 mm	588.5 x 380 x 52.8 mm	623 x 417 x 54 mm
Weights	5.96 kg	7.39 kg	8.6 kg	11.7 kg
Mounting Options	VESA Mounting Holes 100 x 100mm Optional Yoke Mount, Panel Mount		VESA Mounting Holes 100 x 100mm or 200 x 100mm, Optional Yoke Mount, Panel Mount	

SIO-300-ADLN SERIES

intel. Alder Lake

Model	SIO-315-N97	SIO-W315-N97	SIO-W321-N97	SIO-W324-N97
	Resistive / Capacitive Touch Stainless Steel Panel PC, Pressure Valve SUS316 VENT			
CPU Support	Intel® Processor N97 6M Cache, up to 3.60 GHz		Intel® Processor N97 6M Cache or Intel® Core™ i3-N305 Processor 6M Cache	
Memory	DDR5 4800MT/s SO-DIMM, Max 16GB (Default 8 GB)			
LAN	2x LAN by M12 X-Code 8-pin			
I/O	2x USB 2.0 by M12 A-code 8-pin, 2x RS-232/422/485 by M12 A-Code 8-pin			
Storage	M.2 B Key NVMe SSD (Default 128 GB)			
Power	AC IN 110V~240V, M12 S-code 4-pin			
Operating Temperature	-20 °C to 50 °C			
LCD Size	15" (4:3) TFT XGA	15.6" (16:9) Full HD	21.5" (16:9) Full HD	23.8" (16:9) Full HD
Brightness (cd/m2)	300	450	350	450
Touch Type	Resistive 5-wire Touch / Projected Capacitive Touch			
IP Level	Full System IP66/IP69K			

IP66 WATERPROOF TOUCHSCREEN COMPUTER

WIO SERIES

More info

- 21.5" TFT FHD 16:9 LCD with Projected Capacitive Touch
- Support 7th Gen. Intel® 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
- 2x USB 3.2 Gen1 (5 Gbps, waterproof connector)
- 9 to 50 VDC wide range power input
- -10°C to 60°C extended operating temperature
- Full system IP66 compliant
- Two 10W internal speakers built-in
- Multi-language OSD built-in

intel. Kabylake-U

Model	WIO-W221C
	21.5" 16:9 Full HD Capacitive Touch All-In-One IP66 Panel PC
CPU Onboard	Intel® 7th 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	Resistive 5-wire Touch / Projected Capacitive Touch / 7H Surface Hardness

ALL IN ONE TOUCH PANEL PC

AIO SERIES

- 10.1" ~ 21.5" All IN One Touch Panel PC
- World Class Certifications for Safety and Reliability: CE/FCC/CB/UL/UKCA/IC
- Front IP65 Rating for protection against water and dust
- Scratch Resistant 7H Glass Hardness
- Versatile Display Outputs; HDMI and DP
- 9 to 36 VDC Wide Range Power Input
- Front Panel IP65 Rating

intel.

Model	AIO-W210-N97	AIO-W215-N97	AIO-W221-N97
	Capacitive Open Frame Touch Panel PC with Intel® Alder lake N97 Processor		
CPU Onboard	Intel® Alder lake N97 6M Cache, up to 3.60 GHz		
Memory	Default 8GB DDR5 4800MT/s SODIMM (up to 16GB)		
Graphic Output	HDMI / DP / LVDS /eDP		
LAN	2x 2.5GbE I225 LAN		
I/O	6x USB 2.0 by internal cable, 4x USB 3.2 Gen 2 2x RS-232/422/485 by internal cable 1x Audio out		
Storage	128G M.2 B Key NVMe SSD		
Expansion	M.2 E Key Support WiFi 6e (Optional)		
Power	9-36V DC, DC Jack 5.5mm/2.5mm, 60W (12V 5A, Default)		
Operating Temperature	-10°C to 50°C		
Certification	CE, FCC, CB, UL, UKCA, IC		
LCD Size	10.1" (16:10) WXGA	15.6" (16:9) FHD	21.5" (16:9) FHD
Brightness (cd/m2)	400 nits		500 nits
Projected Capacitive	7H / IK07		
Dimensions (W) x (H) x (D)	256 x 170 x 50 mm	400 x 249 x 50 mm	538 x 329 x 62 mm

