



Artist rendering; 2U cable tray option shown

Racal Instruments™ 1263HPr

High-Power, Rear-Maintainable VXI 4.0* Mainframe

The Racal Instruments™ 1263HPr VXI 4.0 high-power 13-slot mainframe allows you to leverage the speed and power of the newest VXI 4.0 standard. The high-power and cooling capability make it ideal for housing the latest generation of high-performance VXIbus instruments, such as high-power digital test instruments.

Key Features

- Rear-removable power supply tray and fan tray
- LAN backplane monitoring of voltage, temperature, and fan speed
- 3.8 kW of usable power delivered to VXI 3.0 or 4.0 compatible modules
- VXI 4.0 backplane for ultra-high speed and power
- Automatic fan speed control for quiet operation



Product Information

High Power And Extensive Cooling

The 1263HPr is capable of delivering up to 3.8 kW of power to the VXIbus modules to meet the most power-hungry applications.

The power supply and fan tray are also easily removable from the rear of the chassis using a blind-mate connector system, thus reducing the time to replace these items. This makes the mainframe ideal for rear-maintainable test system applications.

In addition, the chassis provides both temperature and voltage monitoring. A fault indicator is flagged in the event that one of the VXIbus power supply outputs is out of tolerance or if the intake or exhaust air exceed their temperature limits. LAN monitoring is available.

Safe Operation

The 1263HPr delivers 3.8 kW to 13 VXI 4.0 slots. This power level requires adequate cooling and monitoring to ensure reliable system operation, especially when modules with high internal power dissipation are used.

Substantial cooling is provided with 1280 CFM of cooling air directed from the front and side air inlets to the module slots and circulated out the top and rear of the mainframe.

Fan speed, the outlet temperature of each slot, ambient temperature, and rail voltages are all monitored and tied to programmable alarms that report out-of-tolerance conditions via a discrete fault indicator or over the LAN.

VXI 4.0 Support

The 1263HPr backplane fully supports VXI 4.0 including parallel transfer up to 320 MB/s with 2eSST protocol, which was created to handle high-speed transfer rates. New 5-row P1 and P2 connectors provide more power and speed while maintaining compatibility with pre-existing VXI applications.

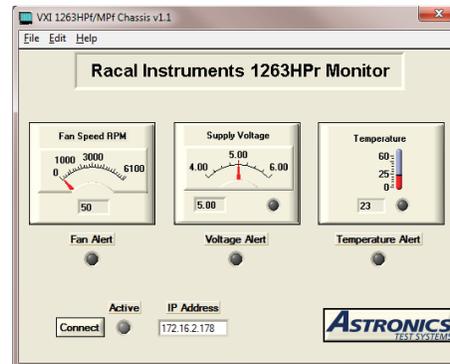


Figure 1: Main Soft Front Panel for 1263HPr Smart Monitor

* VXI-1 revision 4.0

Specifications

Note: The Astronics Test Systems policy is one of continuous development and improvement. Consequently, the equipment may vary in detail from the description and specifications in this publication.

Electrical Performance

Input Voltage Range

- 208 VAC 3-phase or single-phase

Input Frequency Range

- 47 to 500 Hz

DC Current Capacity

| Voltage | Current |
|-----------------|---------|
| +3.3 V | 30 A |
| +5 V | 120 A |
| +12 V | 36 A |
| -12 V | 36 A |
| +24 V | 30 A |
| -24 V | 30 A |
| -5.2 V | 120 A |
| -2 V or -2.2 V* | 70 A |

Maximum Available Power

- 4200 W

Maximum Usable Power

- 3768 W**

Monitoring System

Software Driver

- VXIplug&play 64-bit, Windows 7

Connector

- Rear panel mounted 9-Pin D-sub

Temperature Monitor

- Pins 4, 8 go to open circuit when intake >45° C or exhaust >65° C
- Pins 4, 8 go to closed circuit when intake <45° C or exhaust <65° C

Voltage Monitor

- A window comparator (with $\pm 10\%$ tolerance) on each VXIbus supply rail.
- Pins 2, 6 go to open circuit when tolerance exceeded
- Pins 2, 6 go to closed circuit when in tolerance

Rear Panel Power Connector

- 7-Pin circular connector
- Mating connector Astronics Test Systems part number 602458-207, Amphe-nol part number 97-3106A-20-15S

Pin Outs

- Pin A: L1
- Pin C: L2
- Pin E: L3
- Pin G: Chassis ground

LAN Monitoring and Control

- Voltage: Each voltage rail is monitored. Alarm limits can range from 5 to 10%
- Temperature: Alarm limits are settable for ambient and slot 0 to 12 exhaust temperature. All temperatures may also be read back.
- Fan Speed: 5-speed Automatic. Speed and fault status may be read back.
- Voltage Control: Standard VXI -2 V or -2.2 V voltage rails are selectable.

Environmental

Temperature

- Operating: 0° C to 50° C
- Storage: -40° C to 71° C

Relative Humidity

- 95% non-condensing

Emissions/Immunity (pending)

- EN61326:2006 Class B

Safety (pending)

- EN61010-1:2010-06

Altitude

- Operating: 15,000 ft

Shock

- 30 g, 11 ms, ½ sine wave

Vibration

- 0.013 in (Pk-Pk), 5 to 55 Hz

MTBF (MIL-STD-217E at 25° C)

- 62,000 hrs

MTTR

- The following components can be replaced in less than 5 minutes from the rear of the chassis:
 - Fan assembly
 - Power supply assembly

Mechanical

Mainframe Size

- VXI-1 Rev. 4.0, C-size, 13 slots

Dimensions

- Base Chassis: 17.50" H x 19.00" W x 27.50" D
- With 2U cable tray: 20.97" H x 19.00" W x 27.50" D
- With 3U cable tray: 22.72" H x 19.00" W x 27.50" D

Weight (base chassis)

- 95 lbs

Cooling System

- Forced air circulation with positive pressurization using sixteen 80 CFM fans
- Exhaust temperatures are monitored and fan speed controlled with five adjustment levels to maximize cooling and minimize audible noise.

* -2 V and -2.2 V are software selectable via LAN interface.

** <10,000 feet and <45° C

Ordering Information

408177-005 : Racal Instruments™ 1263HP

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Accessories and Options

- 408048-004 : Power Cable, 208 V 3-Phase
- 408048-005 : Power Cable, 208 V Single-Phase
- 602458-207 : Connector Circular RCP007 Straight
- 602458-007 : Connector Circular RCP007 Right-Angle
- 408251-001 : Fan Assembly
- 408252-002 : Power Supply Assembly
- 408508-001 : 2U Cable Tray
- 408508-002 : 3U Cable Tray
- 404836 : Blanking Plate



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