Innovate
Edge
Intelligence

Industrial Embedded Systems for **Smart Factory**

Engineered for Reliability. Optimized for Industrial Performance.

Power your next generation of industrial automation with IEI's latest TANK, DRPC, MCS, and SWBOX Series industrial computers. Designed for rapid deployment and long-term reliability, these platforms deliver flexible performance and help you optimize total cost of ownership.

Through IEI's configure-to-order (CTO) service, you can fine-tune OS, memory, and storage configurations to match your application needs—enabling faster and more efficient system development (integration).

intel

www.ieiworld.com

Master Your Edge AI Operations

Seamless Integration.
Scalable Success at the Edge.

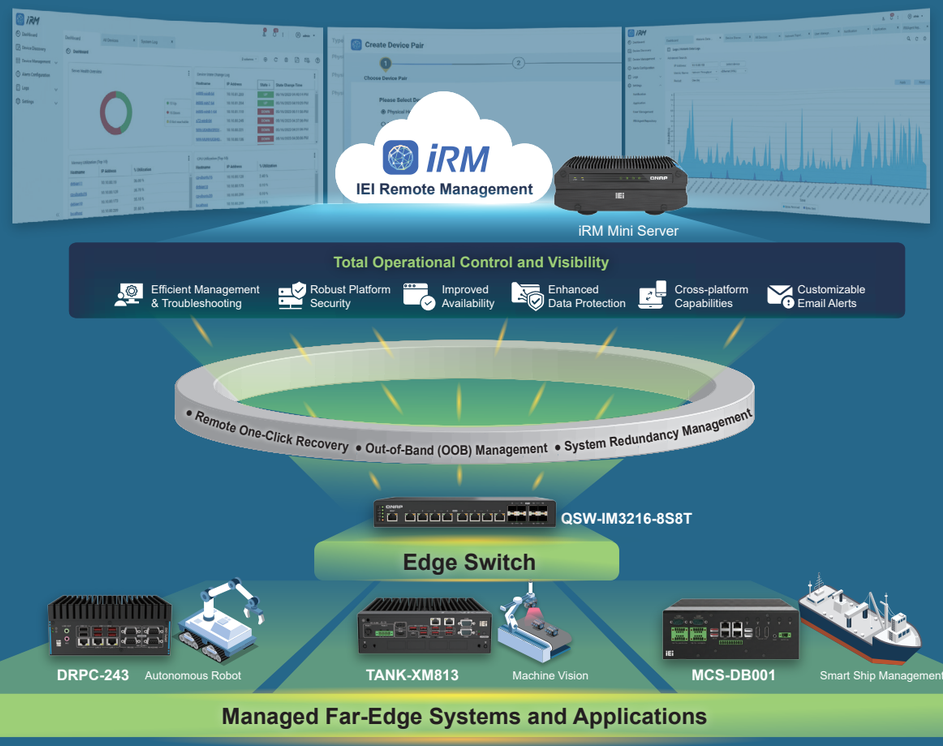
As Edge AI adoption accelerates across factories, transportation, and smart infrastructure, organizations need a reliable way to manage distributed edge systems at scale. Edge AI delivers real-time intelligence, improves operational precision, and reduces latency by processing data closer to its source.

As deployments grow, challenges such as fragmented device management, operational risk, and rising cybersecurity requirements become increasingly complex.

IEI iRM (IEI Remote Management) is a centralized, secure platform designed for large-scale edge environments. Through a single web-based console and the iRM mini server, administrators can monitor system health, perform remote maintenance, and deploy updates across hundreds of edge devices—without disrupting operations.

With IEI iRM, organizations achieve full visibility, operational continuity, and simplified lifecycle management—enabling resilient, scalable Edge AI infrastructures.

IEI Remote Management Platform (iRM) Secures Your Industrial Edge Deployment



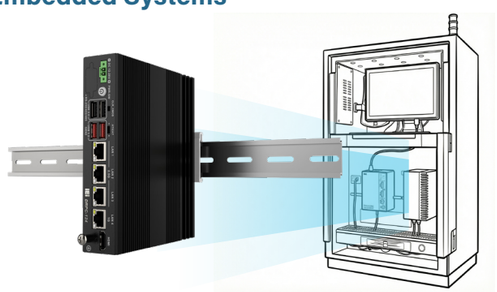
Comprehensive Offerings

High-Performance Embedded Systems

TANK-XM81x series

- Scalable performance across Intel® Core™ Ultra, AMD Ryzen™, and Intel® Core™ platforms
- Enables multi-function expansion through a flexible PCIe/PCI chassis design