CAPACITIVE OPEN FRAME TOUCH PANEL PC

HIO SERIES

- 10.1" ~ 21.5" Open Frame Touch Panel PC
- World Class Certifications for Safety and Reliability: CE/FCC
- Front IP65 Rating for protection against water and dust
- Scratch Resistant 7H Glass Hardness
- Versatile Display Outputs; HDMI and DP
- 9 to 36 VDC Wide Range Power Input
- Front Panel IP65 Rating

intel.

Model	HIO-W210-N97	HIO-W215-N97	HIO-W221-N97
	Capacitive Open Frame Touch Panel PC with Intel® Alder lake N97 Processor		
CPU Onboard	Intel® Alder lake N97 6M Cache, up to 3.60 GHz		
Memory	Default 8GB DDR5 4800MT/s SODIMM (up to 16GB)		
Graphic Output	HDMI / DP / LVDS /eDP		
LAN	2x 2.5GbE I225 LAN		
I/O	6x USB 2.0 by internal cable, 4x USB 3.2 Gen 2 2x RS-232/422/485 by internal cable 1x Audio out		
Storage	128G M.2 B Key SSD (Default)		
Expansion	M.2 E Key Support WiFi 6e (Optional)		
Power	9-36V DC, DC Jack 5.5mm/2.5mm, 60W(12V 5A) Adapter (Optional)		
Operating Temperature	-10°C to 50°C		
Certification	CE, FCC Class A		
LCD Size	10.1" (16:10) WXGA	15.6" (16:9) FHD	21.5" (16:9) FHD
Brightness (cd/m2)	400 nits		500 nits
Projected Capacitive	7H / IK07		
Dimensions (W) x (H) x (D)	252 x 166 x 39 mm	395 x 245 x 40 mm	533 x 325 x 46 mm

INDUSTRIAL BOARD SOLUTIONS

C&T's line of industrial motherboards and single board computers represent the standard of embedded computing as well as the future of data processing and I/O connectivity. From OEM /ODM enterprise computing designs to embedded single board computer applications, C&T provides reliability and longevity with standard off-the-shelf industrial grade motherboards for the most challenging embedded deployments.

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.

Industrial-Grade Materials

Tested and Validated

Long Product Lifecycle

Fast Delivery Time

INDUSTRIAL MOTHERBOARDS & SINGLE BOARD COMPUTERS

intel®

3.5" ADL-N

SBC with Intel® Alder Lake N Series

3.5" Meteor Lake-N

SBC with Intel® Alder Lake N Series

2.5" ADL-N

SBC with Intel® Alder Lake N Series

Mini-ITX Meteor Lake PS

Industrial Motherboard with Intel® Meteor Lake PS

BOARDS SERIES More info

C&T 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.

1.8" FEMTO ITX SERIES

Model	CT-NR101
	AMD Ryzen™ Embedded R1606G with Radeon™ Vega 3 Graphics - Highest 2C Performance
Memory	DDR4-2400 signal channel Memory down, up to 8GB Default 4GB
BIOS	AMI SPI 64Mbit
TPM	TPM 2.0
Display Interface	2x Micro HDMI
Rear I/O	1x RJ45, 2x Micro HDMI, 1x Type C USB 3.1 Gen 2
Internal I/O	1x Front Panel, 1x 8-bit GPIO (4-in/4-out)
Power	2-pin Terminal Block
Operating Temperature	0°C to 60°C
Dimension	84 x 55 mm

