Racal Instruments
http://www.racalinstruments.com

PRODUCT INFORMATION

VXIbus High-Performance Chassis
Linear Power Supply
Model 1261B-LINEAR

- **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**

The 1261B-LINEAR is based on Racal's 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 VXI*plug&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.

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.

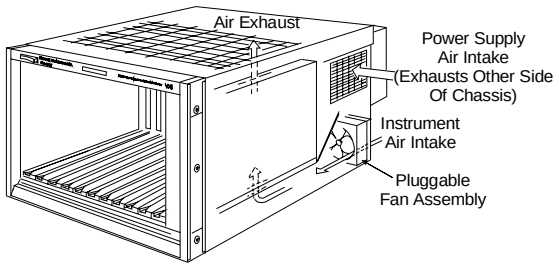
Electromagnetic Compatibility

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.

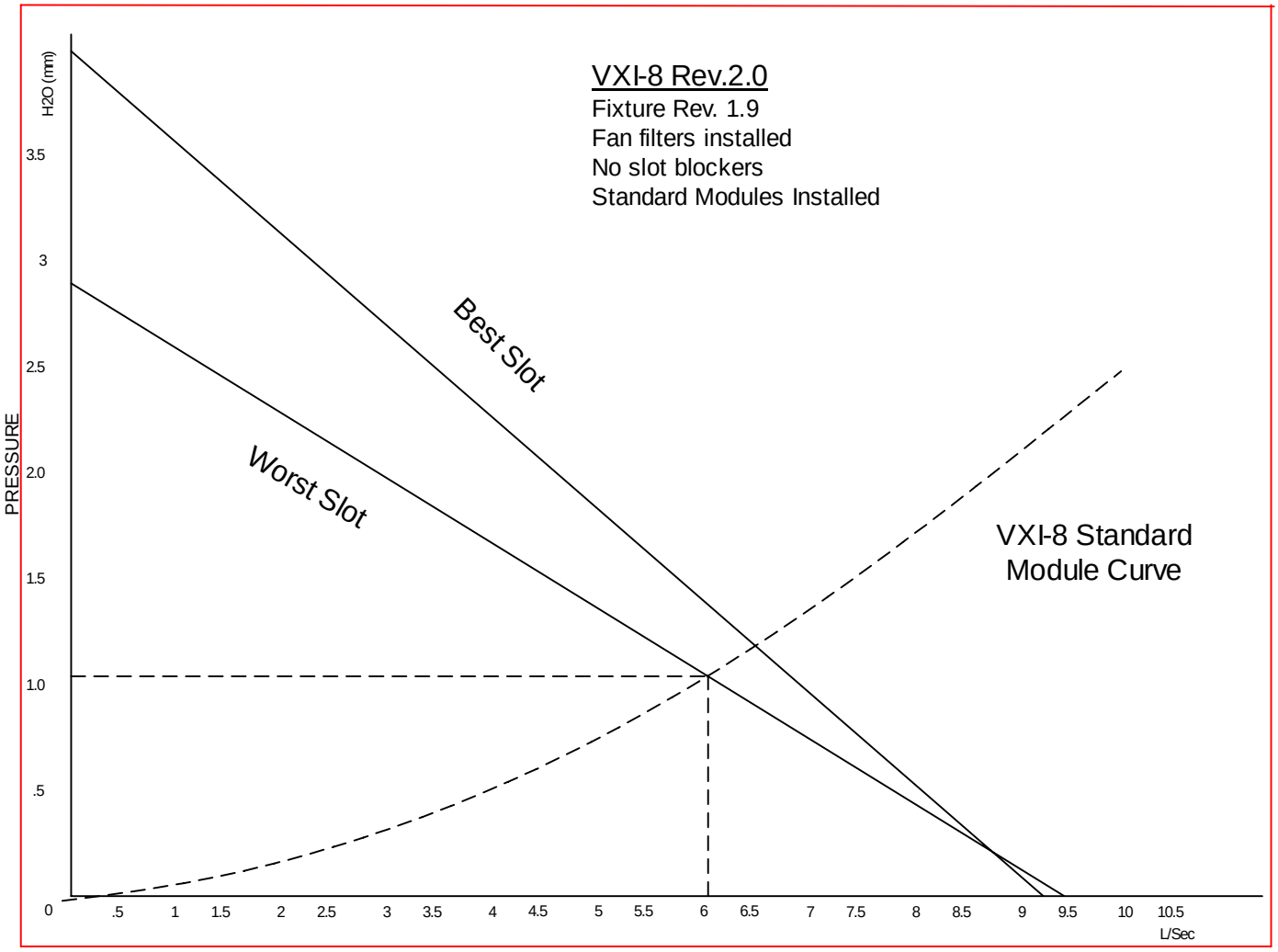
Optional backplane connector shrouds (option 51) minimize radiated noise from the module backplane.

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 -Airflow



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

1261B-LINEAR 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

Voltage	I_{MP}	Load Ripple/ Noise	Dynamic Current
+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, VXI*plug&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

ORDERING INFORMATION		
Model	**7 U Mainframe and 3 U Power Supply**	**Part Number**
1261B-LINEAR	High-Performance VXI Mainframe with Linear Power Supply, (115 VAC) Domestic	407771-03120
1261B-LINEAR/EMS	High-Performance VXI Mainframe with Linear Power Supply; Includes Enhanced Monitoring System, Includes Enhanced Monitoring System (115 VAC) Domestic	407771-03112
1261B-LINEAR	High-Performance VXI Mainframe with Linear Power Supply, (220 VAC) International	407771-13120
1261B-LINEAR/EMS	High-Performance VXI Mainframe with Linear Power Supply; Includes Enhanced Monitoring System, (220 VAC) International	407771-13112
	Options Available	
Option 1	Rack-Mount Flanges (ears) with Slides	407389
Option 2	Rack-Mount Flanges (ears) with Slides and Door	407390
Option 3	Rack-Mount Flanges (ears) with Door	407391
Option 4	Rack-Mount Flanges (ears)	407392
Option 14	9 U Rack-Mount Ears for Mounting an ITA	407396
Option 721	1 U Size Cable Tray (total 8 U size)	OPT-407518-001
Option 51	Backplane/Connector Shrouds Installed	OPT-407400
Option 52	Inter-Module Shields (12 ea.)	OPT-407419
1261B Fan Module	Spare Fan Module for EMS Units	407375
1261B Fan Module	Spare Fan Module for Non EMS Equipped Units	407375-001
980844	1261B-LINEAR User Manual	980844
405094-001	Spare EMS Module	405094-001

CE 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.

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