



IS-110

1U Industrial-Grade Single Slot Server with 560W Power Supply

Chassis Features

- 560W high-efficiency power supply
- Four 2.5" Hot-swap SAS/SATA drive bays
- Optional DVD-ROM drive
- Up to five high performance fans, including two fans via an add-on card
- Two standard size (full-height, full-length) and one low-profile expansion slots
- Front panel power switch, reset button, UID button, USB ports, and five LED indicators
- Rear panel keyboard, mouse, USB, COM, Gigabit Ethernet, and VGA connectors
- Power supply has 80 PLUS® Silver certification

Motherboard Features

- Processor
 - Two sockets available
 - Intel® 64-bit Xeon® Dual core (5100 / 5200 series) or Quad core (5400 series) processor with 1333/1066 MHz FSB
 - Processor configuration vs. fan noise vs. ambient temperature configuration rules
- Intel® 5100P/ICH9 (San Clemente) chipset
- Up to 32 GB 667 / 533 MHz DDR2 ECC Register SDRAM
- Two Gigabit Ethernet controllers
- 3 Gb/s SAS controller with software RAID 0/1/5/10 support (hardware RAID 0/1/5 optional)
- 3 Gb/s S-ATA controller with hardware RAID 0/1/5 support
- ATI ES1000 graphics controller with 32 MB video RAM

The IS-110, a 1U highly optimized product in the IS family of industrial grade servers, provides high-availability for long-lifecycle applications with life cycle management, and revision control. To meet the needs of today's industrial workplaces, the IS-110 offers optional remote maintenance and BIT functions.

The IS-110 is powered by either one or two Intel® 64-bit Xeon® Dual core / Quad core 1333/1066 MHz FSB processor(s) and features the Intel® 5100P/ICH9 (San Clemente) chipset, with up to 32 GB 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 an ATI ES1000 graphics controller with 32 MB video RAM.

The IS-110 accommodates the most demanding of flexibility requirements with four 2.5" Hot-swap SAS/SATA drive bays; two full-height, full-length expansion slots plus one half-height, half-length expansion slot; and a slim drive bay supporting an optional DVD-ROM drive. Keyboard, mouse, USB, COM, Gigabit Ethernet, and VGA connectors are located on the rear panel. Front panel power switch, reset button, USB ports, UID button, and five LED indicators provide easy operator monitoring and control interfaces.

To minimize downtime, three high performance fans (two additional fans available with add-on card) quietly contribute to the IS-110 high performance and high reliability standards.

The IS-110 has a high efficiency power supply unit with the 80 PLUS Silver certification.



IS-110 1U Industrial-Grade Single Slot Server

Additional Product Views



IS-110 without bezel



IS-110 rear view

Chassis Specifications

Form Factor

- 1U rack-mount chassis

Dimensions

- Height: 1.7" (43 mm)
- Width: 16.8" (426 mm)
- Depth: 21.95" (558 mm)
- Gross Weight: 35 lbs (15.9 kg)
- Color: Black

Expansion Slots

- 2x full-height/full-length horizontal mount expansion slots
- 1x half-height/half-length horizontal mount expansion slot

Drive Bays

- 4x 2.5" SAS / SATA Hot-swap drive trays
- Slim drive bay
 - Supports optional DVD-ROM drive

SAS / SATA Backplane

- 1x 1U 2.5" SAS / SATA backplane

System Cooling

- 3x 40 mm x 56 mm fans
- 2x 40 mm x 28 mm fans for add-on card (optional)

Front Panel Resources

- Buttons
 - Power On/Off button
 - System reset button
 - UID button
- Status LEDs
 - Power LED
 - Hard drive activity LED
 - 2x Network activity LEDs
 - Universal Information LED

Rear Panel

- PS/2 keyboard and mouse ports
- 2x 10/100/1000BaseT Ethernet ports (RJ-45)
- 1x VGA port (DB-15)
- 1x RS-232 COM port (DB-9)
- 2x USB 2.0 Type A (host) receptacles
- Cut-outs for three expansion cards

Power Supply

- 560W AC to DC power supply
 - 80 PLUS Silver certification

Operating Environment (System)

- +10° to +35° C (commercial operating temperature range)

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Chassis Specifications Continued

- -40° to +70° C (storage temperature range)
- 8% to 90% non-condensing humidity range
- 5% to 95% non-condensing humidity range (storage)
- MTBF
 - Consult factory for prediction