2.5" PICO ITX SERIES

Model	CT-PBT01
	Intel® Celeron® Processor J1900 (2.0GHz/4C/10W)
Memory	1x 204-Pin DDR3L 1066/1333MHz SO-DIMM
BIOS	AMI 64Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
Display Interface	1x HDMI, 1x LVDS
Rear IO	1x LVDS & 1x LVDS backlight, 1x RS-232/422/485, 1x RS-232, 2x USB 2.0
Internal I/O	1x LVDS, 1x LVDS backlight, 1x RS-232/422/485, 1x RS-232, 2x USB 2.0, 1x SATA 3.0Gb/s, 1x Front panel audio, 1x 8-bit GPIO (4-in/4-out), 1x Front panel, 1x SMBus
Power	12V DC Input, 1x 2-pin power connector
Operating Temperature	-10°C to 70°C
Dimension	100 x 72 mm

INDUSTRIAL BOARDS

BOARDS SERIES More info

3.5" SBC SERIES

Model	CT-DWL01	CT-DR101	CT-DR101
	Support 8th Gen. Intel® WL-UE Processor (15 TDP) Int el® Core™ i7-8665UE, i5-8365UE, i3-8145UE or Intel® Celeron® Processor 4305UE	AMD Ryzen™ Embedded R1000/V1000 Series Processor	Intel® 12th Gen Alder Lake-N N97/i3-N305 Processors
Memory	1x 260-Pin DDR4 2400MHz SO-DIMM slot. Max. up to 32GB	DDR4-2400 SO-DIMM slot up to 32GB, supports ECC	1x 262-Pin DDR5 4800MHz SO-DIMM slot (262-pin), Max 16GB
BIOS	AMI uEFI 256MB SPI flash	AMI uEFI 256Mbit SPI flash	AMI uEFI 256MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset	Software Programmable Supports 1~255 sec. System Reset	Software Programmable Supports 1~256 sec. System Reset
TPM	TPM 2.0 Through Infineon® SLB9665TT2.0 or Equivalent	TPM 2.0	
Display Interface	1x DisplayPort, 1x LVDS, 1x HDMI, 1x EDP internal connector (optional)	1x DisplayPort, 1x LVDS, 1x HDMI	
Rear IO	4x USB 3.2 Gen 2, 2x RJ45 GbE LAN, 1x DisplayPort, 1x HDMI	2x RJ45, 2x USB 3.2 Gen2 (10Gbps), 2x DisplayPort, 1x HDMI	3x RJ45 2x USB 3.2 Gen2 (10Gbps), 2x USB 3.2 Gen 1 (5Gbps) 1x 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 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	1x GPIO header, 2x RS-232-/422/485 Internal 2.0PH headers, 1x SATA, 1x Audio front panel header, 1x LVDS connector, 1x eDP connector, 6x USB 2.0 Internal 2.0 Headers
Power	AT/ ATX 12V DC Input, 4-pin CPU P4 connector	AT/ ATX 12V DC Input, 4-pin CPU P4 connector	9~36V DC Input
Operating Temperature	-40°C to 70°C	-40°C to 75°C	-10°C to 60°C
Dimension	146 x 102 mm		

BOARDS SERIES

More info

C&T 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.

MINI ITX SERIES

Model	CT-XCL01
	LGA 1151 Socket Support 9th Gen. Intel® Core™ Desktop Processor, Q370 Chipset
Memory	2x SO-DIMM, DDR4, 2133/2400/2666 (depend on CPU) MT/s, Max 32 GB
BIOS	AMI® UEFI BIOS 256Mb Flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0 Through Infineon® SLB9665TT2.0 or Equivalent (Optional)
Display Interface	1x DVI-D, 1x LVDS, 1x HDMI 1.4, 1x DisplayPort 1.2
Rear IO	1x RS-232, 2x RJ45, 4x USB 3.1 Gen 2, 1x USB-C (optional), 1x Line-in , Line-out, Mic-in
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
Power	ATX 12V, 24 Pin ATX Power Connector
Operating Temperature	0°C to 60°C
Dimension	170 x 170 mm

