Racal Instruments™ 1263HPf

High-Power, Front-Maintainable VXI 4.0* Mainframe

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

Key Features

- **Front-removable power supply tray and fan tray**
- **LAN 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

Unprecedented Power and Speed

The 1263HPf high-power mainframe is the first to take advantage of the power and speed delivered by the latest revision to the VXIbus specification.

The new more powerful 5-row backplane connectors replace the traditional 3-row type, providing higher transfer speeds and higher power to each slot.

Safe Operation

The 1263HPf delivers a total of 4.0 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.

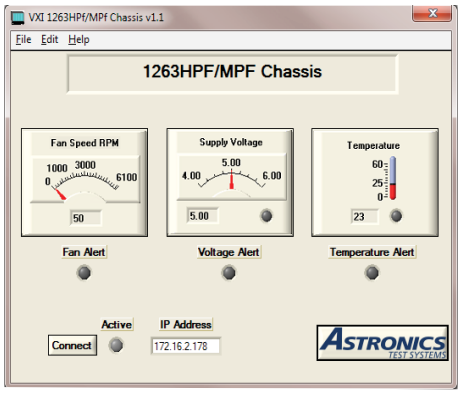

Figure 1: Main Soft Front Panel for 1263HPf Smart Monitor

Substantial cooling is provided with 1200 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.

The outlet temperature of each slot, fan speed, 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 1263HPf backplane fully supports all VXI 4.0 features, 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.

* VXI-1 revision 4.0

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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
- 85 to 264 VAC or 100 to 380 VDC

Input Frequency Range
- 47 to 500 Hz

Maximum Available Power
- 4000 W

Maximum Usable Power
- 3768 W*

DC Current Capacity

Voltage	Current
+3.3 V	20 A
+5 V	160 A
+12 V	40 A
-12 V	40 A
+24 V	40 A
-24 V	40 A
-5.2 V	69 A
-2 V	3 A

Monitoring System

Software Driver
- VXI*plug&play* 64-bit, Windows 7

Monitor Connectors
- Alarms: Front panel mounted DE-9F
- LAN: Front panel Ethernet connector (RJ45 compatible)

Temperature Monitoring I/O
- Pins 4, 8 go to open circuit when ambient >45° C or exhaust >65° C temp rise

Voltage Monitoring I/O
- A window comparator (with 5 to10% tolerance) on each VXIbus supply rail.
- Pins 2, 6 go to open circuit when tolerance exceeded (closed when in tolerance)

Fan Fault Monitoring
- Pins 3, 7 go to open circuit when failure is detected

Chassis power remote on/off
- Pin 5 must be connected to pin 9 (Gnd) to power up chassis.

LAN Monitoring and Control
- Voltage: Each voltage rail is monitored. Alarm limits can range from 5 to 10%.
- Temperature: Alarm limits can be set for ambient and slot 0 to 12 exhaust temperature. All temperatures may also be read back.
- Fan Speed: Manual or automatic mode is selectable. Fan speed range may be set. Speed and fault status may be read back.

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-HDBK-217 FN2, GB GC, 25° C)
- 60,899 hrs

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

Mechanical

Mainframe Size
- VXI-1 Rev. 4.0, C-size, 13 VXI slots, 1 Draft VITA 41.4 switch slot (rear facing)

Front Panel Power Connector**
- 7-Pin circular connector
- Mating connector Astronics Test Systems part number 602458-207, Amphenol part number 97-3106A-20-15S

Dimensions
- 17.5” H x 19” W x 23.8” D

Weight
- 69.1 lbs

Cooling System
- Forced air circulation with positive pressurization using fifteen 80 CFM fans

* <10,000 feet and <45° C

**** Mating connector not supplied and must be ordered separately**

Ordering Information

NOTE: Mating connector and power cable are not supplied and must be ordered separately.

408177-001 : Racal Instruments™ 1263HPf
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Accessories

408048 : Power Cable, Straight Connector (each Cable end)
408048-001 : Power Cable, Right-Angle Connector (each Cable end)
408048-002 : Power Cable, 3-phase, US
408048-003 : Power Cable, 3-phase, Europe
602458-207 : Connector Circular RCP007 Straight
602458-007 : Connector Circular RCP007 Right-Angle
408348 : Fan Assembly
408049-003 : Power Supply Assembly

1263HPf fan assembly