GX7200 SERIES

21 SLOT, 3U PXIE CHASSIS

- 21 slots - supporting a 3U cPCI Express controller and 20 3U PXI or cPCI instruments
- Flexible slot configuration offers (8) PXI-1, (8) Hybrid, and (4) PXIe slots
- 4x4 PXIe lane architecture supports 8 GB/s system bandwidth and peer to peer communication
- Integral Smart functions provide per slot temperature monitoring, system power supply monitoring, fan monitoring / control and PXI trigger mapping

DESCRIPTION

The GX7200 Series mainframes are 21-slot PXI chassis that can accommodate up to 20 instruments as well as a PXI Express controller (an embedded CPU or a PXI bus expander interface such as the MXI). The backplane architecture supports Gen 2 PCI Express bus signaling and the use of both x1 or x4 system controllers. By offering a combination of PXI-1, Hybrid, and Express slots, the GX7200 offers users the ultimate in flexibility for general purpose as well as high bandwidth test needs.

FEATURES

A total of 755 watts of system power is available for the GX7200 Series chassis. Forced-air cooling for the chassis is provided by (4) 79 CFM fans located under the card cage with a dedicated fan supplying cooling for the system power supply. This cooling configuration, in conjunction with air plenums within the chassis, provides airflow for all module slots per the PXI specification and requires no additional rack space for inlet or outlet air.

The GX7200 Smart Chassis supports the monitoring of slot temperatures and system power supply voltages as well providing the ability to program or map each PXI trigger line from one PCI segment to another. In addition, the user can program the temperature monitoring function for specific warning and shutdown limits as well as monitor and control fan speed. All user specific setups can be stored in non-volatile memory as a user configuration and can be used as the default setup for normal chassis operation.

For applications requiring a mass interconnect interface and the means to route cables to/from the rear of the chassis, MTS offers the GX7202 and GX7212 models. These chassis include an integrated 2U cable tray, a hinged interface assembly that accommodates all popular mass interconnect devices, optional openings at the top & bottom of chassis for cable routing, and a recessed card cage (recessed by 2.5" or 4.5") providing up to 7" of space for interface wiring.

CHASSIS CONFIGURATION

Slot 1 is dedicated to the system controller (embedded or remote, using a PXI bus expander) and supports a x1 or x4 PXI Express controller.
Slots 2, 9, 10 and 21 are x4 PXIe slots with slot 9 also supporting the PXIe system timing slot functions.
Slots 3 - 8 and slots 19 & 20 are PXI hybrid slots.
Slots 11 - 18 are PXI-1 slots.

SOFTWARE

The chassis is supplied with the GxChassis software which includes a software library, driver, programming examples, a virtual panel application and documentation. The virtual panel provides a way to control, configure and display the smart chassis' features, including temperature monitoring, trigger line mapping, and power supply voltage monitoring. A 32/64-bit Windows DLL driver is provided with various interface files for accessing the DLL functions from programming tools and languages such as ATEasy, LabVIEW, C/C++, Microsoft Visual Basic®, Delphi, and more. A User's Guide provides documentation that includes instructions for installing, using and programming the chassis. Support for Linux for the chassis is provided using a separate software package - GtLinux.

APPLICATIONS

- Automatic Test Equipment (ATE)
- Data Acquisition
- Process Control
- Production Test
- Scientific Applications
- Industrial Systems

CHASSIS AND CONTROLLERS

MARVIN TEST SOLUTIONS

GX7200 SERIES

SPECIFICATIONS

CHASSIS SPECIFICATIONS	
Input AC Power	90 to 264 VAC, 12 A max (PFC) 47 to 63 Hz
Total Available DC Power	755 W
+5 V **+3.3 V** **+12 V** **-12 V** **Note: Total output power cannot exceed 755 W.**	60 A (max) 60 A (max) 30 A (max) 5 A (max)
Weight **GX7200** **GX7210** **GX7202** **GX7212**	29 lbs 26 lbs 35 lbs 32 lbs
Dimensions **GX7200, GX7210, GX7202, GX7212**	4U (7") H x 17.6" W x 16.5" D 6U (10.5") H x 17.6" W x 23" D
Cooling	Four 79 CFM fans for system cooling. Integrated temperature monitoring via an on-board microcontroller with audible and software notification when preset temperature limits are exceeded. Fan speed control and monitoring is automatic and can be controlled / monitored via the GxChassis software.
PXI Clock	Integrated 10 MHz PXI clock with auto-detect function. Presence of an external 10 MHz PXI clock will disable the internal clock. PXI clock is distributed to all peripheral slots. Optional external clock via slot 2
Temperature Monitoring	Per slot monitoring, 1 reading/sec/slot 4 second moving average value User selectable alarm criteria: • Maximum slot temperature • Average slot temperature Accuracy: ± 2 °C Default warning and shutdown limits: +50 °C & +70 °C Warning and shutdown limits programmable via software driver Status: Query via software driver and audible alarm for a warning limit condition
Power Supply Monitoring	Monitored voltages: 3.3, 5, +12, -12, VIO value Accuracy: ± 2% of reading
PXI Triggers	Slots: 2 – 21 Number: 8 per segment Software controlled segment mapping supports: • Isolate a trigger line within a segment • Map a trigger line left to right • Map a trigger line right to left