Fanless DIN-Rail Embedded Systems



DRPC series

- Spanning Intel® Core™ Ultra, 13th/12th Gen Intel® Core™, and Intel® Processor N platforms
- Designed for DIN-rail mounting, delivering stable, continuous operation in space-constrained industrial environments

Marine-Grade Embedded Systems

MCS series

- Powered by 13th Gen Intel® Core™ and Intel® Celeron® processors, supporting dual DP. 4K displays
- Complies with IEC 60945, IACS E10 and IEC 61162-1/2 standards, with four NMEA 0183 interfaces

IP69K Stainless-Steel Embedded Systems

SWBOX series

- Intel Atom® x7000RE series processors
- M12 waterproof connectors, fiber LAN support, 2.0 kV isolated COM ports

DC UPS Power Backup Systems

RHEA and AUPS2 series

- RHEA series – instant passthrough protection with supercapacitor-based uninterruptible power protection
- AUPS2 Series – long-duration backup power

Unleash Industrial Intelligence

for the Future of Scalable Edge AI

In modern smart factories, data surges in milliseconds and AI workloads evolve just as fast. The IEI TANK-XM series delivers a scalable, high-performance foundation for industrial edge AI. Supporting Intel® Core™ Ultra processors with AI Boost (NPU), 12th–14th Gen Intel® Core™ processors, and AMD Ryzen™ 7000/8000 series processors, it removes processing bottlenecks and enables efficient hybrid AI acceleration.

Unmatched Modularity with eChassis

A unique modular architecture that allows for flexible I/O, storage, and performance acceleration, reducing lead times and future-proofing your investment.

Industrial-Grade Hardened Hardware

Fanless design, wide operating temperature (-20°Cto 60°C), wide-range 12V-28V DC power input, and MIL-STD-810G compliance for shock and vibration. Features Intel Platform Trust Technology (PTT).

Desktop-Class Performance at the Edge

Support for up to 65W TDP desktop processors from Intel and AMD, delivering significant performance gains for demanding single and multi-threaded applications.

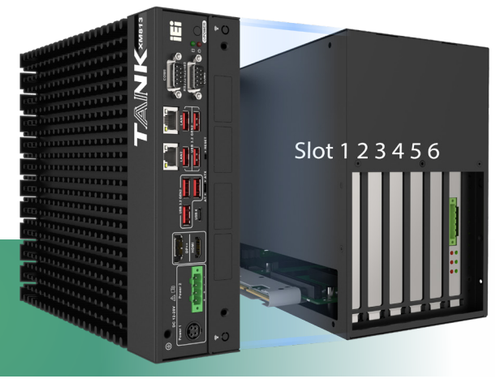
TANK-XM81 Series

	TANK-XM813	TANK-XM812	TANK-XM811-D5
Processor	Intel® Core™ Ultra 9 / 7 / 5 processors (Series 2)	AMD Ryzen™ 7000 and 8000 Series processors	12th, 13th, and 14th Gen Intel® Core™ processors
Memory	2 x DDR5 5600 MHz SO-DIMM, 16 GB pre-installed (up to 96 GB)	2 x DDR5 5200 MHz SO-DIMM, 8 GB pre-installed (up to 96 GB)	2 x DDR5 5200 MHz SO-DIMM, 8 GB pre-installed (up to 64 GB)
Storage	2 x 2.5" SATA 6 Gb/s HDD/SSD bays (RAID 0/1 support)	2 x 2.5" SATA 6 Gb/s HDD/SSD bays (RAID 0/1 support)	2 x 2.5" SATA 6 Gb/s HDD/SSD bay
Display Interface	1 x DP++ 1 x HDMI® 1 x USB Type-C® port (DisplayPort + USB 3.2 Gen 2x2)	1 x DP++ 1 x HDMI® 2 x USB Type-C® port (DisplayPort + USB 3.2 Gen 2x2)	1 x DP++ 1 x HDMI®
Ethernet (LAN)	2 x 2.5 GbE	2 x 2.5GbE	2 x 2.5GbE
USB 3.2 Gen 2 Type-A ports (10 Gb/s)	7	6	8
COM Ports	2 x RS-232/422/485 ports, 4 x RS-232 ports		
Expansion Slots	Modular eChassis 1 x M.2 2280 M-key slot (PCIe® Gen4 x4) 1 x M.2 2230 A-key slot		
Operating Temperature	-20°C to 60°C (CPU TDP 35 W & SSD) -20°C to 50°C (CPU TDP 65 W & SSD)		

Detailed specifications are available in the product datasheet.

