

GX7924

6U CORE™2 DUO CPU

- 6U cPCI/PXI controllers for use with GX7000A and GX7100A Series PXI chassis
- Intel Core 2 Duo T7400 2.16GHz processor
- 3 Gigabit Ethernet ports (2 front, 1 rear I/O)
- 3 USB ports (2 front, 1 rear)
- 1 GB of DDR SDRAM (expandable to 4 GB)
- IPMI V1.5 compliant
- 64-bit / 66 MHz PMC slot
- PICMG 2.0 Rev 3.0 compatible



DESCRIPTION

The GX7924, which is based on the Intel Core 2 Duo processor, offers twice the performance of previous generation processors with no increase in power consumption. Combined with the E7520 and 6300ESB chipsets, the GX7924 offers server class data throughput and performance. When installed in a GX7000A or GX7100A 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 GX7924 employs the Intel Core 2 Duo processor and offers high performance data throughput of up to 6.4 GB/second. ECC memory is fast and reliable and up to 4GB of dual channel 400 MHz DDR2 SDRAM can be installed via two 200-pin SODIMM sockets.

The highly integrated GX7924 features a PMC / XMC 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 3 Gigabit Ethernet ports (2 ports at the front and 1 at the rear) provide full PICMG 2.16 support. The GX7924 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	Intel Core 2 Duo processor in Micro-FCBGA 479-pin package, T7400, 2.16 GHz, 667 MHz FSB, 4 MB L2 cache,
MEMORY	<ul style="list-style-type: none"> • Up to 4 GB DDR2 400 MHz dual channel, registered SDRAM w / ECC via two 200-pin SODIMM sockets (supplied with 1 GB) • 2 redundant 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 • Three USB 2.0 interfaces with up to 480 Mbit/sec, two front, one rear • Three 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 one copper port is routed to PICMG 2.16 rear I/O pins. • VGA Video Controller – ATI ES1000 2D engine, 64 MB external memory. 	
FRONT PANEL FUNCTIONS	
COM1	9-pin D-Sub (RS232, RS422, RS485)
VGA	15-pin D-Sub SVGA connector
ETHERNET	2x RJ-45
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"> • One SATA connection, can be used to connect an onboard 2.5" SATA 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	1	-
SERIAL	1	1	-
PS/2 MOUSE	-	1	-
PS/2 KEYBOARD	-	1	1
ETHERNET	2	1	-
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, 64 bit/66 MHz. • 5V or 3.3 volt signaling, 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 / XME SLOT			
One 64-bit / 66MHz PMC slot Pn1-Pn4, rear I/O Pn3 to J4. 3.3 V PCI voltage			
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 for thermal control, fan speed and all onboard voltages • RTC (integrated in HanceRapids) and CMOS RAM with backup, battery replaceable 			
REAR I/O VIA J3/(J4)/J5			
J3	PICMG 2.16, VGA, COM 1/2, keyboard, mouse, USB 3/4		
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 			

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GENERAL	
DIMENSIONS	233 x 160 x 20.5 mm, 6U, 4HP
WEIGHT	400g
MTBF	157,696 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 XP, XP Embedded, Windows Server 2003, Vista	
POWER CONSUMPTION	
2.16 GHz, 2 GB of memory	53 watts, max.
ENVIRONMENTAL	
OPERATING TEMP.	0° C to +60° C
STORAGE TEMP.	-55° C 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.

ORDERING INFORMATION

CPU BOARDS*	
GX7924-211024	2.16 GHz Core 2 Duo, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO (one rear panel accessible), IPMI, J1/J2/J3, 1 GB RAM
GX7924-212048	2.16 GHz Core 2 Duo, 2xGigEthernet on FP, 2xGigEthernet on PICMG2.16/RIO (one rear panel accessible), IPMI, J1/J2/J3, 2 GB RAM

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

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