PXI Clock and Synchronization Resources	Integrated 10 and 100 MHz clock with an auto-detect function. Presence of an external 10 MHz PXI clock will synchronize the 100 MHz clock to the external 10 MHz source 100 MHz clock accuracy: ± 30 ppm Synchronization signals: SYNC100 & SYNC_CTRL
External 10 MHz Clock Input	An external 10 MHz clock source (TTL level) can be provided via a rear panel BNC or via a PXI Express System Timing Controller
10 MHz Clock Output	10 MHz output is available via a rear panel BNC connector, TTL compatible level
Slots	(1) PXI Express Controller (1) PXIe Timing Controller (3) PXI Express (8) PXI Hybrid (8) PXI-1
GX7200, GX7202 Peripherals	500 GB (min) hard drive, 7200 rpm

ENVIRONMENTAL TEMPERATURE RANGE AND COMPLIANCE	
Operating	0 °C to +50 °C
Storage	-20 °C to +60 °C
Relative Humidity (operating)	5% to 80% RH, non-condensing Dew point -5°C - 20°C
Relative Humidity (non-operating)	5% to 95% RH, non-condensing 30°C max
Altitude (operating)	Up to 2000 M
CE Compliance	EN61010-1 EN61326
PXI Compliance	PXI-5, PXI Express Hardware Specification

Note: Specifications are subject to change without notice

MARVIN TEST SOLUTIONS

GX7200 SERIES

ORDERING INFORMATION

GX7200	21 Slot PXIe Master Chassis
GX7210	21 Slot PXIe Slave Chassis
GX7210-NP	21 Slot PXIe Slave Chassis without Power Supply
GX7210-PWR1	AC Power Panel Assembly for GX7210
GX7200R	21 Slot PXIe Master Chassis with Rack Mount
GX7210R	21 Slot PXIe Slave Chassis with Rack Mount
GX7212	GX7210R with an Integrated Cable Tray and a Hinged Front Panel for Mass Interconnect (Rackmount Configuration)
GX7200-MPR	21 Slot PXIe Master Chassis, SCOUT Receiver Compatible
GX7210-MPR	21 Slot PXIe Slave Chassis, SCOUT Receiver Compatible
GX7202	GX7200R with an Integrated Cable Tray and a Hinged Front Panel for Mass Interconnect (Rackmount Configuration)
GX7205	21 Slot PXIe Master Chassis with 1600W system power supply
GX7215	21 Slot PXIe Slave Chassis with 1600W system power supply
GX7202-N	GX7200R with an Integrated Cable Tray, (Rackmount Configuration)

CONTROLLER (FOR MASTER CHASSIS, SELECT ONE)	
GX7944-2162048	3U PXIe Single-Slot controller, 2.16GHz Core2Duo, 2GB RAM, 1GB/S System Bandwidth

BUS EXPANDER (FOR SLAVE CHASSIS)	
MXIe1-Express	MXI-Express Interface Kit (PCIe I/F Card, PXIe I/F Card, 3-Meter Cable). 192MB Throughput, includes 2-port PCIe card
MXIe1-Express-L	Laptop (ExpressCard) to PXIe (X1) Interface Card Kit, Includes 3 Meter Cable
MXIe4-Express-1	MXI-Express Interface Kit (PCIe I/F Card, PXIe I/F Card, 3-Meter Cable). 798MB Throughput, 1-port PCIe card
MXIe2-Express	MXI-Express Interface kit (2-port PCIe I/F card, (2) PXIe modules, (2) 3M cables, 192 MB throughput

ACCESSORY	
GX97111	3U Blank Panel, 1-Slot wide
GX97112	3U Blank Panel, 2-Slots wide
GX97114	3U Blank Panel, 4-Slots wide
GX97115	3U Blank Panel Kit includes (3) 1-slot, (4) 2-slot and (2) 4-slot wide panels

GX97920	20 & 21-Slot PXI Chassis Installation/Integration Service (Includes 2nd Year Warranty & Blank Panels)
OPTION	
GX7xxx-400Hz	115VAC/400Hz Input Power Option for any Marvin Test Solutions PXI Chassis

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