TANK-XM813 Series

Scalable Performance, Unique Modular Design for Flexible, Seamless Expansion



Flexible Expansion Without Redesign

With optional 2-, 4-, or 6-slot backplanes (eBP) and expansion chassis (eChassis), the system can easily adapt to new interfaces or AI workloads without redesigning the entire platform.

	eChassis	eBP	Slot 2	Slot 3	Slot 3	Slot 4	Slot 5	Slot 6
A	TXC-XM81-3S	TXCBP-XM81-2A	PCIe x16	-	PCIe x4	-	-	-
B	TXC-XM81-3S	TXCBP-XM81-2B	PCIe x16(x8 signal)	-	PCIe x16(x8 signal)	-	-	-
C	TXC-XM81-4S	TXCBP-XM81-4A	PCIe x16	PCIe x1	PCIe x4	PCIe x4	-	-
D	TXC-XM81-4S	TXCBP-XM81-4B	PCIe x16(x8 signal)	PCIe x4	PCIe x16(x8 signal)	PCIe x4	-	-
E	TXC-XM81-4S	TXCBP-XM81-4C	PCIe x16	PCIe x4	PCI	PCI	-	-
F	TXC-XM81-G1	TXCBP-XM81-4A	PCIe x16	PCIe x1	PCIe x4	PCIe x4	-	-
G	TXC-XM81-G2	TXCBP-XM81-G2	PCIe x16 (x8 signal)	-	PCIe x16(x8 signal)	-	PCIe x4	PCIe x4

Intel® Core™ Ultra

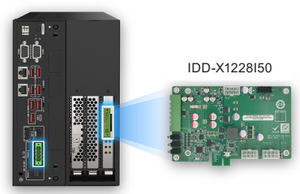
Intel® Core™ Ultra with AI Boost (NPU) and Intel® Arc™ graphics delivers powerful multi-core performance and efficient AI processing, with support for up to 96 GB DDR5 5600 MHz memory.

Expandable GPU Performance

Through the TXC-XM81-G1 and TXC-XM81-G2 eChassis, the system supports full-length, triple-slot GPU accelerator cards up to 380 W.

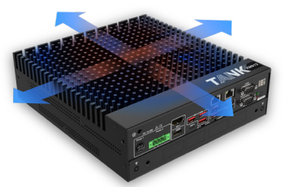
Integrated PoE+ Solution

Optional 8-port 2.5GbE PoE+ (IEEE 802.3at) modules (GPOE-XM81-8P) provide 30 W power per port.



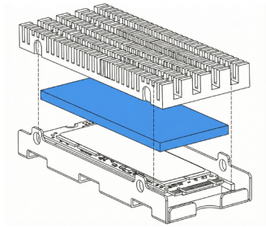
Dual Power Input Architecture

With the integrated IEI IDD-X1228I50-R10 power board, the system delivers stable and dedicated power to both the main unit and high-performance add-on cards requiring more than 75 W.



-20°C to 60°C Fanless System

A reinforced fanless cooling structure with a die-cast aluminum chassis and multi-layer heatsink efficiently dissipates heat from Intel® Core™ Ultra processors to the chassis surface.



NVMe SSD Thermal Stability

The TANK-XM813 employs a dedicated M.2 thermal solution to guarantee sustained reliability in demanding environments up to 60°C.

Fanless DIN-Rail

Scalable Performance

Fanless DIN-Rail industrial computers are designed to fit directly into standard electrical cabinets, making them ideal for space-constrained control rooms. Their snap-on rail mounting simplifies installation, cable routing, and maintenance, while the fanless, rugged design withstands vibration, dust, and extreme temperatures—perfect for demanding Industrial Automation and Control Systems (IACS), transportation, and energy environments.

Fanless, Rugged Design

Extruded aluminum alloy construction and passive cooling eliminate failure points and ensure reliable operation.

Wide Temperature Range

Engineered to operate reliably in harsh environments, from -20°C to 60°C (model dependent).

DIN-Rail Mountable

Designed for easy and secure integration into standard industrial control cabinets and enclosures.

