



## VXIbus High-Performance Chassis Linear Power Supply

- ◆ **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**

Racal Instruments™ 1261B-LINEAR is based on our highly successful 1261B Series and includes a separate linear power supply optimized for RF and Microwave applications. It is fully compliant with the latest revision of both VXIbus and VXIplug&play specifications..

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 VXI *plug&play* drivers and soft front panel interface.

### **Instrument Recessing**

VXI*plug&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.

# 1261B LINEAR PRODUCT INFORMATION

### 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

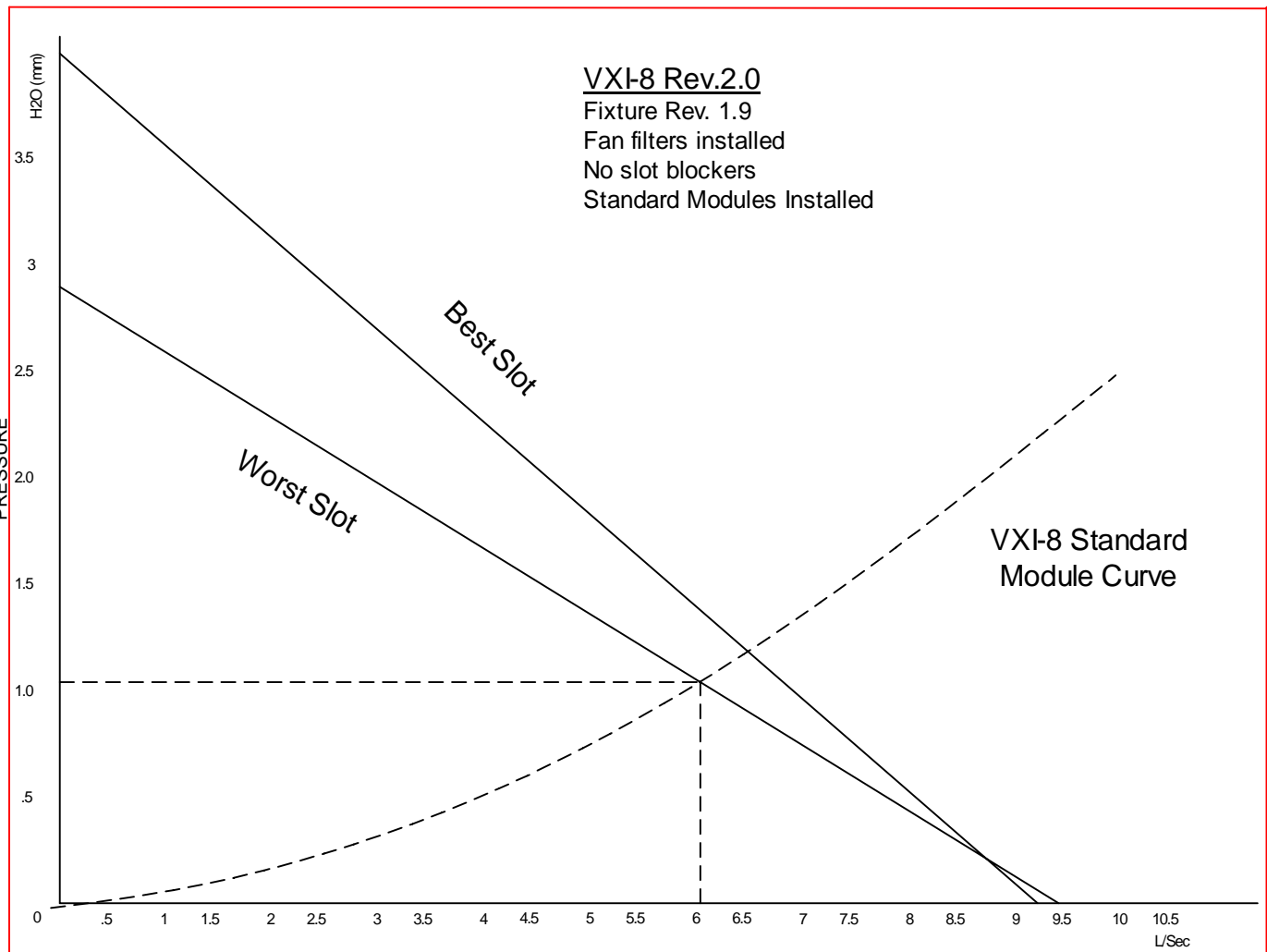
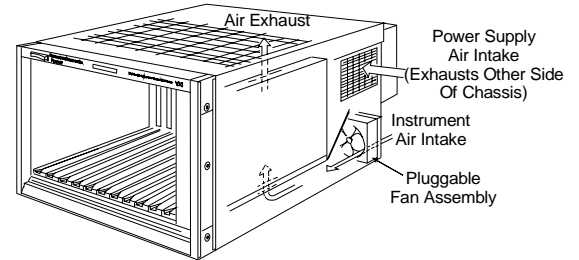
(FCC and CE) standards. Optional inter-module shields (option 52) provide more shielding between VXI modules.

