



IS-100

1U Industrial-Grade Single Slot Server

Chassis Features

- 520W power supply
- Four 3.5" Hot-swap SAS/SATA drive bays
- Optional DVD-ROM drive or floppy drive
- Four high-performance counter-rotating fans
- One full-height, half-length PCIe expansion slot (horizontal mount, rear panel access)
- Front panel power switch, reset button, five LED indicators, and two USB receptacles.
- Rear panel keyboard, mouse, USB, COM, Gigabit Ethernet, and VGA connectors
- Complies with RoHS 5/6 and WEEE Directives

Motherboard Features

- Processor
 - Single Intel® 64-bit Xeon® Dual-Core (5100/5200 series) or Quad-Core (5400 series) processor with 1333/1066 MHz FSB
- Intel® 5100P/ICH9 (San Clemente) chipset
- Up to 8 Gbyte 667/533 MHz DDR2 ECC Register SDRAM
- Two Gigabit Ethernet controllers
- 3 Gbit/s SAS controller with software RAID 0/1/5/10 support (hardware RAID 0/1/5 optional)
- 3 Gbit/s S-ATA controller with hardware RAID 0/1/5 support
- XGI Z9 graphics controller with 32 Mbyte video RAM

The IS-100, a 1U entry-level product in the IS family of industrial grade servers, provides high-availability for long-lifecycle applications with life cycle management and revision control. To endure the harsh elements of today's industrial workplaces, the IS-100 offers an optional set of extended operating temperature, extended shock and vibration specifications, plus optional remote maintenance and BIT functions.

The IS-100 is powered by an Intel® 64-bit Xeon® Dual/Quad-Core 1333/1066 MHz FSB processor and features the Intel® 5100P/ICH9 (San Clemente) chipset with up to 8 Gbyte DDR2 ECC Register SDRAM of memory. Peripheral resources include two Gigabit Ethernet controllers, a 3 Gb/s SAS controller with software RAID 0/1/5/10 support (hardware RAID 0/1/5 optional), a 3 Gb/s S-ATA controller with hardware RAID 0/1/5 support, plus a XGI Z9 graphics controller with 32 Mbyte video RAM.

The IS-100 accommodates the most demanding of flexibility requirements with four 3.5" Hot-swap SAS/SATA drive bays; one full-height, one half-length expansion slot; and a slim drive bay supporting either an optional DVD-ROM drive or an optional floppy drive. Keyboard, mouse, USB, COM, Gigabit Ethernet, and VGA connectors are located on the rear panel. Front panel power switch, reset button, five LED indicators, and two USB receptacles provide easy operator monitoring and control interfaces.

To minimize downtime, four high performance counter-rotating fans quietly contribute to the IS-100 high performance and high reliability standards. This unit is compliant with RoHS 5/6 and WEEE Directives.



IS-100 1U Industrial-Grade Single Slot Server

Additional Product Views



IS-100 without bezel



IS-100 rear view

Chassis Specifications

Form Factor

- 1U rack-mount chassis with 20" depth

Dimensions

- Height: 1.75" (44.45 mm)
- Width: 17.2" (437 mm)
- Depth: 19.85" (503 mm)
- Gross Weight: 31 lbs (14.1 kg)
- Color: Black

Expansion Slot

- 1x full-height, half-length PCIe horizontal mount expansion slot
 - Hosted at MCH across x8 PCI-Express link
 - PCI-Ex/PcE Riser card required

Drive Bays

- 4x 3.5" SAS / SATA Hot-swap drive trays
 - Supports 2.5" and 3.5" HDD assemblies
- Slim drive bay
 - Supports optional DVD-ROM drive or floppy drive

SAS / SATA Backplane

- 1x 1U SAS/SATA backplane

System Cooling

- 4x 4 cm counter-rotating fans (12.5k RPM)

Front Panel

- Buttons
 - Power On/Off button
 - System reset button
- LEDs
 - Power LED
 - Hard drive activity LED
 - 2x Network activity LEDs
 - System overheat LED
- Two USB 2.0 Type A (host) receptacles
- One RS-232 COM port connector (DB9)

Rear Panel

- PS/2 keyboard and mouse ports
- 2x 10/100/1000BaseT Ethernet ports
- 1x VGA port (DB-15)
- 1x RS-232 COM port (DB-9)
- 2x USB 2.0 Type A (host) receptacles
- Cutout for one horizontal mount full-height, half-length host adapter

