RXi-EP Box IPC

Highly Versatile, Ruggedized Computing

GE Intelligent Platforms has combined its expertise in designing high-performance embedded computing platforms with our more than 30 years of experience in industrial control to create a powerful and expandable industrial computing platform – the PACSystems RXi-EP Box IPC.

The PACSystems RXi industrial computing platform delivers compact, rugged, high-performance computing capabilities to run HMI, historian, and analytics applications right at the machine, enabling improved real-time control of operations and better integration into plant-wide systems.

The RXi-EP Box IPC is the mid-range offering in the RXi IPC family, featuring the added expandability of a PCI Express slot and CFast storage.

High-Performance Computing

The RXi-EP Box IPC incorporates the latest technologies to deliver high-performance computing for the industrial environment.

GE selected the latest Intel processors for their unmatched performance. The RXi-EP Box IPC has multiple Gigabit Ethernet interfaces, and industrial grade high-speed SSD storage (or optional larger hard disk storage) to complete the high-performance design. These high performance specifications make the RXi-EP Box IPC the perfect platform for running GE's Proficy* applications or other industrial applications right at the machine, even in the harshest environments.

Expandability

The RXi-EP Box IPC provides additional application flexibility with both mini PCI express and low profile PCI express slots. This expandability combined with the highest performance CPUs delivers truly high performance computing.

Greater Uptime

From the use of all industrial grade components to its fanless design, all aspects of the RXi-EP Box IPC have been engineered for reliability in harsh environments. The core of the RXi-EP Box IPC architecture is GE's rugged COM Express modular CPU platform. GE 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.

Lower TCO

Reliability is just one aspect of how the RXi-EP Box IPC reduces your cost of ownership. The RXi-EP Box IPC delivers on the promise of 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.

FEATURE	BENEFIT
2.26GHz Intel Core 2 Duo; 1.4 and 1.7 GHz Intel Core i7	Delivers high performance computing for applications that need to load, manipulate and store large amount of data, or to handle multiple communication ports in real-time applications
Fanless operation	A robust, reliable solution with no moving parts and minimized dust contamination
Three Gigabit Ethernet ports (two 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
One PCI Express low profile expansion slot	Allows you to add new functionality on demand to support the specific application needs

PACSystems RXi-EP Box IPC

Specifications

Processor
- Intel Core i7 processor, at 1.7 GHz
- Intel Celeron at 1.4 GHz

Memory
- Up to 4 GB DDR3 - with Intel Core 2 Duo
- Up to 4 GB DDR3 ECC - with Intel Core i7

Non-Volatile Memory
- 128 kByte nv-SRAM (flat memory)
- Storage for process relevant data
- With Intel Core i7 only

2.5 inch SATA Interface
- Optional internal 2.5" SATA hard disk or 2.5" SATA Solid State Drive (SSD) – user accessible
- Usage of SSD for shock and vibration immunity as well as extended temperature applications

CFast Card Slot
- CFast slot with external access
- CFast card, bootable
- Operates in parallel with optional onboard HDD/SSD

Ethernet
- 3 Ethernet (10, 100, 1000 Mbit) ports
- 10/100/1000BaseT auto-negotiation
- 2 ports (1 & 2) support Time SYNC (IEEE1588 and 802.1AS) based on Intel 82574IT

Wireless Communication
- WLAN optional via internal Mini PCIe card site

Video / Graphics Interface
- Display Port – with Core i7 processor only
- VGA Port

USB Interface
- 4 USB 2.0 Standard Size ports – External
- 1 USB 2.0 Standard Size ports – Internal

Expansion
- Internal Mini PCIe card site (e.g. for WLAN, GPRS, etc.)
- 0 (Slim version) or 2 to 4 Full size PCI Expansion slots

LED
- Power, SATA, Eth 1, 2 & 3 (Link / Activity)
- Battery Status, Over-temperature

Accessories

ICRXIACCMP02	10 pcs Flat Mounting Kit
ICRXIACCMP05	1 pcs Flat Mounting Kit
ICRXIACCRM05	1 pcs Flat DIN Rail Kit
ICRXIACCRM04	1 pcs Slim DIN Rail Kit ICRXI

Others
- Timer (IO Hub integrated): Legacy PC AT; High Precision Event Timer
- Watchdog (IO Hub integrated)
- Temperature sensors: Intel on-die TDS – Software readable (-15°C to +105°C)
- Internal box temperature with status LED for over-temperature
- Real Time Clock: RTC 146818 compatible, Li-battery
- Battery: Access of the device for exchange

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.
- For detailed information please read the manual.

Range	Operating	Storage
Standard	Refer to Ordering Information table[1]	-40°C to +85°C
Extended	Up to -20°C to 60°C are achievable on request. With Celeron CPU, special SSDs, and components even -40°C to 70°C are achievable on request.	-40°C to +85°C

[1]Temperature rating requires vertical orientation of the heat sink fins. Extended temperature variants available upon request.

