

SIMATIC Rack PC 847B – Maximum Extendibility and Supreme Industrial Functionality



with Intel® Core™2 Duo Processors

simatic pc RACK PC 847B

The new 19-inch SIMATIC Rack PC 847B is equipped with powerful and energy-saving Intel® Core™2 Duo processors as well as with a chipset and memory technology of the latest generation.

The considerably improved computing power combined with the **PCI-Express technology** (optional 8 or 11 PCI/PCI-Express slots) turns this innovation into the perfect platform for high-performance applications, for example in the fields of measuring technology, test benches and industrial image processing.

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SIMATIC Rack PC 847B –

Maximum Extendibility and Supreme Industrial Functionality...

Latest PC technology for improved productivity

The 19-inch SIMATIC Rack PC 847B is equipped with state-of-the-art PC technology and offers maximum performance for improved productivity thanks to rapid data processing and enhanced graphics.

Maximum performance

- Intel® Core™2 Duo processors
- Front-side bus with 667 MHz
- Intel® 945GM Express chipset
- Intel® Matrix Storage Technology (ICH7R)
- DDR2 memory technology with DualChannel support and memory extension up to 4 GB
- Serial ATA hard disks
- PCI-Express technology

Improved graphics

- Intel® GMA950 graphics media accelerator
- 1 x PCI-Express x16 (PEG) for the application of powerful graphics cards

Improved ruggedness and industrial suitability for reliable continuous operation in industrial applications

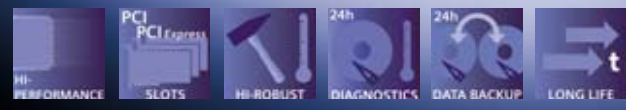
The new industrial PC design of the SIMATIC Rack PC 847B is both unique from an optical as well as constructional point of view – it complies with the highest of requirements placed upon ruggedness and industrial suitability:

- Rugged full-metal housing with high electromagnetic compatibility (EMC) and compact mounting depth for installation in control cabinets with depths of only 500 mm;
- Integrated industrial power supply (in acc. with NAMUR);
- High-quality components with a high MTBF (mean time between failure) as well as positive pressure ventilation with temperature-controlled fans and replaceable dust filter increase the service life of all internal components;
- An active cooling concept and optimum component arrangement ensure 24-h continuous operation in full configuration with maximum computing power – without power loss (throttling) – at ambient temperatures from 5 to 50 °C (with all processor variants);
- High vibration/shock resistance thanks to special hard disk suspensions and retaining card holders (also with telescopic rail mounting).

Excellent operating friendliness in terms of installation, commissioning, service and maintenance for reduced engineering expenditures

- Service-friendly device design, e.g. thanks to front-side filter/fan replacement without the use of tools and the prepared telescopic rail mounting option for optimum access in service cases;
- Removal of the housing cover by unfastening only one screw for a fast replacement of PC components;
- Restore CD for a rapid restoration of the hard disk contents' delivery state;
- For fast commissioning, we also offer the Rack PC 847B as a completely configured turn-key system with pre-installed and activated operating system to save time and costs.

...with Intel® Core™2 Duo processor



Enhanced system availability thanks to high data security for minimized downtimes

Already in its standard design, the SIMATIC Rack PC 847B offers a high system availability (e.g. thanks to integrated diagnostic and signaling functions for temperature, fan and watchdog). This is supported by the new front LED concept for efficient self-diagnostics, for example, for monitoring hard disks in RAID1 configuration or for the Ethernet or PROFIBUS status display.

Further options for enhanced system availability include:

- Optional RAID1 mirror disk system and hot-swap removable frame, which facilitates hard disk replacement during on-going operation; the RAID controller is already integrated on-board and does not occupy any free PCI slot;
- Preventive data back-up with second hard disk and the SIMATIC PC/PG Image Creator;
- Early diagnostics, e.g. of internal housing temperature, fan and program sequence (watchdog) as well as hard disks – locally, via LAN or web server – with the SIMATIC PC DiagMonitor diagnostic software.

Long-term availability and investment protection for reduced engineering expenditures

The SIMATIC Rack PC 847B forms an integral component of Totally Integrated Automation (TIA), thanks to which you can profit from reduced interfaces and a unique communication consistency with all other SIMATIC PC products. It facilitates the utilization of innovative PC technologies offering a high continuity and long-term availability for maximum investment protection:

- Application of long-term available PC components and motherboards from in-house development and production;
- Support of legacy interfaces (PS/2, COM, LPT);
- System-tested SIMATIC software;
- Guaranteed innovation cycles and long-term availability of at least 2.5 years;
- Guaranteed spare parts supply of at least 5 years.