Power Supply

- Single 520W AC power supply with PFC
- AC voltage: 100 - 240V, 47 - 63 Hz

Operating Environment (System)

- +10° to +35° C (commercial operating temperature range)
- -20° to +55° C (industrial operating temperature range)
- -40° to +70° C (storage temperature range)
- 8% to 90% non-condensing humidity range
- 5% to 95% non-condensing humidity range (storage)
- Mechanical Shock
 - Operating: 2-3 ms duration, 20-40G, half-sine, one shock on each side.
 - Non-operating: 12-20 ms duration, 20-30G, square wave, one shock on each side.

Chassis Specifications Continued

- Mechanical Vibration
 - Operating: 0.35g rms at 5 to 200 Hz. Approx. 60 min./axis.
 - Non-operating (Random): 0.98g rms at 5 to 200 Hz. Approx. 30 min./axis.
- Operating Altitude: sea level to 10,000 ft
- Predicted MTBF (MIL-217, 25C / GB)
 - Consult factory for prediction
- 5/6 RoHS and WEEE Compliant

Regulatory

- USA - UL listed
- Canada - CUL listed
- EN 60950/IEC 60950-compliant
- CB Report
- CCC certification
- FCC Pt 15 A (Industrial)
- CE Mark

Chassis Options

Front Panel

- Ports
 - 2x USB & DB9 COM port tray (In place of floppy drive)

Peripheral Drive

- TEAC 3.5" 1.44 MB Slim floppy drive
- Panasonic Slim 8x DVD; 24x CD DVD-ROM drive

Front Bezel

- Front cover bezel with key lock and filter; call GE Fanuc Intelligent Platforms for details.

Heatsink/Retention

- Call GE Fanuc Intelligent Platforms for thermal component options.

Motherboard Specifications

Processor / Cache

- One Intel® 64-bit Xeon® processor
 - Quad-Core Intel® Xeon® processor 5400 sequence up to 2.83 GHz
 - Dual-Core Intel® Xeon® processor 5200/5100 sequence up to 2.66 GHz

System Bus

- 1333/1066 MHz front side bus

Operating System Software

- Supports 32-bit and 64-bit operating systems
- Windows® XP/2000/2003/Server 2003
- Linux 2.6 distributions

Motherboard Specifications Continued

BIOS

- 8 Mbyte Flash with Phoenix® BIOS
- Features
 - Plug and Play (PnP)
 - DMI 2.3
 - PCI 2.2
 - ACPI 1.0/2.0
 - USB keyboard support
 - Hardware BIOS virus protection
 - SMBIOS 2.3

Memory Capacity

- 6x 240-pin DIMM sockets
- 8 Gbyte maximum memory capacity using paired SoDIMM modules
- Memory mirroring and Interleaved memory bus operation supported

Memory Type

- 667/533 MHz Register DDR2 ECC Single Rank SDRAM 72-bit, 240-pin gold-plated DIMMS

Memory DIMM Module Sizes

- 1 Gbyte, 2 Gbyte, 4 Gbyte

Memory Error Detection

- Corrects single-bit errors
- Detects double-bit errors (using ECC memory)
- Supports Intel® x4 and x8 Single Device Data Correction (SDDC)

Chipset (On-Board Devices)

- Intel® 5100 (San Clemente) chipset
- Intel® ICH9R

SAS Controller (On-Board Device)

- 3 Gb/s SAS controller
- Software RAID 0/1/5/10 support

SATA Controller (On-Board Device)

- 3 Gb/s S-ATA controller with hardware RAID 0/1/5 support

Network Controllers (On-Board Devices)

- Intel® 82573V & 82573L Gigabit Ethernet Controllers
- Supports 10BaseT, 100BaseTX, and 1000BaseT with autonegotiation, RJ-45 receptacles on rear panel

Graphics Controller (On-Board Device)

- XGI Z9 with 32 MB of video RAM
- VGA (640x480) to UXGA (1600x1200) pixel field formats supported
- DB-15 receptacle on rear panel

Super I/O (On-Board Device)

- Winbond 83627DHP chip

IDE (Input / Output)