Regulatory

- USA - UL listed
- Canada - CUL listed
- EN 60950/IEC 60950-compliant
- CCC certification
- Germany - TUV
- CE Mark

Chassis Options

Front Panel

- Ports
 - 2x USB 2.0 Type A (host) receptacles

Peripheral 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 or two Intel® 64-bit Xeon® processor(s)
 - Quad-Core Intel® Xeon® processor 5400 sequence up to 2.83 GHz
 - Dual-Core Intel® Xeon® processor 5200/5100 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/2003/Server 2003
- Linux 2.6 distributions

BIOS

- 8 MB 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

Motherboard Specifications

Memory Capacity

- 6x 240-pin DIMM sockets
- 32 GB 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 GB, 2 GB, 4 GB, 8 GB

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 (Windows and Linux OS environments)

SATA Controller (On-Board Device)

- 3 Gb/s S-ATA controller
- Hardware RAID 0/1/5/10 support (Windows OS)
- Hardware RAID 0/1/10 support (Linux OS)

Network Controllers (On-Board Devices)

- Intel® 82575V/L Gigabit Ethernet Controllers
- Supports 10BaseT, 100BaseTX, and 1000BaseT with auto-negotiation, RJ-45 receptacles on rear panel

Graphics Controller (On-Board Device)

- ATi ES1000 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 83627HF 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

Floppy (Input / Output)

- 1x floppy controller; 1.44 MB, 2.88 MB

Motherboard Specifications Continued

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

- 13.05" x 8" (33.15 mm x 203 mm)

Motherboard Options

SAS RAID Controller Module

- Hardware RAID 0/1/5/10 support (Windows and Linux OS environments)

IPMI Controller Module

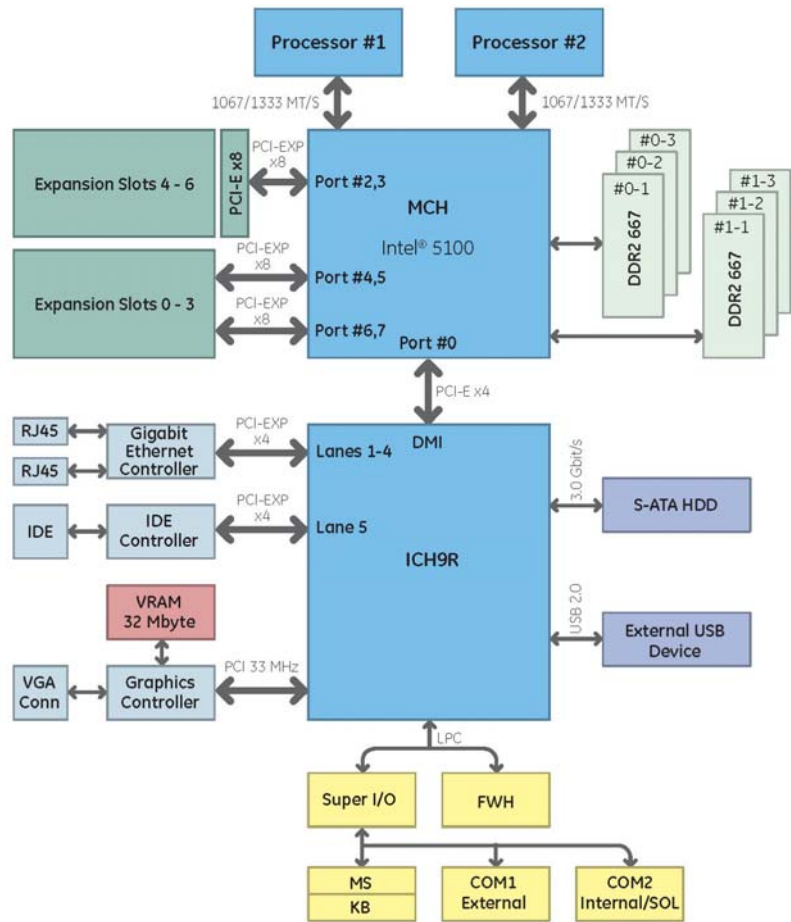
- Support for Intelligent Platform Management Interface v1.5 / 2.0

Software Management

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

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Block Diagram



Ordering Information

IS-110 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.

GE Fanuc Intelligent Platforms Information Centers

Americas:
1 800 322 3616 or 1 256 880 0444

Asia Pacific:
+81 3 5544 3973

EMEA:
Germany: +49 821 5034 0
UK: +44 1327 359444

Additional Resources

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

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