DRPC Series

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Ultra-Slim

	DRPC-243-MTL	DRPC-242-RPLH	DRPC-150-TWL	DRPC-125-TWL
Processor	Intel® Core™ Ultra 7 and 5 processors	13th and 12th Gen Intel® Core™ i7, i5, and i3 processors	Intel® Processor N97 and Intel® Processor N150	Intel® Processor N97 and Intel® Processor N150
Memory	2 x DDR5 5600 MHz SO-DIMM, up to 96 GB	2 x DDR5 5600 MHz SO-DIMM, up to 96 GB	1 x DDR5 5200 MHz SO-DIMM	Onboard 8 GB LPDDR5 memory
Display Interface	1 x lockable HDMI™ 1.4b (up to 4096 × 2160 @ 30 Hz) 1 x DP 1.4b (up to 4096 × 2160 @ 60 Hz) 1 x USB4	1 x lockable HDMI™ 1.4b (up to 4096 × 2160 @ 30 Hz) 1 x DP 1.4b (up to 4096 × 2160 @ 60 Hz)	2 x HDMI™ (up to 4K @ 60 Hz)	1 x HDMI™ (up to 4K @ 60 Hz)
Ethernet (LAN)	3 x 2.5GbE	3 x 2.5GbE	2 x 2.5GbE	4 x 2.5GbE
COM Ports	2 x RS-232 2 x RS-422/485 (2.5 kV isolation)	2 x RS-232 2 x RS-422/485 (2.5 kV isolation)	4 x RS-232/422/485	1 x RS-232/422/485 (optional)
USB	4 x USB 3.2 Gen 2 2 x USB 2.0 1 x USB4 (USB + Display)	2 x USB 3.2 Gen 2 4 x USB 2.0	4 x USB 3.2 Gen 2	4 x USB 3.2 Gen 2
CAN bus	N/A	N/A	2 x isolated CAN bus ports	N/A
PCIe Expansion	PCIe® Gen4 Modular Expansion	PCIe® Gen4 Modular Expansion	N/A	N/A
M.2	1 x M.2 2230 E-key (PCIe® Gen3 x1 / USB 2.0) 1 x M.2 3042/3052 B-key (PCIe® Gen3 x1 / USB 3.2 Gen 2 / USB 2.0) with SIM card slot 1 x M.2 2280 M-key (PCIe® Gen4 x4)		1 x M.2 2230 E-key (PCIe® Gen3 x1 / USB 2.0) 1 x M.2 2280 M-key (PCIe® Gen3 x2)	1 x M.2 2242/2280 B-key (SATA) 1 x M.2 2280 M-key (PCIe® Gen3 x2)
Operating Temperature	-20°C ~ 60°C	-20°C ~ 60°C	-20°C ~ 60°C	-10°C ~ 50°C

Detailed specifications are available in the product datasheet.

DRPC-243-MTL Series

Scalable Performance, Unique Modular Design for Flexible, Seamless Expansion

Next-Generation Performance

Intel® Core™ Ultra with AI Boost (NPU) and Intel® Arc™ graphics, supporting up to 96 GB DDR5 5600 MHz memory for high-performance and efficient AI workloads.

Expandable GPU Performance

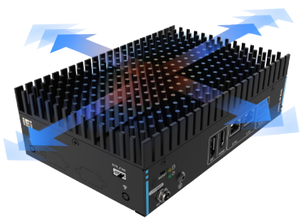
By adding the optional TXC-DRPC-242-1S second-layer expansion kit, you can install a variety of PCIe x4 add-on cards.

Dual Storage Options

Supports both a 2.5-inch SSD and an M.2 2280 NVMe PCIe Gen4 x4 SSD, offering flexible dual-storage options with high data throughput for demanding edge applications.

Optional Active Cooling

For computing-intensive use, an optional external fan provides active cooling to maintain performance in high temperatures while keeping the system easy to clean and protected from dust.



-20°C to 60°C Fanless Design

An optimized thermal design with a pin-fin heatsink improves improves multi-directional heat dissipation heat conduction, reduces airflow impedance, and delivers superior heat dissipation in a fanless system.

Seamless Wireless Connectivity

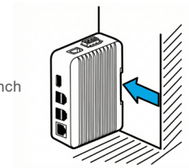
Designed for remote and mobile edge deployments, supporting 5G/4G via an M.2 B-key slot with onboard SIM slot and module Wi-Fi/Bluetooth via an M.2 A-key slot.

