RXi2-BP 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-BP IPC delivers compact, rugged, mid-to high-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 compute capabilities with a compact and robust enclosure, the RXi2-BP is ideal for a range of demanding Industrial applications.

High-Performance Computing

Emerson uses the latest AMD Ryzen family processors based on their unmatched performance. The RXi2-BP IPC has up to 16GB of ECC RAM, four to six Gigabit Ethernet interfaces, and industrial grade high-speed SSD disc storage to complete the high-performance design.

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

The RXi2-BP design incorporates features optional mini PCIe and 1 or 2 slot PCIe expandability This functionality combined with advanced CPUs allows for high-performance, computing. To help keep data and operations secure, the RXi2-BP utilizes Trusted Platform Module (TPM) and Microsoft Secure Boot technology.

Greater Uptime

All aspects of the RXi2-BP IPC have been engineered for reliability in harsh environments. With high quality industrial components, a rugged design, and fanless operation, it is perfect for both commercial and Industrial applications, The RXi2-BP IPC is a highly reliable IPC with a long life cycle.

The RXi2-BP 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-BP IPC combines high performance with reliability, enhancing productivity and reducing cost of ownership. The RXi2-BP 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
AMD Ryzen Embedded V1000 and R1000 Series CPUs	• High-performance AMD chip with an industrial temperature version. Coupled with our patented cooling technology, our performance is best-in-class
Fanless operation	• A robust, reliable solution with no moving parts and minimized dust contamination
4 Gigabit Ethernet ports (three 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
Small Form Factor	• Mounting options provides flexibility for where the IPC can be installed. DIN Rail or Book Shelf Mounting available.

Specifications

Processor

AMD Ryzen Embedded V1000 and R1000 Series
- V1605B, 12-25W, 4c 2.0GHz (3.6GHz), Vega 8 graphics
- V1404I, 12-25W, 4c 2.0GHz (3.6GHz), Vega 8 graphics
- R1505G, 12-25W, 2c 2.4GHz (3.3GHz), Vega 3 graphics
- R1305G, 8-10W, 2c1.5GHz (2.8GHz), Vega 3 graphics

Memory
- Up to 16GB DDR4-2400
- Soldered, with ECC

Storage Interfaces
- Primary storage device – M.2 SATA 6 gigabit/s
- Micro-SD slot, user accessible, supports OS boot, hot plug

Ethernet[1]
- Four 10/100/1000BASE-T Ethernet ports
- Option to expand to 6 ports
- Option to support 3x SFP ports

Wireless Communication[1]
- Option to add Celullar Modem or WiFi/BlueTooth wireless connectivity

Graphics Interface
- DisplayPort++ HBR3 support (4 independent displays)

USB Interface
- Two USB 3.1 Gen 1
- Two USB 2.0

Serial Communications
- One RS-232
- One galvanically isolated RS422/485

Expansion[1]
- Optional mini PCIe slot with UIM card holder, can be used for Cellular Modem or WiFi/BlueTooth
- Optional 1, 2 PCIe expansion slots

Non-Volatile Memory[1]
- Optional 1 to 4 Mbit MRAM

LED
- One green color User Defined LED

Others
- Timers: Legacy PC-AT, Local APIC, HPET
- OS and application watchdog timers
- Thermal monitoring
- RTC with Lithium coin cell battery

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

Environmental
- Thermal performance is highly dependent on end application work load, pre-configured processor TDP value, installed expansion cards, IPC mounting orientation. Values listed are measurements of the specific test cases.

Range	Operating[2, 3]	Storage
Standard	0°C up to +70°C	-40°C up to +85°C
Extended	-40°C up to +70°C	-40°C up to +85°C
Humidity	5-95% @ +40°C	5-95% @ +40°C
Altitude	6,600 ft. (2.0km)	40000 ft. (12 km)

Firmware
- UEFI AMI Aptio® 5

Dimensions (H x W x D)
- 158 x 191 x 44.5 mm, Weight: 1.45kg

Mechanical
- Rugged aluminum and stainless steel housing for optimal thermal management and durability
- IP20 – Protection against particles

Software Support
- Windows® 10 IoT 2019 LTSC
- Linux Ubuntu 18.04, 20.04, and above
- VxWorks® 7.0 (upon request)

Safety
- Designed to meet standard UL62368, CE class A, FCC-A

Mounting Options
- Slim (Book)
- DIN Rail
- Panel Mounting Kit (R2B00ACCMP01)
- DIN Rail Mounting Kit (R2B00ACCRM01)

[1] Additional configuration options may be available, contact your regional sales representative to inquire.
[2] At 100% CPU load temperature range requires vertical orientation of the heat sink fins at free convection.
[3] 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.

Ordering Information

Part Number	Description	Operating Temperature[2,3]
R2B0N8N1N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 16GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N6N1N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 4GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N7N1N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 8GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N5N1N3A0F	RXi2 - BP Industrial PC: AMD V1404I CPU, 16GB RAM, 128GB SSD	-40˚C up to 70˚C
R2B0N3N1N3A0F	RXi2 - BP Industrial PC: AMD V1404I CPU, 4GB RAM, 128GB SSD	-40˚C up to 70˚C
R2B0N4N1N3A0F	RXi2 - BP Industrial PC: AMD V1404I CPU, 8GB RAM, 128GB SSD	-40˚C up to 70˚C
R2B0N2N1N3A0A	RXi2 - BP Industrial PC: AMD V1605B CPU, 16GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N0N1N3A0A	RXi2 - BP Industrial PC: AMD V1605B CPU, 4GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N1N1N3A0A	RXi2 - BP Industrial PC: AMD V1605B CPU, 8GB RAM, 128GB SSD	0˚C up to 70˚C
R2B0N8A1N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 16GB RAM, 128GB SSD, Win 10	0˚C up to 70˚C
R2B0N7A1N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 8GB RAM, 128GB SSD, Win 10	0˚C up to 70˚C
R2B0N5A1N3A0F	RXi2 - BP Industrial PC: AMD V1404I CPU, 16GB RAM, 128GB SSD, Win 10	-40˚C up to 70˚C
R2B0N4A1N3A0F	RXi2 - BP Industrial PC: AMD V1404I CPU, 8GB RAM, 128GB SSD, Win 10	-40˚C up to 70˚C
R2B0N2A1N3A0A	RXi2 - BP Industrial PC: AMD V1605B CPU, 16GB RAM, 128GB SSD, Win 10	0˚C up to 70˚C
R2B0N1A1N3A0A	RXi2 - BP Industrial PC: AMD V1605B CPU, 8GB RAM, 128GB SSD, Win 10	0˚C up to 70˚C
R2B0N8N2N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 16GB RAM, 256GB SSD	0˚C up to 70˚C
R2B0N6N2N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 4GB RAM, 256GB SSD	0˚C up to 70˚C
R2B0N7N2N3A0A	RXi2 - BP Industrial PC: AMD R1505G CPU, 8GB RAM, 256GB SSD	0˚C up to 70˚C

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