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.



**1261B-LINEAR**  
VXI-8 Cooling Chart (Filters Installed)



# 1261B LINEAR PRODUCT SPECIFICATIONS

## ELECTRICAL PERFORMANCE

### Input Voltage Range

115 Vrms +/- 10%  
(230 Vrms 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

#### Load Ripple/ Dynamic

Voltage	I <sub>MP</sub> Current	Noise	
+24 V	7.2 A	<4 mVpk-pk	8.5 A
+12 V	6.8 A	<4 mVpk-pk	3.0 A
+5 V	35 A	<4 mVpk-pk	6.0 A
-2 V	3 A	<4 mVpk-pk	4.4 A
-5.2 V	18 A	<4 mVpk-pk	4.8 A
-12 V	6.8 A	<4 mVpk-pk	3.3 A
-24 V	7.2 A	<4 mVpk-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)

### Software Drivers

Native Language: SCPI  
Drivers: LabVIEW,  
LabWindows CVI,  
VXIplug&play

### 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

## VXIbus 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

## MECHANICAL

### Cooling System

Forced air circulation with positive pressurization.

### Fan Speed Control

HI/LOW Switch on rear of chassis

### Acoustic Noise

(Fan speed control set to low)

56 dBA

### Modular Fans

Filter removed from rear for cleaning

### Mainframe Size

VXIbus C-size, 13 slots

### Dimensions (HxWxD)

Mainframe: 12.22" x 17.38" x 23.68" (7 U)

Power Supply = 5.22" x 19" x 27.78" (3 U)

### Weight

Mainframe = 46 lbs.

Power Supply = 82 lbs.

## 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)

## EMC COMPLIANCE

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

## SAFETY COMPLIANCE

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



# 1261B LINEAR ORDERING INFORMATION

## ORDERING INFORMATION

### MODEL/DESCRIPTION

Racal Instruments 1261B-LINEAR, High-Performance VXI Mainframe with Linear Power Supply, (115 VAC) Domestic  
Racal Instruments 1261B-LINEAR/EMS, High-Performance VXI Mainframe with Linear Power Supply; Includes Enhanced Monitoring System (115 VAC) Domestic  
Racal Instruments 1261B-LINEAR, High-Performance VXI Mainframe with Linear Power Supply, (220 VAC) International


### PART NUMBER

407771-03120  
407771-03112  
407771-13120

### AVAILABLE OPTIONS

Option 1, Rack-Mount Flanges (ears) with Slides  
Option 2, Rack-Mount Flanges (ears) with Slides and Door  
Option 3, Rack-Mount Flanges (ears) with Door  
Option 4, Rack-Mount Flanges (ears)  
Option 14, 9 U Rack-Mount Ears for Mounting an ITA  
Option 721, 1 U Size Cable Tray (total 8 U size)  
Option 51, Backplane/Connector Shrouds Installed  
Option 52, Inter-Module Shields (12 ea.)  
1261B Fan Module , Spare Fan Module for EMS Units  
1261B Fan Module , Spare Fan Module for Non EMS Equipped Units  
Spare EMS Module

407389  
407390  
407391  
407392  
407396  
OPT-407518-001  
OPT-407400  
OPT-407419  
407375  
407375-001  
405094-001

 The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

The EADS North America Defense Test and Services policy is one of continuous development, consequently the equipment may vary in detail from the description and specification in this publication.



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