Model	CT-XSL01
	LGA 1151 socket supporting 6th Gen Intel® Core™ i3/i5/i7 Desktop Processor, Intel® Core™ i7-6700TE / i5-6500TE / i3-6100TE
Memory	2x 260-Pin DDR4 1866/2133MHz SO-DIMM
BIOS	AMI uEFI 128MB SPI flash
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0 supported (optional)
Display Interface	1x DVI-D, 1x 2-ch 24-bit LVDS, 1x DisplayPort
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	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 power, 2x12-pin and 2x2-pin power connector
Operating Temperature	0°C to 60°C
Dimension	170 x 170 mm

INDUSTRIAL BOARDS

BOARDS SERIES

More info

MICRO ATX SERIES

NEW

Model	CT-MSL01	CT-MCL01	CT-MRL01
	LGA 1151 socket supporting 6th Gen Intel® Core™ i3/i5/i7 Desktop Processor, Intel® Core™ i7-6700TE / i5-6500TE / i3-6100TE	Support 8th/9th Gen Intel® CFL-R S Processor (LGA 1151, 95W/65W/35W TDP), Intel® Core™ i7-9700E / i5-9500E / i3-9100E or Intel® Pentium® G5400T, G5400	Support 12th/13th/14th Gen Intel® Core™ i9/i7/i5/i3 Alder lake-S, Raptor Lake-S Processor
Memory	4x 288-Pin DDR4 1866/2133MHz DIMM	4x 288-Pin DDR4 2133/2400/2666MHz DIMM	4x DDR4 2133/2400/2666MHz DIMM. 128 GB Max
BIOS	AMI uEFI 128MB SPI flash	AMI uEFI 256MB SPI flash	
TPM	TPM 2.0 supported (optional)		TPM 2.0
Display Interface	1x VGA, 1x DVI-D, 1x DisplayPort	1x VGA, 1x DVI-D, 2x DisplayPort (DP 1.2)	Quad 4K Displays through 4x DP++
Rear IO	1x VGA, 1x DVI-D, 1x DP, 1x HDMI, 2x RS-232/422/485, 4x USB 3.2 Gen1 (5 Gbps), 2x RJ45 GbE LAN, 1x Line-in, 1x Line-out, 1x Mic-in	1x VGA, 1x DVI-D, 2x DP, 2x RS-232/422/485, 4x USB 3.2 Gen 2, 2x RJ45, 1x Line-in, 1x Line-out, 1x Mic-in	4x DP++, 6x USB 3.1 Gen 2, 2x RJ45, 1x Line-in, 1x Line-out, 1x Mic-in, 1x USB 3.2 Gen 2x2 Type C
Internal I/O	4x RS-232, 2x USB 3.2 Gen1 (5 Gbps), 6x USB 2.0, 4 x SATA 6.0Gb/s, 1x Front panel audio, 1x 8-bit GPIO (4-in/4-out), 1x PS/2 KB/MS, 1x LPC, 1x Front panel, 1x CPU fan, 2x System fan	4x RS-232, 1x USB 3.2 Gen 1, 7x USB 2.0, 6 x SATA 6.0Gb/s, 1x Front panel audio, 1x 8-bit DIO (4-in/4-out), 1x SPI header, 1x LPC, 1x Front panel, 1x CPU fan, 2x System fan	6x RS-232, 2x USB 3.0 Gen 1, 4x USB 2.0, 4 x SATA Gen 3, 1x Front panel audio, 1x 8-bit DIO (4-in/4-out), 1x SPI header, 1x Front panel, 1x CPU fan, 2x System fan
Power	ATX power, 2x12-pin and 2x2-pin power connector		ATX Power, 2x12-pin and 2x2-pin power connector
Operating Temperature	0°C to 60°C		
Dimension	244 x 244 mm		

iCubes Industrial

Icubes Tech Limited

Unit 1, CBC Slough, Bristol Way, Slough , Berkshire ,SL1 3TD United Kingdom

Phone: 01753 552222

Email: sales@icubes.co.uk

www. icubes.co.uk