GX7300 SERIES

MARVIN TEST SOLUTIONS

20 SLOT, 3U PXI CHASSIS

- 20 slots - supporting a 3U (embedded or remote) PXI controller and 19 3U PXI or cCPI instruments
- Built-in peripherals (hard disk drive, and a DVD-RW drive) for embedded controller configurations
- Integral Smart functions provide per slot temperature monitoring, system power supply monitoring, and PXI trigger mapping
- 755 W and 1600 W system power supply configurations
- Cable tray, recessed instrumentation, cable routing, and hinged front interface assembly configurations are available for mass interconnect interfaces

DESCRIPTION

The GX7300 Series mainframes are 20-slot PXI chassis that can accommodate up to 19 instruments as well as a PXI controller (an embedded CPU or a PXI bus expander interface such as a MX interface). The 3U form-factor provides a compact test system foot print and provides users with the flexibility to employ both PXI and Compact PCI 3U modules.

FEATURES

A total of 755W of system power is available for the GX7300, GX7310, GX7302 and GX7312 models. The GX7305 and GX7315 feature a high capacity, 1600 watt system power configuration and is capable of supplying 60 watts of power to each PXI peripheral slot - making it the ideal PXI chassis for high peformance and high channel count digital I/O applications and performance mixed-signal applications.

Forced-air cooling for the GX7300, GX7310, GX7302 and GX7312 chassis is provided by (4) 65 CFM fans located at the bottom of the card cage assembly with a dedicated fan supplying cooling for the system power supply. This cooling configuration, in conjunction with air plenum within the chassis, provides airflow for all module slots per the PXI specification. The GX7305 and GX7315 employ four 100 CFM fans located at the bottom of the card cage assembly with dedicated fans for the system power supplies.

The GX7300 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 the chassis' 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.

The GX7302 and GX7312 offer the ideal solution for supporting mass interconnect interfaces from several manufacturers including Virginia Panel, Mac-Panel, ITT Cannon, and others. 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 recessed PXI instruments (recessed by 2.5" or 4.5") providing up to 7" of space for interface wiring. In addition, the GX7302 and GX7312 can be ordered with the Mac-Panel Scout receiver, providing a wireless mass termination interface.

CONFIGURATION

Slot 1 is dedicated to the system controller (embedded or remote, using a PXI bus expander). A PXI Star Trigger Controller or any PXI or cPCI instrument can be used in slot 2. Slots 3 - 15 support the PXI Star Trigger and any PXI or cPCI instrument. Slots 16 - 20 accommodate PXI or cPCI instruments without the Star Trigger.

PROGRAMMING AND SOFTWARE

The chassis is supplied with the GxChassis software which provides software libraries and a driver, programming examples, 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. A separate software package - GtLinux - provides support for Linux 32/64 operating systems.

CHASSIS AND CONTROLLERS

GX7300 SERIES

MARVIN TEST SOLUTIONS

APPLICATIONS

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

SPECIFICATIONS

Chassis	GX7300, GX7310, GX7302, GX7312
Input AC Power	90 to 264 VAC, 12 A max (PFC) 47 to 63 Hz
Total Available DC Power	850 watts
DC current +5 V +3.3 V +12 V -12 V Note: Total power cannot exceed 755 W	 60 A (max) 40 A (max) 35 A (max) 5 A (max)
Chassis	**GX7305, GX7315**
Input AC Power	120 VAC, ±15%; 20 A max (PFC) 240 VAC, ±10%; 10 A max (PFC) 47 Hz to 440 Hz
Total Available DC Power	1600 watts
Available DC Current +5 V +3.3 V +12 V -12 V	 100 A (max) 180 A (max) 10 A (max) 5 A (max)
Weight GX7300 GX7310 GX7302 GX7312 GX7305 GX7315	 33 lbs 30 lbs 35 lbs 32 lbs 40 lbs 37 lbs
Dimensions: GX7300, GX7310	4U (7") H x 17.6" W x 16" D
Dimensions: GX7302, GX7312, GX7305, GX7315	6U (10.5") H x 17.6" W x 23" D
Cooling (GX7300, GX7310, GX7302, GX7312)	Four 65 CFM fan for system cooling. Separate fan for system power supply. Integrated temperature monitoring via an onboard microcontroller with audible and software notification when preset temperature limits are exceeded. Fan control and monitoring via the GxChassis software
Cooling (GX7305, GX7315)	Four 100 CFM fans. Separate fans for system power supplies. Integrated temperature monitoring via an onboard microcontroller with audible and software notification when preset temperature limits are exceeded. Fan control and monitoring via the GxChassis software
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 and +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 - 20 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
Clock	Integrated 10 MHz PXI clock with an auto-detect function. Presence of an external 10 MHz PXI clock will disable the internal clock.
Slots	20 PXI or cPCI Slots (19 instruments max)
Receiver Interface (GX7302-I)	Virginia Panel iCON 960 (Includes connector interface PCB assembly)
GX7300, GX7302, GX7305 Peripherals	DVD-RW and 160 GB (min) hard drive, 7200 rpm

GX7300 SERIES

ENVIRONMENTAL	
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +60 °C
GX7300C / GX7310 Acoustic Noise (at operator level, 12 inches from front of unit)	Auto fan setting (@ 23°C ambient): 54.3 dBA High fan setting: 61 dBA
GX7305 / GX7315 Acoustic Noise (at operator level, 12 inches from front of unit)	Auto fan setting (@ 23°C ambient): 57.1 dBA High fan setting: 72.8 dBA
CE Compliance	EN61010-1 EN61326

