

GX7920 SERIES

6U PENTIUM® M CPU BOARD

- 6U cPCI/PXI controller for use with GX7000A and GX7100A Series PXI chassis
- Low power version: Intel Pentium M LV 1.4 MHz processor
- 4 Gigabit Ethernet ports (2 front, 2 rear I/O)
- 4 USB ports (2 front, 2 rear)
- 1 GB of DDR SDRAM (expandable to 2 GB)
- IPMI V1.5 compliant
- PCI-X PMC site
- PICMG 2.0 Rev 3.0 compatible 32bit/33 MHz



DESCRIPTION

Combining the low power/high performance features of Intel's Mobile Pentium M processor with the 855GME chipset, the GX7920 CompactPCI system controller offers a high performance, single slot, PXI controller solution. When installed in a GX7000 or GX7100 chassis, the controller provides an integrated, high performance, single slot, PXI controller solution – supporting all integrated chassis peripherals (hard drive, DVD, etc.) and providing a variety of I/O interfaces including USB, Gigabit Ethernet, and RS232. Additional flexibility is provided by the front panel accessible PMC slot, which can accommodate a variety of interfaces and functions for specific applications or needs.

FEATURES

The GX7920 employs the Intel Pentium M processor and offers equivalent performance to a 2.6 GHz Pentium 4 with half the power consumption. ECC memory is fast and reliable and up to 2GB of PC333 DDR SDRAM via two 200-pin SODIMM sockets can be installed on the module.

The highly integrated GX7920 features a PCI-X PMC site, And the Intel 6300ESB I/O Controller Hub provides advanced I/O technology including USB 2.0 (40X faster than USB 1.1), Serial ATA150 and an onboard 64/66 PCI-X bus. Up to 4 Gigabit Ethernet ports (2 ports at the front and 2 at the rear) provide full PICMG 2.16 support. The GX7920 features full rear I/O connectivity as well as front panel status LEDs that provide debug and diagnostic information.

APPLICATIONS

- GX70xx chassis controllers
- GX71xx chassis controllers

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SPECIFICATIONS

| PROCESSOR AND MEMORY | |
|-----------------------|---|
| PROCESSOR | Mobile low power Intel Pentium M processor in Micro-FCBGA 479-pin package, 2x 32KB L1 cache and 1MByte/2MByte L2 cache, 400MHz processor system bus |
| LOW POWER DISSIPATION | 1.4GHz LV (2 MByte L2) |
| MEMORY | <ul style="list-style-type: none"> • 400MHz processor side bus, Intel 82855GME • Up to 2 GB PC333 DDR SDRAM w/ or w/o ECC via two 200-pin SODIMM sockets (supplied with 1 GB) • Socket for CompactFlash Type II module • Connector for onboard 2.5" HDD support • 1 MB Firmware Hub (FWH) for BIOS • 8 kB for storing CMOS data when operating without battery |
| I/O | |
| | <ul style="list-style-type: none"> • Two 16C550 compatible UARTs (COM1/2) • Keyboard and mouse interface on rear I/O • Floppy disk controller on rear I/O • Four USB 2.0 interfaces with up to 480 Mbit/sec, two front, two rear • Up to four 10/100/1000 MB/s Gigabit Ethernet ports based on the Intel 82546EM Ethernet 64-bit PCI bus controller. Two copper ports are routed to front and two copper ports are routed to PICMG 2.16 rear I/O pins. • VGA Video Controller integrated in Intel 82855GME GMCH providing 2048x1536x8bit/60Hz resolution, max. shared memory 64MB |
| FRONT PANEL FUNCTIONS | |
| COM1 | 9-pin D-Sub (RS232, RS422, RS485) |
| VGA | 15-pin D-Sub SVGA connector |
| ETHERNET | 2x RJ-45 (depending on version) |
| USB | 2x 4-pin connectors |
| PMC INTERFACE | Front panel accessible |
| LEDS | 2x LAN activity (yellow) and speed (green) one blue control LED for hot swap 2x for IPMI, 1x watchdog, 1x thermal control 8-LED-field for BIOS POST code or general purpose |
| MICRO SWITCH | reset button, guarded |

