

Racal Instruments™

1261B Linear

VXIbus High-Performance Chassis Linear Power Supply



Key Features

- Low-noise power supply
- Ideal for RF and microwave testing
- Enhanced monitoring
- 760 W of usable/available power
- Optional backplane connector shrouds and intermodule shield
- Excellent cooling

Product Information

The 1261B-Linear mainframe was specifically designed for RF/Microwave and Telecommunications applications, where ultra-low power supply noise is critical. The power supply is mounted in a separate chassis for ease of maintenance, calibration, and rack installation. The two chassis are connected via two cables designed for fast installation and setup.

Optional Enhanced Monitoring System

The 1261B-Linear's microcontroller-based Enhanced Monitoring System (EMS) provides a fully VXIbus compliant message-based interface to the chassis. The EMS reports to the user via the backplane using individual commands or a soft front panel interface. Additional features include front panel alphanumeric display, individual VXIbus voltage status, and temperature rise for each individual slot. It comes complete with *VXIplug&play* drivers and soft front panel interface.

Instrument Recessing

VXIplug&play-compliant instrument recessing provides room for connectors and cable assemblies in front of each VXIbus module without interfering with an interface panel.

Rack Mounting

The card cage of the 1261B-Linear has optional rack ears allowing variable chassis recessing up to 5 3/8" when mounted in an equipment rack. This feature allows more room for cables and large connectors. Optional slides are available for the 1261B-Linear card cage.

Chassis Extension

ITA Receiver Extension (option 54-1) adds additional space between modules and ITA. This would be used in a rack with less than 30-inch depth.

Cable Tray

An optional 1 U size, 1.75-inch, cable tray (option 721) allows cable access between the front and rear of the chassis as well as other instruments in the test system. This allows rack-mounted instruments to interface to the VXIbus resources or to an interface test adapter mounted on the front of the chassis.

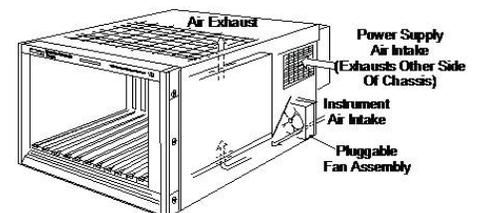
Electromagnetic Compatibility

The 1261B-Linear has been tested for EMC compliance to commercial (FCC and CE) standards. Optional inter-module shields (option 52) provide more shielding between VXI modules.

Optional backplane connector shrouds (option 51) minimize radiated noise from the module backplane.

Optimized Cooling

The 1261B-Linear mainframe takes advantage of an optimal "pressurized plenum" design. Molded slot blockers prevent air from diverting through unvented slots. This approach directs unprecedented volume of cooling air through your modules.



ASTRONICS
TEST SYSTEMS

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

- 115 V_{rms} ±10% (230 V_{rms} requires Option 72)

Input Frequency

- 47 Hz to 63 Hz

Maximum Power Consumption

- 1130 W Power Supply
- 190 W Mainframe

Total Available Power

- 760 W

Protections

- Short Circuit
- Overload

External Monitoring

- Monitoring of all rail voltages through a rear connector

DC Current Capacity

Voltage	Load Ripple/ Dynamic		
	I _{MP}	Noise	Current
+24 V	7.2 A	<12 mV _{pk-pk}	8.5 A
+12 V	6.8 A	<12 mV _{pk-pk}	3.0 A
+5 V	35 A	<12 mV _{pk-pk}	6.0 A
-2 V	3 A	<12 mV _{pk-pk}	4.4 A
-5.2 V	18 A	<12 mV _{pk-pk}	4.8 A
-12 V	6.8 A	<12 mV _{pk-pk}	3.3 A
-24 V	7.2 A	<12 mV _{pk-pk}	9.0 A

(Ripple/Noise measured over 10 MHz Bandwidth)

Enhanced Monitoring System (EMS) (Optional)

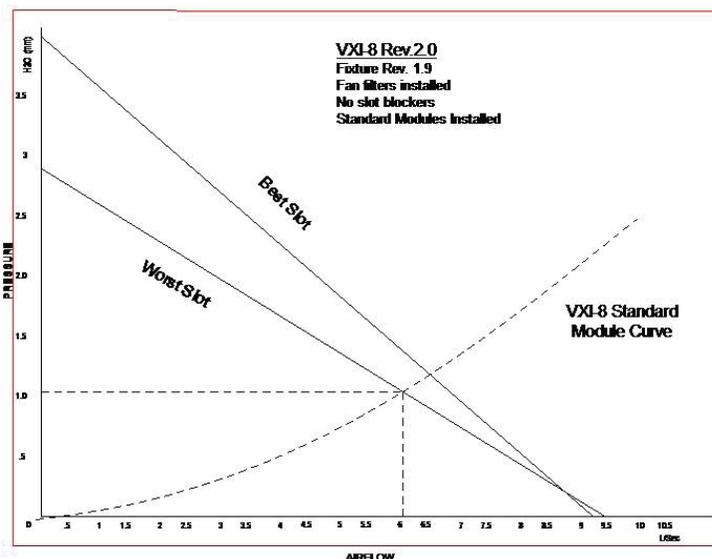
(VXIbus Rev 2.0 message-based and RS-232 interfaces)