Why Choose DIN-Rail Industrial Computers?

With their unique design, they deliver outstanding space efficiency, installation flexibility, thermal performance, and maintenance convenience in industrial environments, making them the preferred choice over traditional mini industrial PCs.

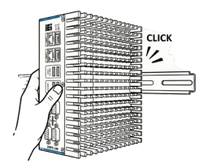
Space & Design

Smart layout that maximizes every inch of cabinet space.



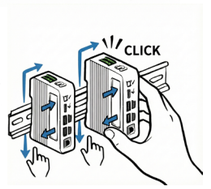
Maintenance & Efficiency

Simplified service procedures that maximize system uptime.



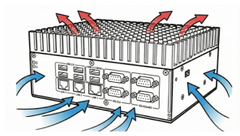
Installation & Expansion

Standardized DIN-rail design enables fast deployment and flexible expansion.



Cooling & Performance

Optimized airflow ensures stable operation even in extreme environments.



Engineered for the Sea

Trusted for the Mission

The smart ship industry navigates critical challenges: digital transformation challenges, escalating cybersecurity risks, and complex maintenance needs. To overcome these, IEI delivers a centralized computing platform that unifies navigation and control-room data. This solution enables edge computing and predictive maintenance, ensuring seamless compliance with rigorous international maritime standards like IEC 60945 and IACS.

IP69K Stainless Durability

for the Toughest Environments

Food processing and cold-chain environments subject edge systems to frequent high-pressure washdown, strict hygiene standards, extreme temperature changes, and corrosive cleaning agents—conditions that typically cause water ingress, corrosion, and downtime in conventional industrial PCs. The IP69K-rated SWBOX-ASL addresses these challenges with a stainless-steel enclosure, sealed M12 I/O, and a wide operating temperature range of −40°C to 70°C, delivering reliable, low-maintenance edge computing for demanding hygiene-critical applications.

MCS Series

13th Gen Intel® Core™ i3/i5/i7 processors

Hybrid architecture that intelligently allocates workloads: P-cores handle AI inference, while E-cores manage background tasks to keep the system stable under heavy loads.

	MCS-DB001
Processor	Intel® Celeron® 7305E / Intel® Core™ i3-1315URE / i5-1345URE / i7-1365URE
Memory	2 x DDR5 5600 SO-DIMM
Storage	Hot-swappable 2.5" SSD bays/ M.2 2280 socket (for PCIe 4.0 NVMe / SATA SSD)
Ethernet (LAN)	4 × 2.5GbE LAN ports
USB	4 x USB3.0 / 2 x USB2.0
Serial Ports	4 × NMEA 0183 (RS-422/485) serial ports 2 × DB9 (RS-232/422/485)
DIO	8 x isolated DIO
Expansion Slots	1 × M.2 M-Key 2242/2280 (PCIe 4.0 ×4) NVMe (256GB SSD pre-installed) 1 × M.2 E-Key 2230 (PCIe 3.0 ×1 / USB 2.0) (Wi-Fi/Bluetooth) 1 × M.2 B-Key 3052 (USB 3.0) (Cellular) 1 × Mini PCIe (USB 2.0) (GNSS) 5 × SMA-type antenna holes
Power	AT/ATX power mode Power button 9–36V DC-IN (2-pin terminal block) Remote power on/off (2-pin terminal block)
Certification	CE / FCC / IEC 60945 / IEC 61162-1/-2 / IACS E10
Operating Temperature	-20°C ~ 60°C

Detailed specifications are available in the product datasheet.

Dual DP ports support up to two independent 4K displays

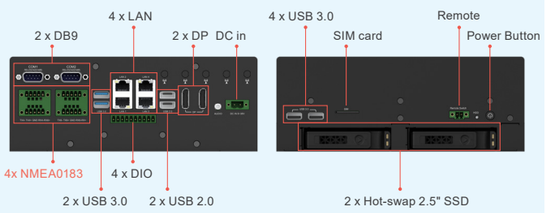
Two independent displays can be driven simultaneously through the onboard DP outputs, providing the flexibility needed for multi-monitor bridge-room applications.

2 x Hot-swap 2.5” SSD drive bays

The system features 2 × accessible 2.5" SSD drive bays that support hot-swappable replacement, enabling maintenance without system downtime and emergency access.

