GX7600 SERIES

9 SLOT, 3U PXI EXPRESS CHASSIS

- Supports a 3U (embedded or remote) cPCI Express controller, 2 PXI Express hybrid slots, 5 PXI slots, and a PXI Express system timing slot
- Built-in peripherals (hard disk drive, and a DVD-RW drive) for embedded controller configurations
- Compact footprint is ideal for bench top or portable applications
- Integral Smart functions provide per slot temperature monitoring and system power supply voltage monitoring

DESCRIPTION

The GX7600 Series mainframes are compact, 9-slot PXI chassis that can accommodate up to 8 instruments as well as an embedded single slot cPCI Express controller such as the GX7944 or a PXI Express external bus controller such as the x1 or x4 MXI - PXI Express interface. The GX7600's compact 3U form-factor occupies only 9 x 18 inches of bench space, making it ideal for benchtop or space constrained applications. And when combined with 8 peripheral slots, integral Smart functions, and the bandwidth of PXI Express, the GX7600 represents a new level of performance, capabilities and value for PXI mainframes.

FEATURES

System power for the GX7600 Series is provided by a single power supply configuration that provides 550 watts of system power.

Forced-air cooling for the chassis is provided by two 79 CFM fans located under the card cage with a separate fan providing cooling for the system power supply. Based on internal chassis temperature, chassis fan speed is automatically adjusted, minimizing acoustic noise emissions. The chassis' cooling configuration provides airflow for all module slots per the PXI specification and requires no additional rack space for inlet or outlet air.

Like all Marvin Test Solutions' PXI chassis, the GX7600 incorporates Smart functions, which supports the monitoring of slot temperatures and system power supply voltages. In addition, the user can program the temperature monitoring function for specific warning and shutdown limits. All user specific setups can be stored in nonvolatile memory as a user configuration and can be used as the default setup for normal chassis operation. All Smart functions are available with master or slave chassis configurations.

CONFIGURATION

The nine-slot layout of the GX7600 consists of five PXI slots, two PXI hybrid slots, one PXIe timing slot, and one cPCIe controller slot. The PXI backplane supports a x4 PCI Express lane configuration for the two hybrid slots and the system timing slot, providing an aggregate bus bandwidth of 3 GB/s. An additional x1 PCI Express lane interfaces to a PCI bridge device for support of the 5 PXI slots. Full support of the PXI Express timing, triggering, and synchronization resources is provided including support for the PXI Express system timing slot.

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.

APPLICATIONS

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

GX7600 SERIES

SPECIFICATIONS

CHASSIS	
Input AC Power	115 VAC @ 10 A, 50 / 60 Hz, or 230 VAC @ 5 A, 50 / 60 Hz Autorange switching
Total Available DC Power	550 W
+5 V **+3.3 V** **+12 V** **-12 V** **Note: Total power for the +5 V and +3.3 V cannot exceed 300 W.**	60 A (max) 40 A (max) 32 A (max) 3 A (max)
Weight **GX7600** **GX7610**	 16 lbs 13 lbs
Dimensions **GX7600 / GX7610**	 4U (7") H x 8.9" W x 18" D
Cooling	Two 79 CFM fans for system cooling. Dedicated 50 CFM fan for power supply cooling.
Temperature Monitoring	Integrated temperature monitoring via an on-board microcontroller with audible and software notification when preset temperature limits are exceeded. Per slot temperature 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 - 9 Number: 8
PXI Star Trigger	Slots: 2 - 9 Dedicated, low skew Star trigger connecting slots 2, 3, and 5 - 9 to slot 4, the PXIe system timing slot
PXI Express DSTAR Triggers	Slots: 3, 4, and 5 3 dedicated differential pairs, connecting each PXI hybrid slot to the PXIe system timing slot
PXI Clock and Synchronization Resources	Clocks: Integrated 10 and 100 MHz clock with an autodetect 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	9 Slots (8 instruments max) 1 cPCIe controller slot 2 PXI Hybrid slots 5 PXI slots 1 PXIe System Timing slot
GX7600, GX7602 Peripherals	DVD-RW and 160 GB (min) hard drive, 7200 rpm
ENVIRONMENTAL	
Operating Temperature	0 °C to +50 °C
Storage Temperature	-20 °C to +60 °C
Emissions Compliance	EN55011:1991 Group 1 FCC Class A at 10 M
CE Compliance	EN 61010-1 EN61326

Note: Specifications are subject to change without notice

GX7600 SERIES

ORDERING INFORMATION

GX7600	9 Slot Smart 3U PXI Express Master Chassis w/DVD-RW & Hard Disk Drive
GX7600R	9 Slot Smart 3U PXI Express Master Chassis with Rackmount Kit (GX97600) w/DVD-RW & Hard Disk drive
GX7610	9 Slot Smart 3U PXI Express Slave Chassis
GX7610R	9 Slot Smart 3U PXI Express Slave Chassis with Rackmount Kit (GX97600)
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, SELECT ONE)	
MXIe1-Express	MXI-Express Interface Kit (PCIe I/F Card, PXIe I/F Card, 3-Meter Cable). 192MB Throughput
MXIe4-Express	MXI-Express Interface Kit (PCIe I/F Card, PXIe I/F Card, 3-Meter Cable). 798MB Throughput
MXIe1-Express-L	Laptop (ExpressCard) to PXIe (X1) Interface Card Kit, Includes 3 Meter Cable
ACCESSORY	
GX97600	Rackmount kit for GX7600 & GX7800 chassis
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
GX97117	3U, Single Slot, Blank Panel w/Air Baffle
GX7909-250	3U PXI Card with 250 GB Hard Drive
GX7909-80	3U PXI Card with 80 GB Hard Drive
SERVICES	
GX97909	8 & 9-Slot PXI Chassis Installation/Integration Service & 2nd Year Warranty
OPTION	
GX7xxx-400Hz	115VAC/400Hz Input Power Option for any Marvin Test Solutions PXI Chassis

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