- Single EIDE channel supports up to two UDMA IDE devices (IDE-M, IDE-S) including CF card
- Supports UDMA Mode 5, PIO Mode 4, and ATA/100

Motherboard Specifications Continued

Floppy (Input/Output)

- 1x floppy controller; 1.44 MB 2.88 MB

Power Configurations

- ACPI Power Management
- Main Switch Override Mechanism
- Wake-On-Ring (WOR) header
- Wake-On-LAN (WOL) header
- Power-on mode for AC power recovery

CPU Monitoring

- Monitors for CPU cores, +1.8V, +3.3V, +5V, ±12V, +3.3V standby, +5V standby, VBAT, HT, Memory, Chipset
- CPU core 6-phase-switching voltage regulator with auto-sense from 0.8375V - 1.60V

Fan Monitoring

- Tachometer monitoring
- Status monitor for speed control
- Status monitor for on/off control
- Low noise fan speed control

Other Monitoring Features

- Chassis intrusion detection
- Chassis intrusion header
- Chipkill support

Temperature Monitoring

- Monitoring for CPU and chassis environment
- CPU thermal trip support
- Thermal control for 6x fan connectors
- PSU I²C temperature sensing logic
- Thermal monitor 2 (TM2) support
- Platform Environment Control Interface (PECI) support

Status LEDs

- CPU/system overheat LED
- Suspend-state indicator LED

Dimensions

- 12.05" x 10" (30.6 cm x 25.4 cm)

Compliance

- RoHS Compliant 5/6

Motherboard Options

SAS RAID Controller Module

- Hardware RAID 0/1/5 support

IPMI Controller Module

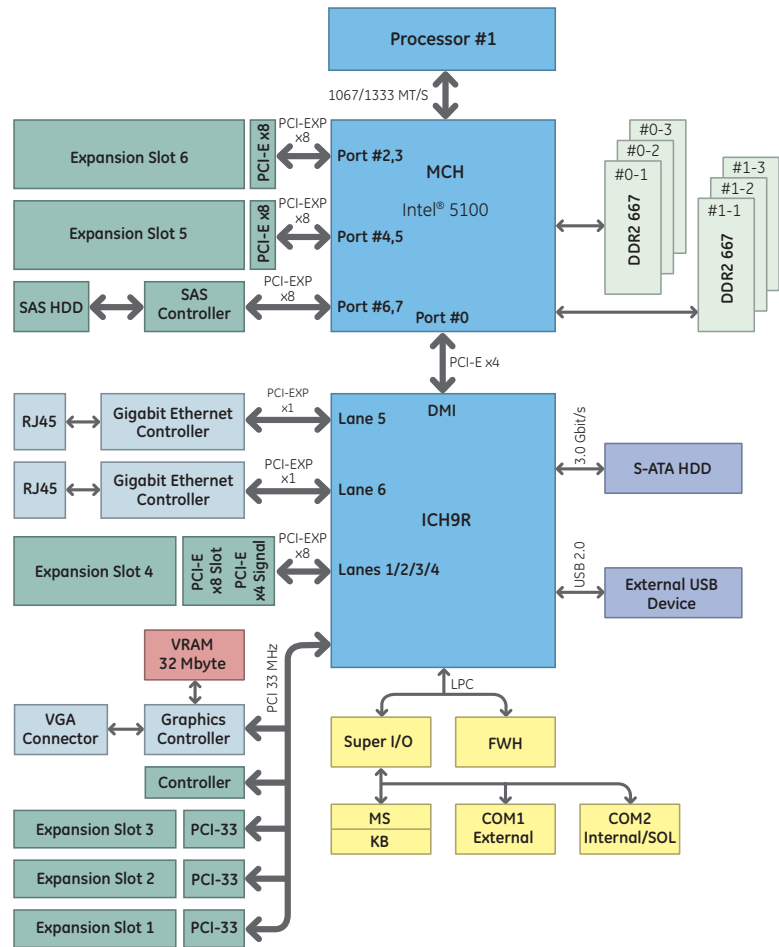
- Support for Intelligent Platform Management Interface v1.5/2.0

Software Management

- IPMI (Intelligent Platform Management Interface) v1.5/2.0
- Remote Maintenance software package

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Block Diagram



Ordering Information

IS-100 1U Industrial-Grade Single Slot Server

About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanuc.com.

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Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

www.gefanuc.com

