RXi2-EP Industrial PC

The Next Generation Of Ruggedized Computing

Emerson has developed the next generation of its powerful, expandable, and reliable industrial computers (IPC). RXi2 IPCs offer new processor choices, increased and faster storage, improved graphics, and enhanced security features.

The RXi2-EP IPC delivers compact, rugged, mid-range performance computing capabilities to run HMI, historian, and analytics applications right at the machine to enable improved real-time control of operations and better integration into plant-wide systems.

Combining outstanding graphics capabilities with the added expandability of 0, 1, 2 or 4 PCI Express slots and CFast storage, the RXi2-EP is ideal for a range of demanding industrial applications.

High-Performance Computing

Emerson uses the latest AMD processors based on their unmatched performance. The RXi2-EP IPC has up to 16GB of ECC RAM, 5 Gigabit Ethernet interfaces, and industrial grade high-speed HDD storage (or optional SSD disk storage) to complete the high-performance design.

These features make the RXi2-EP IPC the perfect platform for running industrial applications right at the machine, even in the harshest environments.

The RXi2-EP IPC provides additional application flexibility with both mini PCI Express and low-profile PCI Express slots. This expandability combined with advanced CPUs delivers high-performance, graphically powerful computing.

To help keep data and operations secure, the RXi2-EP utilizes Trusted Platform Module (TPM) and Secure Boot technology.

Greater Uptime

All aspects of the RXi2-EP IPC have been engineered for reliability in harsh environments, from the use of all industrial grade components to its fanless design.

The core of the RXi2-EP IPC architecture is Emerson's rugged COM Express modular CPU platform. Emerson incorporates patented thermal monitoring technology with sophisticated passive cooling techniques to provide the highest-performance, fanless industrial computing platform that can operate in extended temperature ranges.

Enhanced Productivity & Lower TCO

The RXi2-EP IPC combines high performance with reliability, enhancing productivity and reducing cost of ownership

The RXi2-EP IPC delivers low TCO through features such as compact size, reduced maintenance, low power consumption, and ease of future performance upgrades enabled by our innovative rugged COM Express CPU architecture.

EMERSON

Feature	Benefit
2nd Gen AMD R-Series APU	• Delivers high-performance computing for applications that load, manipulate and store large amounts of data, or handle multiple communication ports in real-time
Fanless operation	• A robust, reliable solution with no moving parts and minimized dust contamination
5 Gigabit Ethernet ports (four with Time SYNC IEEE1588 and 802.1AS)	• Network implementation flexibility • Multiple high-speed Ethernet links for communication-centric applications with support for deterministic transfer of data/commands
0, 1, 2 or 4 PCIe Expansion slots	• Add new functionality on demand to support specific application needs

Specifications

- AMD RX-225FB Processor 15~17W CTDP 2c 2.2GHz (3.0GHz) 1MB Cache
- AMD RX-427BB Processor 30~35W CTDP 4c 2.7GHz (3.6GHz) 4MB Cache

Memory
- Up to 16 GB DDR3L-1866
- Soldered, with ECC

Storage Interfaces
- Primary storage device – M.2 PCI Express Gen3 x4 or M.2 SATA Gen3
- Secondary storage option – Twin 2.5" SATA drive bays, hot swap and RAID enabled
- CFast slot, user accessible, supports boot, hot plug Ethernet
- Four 1-gigabit Ethernet channels – RJ-45 standard, SFP optional
- One 1-gigabit Ethernet channel w/ remote management capability – RJ45

Wireless Communication
- LTE modem option using Mini-PCIE with UIM card holder
- Wifi/Bluetooth radio option using M.2 expansion slot Video/Graphics Interface
- Twin DisplayPort++ 1.2 for a total of 4 independent displays USB Interface
- Four USB 3.0 external
- Two USB 2.0 internal

Serial Communications
- 2 to 4 channels
- Two RS232, two RS422/485

Expansion
- Mini-PCIE card site for NvSRAM card, LTE modem, or other
- M.2 communications slot for WiFi and Bluetooth
- PCI Express expansion slots:
  - Zero
  - One Gen3 x4
  - Two Gen2 x4
  - Four One Gen2 x4, 3 Gen2 x1

Non-Volatile Memory
- 512 KB, 1MB or 2MB NVSRAM
- Storage for process relevant data
- NVSRAM option uses mini-PCIE slot LED

LED
- Power, TPM, Temperature, SATA
- Ethernet Link/Activity
- One User Defined LED

Others
- Timers: Legacy PC-AT, HPET
- Twin Watchdog Timers (OS, application)
- Thermal monitoring
- RTC with Lithium coin cell battery

Power
- Input: 24V DC (±25%) with protection

Environmental

All values under typical conditions without added expansion slot cards.

Extended temperature variants are available upon request.

The maximum extended temperature ranges mentioned in the table below are achievable with a specific choice of CPU and storage, and without extension cards installed in the system.

Range	Operating	Storage
Standard	0°C to +60°C	-40°C to +85°C
Extended	-40°C to +70°C[2]	-40°C to +85°C

[1] At 100% CPU load temperature range requires vertical orientation of the heat sink fins at free convection.
[2] Operating temperature is dependent on the CPU and SSD choice, application software, orientation of the heat sink fins at free convection. For detailed recommendations please contact support team.