... with Intel® Core™2 Duo Processor



Maximum extendibility and supreme industrial functionality for unrivaled flexibility

The SIMATIC Rack PC 847B offers maximum upgradeability thanks to its 8 or optionally 11 free PCI-/PCI-Express slots for the installation of long extension cards and due to a multitude of integrated interfaces for communication on the field or control level:

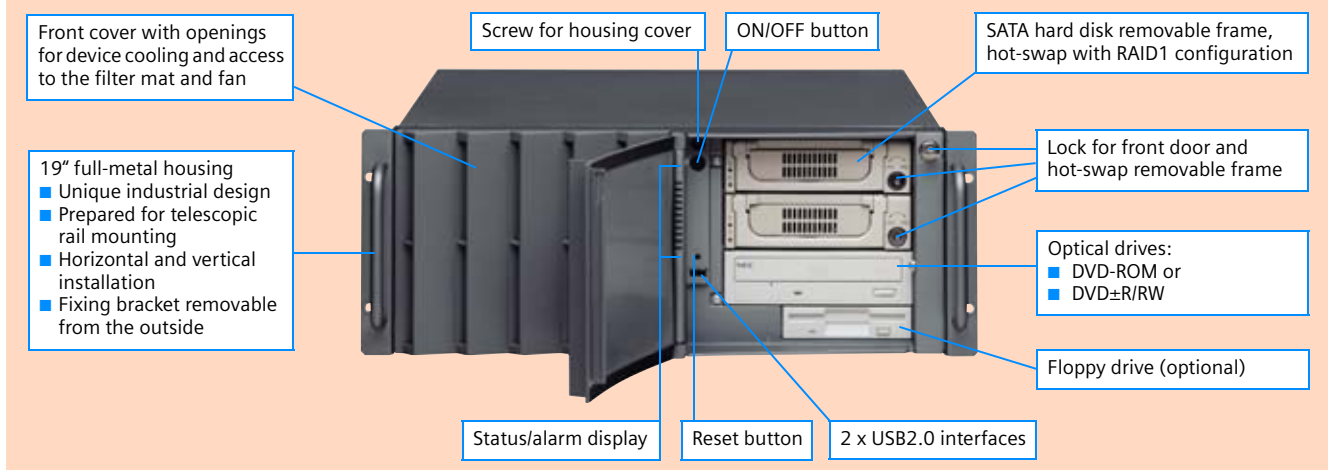
- 2 x Gigabit Ethernet for high data transmission rates;
- Integrated PROFIBUS/MPI interface (optional) for a cost-efficient connection of distributed field devices or for couplings with SIMATIC S7;
- 3 x PCI-Express-x4 interface (optional) for bandwidths up to seven times that of conventional PCI architectures and an overall speedier access to I/O devices;

- Dual monitoring via a PCI-Express x16 graphics card (optional) with high graphics performance;
- ADD card: DVI connection for monitor (optional);
- 6 x high-speed USB 2.0 ports, two of which are installed on the front (one of which can be used with the door closed). A plug-connected USB-FlashDrive can also be operated with the front door closed and is thus protected against manipulation, as are the drives accessible from the front and the ON/OFF or reset buttons.

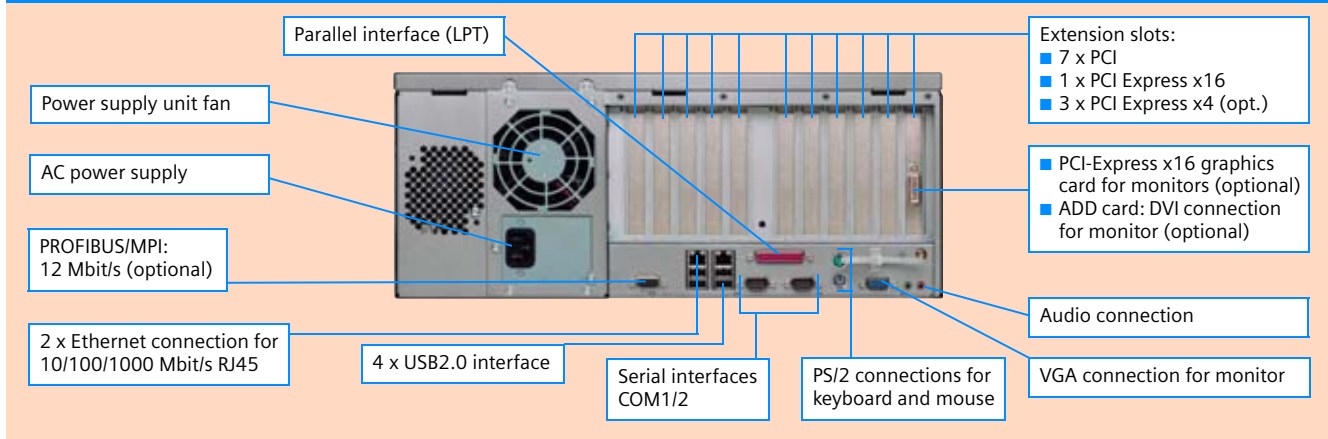
Our online configurator supports you with the individual selection from our diversified portfolio of processors, memory extensions, drive configurations, add-on cards and pre-installed operating systems.