	Operating	Storage
• Humidity	• 5-95% @ +40°C	• 5-95% @ +40°C
• Altitude	• 15000 ft. (4.5 km)	• 40000 ft. (12 km)

BIOS
- AMI via SPI interface

Dimensions (H x W x D)
- 182 × 233 × 98 mm (7.16 × 9.2 × 3.86 inch)

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

Software Support
- Microsoft® Windows® 7 Professional (32-/64-Bit)
- Linux, Kernel 2.6.32

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

Slim version available

Ordering Information

PART NUMBER	DESCRIPTION	OPERATING TEMPERATURE
ICRXIFF7R111A	RXI EP Celeron 1.4 GHz, 4GB, WIN7, 320 GB HDD	0°C to +65°C
ICRXIFF7F111A	RXI EP Celeron 1.4 GHz, 4GB, WIN7, 128GB SSD	0°C to +65°C
ICRXIFE7R111A	RXI EP ULV 1.7 GHz, 4GB, WIN7, 320 GB HDD	0°C to +60°C
ICRXIFE7F111A	RXI EP ULV 1.7 GHz, 4GB, WIN7, 128GB SSD	0°C to +60°C
ICRXIFF0F111A	RXI EP Celeron 1.4 GHz, 4GB, No OS, 128GB SSD	0°C to +65°C
ICRXIFE0F111A	RXI EP ULV 1.7 GHz, 4GB, No OS, 128GB SSD	0°C to +60°C
RXE0N0N7G102A	RXi-EP Slim, 0 Slot, Celeron, 128 GB SSD, Win7	0°C to +60°C
RXE0N0E0G102A	RXi-EP Slim, 0 Slot, i7 ULV, 128 GB SSD, no OS	0°C to +60°C
RXE0N0E7G102A	RXi-EP Slim, 0 Slot, i7 ULV, 128 GB SSD, Win7	0°C to +60°C

GE Intelligent Platforms Contact Information

Americas: **1 800 433 2682** or **1 434 978 5100**
Global regional phone numbers are listed by location on our web site at **www.ge-ip.com/contact**

www.ge-ip.com

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PACSystems RXi-EP Slim IPC

Specifications

Processor
- Intel Core i7 processor, at 1.7 GHz
- Intel Celeron at 1.4 GHz

Memory
- Up to 4 GB DDR3 - with Intel Core 2 Duo
- Up to 4 GB DDR3 ECC - with Intel Core i7

Non-Volatile Memory
- 128 kByte nv-SRAM (flat memory)
- Storage for process relevant data
- With Intel Core i7 only

2.5 inch SATA Interface
- Optional internal 2.5" SATA hard disk or 2.5" SATA Solid State Drive (SSD) – user accessible
- Usage of SSD for shock and vibration immunity as well as extended temperature applications

CFast Card Slot
- CFast slot with external access
- CFast card, bootable
- Operates in parallel with optional onboard HDD/SSD

Ethernet
- 3 Ethernet (10, 100, 1000 Mbit) ports
- 10/100/1000BaseT auto-negotiation
- 2 ports (1 & 2) support Time SYNC (IEEE1588 and 802.1AS) based on Intel 82574IT

Wireless Communication
- WLAN optional via internal Mini PCIe card site
- Video / Graphics Interface
- Display Port – with Core i7 processor only
- VGA Port

USB Interface
- 4 USB 2.0 Standard Size ports – External
- 1 USB 2.0 Standard Size ports – Internal

Expansion
- Internal Mini PCIe card site (e.g. for WLAN, GPRS, etc.)
- 1 PCI Express x4 slot for low profile cards

LED
- Power, SATA, Eth 1, 2 & 3 (Link / Activity)
- Battery Status, Over-temperature

Others
- Timer (IO Hub integrated): Legacy PC AT; High Precision Event Timer
- Watchdog (IO Hub integrated)
- Temperature sensors: Intel on-die TDS – Software readable (-15°C to +105°C)
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	Operating	Storage
Humidity	5-95% @ +40°C	5-95% @ +40°C
Altitude	15000 ft. (4.5 km)	40000 ft. (12 km)

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

Environmental
- All values under typical conditions without added expan- sion slot cards.
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- 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.
- For detailed information please read the manual.

Ordering Information

PART NUMBER	DESCRIPTION	OPERATING TEMPERATURE
RXE0N0N7G102A	RXi-EP Slim, 0 Slot, Celeron, 128 GB SSD, Win7	0°C to +60°C
RXE0N0E0G102A	RXi-EP Slim, 0 Slot, i7 ULV, 128 GB SSD, no OS	0°C to +60°C
RXE0N0E7G102A	RXi-EP Slim, 0 Slot, i7 ULV, 128 GB SSD, Win7	0°C to +60°C

Accessories

ICRXIACCMP02	10 pcs Flat Mounting Kit
ICRXIACCMP05	1 pcs Flat Mounting Kit
ICRXIACCRM05	1 pcs Flat DIN Rail Kit
ICRXIACCMP06	1 pcs Slim 70 Mount Kit RXE

About GE Intelligent Platforms

GE Intelligent Platforms provides industrial software, control systems and embedded computing platforms to optimize our customers' assets and equipment. Our goal is to help our customers grow the profitability of their businesses through high-performance solutions facilitated by the Industrial Internet. We work across industries, including manufacturing, water, oil & gas, mining, power, defense and aerospace. A division of GE, we are headquartered in Charlottesville, VA. www.ge-ip.com

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RoHS compliant