Note: Operating temperatures higher than +70°C are possible. For detailed recommendations please contact support team.

Range	Operating	Storage
Humidity	5-95% @ +40°C	5-95% @ +40°C
Altitude	6,600 ft. (2.0km)	40000 ft. (12 km)

For detailed information please read the manual.

BIOS
- UEFI AMI Aptio® 5

Dimensions (H x W x D)
- 0 slot: 252 x 203 x 108.5 mm (9.92 x 8 x 4.24 in)
  Weight: 4,2kg
- 2 slot: 252 x 203 x 155.5 mm (9.92 x 8 x 6.13 in)
  Weight: 4,4kg

Mechanical
- Rugged aluminum and stainless steel housing for optimal thermal management and durability
- IP20 – Protection against particles
- Flat and Slim (Book) mounting orientation options

Software Support
- Microsoft® Windows® 7 Professional 64-Bit
- Microsoft® Windows® 10 Professional 64-Bit
- Linux kernel 4.4
- VXWorks 7.0

Safety
- Designed to meet standard UL1950, CE class A, FCC-A
- Designed to meet marine class A

Slim version available

Ordering Information

Part Number	Description	Operating Temperature
R2E0N1A0A1T0A	Quad Core 2.7GHz, 0 Slot, 128GB SSD, 16GB DDR3L, 2xRS232, 5xRJ45, No OS	0°C to +60°C
R2E0N1A1A1T0A	Quad Core 2.7GHz, 0 Slot, 128GB SSD, 16GB DDR3L, 2xRS232, 5xRJ45, Windows 10	0°C to +60°C
R2E0N1C0A1T0A	Dual Core 2.2GHz, 0 Slot, 128GB SSD, 8GB DDR3L, 2xRS232, 5xRJ45, No OS	0°C to +60°C
R2E0N1C1A1T0A	Dual Core 2.2GHz, 0 Slot, 128GB SSD, 8GB DDR3L, 2xRS232, 5xRJ45, Windows 10	0°C to +60°C
R2E2N1A0A2T0A	Quad Core 2.7GHz, 2 Slot, 128GB SSD, 16GB DDR3L, 2xRS232, 2xRS422/485, 5xRJ45, No OS	0°C to +60°C
R2E2N1A1A2T0A	Quad Core 2.7GHz, 2 Slot, 128GB SSD, 16GB DDR3L, 2xRS232, 2xRS422/485, 5xRJ45, Windows 10	0°C to +60°C
R2E2N1C0A2T0A	Dual Core 2.2GHz, 2 Slot, 128GB SSD, 8GB DDR3L, 2xRS232, 2xRS422/485, 5xRJ45, No OS	0°C to +60°C
R2E2N1C1A2T0A	Dual Core 2.2GHz, 2 Slot, 128GB SSD, 8GB DDR3L, 2xRS232, 2xRS422/485, 5xRJ45, Windows 10	0°C to +60°C

United State Office
Emerson Automation Solutions
Intelligent Platforms, LLC
2500 Austin Dr
Charlottesville, VA

Singapore Office
Emerson Automation Solutions Intelligent
Platforms Asia Pacific Pte. Ltd.
1 Pandan Cres,
Singapore, 128461

Brazil Office
Emerson Automation Solutions
Av. Hollingsworth, 325 – Iporanga
Sorocaba – SP, 18087-105

China Office
Emerson Automation Solutions Intelligent
Platforms (Shanghai) Co., Ltd
No.1277, Xin Jin Qiao Rd, Pudong,
Shanghai, China, 201206

Germany Office
Emerson Automation Solutions
ICC Intelligent Platforms GmbH
Memminger Straße 14
Augsburg, DE 86159

India Offices
Emerson Automation Solutions
Intelligent Platforms Pvt. Ltd.,
Building No.8, Ground Floor
Velankani Tech Park, No.43
Electronics City Phase I, Hosur Rd
Bangalore-560100

Americas Support – Technical and Commercial
Phone: 1-888-565-4155 or 1-434-214-8532 (if toll free 800 option is unavailable)
Email for Technical Support: support.mas@emerson.com
Email for Commercial Support: customercare.mas@emerson.com
Primary language of support: English

Europe, Middle East, & Africa Support – Technical and Commercial
Phone: +800-4-444-8001
or +420-225-379-328 (if toll free 800 option is unavailable or dialing from a mobile telephone)
Email for Technical Support: support.mas.emea@emerson.com
Email for Commercial Support: customercare.emea.mas@emerson.com
Primary languages of support: English, German, Italian, Spanish

Asia Support – Technical and Commercial
Phone: +86-400-842-8599 for Greater China
+65-6955-9413 (All Other Countries)
Email for Technical Support: support.mas.apac@emerson.com
Email for Commercial Support Asia: customercare.cn.mas@emerson.com
Primary languages of support: Chinese, English

Support Website: www.emerson.com/iac-support

Home Website: www.emerson.com/industrial-automation-controls

EMERSON