Note: Specifications are subject to change without notice

ORDERING INFORMATION

GX7305	20 Slot 3U High Power/High Cooling PXI Master Chassis to Support High-Performance Digital Cards (GX5295 Family)
GX7315	20 Slot 3U High Power PXI Slave Chassis
GX7300C	20 Slot 3U PXI Master Desktop Chassis w/DVD-RW & Hard Disk drive
GX7300CR	20 Slot 3U PXI Master Rackmount Chassis w/DVD-RW & Hard Disk drive
GX7302C	GX7300CR with an integrated Cable Tray & a Hinged front panel for Mass Interconnect (rackmount configuration)
GX7302C-4TB	GX7300CR with the card cage recessed 4", & top/bottom cable routing openings (formerly GX7302-4)
GX7302C-4FTB	GX7300CR with a hinged flat front panel, card cage recessed 4", and top/bottom cable routing openings (rackmount configuration) (formerly GX7302-4FT)
GX7302C-MP	GX7302C with a MacPanel SCOUT Mass Interconnect Receiver
GX7312C-MP	GX7312C with a MacPanel SCOUT Mass Interconnect Receiver
GX7310C	20 Slot 3U PXI Slave Desktop Chassis for use with PXI Remote Controllers
GX7310CR	20 Slot 3U PXI Slave Rackmount Chassis for use with PXI Remote Controllers
GX7312C	GX7310CR with an integrated Cable Tray & a Hinged front panel for Mass Interconnect (rackmount configuration)
GX7312C-4FTB	GX7310CR with a hinged flat front panel, card cage recessed 4", and top/bottom cable routing openings (rackmount configuration)
GX7302C-I	GX7302C with iCON 960 Receiver Interface / PCB Assy and Card Cage Recessed 4"
GX7315R	20 Slot 3U High Power Rack Mount PXI Slave Chassis
GX7312C-4TB	GX7310CR with the card cage recessed 4", & top/bottom cable routing openings (formerly GX7312-4)
CONTROLLER (FOR MASTER CHASSIS, SELECT ONE)	
GX7938	3U Intel 6-Core Xeon 2.7 GHz cPCI Embedded Controller
GX7939	3U Intel i7 Quad-core, 2.8 GHz cPCI Embedded Controller
GX7937-234096	3U Single Slot Embedded Controller for GX73xx chassis, 2.3 GHz i7 core, 4 GB of RAM
GX7936-214096	3U Single Slot Embedded Controller for GX73xx Chassis. 2.1 GHz i7 Core, 4 GB of RAM
GX7936-SSD	GX7936 Controller with Solid State Drive, 1 TB min. Note: Requires Windows OS
BUS EXPANDER (FOR SLAVE CHASSIS)	
MXI-PCIe-PXI-KIT-AD	MXI-Express Interface Kit including PCIe Interface Card, PXI Interface Card and 3 Meter Cable
MXI-PCIe-X1-AD	PCI Express-to-PCI expansion card for host PC, X1 PCI Express interface - Compatible with MXI-PXI-X1-A
MXI-PXI-X1-AD	PXI interface, X1 - Compatible with MXI-PCIe-X1-A
MXI-CBL-PCIe-X1-1M-AD	PCIe -to-PXI 1 M cable
MXI-CBL-PCIe-X1-3M-AD	PCIe -to-PXI 3 M cable
MXI-CBL-PCIe-X1-7M-AD	PCIe -to-PXI 7 M cable
MXI-4E-C	MXI-Express Kit, Copper, PXI to PCI, with 3m Cable
MXI-EXPRESS-1A	PCIe -to-PXI Chassis Expansion Kit. Includes (1) PCIe interface card, (1) PXI interface card and 3 M cable

MXI-EXPRESS	MXI-Express Interface Kit Including PCIe Interface Card, PXI Interface Card, and a 3 Meter Cable, includes 2-port PCIe card
MXI-4E-PXI-C-P	MXI-Express Interface Card, PXI, Copper, for Daisy Chain Configurations (Requires One MXI-E-PXI-C & Cable)
MXI-EXPRESS-1	MXI-EXPRESS interface kit, includes single port PCIe interface card, PXI interface card, 3M cable
MXIe1-PXI-L	Laptop (ExpressCard) to PXI Interface Card Kit, Includes a 3 Meter Cable
MXI-EXPRESS-2	Dual MXI-Express I/F Kit Including Dual-Port PCIe I/F Card, 2 PXI I/F Cards, and 2 3 Meter Cables
MXI-4E-PCI-C	MXI-Express Interface Card, PCI, Copper, (Requires One MXI-E-PXI-C & Cable)
MXI-4E-PXI-C	MXI-Express Interface Card, PXI, Copper, (Requires One MXI-E-PCI-C & Cable)
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 with multiple size panels
GX97117	3U Blank Panel with Air Baffle
GX7909-250	3U cCPI Card with 250 GB Hard Drive
GX7909-80	3U CPCI Card with 80 GB Hard Drive
GX7909-SSD	3U cPCI with Solid State Drive, 1TB
GX7909-500	3U cCPI Card with 500 GB Hard Drive
GX97920	20 / 21-Slot PXI Chassis Installation/Integration Service & 2nd Year Warranty
GX97921	20 / 21-Slot High-Power PXI Chassis Integration Service & 2nd Year Warranty
GX97028	Replacement PXI Chassis Power Supply
GX98300	Chassis Flange Kit for SCOUT 3U Rcvr, GX7200 & GX7300 Chassis
GX97026	Replacement Power Supply for use on GX73x0 Chassis Models (2520-250-00)
GX97024	Replacement Power Supply for use on GX73xx Chassis Models (MRI modification 134)
OPTION	
GX7xxx-HD	Upgrade Chassis Hard Disk size to 560GB
GX7xxx-400Hz	115VAC/400Hz Input Power Option for any Marvin Test Solutions PXI Chassis