IEC 61162– Certified Marine Communication

Supports NMEA 0183 communication compliant with IEC 61162-1 / IEC 61162-2, enabling seamless integration with GPS, AIS, gyro compass, and other marine navigation systems.



SWBOX Series

The Perfect Balance of Efficiency and Performance

Powered by Intel Atom® x7433RE and x7835RE processors with 8GB DDR5 memory pre-installed, the platform integrates Intel® Deep Learning Boost (Intel® DL Boost) to deliver efficient, low-power AI acceleration for industrial edge applications.

Flexible Dual Storage Architecture

Provides a combination of high-speed and large-capacity storage, the system ensures fast response times and ample data space.

EMI-Immune Fiber LAN

Provides long-distance, high-speed data transmission that is immune to electromagnetic interference, making it an ideal choice for large factory areas or outdoor applications. (Optional)

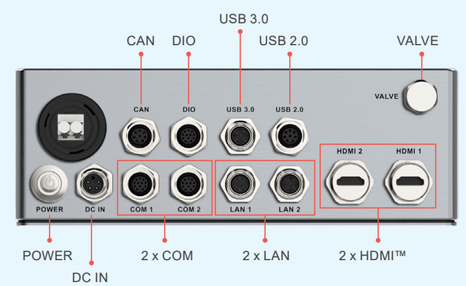
2.0 kV Isolation Protection

The CAN Bus and COM ports feature an isolation design that effectively protects the system from damage caused by voltage surges and ground loops, enhancing system stability.

	SWBOX-ASL
Processor	Intel® Atom® x7433RE and Intel® Atom® x7835RE
Memory	1 × SO-DIMM DDR5 5600 (8GB pre-installed), up to 16GB
Storage	1 × 2.5" SATA 6Gb/s HDD/SSD bay
Expansion Slots	1 × M.2 2280 M-key (PCIe Gen3 x2) 1 × M.2 2230 A-key (USB + PCIe Gen3 x1 / USB 2.0) 1 × M.2 3042/3052 B-key (PCIe Gen3 x1 / USB 2.0) 1 × Onboard SIM card socket (for M.2 B-key)
Ethernet	2 × Intel® I226IT 2.5GbE LAN via M12 connector 1 × 1G waterproof fiber LAN (optional)
Display	2 × HDMI™ 1.4b
USB	1 × USB 3.2 Gen1 via M12 connector (8-pin, X-code, female) 2 × USB 2.0 via M12 connector (8-pin, A-code, female)
COM	2 × RS-232/422/485 with 2.0 kV isolation via M12 connector
CAN	2 × CAN bus with 2.0 kV isolation via M12 connector
Ingress Protection	IP69K
Power	10–28V DC via M12 connector (5-pin, A-code, male)
Operating Temperature	-40°C ~ 70°C (SSD)

Detailed specifications are available in the product datasheet.

Ruggedized M12 Waterproof Connectors for Seamless and Reliable IIoT Integration



Sustainable DC UPS Backup Power at the Industrial Edge

As industrial workloads move from centralized data centers to distributed edge nodes, mission-critical systems must keep running even when DC power is unstable. IEI's RHEA supercapacitor UPS modules and AUPS2 lithium-ion UPS systems are purpose-built for industrial edge computers, providing ride-through protection for short power interruptions as well as extended backup time at 12–24 VDC.

Common Power Challenges at the Industrial Edge

Sudden System Shutdown

Leads to production interruptions and costly downtime.

Data Loss and Corruption

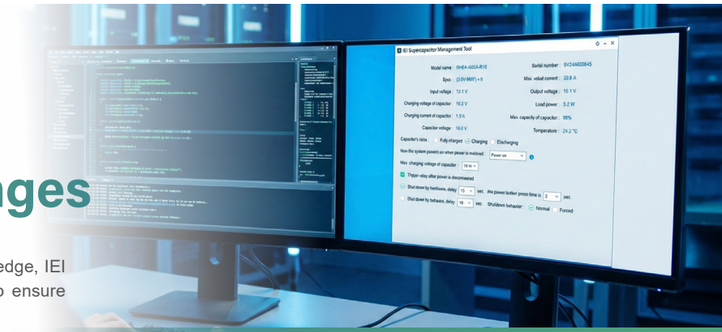
Critical operational data lost during writing, affecting quality control and traceability.

Unplanned Maintenance

Frequent power issues increase equipment failure rates, leading to higher maintenance costs.

