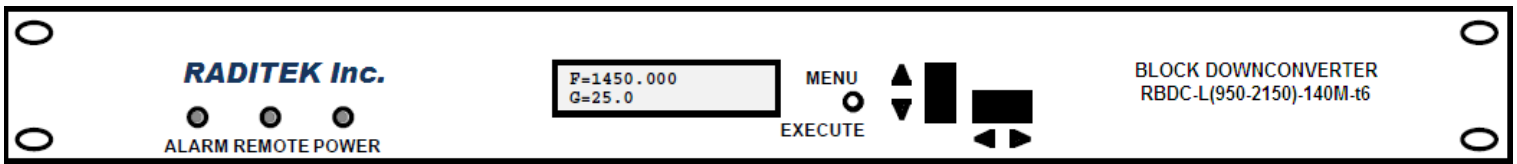




# Down Converter

## L Band to 140 MHz

RDC-L(950-2150)-140M-t6



FRONT PANEL

The L-Band Down Converter converts 950 to 2150 MHz in 1 kHz, 10 kHz, 100kHz, or 125 kHz steps (user selectable) to 140  $\pm$ 36 MHz with low group delay and flat frequency response.

- ❖ Synthesized local oscillators (LO) provide very low phase noise and  $\pm$ 0.01ppm stability frequency selection.
- ❖ Multi-function push button switches select the RF frequency, gain, and other parameters.
- ❖ Front panel LED's provide indication of DC power (green), PLL alarm (red), and remote operation (yellow).
- ❖ Gain is adjustable manually over a 0 to +50 dB range as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of frequency and gain.
- ❖ Parameter selection and frequency and gain settings appear on the LCD display.
- ❖ Connectors are BNC female for IF output and the optional external reference input and output, and Type F female for the RF input. LNB +24 VDC, 0.4 Amps and 10 MHz reference can be inserted on the RF line as added options.
- ❖ The 10 MHz option also includes a 10 MHz output connector, which contains either the internal or external 10 MHz reference signal.
- ❖ The unit is powered by a 90-260 VAC power supply, and housed in a 13/4" X 19 " X 16" rack mount chassis.

## Down Converter L-Band to 140 MHz

Specifications*					
Input Characteristics (RF)					
Impedance/Return Loss	75Ω/12 dB				
Frequency	950 to 2150 MHz				
Noise Figure, max	15 dB (max gain)				
Input Level Range	-70 to -20 dBm				
1dB compression	-15 dBm				
Output Characteristics (IF)					
Impedance/Return Loss	75Ω/18 dB				
Frequency	140 ± 36 MHz				
Output level/max linear	-20 to -10 dBm				
Output 1dB compression	-5 dBm				
Channel Characteristics					
Gain range (adjustable)	+0.0 to +50 dB				
Image Rejection	- 50 dBc in band				
Spurious Response	< -50 dBc, carrier related to spurious at 0 dBm				
Frequency Response	±1.5 dB, 950 to 2150MHz, ± 0.5 dB, 72 MHz BW				
Group Delay, max	0.0035 ns/MHz <sup>2</sup> parabolic; 0.025 ns/MHz linear; 1 ns ripple				
Frequency Sense	Inverting or Non-inverting selectable				
Synthesizer Characteristics					
Frequency Accuracy	± 0.01 ppm internal reference				
Frequency Step	1 kHz, 10kHz or 125kHz (user selectable)				
10 MHz In/Out Level	3 dBm ± 3 dB (Option E)				
Phase Noise @ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBc/Hz	<-75	<-85	<-90	-110	<-120
Controls, Indicators					
Freq/Gain Selection	direct readout LCD; pushbutton switches or remote control				
Power; Alarm; Remote	Green LED; Red LED; Yellow LED				
Remote	RS232C, 9600 baud (RS485, Option E)				
Other					
RF/IF ConnectorS	Type F(female), BNC (female)				
10 MHz Connectors	BNC (female), 50Ω/75Ω (Option E)				
Alarm/Remote Connector	DB9 (female) - NO or NC contact closure on Alarm				
Size	19 inch, 1RU standard chassis 1.75"high X 16.0" deep				
Power	90-260 VAC, 47-63 Hz, 45 watts max				

\*10°C to 40°C; Specifications subject to change without notice

### Available Options

E – External 10 MHz ref in & out w/RF insertion
L – LNB Voltage, +24VDC, 0.4 amps
Q - RS485/RS422 Remote Interface
Connectors/Impedance
B – 75Ω BNC (RF), 75Ω BNC (IF)
C – 50Ω BNC (RF), 75Ω BNC (IF)
D – 50Ω BNC (RF), 50Ω BNC (IF)
N – 50Ω N-type(RF), 75Ω BNC (IF)
M - 50Ω N-type(RF), 50Ω BNC (IF)

### RFQ 17517 options included

1	140 MHz
2	Monitor points IF BNC female
3	Monitor points LO BNC female