www.siemens.com/ipc-configurator

Front side design



Rear side design



Scheduled availability for delivery: End of first quarter 2007

Subject to technical changes / improvements

SIMATIC Rack PC 847B

Technical Data



		SIMATIC Rack PC 847B
Design		19" Rack, 4 rack units <ul style="list-style-type: none"> • Prepared for telescopic rails • For horizontal and vertical installation • 19" fixing bracket removable from the outside
Motherboard		In-house developed and produced motherboards
Processor	Dual Core Dual Core Single Core	<ul style="list-style-type: none"> • Intel® Core™2 Duo T7400 (2.16 GHz, 667 MHz FSB, 4 MB second-level cache, EM64T) • Intel® Core™2 Duo T5500 (1.66 GHz, 667 MHz FSB, 2 MB second-level cache, EM64T) • Intel® Celeron® M 440 (1.86 GHz, 533 MHz FSB, 1 MB second-level cache)
Main memory		≥ 256 MB DDR667 SDRAM (DDR2 with DualChannel support); extendible up to 4 GB
Free slots for extensions		<ul style="list-style-type: none"> • 7 x PCI, 1 x PCI-Express x16 or • 7 x PCI, 1 x PCI-Express x16, 3 x PCI-Express x4
Graphics		<ul style="list-style-type: none"> • On-board: Intel GMA950 controller at the PCI-Express bus, integrated in chipset, up to 128 MB, 1280 x 1024 pixels with 100 Hz refresh rate and 32 Bit colors • In PCIe x16 slot (optional): PCI-Express graphics card (DualHead: 2 x VGA or 2 x DVI), 128 MB, up to 2048 x 1536 pixels with 75 Hz refresh rate and 32 Bit colors
Operating system	<ul style="list-style-type: none"> • Included in scope of supply, pre-installed and supplied on Restore-DVD 	<ul style="list-style-type: none"> • Without • Windows 2000 / XP Professional MUI (multi-language user interface; 5 languages, GER/ENG/FR/SP/IT) • Windows Server 2003, incl. 5 Client MUI (multi-language user interface; 5 languages, GER/ENG/FR/SP/IT)
Power supply		AC: 110/230 V, 50/60 Hz; short-term voltage interruption max. 20 ms at 0.85 x nominal voltage (acc. to NAMUR)
Drives		
Hard disks (serial ATA with NCQ technology)		Internal installation (also in shock- and vibration-cushioned drive holder) or in front hot-swap removable frame <ul style="list-style-type: none"> • 80 or 160 GB, or • 2 x 160 GB, or • RAID1, 2 x 160 GB (RAID controller on-board)
Optical drives		• DVD-ROM or DVD±R/RW
Floppy drive		1.44 MB (optional)
Module slots		6 (internal: 2 x 3.5", front-side: 3 x 5.25", 1 x 3.5")
Interfaces		
PROFIBUS/MPI		12 Mbit/s (electrically isolated, CP 5611-compatible); optional
Ethernet		2 x 10/100/1000 Mbit/s (RJ 45)
USB 2.0		4 x rear-side, 2 x front-side (one of which can be used with the door closed, e.g. for USB FlashDrive)
Serial/parallel		COM1 (V.24), COM2 (V.24) / LPT1 (EPP/ECP)
VGA/DVI		1 x VGA, 1 x DVI via ADD card (optional), (2 x VGA or 2 x DVI) via PCIe graphics card (optional)
Keyboard/mouse		2 x PS/2
Audio		1 x micro; 1 x line-out
Ambient conditions		
Degree of protection acc. to EN 60529 / protection class		IP51 front-side, IP20 rear-side / protection class I in acc. with IEC 61140
Vibration during operation ¹⁾		10 to 58 Hz: 0.0375 mm; 58 to 500 Hz: 5 m/s ² (approx. 0.5 g) in acc. with IEC 60068-2-6
Shock during operation ¹⁾		50 m/s ² , 30 ms (approx. 5 g) in acc. with IEC 60068-2-27
Ambient temperature during operation		5 to 50 °C, with full processor power (without power loss, throttling)
Humidity		5 to 80% at 25 °C (no condensation)
System-tested SIMATIC industrial software ²⁾		
SIMATIC industrial software (in preparation)		STEP 7®, WinAC®, WinCC® flexible, WinCC®, SOFTNET®
Certifications/directives		
Safety standards		EN 60950, UL 60950, cUL 60950
Certifications		cULus (UL 60950)
CE mark		Suitable for industrial applications
EU directives		WEEE / RoHS
Dimensions and weights		
Installation dimensions (W x H x D in mm)		430 x 177 x 444
Weight		approx. 19 kg

1) Restrictions for the operation of optical drives and removable frames

Subject to technical changes / improvements

2) In accordance with the permitted system configuration