IEI Dual Technology Solutions to Tackle Edge Power Challenges

To address these power-related challenges at the industrial edge, IEI delivers two complementary DC UPS solutions designed to ensure continuous operation under unstable DC power conditions.



IEI Supercapacitor Management Tool

USB-based monitoring with safe automatic shutdown and optimizes service life through temperature-aware power management.

A. RHEA Series

Durable Supercapacitor Backup for Harsh Environments

Built for sudden power loss in harsh industrial environments, this maintenance-free solution supports −40°C to 60°C operation, offers over 10 years of service life and 500,000 charge–discharge cycles, and uses the Management Tool for real-time monitoring and automatic soft shutdown to protect data integrity.

- OVP/OCP Power Protection
- Up to 10+ years of maintenance-free service
- Reliably operates in harsh environmetns from -40°C to 60°C

B. AUPS2 Series

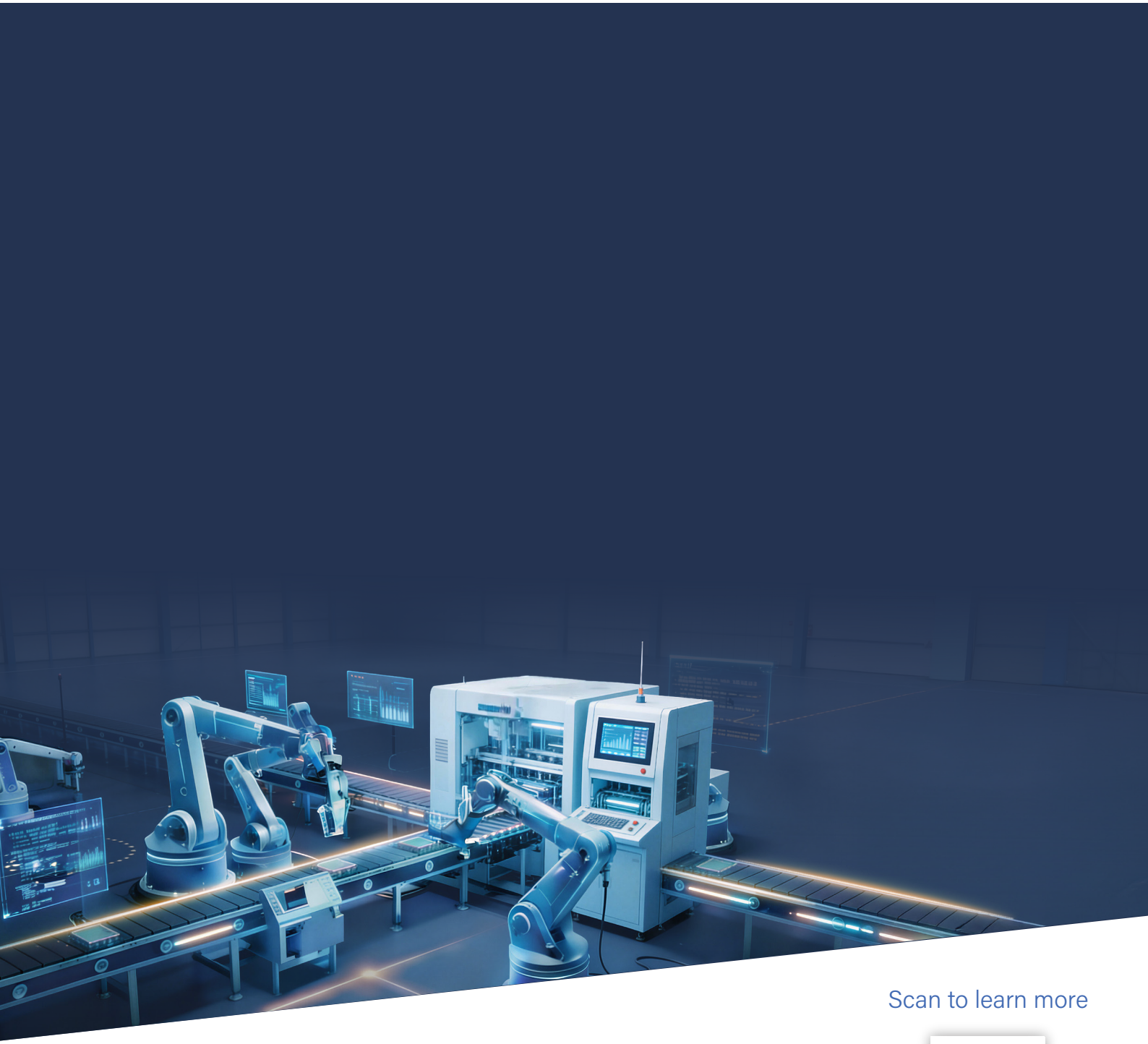
Extended Backup Runtime

Provides stable backup power during longer power outages, ensuring sufficient time to complete critical tasks, save data, and safely shut down.