| ONBOARD INTERFACES | | | |
|---------------------------------------|--|----------|-------------------|
| | <ul style="list-style-type: none">•Two IDE connectors supporting Ultra DMA, one 40pin/2.54mm, one 44 pin/2mm for onboard 2.5 IDE HDD or Flash•One SATA connection (optional), can be used alternatively to connect an onboard 2.5" SATA HDD instead of an onboard 2.5" IDE HDD•CompactFlash type II socket•22-pin connector with all LPC signals•PS/2 keyboard connector•2x200-pin SODIMM connectors•4x 64-pin PMC interface | | |
| I/O SUMMARY | | | |
| | FRONT I/O | REAR I/O | ONBOARD CONNECTOR |
| VIDEO | 1 | 1 | - |
| USB | 2 | 2 | - |
| SERIAL | 1 | 2 | - |
| PS/2 MOUSE | - | 1 | - |
| PS/2 KEYBOARD | - | 1 | 1 |
| ETHERNET | 2 | 2 | - |
| ATA100 | - | 1 | 2 |
| SATA150 | - | 2 | 1 |
| COMPACTFLASH | - | - | 1 |
| PMC | 1 | via J4 | Pn1-Pn4 |
| FLOPPY | - | 1 | - |
| COMPACTPCI BUS INTERFACE | | | |
| | <ul style="list-style-type: none">•PICMG 2.0 Rev. 3.0 compatible, 32 bit/33 MHz.•5V default signaling (3.3V on request available), REQ/ GNT for 7 slots•Operating in system slot as system master and in peripheral slot in PCI passive mode (no communication to CompactPCI bus). | | |
| PMC SLOT | | | |
| | One 64-bit / 66MHz PMC slot Pn1-Pn4, rear I/O Pn3 to J4. 5 V and 3.3 V PCI voltage (default configuration 3.3V) | | |
| SUPERVISORY FUNCTIONS, CLOCK/CALENDAR | | | |
| | <ul style="list-style-type: none">•Watchdog, software configurable, 125 msec to 256 sec generates IRQ, NMI or hardware reset•Hardware monitor LM87 for thermal control, fan speed and all onboard voltages•RTC (integrated in HanceRapids) and CMOS RAM with backup, battery replaceable | | |

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| REAR I/O VIA J3/(J4)/J5 | |
|--|---|
| J3 | PICMG 2.16, VGA, COM0/1, keyboard, mouse, USB3/4 |
| J4 | PMC rear I/O |
| J5 | SATA 1/2, IDE (secondary), Floppy |
| IPMI | |
| IPMI 1.5-compliant for IPMI based management and CompactPCI System Management PICMG 2.9 R1.0. | |
| COMPLIANCE | |
| CompactPCI Core Specification PICMG 2.0 Rev. 3.0 CompactPCI Hot Swap Specification PICMG 2.1 R2.0 CompactPCI System Management PICMG 2.9 R1.0 CompactPCI Packet Switching Backplane PICMG 2.16 R1.0 Designed to meet or exceed: <ul style="list-style-type: none"> • Safety: UL 1950, UL 94, CSA 22.2 No 950, EN 60950, IEC 950 • EMI/EMC: EN 55022 / EN 55024, EN 50081-1 / EN 6100-6-2 | |
| GENERAL | |
| DIMENSIONS | 233 x 160 x 20.5 mm, 6U, 4HP |
| WEIGHT | 350g |
| MTBF | 139,589 h @ 30 C / 86 F (Bellcore Issue 6) |
| SOFTWARE SUPPORT | |
| <ul style="list-style-type: none"> • AMI BIOS with POST codes, setup console redirection to serial port (VT100 mode) with CMOS setup access, BIOS parameters saved in EEPROM, diskless, keyboardless, videoless operation • LAN boot support. • Board identification number accessible via EEPROM • Support for Windows 2000, XP, XP Embedded, Windows Server 2003, | |
| POWER CONSUMPTION | |
| 3.3V | typ. 8-10 W / max. 11 W |
| 5V | typ. 5-7 W / max. 11 W |
| +12V | required |
| -12V | not required |
| ENVIRONMENTAL | |
| OPERATING TEMP. | 0 °C to +60 °C standard-40 °C to +85 °C E2 with 1.1/1.4 GHz LV Pentium M (optional) |
| STORAGE TEMP. | -55 oC to +95 °C |
| CLIMATIC HUMIDITY | Non-condensing 93% at 40 C (acc. to IEC 60068-2-78) |
| ALTITUDE | 50,000 ft. (15,240 m) |

Note: Specifications are subject to change without notice.

*PS2 splitter can be used for the front PS2 connector to use keyboard and mouse.

ORDERING INFORMATION

| CPU BOARD* | |
|----------------------|--|
| GX7920-141024 | LV Pentium M 1.4GHz, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO, IPMI, J1/J2/J3, 1 GB RAM |

*Call Geotest for additional configurations for applications requiring different speed processors.

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