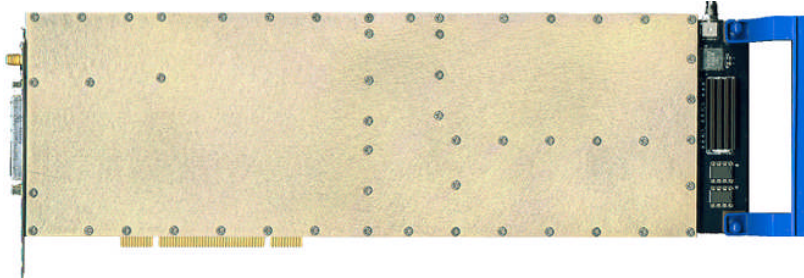


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LS-25-D2 PCI Card Multi-Band Down Converter Data Sheet

Description:

The Lumistar LS-25-D2 is the next generation tri-band, single-slot, full-length PCI down converter. The down converter is manufactured with one, two, or three frequency bands. This wideband design supports PCM data rates up to 20 Mbps and includes a linear 70 MHz IF output, an AGC controlled 70 MHz IF output and filtered AM / linear AGC outputs. The design offers either 4 or 12 IF Bandwidths. Other down-converters are available (LS-27-D Dual-Band



Two Channel, or LS-27-Q Quad-Band Single Channel) to be used with the LS-33-P Pre-D Diversity Combiner providing two or three-board solutions to Pre-Detection Diversity Reception with multi-mode demod formats. The 20 MHz

Reference I/O allows the local oscillators of two down-converters to be locked together to achieve the high performance required in Pre-Detection Diversity Combining.

Key Features:

- **Single, Dual, or Tri-Band Single Slot PCI Down Converter**
- **AM Output doesn't compress from -10 to -100 dBm**
- **Linear AGC Outputs**
- **Supports data rates up to 20 Mbps**
- **8 dB Noise Figure (maximum); 6dB (typical)**
- **70 MHz IF Outputs: Linear and AGC controlled**
- **Spectral and Eye Pattern Display Option using LS-22-SE PCI Board**
- **Compatible with LDPS Software**

Frequency Band Options: Specify up to 3 bands from the table below

P 215-320 MHz
L 1435-1540 MHz
U 1710-1850 MHz
S 2200-2400 MHz
E 2185-2485 MHz
K Custom

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LS-25-D2 PCI Card Multi-Band Down Converter

Data Sheet

Tuner:

Input Bands	Specify up to 3: 2185 – 2480 MHz (E-Band) 2200 – 2400 MHz (S-Band) 1710 – 1850 MHz (UL-Band) 1435 – 1540 MHz (L-Band) 215-320 MHz (P-Band)
IF Bandwidths	4 or 12 depending on model 0.5, 1, 1.5, 2.5, 3.5, 4, 6, 8, 10, 12, 16, 20 MHz
Tuner Resolution	50 KHz
Frequency Accuracy	0.002%
Noise Figure	8 dB (Maximum); 6 dB (Typical)
Operating Input Level	-10 to threshold
Maximum Input Level	+18 dBm without damage

Outputs:

AGC Controlled 70 MHz IF	-15 +/- 5 dBm signal into 50 Ohms
Linear 70 MHz IF	35 dB Gain (typ) into 50 Ohms. Max output of +5 dBm
AGC Output	0-4 V into 1K Ω , 0 V is -100 dBm, 4V is 0 dBm
AGC Time Constant	4 selectable time constants 1, 10, 100, 1000 ms
AGC Linearity	+/- 2 dB into best fit straight Line -15 dBm to threshold +5 dB
AM Output	4 Vp-p into 10 K Ω 2.5 Vp-p into 75 Ω
AM Freq Response	Selectable AM Low Pass Filters: 50, 500, 5K, and 50 KHz

Bus Outputs:

Signal Strength and Peak Deviation
AM Modulation Depth
AM Frequency

Environmental:

Operating Temperature	0° to +50° C
Non-Operating Temperature	-25° to +70° C
Operating Humidity	0 to 90% (Non- condensing)
Non-Operating Humidity	Protect from moisture and contamination

Physical:

Form Factor	Full Size PCI Board
IF Loop-back	Software controlled
Input Connections	SMA for RF in
Reference Connector	SMB for Ref I/O
Input/Output Connector	D-Series 13W3 provided with: BNC for AM Out BNC for AGC Out SMA for 70 MHz IF Out1 SMA for 70 MHz IF Out2 SMA for Linear IF Out
D-Series to BNC/SMA cable	
Current Required	11 Watts Maximum 325 mA at +5V 530 mA at +12V 215 mA at -12V

Part Numbering: where X = Band

LS-25-DA(X)	Single Band 4IF/4Video
LS-25-DB(X)	Single Band 12IF/12Video
LS-25-DA(XX)	Dual Band 4IF/4Video
LS-25-DB(XX)	Dual Band 12IF/12Video
LS-25-DA(XXX)	Tri Band 4IF/4Video
LS-25-DB(XXX)	Tri Band 12IF/12Video

Part Number Examples:

LS-25-DBPS	P-Band and S-Band down converter with 12 IF BW and 12 Video Filters
LS-25-DALUS	Lower L-Band, Upper L- Band, and S-Band down converter with 4 IF BW and 4 Video Filters

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Specifications are subject to change. Please verify the latest specifications at time of order.

4-15-08