- Long Backup Time
- High Capacity
- Compact Size

	RHEA-E1260A	RHEA-I420A	RHEA-I512A	RHEA-I660A	AUPS2-A20	AUPS2-B20
Battery Type	Supercapacitor	Supercapacitor	Supercapacitor	Supercapacitor	Lithium-ion batteries	
Capacity	12 × 600 F / 3 V supercapacitors	4 × 200 F / 3 V supercapacitors	5 × 120 F / 3 V supercapacitors	6 × 600 F / 3 V supercapacitors	1 x 4S2P Lithium-ion batteries 5200 mAh, 7.4 V	1 x 4S2P Lithium-ion batteries 5200 mAh, 14.8V
Input voltage	12/19/24 VDC ±10%	12-28V DC	12-28V DC	12/19/24 VDC ±10%	12–24 VDC	
Output voltage	Output Voltage: Follows input voltage: 12/19/24 VDC (±10%) Output Power: 150 W	12V DC Output Power: 60W	12V DC Output Power: 45W	Output Voltage: Follows input voltage: 12/19/24 VDC (±10%) Output Power: 150 W	12 VDC	
Backup time	100 s (150 W load, 2.6 V, 30 °CC)	20 s (60 W load, 2.5 V, 30 °CC)	25 s (45 W load, 2.5 V, 30 °CC)	60 s (150 W load, 2.7 V, 30 °C 160 s (6 W load, 2.7 V, 30 °CC)	28 Wh or 56 Wh, providing more than 140 minutes of operation	
I/O	DC jack for power input 1 x 4-pin terminal block for power input 1 x 4-pin terminal block for power output 1 x 4-pin terminal block for relay & power button 1 x USB 2.0 Type-A	1 × 4-pin 2×2 power input connector (DC in) 1 x 4-pin 2×2 power output connector (DC out) 1 x USB 2.0 pin header 1 x Debug pin header 1 x FW flash pin header 1 x Power button pin header		1 x LED display interface 1 × 4-pin 2×2 power input connector (DC in) 1 x 4-pin 2×2 power output connector (DC out) 1 x Relay button pin header 1 x USB2.0 Type-A 1 x Debug pin header 1 1 × FW flash pin header 2 x Power button pin headers	1 x LED indicator 1 x Power button 1 x USB 2.0 Type-A 1 x Ethernet (RJ-45) 1 x Remote power button connector (terminal block) Model A20: 1 x Power input (12–24 VDC, DC jack) Model B20: 1 x Power input (12–24 VDC, DC jack and terminal block) 1 x Power output (12 VDC, DC jack)	
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection)	OVP (Over Voltage Protection) OCP (Over Current Protection)	OVP (Over Voltage Protection) OCP (Over Current Protection)	OVP (Over Voltage Protection) OCP (Over Current Protection)	N/A	
Operating Temperature	-40°C ~ 60°C	-40°C ~ 60°C	-40°C ~ 60°C	-40°C ~ 60°C	0°C – 40°C	

Detailed specifications are available in the product datasheet.



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Headquarters

IEI Integration Corp.

No. 29, Zhongxing Rd., Xizhi Dist., New Taipei City 221
TEL : +886-2-86916798 / +886-2-26902098 FAX : +886-2-66160028
sales@ieiworld.com www.ieiworld.com

America

IEI Technology USA Corp.

138 University Parkway, Pomona, CA 91768
TEL : +1-909-595-2819 FAX : +1-909-595-2816
sales@usa.ieiworld.com usa.ieiworld.com

China

IEI Technology (SH) Co.,Ltd

515, Shen Fu Rd., Xin Zhuang Industrial Develop Zone, Shanghai, 201108, China
TEL:+86-400-067-5568 FAX:+86-21-3462-7797
sales@ieiworld.com.cn www.ieiworld.com.cn

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