System Status Readout

- VXI Voltages (7)
- Fan Speed (3)
- Temp Sensors (Ambient & per slot) available at front panel display, VXI message-based interface, or RS-232 interface

Over Temperature Indication

- User selectable with defaults of:
 - Absolute Slot Temp at 55° C
 - Rise Temp. of each slot at 30° C
 - Ambient Temp at 55° C



VXI-8 Cooling Chart (Filters Installed)

Event Monitoring

- BERR*
- Interrupt Ack Cycle
- Power on time: Cumulative and since last power cycle

TTL Trigger Capability

- Route backplane TTLTRIG lines to/from rear panel input/output
- TTL Trigger Routing Delay: 50 ns max

Programmable TTL Trigger Delay

- 0 ns to 1 s, synchronization error
- 31.25 ns max

Trigger Delay Resolution

- 31.25 ns

Service Requirement Monitoring

- Filter Cleaning, Fan Speed

VXIbus Signal Status Monitoring

(Alarms or notification capability for all monitor functions.)

- AS*, SYSFAIL*, ACFAIL*

Front Panel User Message

- 80 Characters, Scrolled, Programmable

Auxiliary DC Outputs (fused, self healing)

- +5 V @ 1 A
- +12 V @ 1 A
- +24 V @ 1 A
- +5 V Standby Input
- Rear panel inputs (2 A max)
- MAX/Variable Fan Speed Switch on Rear of EMS

Software

Software Drivers

- Native Language: SCPI
- Drivers: LabVIEW™, LabWindows™/CVI, VXIplug&play support for frameworks based on Microsoft Win32® application programming interface

Environmental

Temperature

- MIL-T-28800, Type III, Class 5, Style F
- Operating: 0° C to +55° C
- Storage: -40° C to +7° C

Relative Humidity

- Operating range: Up to 95% at up to 30° rise and up to 45% at up to 55° C
- Non-operating: Up to 95% at up to 55° C

Altitude

- Operating: 5,000 ft (4570 m)
- Non-operating: 40,000 ft (12,190 m)

Acoustic Noise (Fan speed control set to low)

- 56 dBA

EMC

- FCC 47 CFR, Part 15
- EN50081-1, EN50082-1
- Radiated Emissions per EN55011 Class B or CISPR 11A

Standards Compliance

- 100% compliant to the VXIbus specification Rev. 2.0
- Software Protocols supported by VXI and RS-232 interfaces
- Command Set compatible with IEEE-488.2 Instrument Protocol (14) and SCPI 1995.0

Specifications

continued

Safety

- UL 3111-1, IEC1010-1, CSA 22.2
- No. 1010.1
- CE Marked Power Supply tested per TUV

MTTR

- The following components can be replaced in less than 5 minutes from the rear of the rack:
 - Fan Assembly
 - Airflow Filters
 - EMS Monitor
- The following components can be replaced in less than 5 minutes from the top of the power supply:
 - Power Supply Modules

Mechanical

Cooling System

- Forced air circulation with positive pressurization.

Fan Speed Control

- HI/LOW Switch on rear of chassis

Modular Fans

- Filter removed from rear for cleaning

Mainframe Size

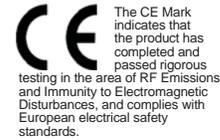
- VXIbus C-size, 13 slots

Dimensions

- Mainframe: 12.22" H x 17.38" W x 23.68" D (7 U)
- Power Supply = 5.22" x 19" x 27.78" (3 U)

Weight

- Mainframe: 46 lbs
- Power Supply: 82 lbs



Ordering Information

407771-03112 : Racal Instruments™ 1261B-LINEAR/EMS

High-Performance VXI Mainframe with Linear Power Supply; Includes Enhanced Monitoring System (115 VAC) Domestic

407771-03120 : Racal Instruments™ 1261B-LINEAR (Mature)

High-Performance VXI Mainframe with Linear Power Supply, (115 VAC) Domestic

407771-13120 : Racal Instruments™ 1261B-LINEAR (Mature)

High-Performance VXI Mainframe with Linear Power Supply, (220 VAC) International

Available Options

- 407375 : Spare Fan Module (for units with SMS & EMS)
- 407375-001 : Spare Fan Module (no non-SMS/EMS units)
- 407389 : Option 01; 7U Rackmount Flange (ears) with Slides only
- 407390 : Option 02; 7U Rackmount Flange (ears) with Slides and Acrylic Door
- 407391 : Option 03; 7U Rackmount Flange (ears) with Acrylic Door only
- 407392 : Option 04; 7U Rackmount Flange (ears) only
- 407396 : Option 14; 9U Rackmount Flange (ears) only
- 407419 : Option 52; Inter-module Shield (Quantity 12)
- OPT-407518-001 : Option 721; add 1U to Cable Tray for a total size of 8U—must be ordered with chassis
- OPT-407418 : Option 51; Backplane Connector Shrouds

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