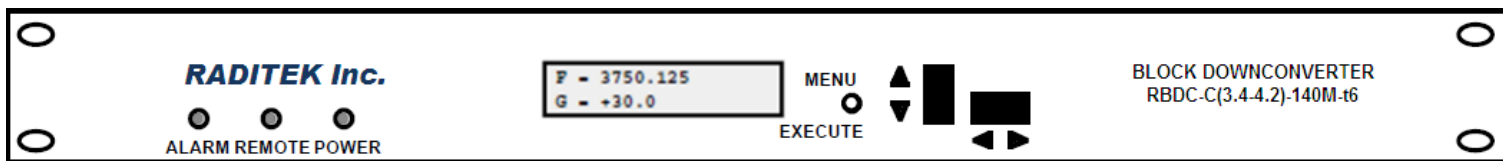


Down Converter
C Band to 140 MHz
RDC-C(3.4-4.2)-140M-t6



FRONT PANEL

The C-Band Down Converter converts 3.4 to 4.2 GHz in 1 kHz steps to 140 ± 36 MHz with low group delay and flat frequency response.

- ❖ Synthesized local oscillators (LO) provide very low phase noise and ± 0.01 ppm 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 +25 to +50 dB range as adjusted by the front panel multifunction 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 10MHz reference input and output, and Type N(female) for the RF input.
- ❖ External 10 MHz is standard. A 10 MHz output connector contains either the internal or external 10 MHz reference signal.
- ❖ The unit is powered by a 100-240 $\pm 10\%$ VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.

Down Converter C Band to 140 MHz

Specifications*					
Input Characteristics (RF)					
Impedance/Return Loss	50Ω/20 dB				
Frequency	3.4 to 4.2 GHz				
Noise Figure, max	12 dB (max gain)				
Level	-60 to -20 dBm				
1dB compression	-15 dBm				
Output Characteristics (IF)					
Impedance/Return Loss	75Ω/23 dB				
Frequency	140 ± 36 MHz				
Level	-25 to -10 dBm				
1dB compression	+10 dBm				
Intermodulation	< -55 dBC; -60 dBC typ. (2 carriers @ -10 dBm input)				
Channel Characteristics					
Gain range (adjustable)	+25 to +50 dB, 1dB steps				
Image Rejection	> 60 dB, min				
Spurious Response	< -60 dBC, carrier related to spurious at 0 dBm				
Frequency Response	±1.5 dB, 3.4-4.2 GHz; ± 0.6 dB, 72 MHz BW; ± 1.0 dB, 80 MHz BW				
Group Delay, max	0.0035 ns/MHz ² parabolic; 0.025 ns/MHz linear; 1 ns ripple				
Frequency Sense	Non-inverting				
Synthesizer Characteristics					
Frequency Accuracy	± 0.01 ppm internal reference; external reference input				
Frequency Step	1 kHz				
10 MHz In/Out Level	3 dBm ± 3 dB				
Phase Noise @ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBc/Hz	<-70	<-80	<-88	,-100	<-110
Controls, Indicators					
Freq/Gain Selection	direct readout LCD; pushbutton switches or remote selection				
Power; Alarm; Remote	Green LED; Red LED; Yellow LED				
Remote	RS232C, 9600 baud				
Other					
RF Connector	Type N (female), 50 Ohm				
IF Connector	BNC (female), 75 Ohm				
10 MHz Connectors	BNC (female), 50Ω/75Ω				
Alarm/Remote Connector	DB9 - 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

Q - RS485/RS422 Remote Interface	Connectors/Impedance
T - Temperature Sensor	M - 50Ω Type N (RF), 50Ω BNC (IF)

RFQ17517 - Options Include

1	10 MHz External Reference
2	Test Point (Front Panel) RF Sample - SMA 20dBc, Nominal
3	Test Point (Front Panel) IF Sample - BNC 20dBc, Nominal
4	Test Point (Front Panel) - Optional L.O. Sample