

The 6000U enclosure has 4 slots for Series 6000 input and output modules with a Universal Serial Bus (USB 2.0) computer interface for programming, control and data output. Like other 6000 mainframes, it supports systems of up to 4096 channels using slave enclosures.

The enclosures have integral fans providing air circulation and an internal cable tray that routes the input and output cables from the front of the installed modules to exit the rear of the enclosure. An optional, removable hard drive is available for local data storage that may be employed for redundant recording of important data.

Programming and data transfer use the USB 2.0 protocol, which provides high data transfer rates with low, predictable latency. It interfaces to the USB 2.0 port provided on most PC computers including laptops. Maximum length of the interface cable is 5 meters but it may be extended further using Ethernet with the CDP option.

The optional USB to Ethernet Control Data Processor (CDP) interfaces multiple 6000U enclosures to gigabit Ethernet providing remote operation and data collection. The gigabit Ethernet may be used for distances up to 15 meters and may be extended to longer distances using switches or an alternate transport protocol. The CDP includes a high-speed processor and software that performs low-level operations freeing resources on the data acquisition computer for data display, storage, reduction and distribution.



FEATURES

- Desktop or rack mounting for small systems
- USB 2.0 Interface provides 4 MS/s aggregate data rate
- Calibration voltage distribution
- Alarm busses for control external equipment
- Optional remote operation using gigabit Ethernet
- Optional on-board data storage
- Built-in fans and cable tray
- 5 Inches high

SPECIFICATIONS

DATA FORMAT

Data Word16 or 32-bits, 2's complement binary.
 Scan TableMaximum format length is 65,536 samples.
 Sample RatesMultiple sample rates consisting of the highest sample rate divided by binary numbers. Highest sample rate is programmable with 1 uS resolution.

DATA INTERFACE

Output RateProcessor dependent, typically over 4 million 16-bit samples/second (4 MS/s).
 Latency.....Processor and scan table dependent, typically less than 5 milliseconds.

OPERATION

ProtocolControl and data interface is USB 2.0.
 SoftwareWindow's 2000 or XP driver provides high-level operating command set. Fully compatible with all implementations of PI660 operating software.
 Control Inputs.....TTL inputs for Start, Stop and Trigger assert flags in the header of output data that initiate software control operations.
 AlarmsWarning and alarm buses may be independent or shared between enclosures and may initiate an output from a digital I/O type module.

CONNECTIONS

Calibration15-Pin Type D mounted on rear panel. Mating connector supplied.
 Control15-Pin Type D mounted on rear panel. Mating connector supplied.
 Synchronization.....Category 5, enclosure to enclosure. Two-meter cable supplied.
 USBTwo-meter cable supplied.

GENERAL

Power115 or 230 VAC, $\pm 10\%$, 47 to 63 Hz, 400 Watts.
 Temperature0°C to +50°C operating.
 Humidity95% without condensation.
 Shock/VibrationNormal shipping and handling of laboratory instruments.
 Size19 inches wide, 5 inches high, 18 inches deep (including connectors).
 WeightApproximately 25 pounds with all channel modules.

CONTROL DATA PROCESSOR (OPTION)

InputUSB 2.0 ports for up to eight 6000U enclosures. Additional 6000U enclosures accommodated by adding USB PCI expansion cards.
 OutputEthernet, gigabit.
 Distance (Output) ..Fifteen meters. Longer distance using Ethernet switches or transport protocol.
 Processor3 GB Pentium IV with 1G RAM.
 Power95-132 or 180-264 VAC, 47 to 63 Hz.
 Temperature0°C to +50°C operating.
 Size19-inches wide, 1U high.

ORDERING INFORMATION

6010U①Enclosure, 16-slot, USB 2.0 data and control interface.

OPTIONS

6095Data Storage, 40 GB hard drive
 CDPControl Data Processor, gigabit Ethernet output
 PS1Auxiliary Power Supply (required for 6014s)

①Add -115 for 115 VAC operation or -230 for 230 VAC operation.