

GX7600 SERIES

9-SLOT 3U PXI EXPRESS SMART CHASSIS

- Supports a 3U (embedded or remote) PXI 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
- 560 W power supply
- High performance cPCI Express bus architecture – up to 1 GB/s dedicated slot bandwidth and 3 GB/s system bandwidth



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 PXI Express controller such as the GX7940 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 9x18 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 400 watts of system power.

Forced-air cooling for the chassis is provided by two 65 CFM fans located at the rear of the chassis 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 Geotest 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 non-

volatile 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.

SOFTWARE

The GX7600 is supplied with a virtual instrument panel, which includes 32-bit DLL driver libraries and documentation. The virtual panel can be used to interactively set /display shutdown and alarm conditions based on defined temperature levels. In addition, defined warning and alarm limits can be saved or recalled or optionally, the use of factory settings can be invoked. Monitoring of all system power voltages and configuration is also supported.

An API is supplied that supports a variety of programming tools and languages such as ATEasy, LabVIEW, Microsoft® Visual C++, Borland® C/C++, Microsoft Visual Basic®, Borland Delphi, LabWindows, and .Net.

GX7600 SERIES

APPLICATIONS

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

SPECIFICATIONS

CHASSIS	
INPUT AC POWER	115 VAC @ 10A, 50/60 Hz, or 230 VAC @ 5 A, 50/60 Hz Autorange switching
TOTAL AVAILABLE DC POWER	560 W
+5V	60 A (Max)
+3.3V	40 A (Max)
+12V	32A (Max)
-12V	3 A (Max)
WEIGHT	
GX7600	16 lbs
GX7610	13 lbs
DIMENSIONS	4U (7") H x 8.9" W x 18" D
GX7600 / GX7610	
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 & +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 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	9 Slots (8 instruments max) 1 cPCIe controller slot 2 PXI Hybrid slots 5 PXI slots 1 PXIe System Timing slot
ENVIRONMENTAL TEMPERATURE RANGE	
OPERATING	0° C to 50° C
STORAGE	-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.

ORDERING INFORMATION

CHASSIS	
GX7600	3U, 9 Slot PXI Express Chassis with built-in DVD-RW and hard disk drives
GX7610	3U, 9 Slot PXI Express Chassis for external controller applications
CONTROLLER OPTIONS	
GX7940-141024	3U, Single slot cPCI Express controller, for GX7600 Series chassis. 1.4 GHz/1 GB RAM, Pentium M CPU
GX7940-201024	3U, Single slot cPCI Express controller for GX7600 Series chassis. 2 GHz/1 GB RAM, Pentium M CPU
PCI E-PXIE (X1) MXI EXPRESS	PCIe to PXIe bus expansion kit. Supports x1 lane configuration between an external PC and a PXI Express chassis
PCI E-PXIE (X4) MXI EXPRESS	PCIe to PXIe bus expansion kit. Supports x4 lane configuration between an external PC and a PXI Express chassis
ACCESSORIES	
GX97909	9-Slot PXI Chassis Installation/Integration Service (includes 2nd year warranty)