

PI-11008

Instrument Mainframe

Features:

- Controller slot plus seven 6U Instrument Card Slots
- 630 Watt Power Supply
- Low Noise Support for PI Instrument Cards
- Quad-core i7 Processor
- Up to 32 GB RAM
- On-board SDD, 1.0 TB
- Rack-mountable or bench-top use
- USB 2.0/3.0, dual Gigabit Ethernet
- On-board Video for up to 3 displays
- One PMC site

Applications:

- Benchtop FPA test instrument
- Pattern generator mainframe
- Control mainframe for System 7700
- Slave mainframe for System 7700
- Replacement for PI-5800A and PI-4001 instruments

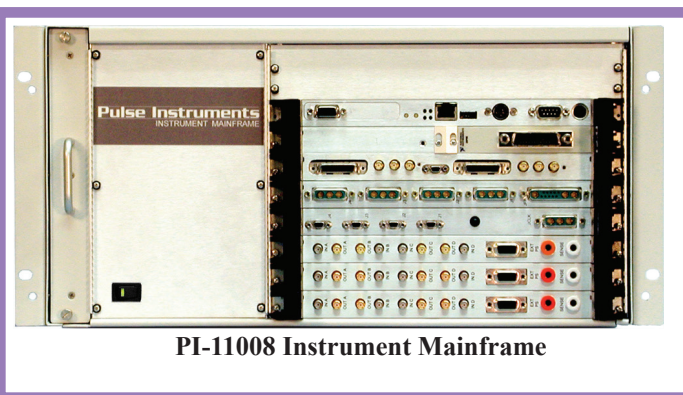
Description:

The PI-11008 Instrument Mainframe is the primary building block for Pulse Instruments' modular FPA, CCD and CMOS imaging test stations. Housing a variety of Pulse Instruments analog and digital instrumentation cards as well as selected 3rd-party cards, the PI-11008 provides a modular, flexible foundation for cost-effective, high-performance test.

Pulse Instruments mainframes are designed to accommodate the power and noise requirements of Pulse Instruments analog instrumentation cards. These instrument cards, such as the PI-41401, PI-41402, PI-41702, and PI-41703, require more current from the -12 V supply than is available in a standard mainframe. Therefore this mainframe has a larger -12 V power supply that provides 5.0 Amps.

The standard CompactPCI mainframe is typically built for instrumentation applications where electrical noise is not a serious consideration. With Pulse Instruments test equipment electrical noise is of paramount consideration in the overall system performance. The PI-11008 has been designed to minimize the electrical noise injected into the instruments' analog circuitry and therefore minimize the effect on the output performance.

The mainframe has an industry-standard 8-slot CompactPCI backplane. One slot is reserved for the



single-board-computer or bus extension card with the remaining 7 slots available for instrument cards from Pulse Instruments or other vendors.¹

The single-board computer is a commercially-available x86 blade running Windows 10/64. The commodity nature of the system controller ensures that CPU replacements and upgrades will be available and affordable throughout the life of your system. The Windows 10 operating system supports standard Windows applications and utilities and provides for easy integration into corporate IT and test networks.

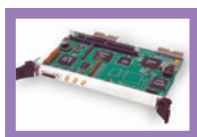
An on-board 2.5" SSD site houses the system disk (up to 1.0 TB), minimizing downtime by providing easy access to the drive for imaging, backup, or replacement.

One PMC site is available for an optional GPIB interface or CPCI extension card. 3rd-party PMC cards may be installed to provide SCSI or Fibre Channel interfaces, though support for such cards is not guaranteed by PI.

The SBC provides standard on-board peripherals such as USB 2.0 and 3.0 ports, DVI, serial (COM) ports, and dual Gigabit Ethernet. An optional rear-I/O module provides 2 additional Gigabit Ethernet ports, one additional DVI, one additional HDMI, and an internal SATA interface.

The PI-11008 can be configured to operate as your system controller, or it can be slaved to an external PC via GPIB or TCP/IP.

¹ Support for 3rd-party cards is not guaranteed by Pulse Instruments.



Pulse Instruments

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As a system controller the PI-11008 can run Pulse Instruments' PI-DATS graphical test system software or nearly any Windows-based 3rd-party test software that can link to our DLLs.

As a slave instrument the PI-11008 can be controlled by nearly any software that can generate ASCII command strings and pass them over GPIB or TCP/IP. As a GPIB instrument the PI-11008 emulates a PI-5800A pattern generator and/or a PI-4000 Series clock driver and DC bias instrument with a very high degree of backward compatibility.

System configurations requiring more than 7 instrument cards can be implemented by bridging multiple PI-11008 mainframes via PCI extension cards. Extending the PCI bus requires one or more bridge cards installed in the "master" mainframe and one installed in each "slave" mainframe. One bridge master can bridge to two slave mainframes. A power sequencing circuit provides for single-switch power on, and ensures a sequential power-up sequence for proper PCI bus enumeration.

The PI-11008 also controls the popular Pulse Instruments 4000 Series of clock driver and low-noise DC bias instruments. The PI-11008 is a backward-compatible replacement for the PI-4001 Control Mainframe when existing PI-4002 mainframes are upgraded with USB-Opto interface cards.

Specifications and Ordering Information:

Features common to PI-11008S and PI-11008-D4

- Eight slots, one for SBC or CPCI bridge card and seven slots for instrument cards
- Power Supply, 630 Watts
 - +3.3 V/30 A
 - +5 V/43 A
 - +12 V/35 A
 - -12 V/5 A
 - +3.3 V/30 A
- 120 VAC or 220 VAC support, manually switchable
- Power sequencing circuit to ensure proper sequencing of multiple PI-11008 mainframes (using cable # 88000550-2)
- Voltage monitor points on power sequencer board
- Removable fan tray; 12 V DC Fans, powered separately for noise immunity
- RFI/EMI Shielded, designed to meet FCC Part 15 Class A
- UL/CSA/CE Qualified
- Physical Size: 8.75" x 17.375" x 11.625", (214 mm x 441 mm x 295 mm)

PI-11008-D4/16 or PI-11008-D4/32, System Controller with Single Board Computer

- Quad Core i7 CPU
- 16 or 32 GB RAM
- DVI output
- Two USB 3.0 ports
- One USB 2.0 port
- One serial (COM) port
- Dual Gigabit Ethernet ports
- Windows 10/64 Professional preinstalled on internal, removable SSD
- Pulse Instruments PI-PAT and PI-Controller software
- Optional CPCI bridge card (**PI-31002SF**)
- Optional GPIB interface
- Optional PI-DATS software
- Optional Rear I/O Card (**cPCI-I/O4**)
 - DVI output
 - HDMI output
 - Dual Gigabit Ethernet
 - Three additional USB 2.0 ports
 - Internal SATA port

PI-11008S, Slave Mainframe (requires CompactPCI bridge card set)

- Requires 2/each of CPCI bridge card (**PI-31002SF**), one installed in the System Controller and one installed in the PI-11008S