

DATA SHEET REV C

05/24/10

2017-05 Up/Downconverter, 950-1525 MHz, 140 MHz IF

The 2017-05 L-band Up/Downconverter converts 140 MHz to 950-1525 MHz (Up) and 950-1525 MHz to 140 MHz (Down) in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm for up and downconverters (red), remote operation (yellow), and upconverter mute (yellow). Gain is manually controlled over a -10 to +30 dB range for the upconverter and over a 0 to +50 dB range for the downconverter 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 and the optional external reference input and output, and Type F female for RF. LNB or SSPB +24 VDC and 10 MHz reference can be inserted on the RF lines as added options. A high stability (±0.01ppm) option is also available. It is powered by a 100-240 ±10% VAC power supply & housed in a 1.75" X 19" X 16" 1RU chassis.

0	U F=1525 G=10	UP/	MODEL 2017
DOWNCONVERTER	UPCONVERTER D F=1450 G=25		CROSS TECHNOLOGIES INC.
	O O O POWER MUTE ALARM		
Front Panel			
EQUIPMENT SPECIFIC		<u>it Panel</u>	
UPCONVER ⁻		DOWN	CONVERTER
Input Characteristics (IF		Input Characteristic	
Impedance/Return Loss	έ 75Ω /18 dB	Impedance/Return L	
Frequency	140 ± 36 MHz	Frequency	950 to 1525 MHz
Input Level Range	-40 to -10 dBm	Noise Figure, max.	15 dB (max gain)
Output Characteristics (Input Level Range	-70 to -20 dBm
Impedance/Return Loss	75Ω/12 dB	Input 1dB compressi	ion -15 dBm
Frequency	950 to 1525 MHz	Output Characteris	<u>tics (IF)</u>
Output level	-20 to 0 dBm	Impedance/Return L	oss 75Ω/18 dB
Output 1 dB compression		Frequency	140 ± 36 MHz
Channel Characteristics		Output level/max line	
Gain range (adjustable)	-10 to +30 dB	Output 1 dB compression -5 dBm	
Frequency Sense	Non-inverting	Channel Characteri	
		Gain range (adjustat	
UP AND DOWNCO		Frequency Sense	Inverting or Non-inverting (selectable)
Channel Characteristics			Available Ontions
Frequency Response	±1.5 dB, 950 to 1525 MHz ; ± 0.5 dB, 7	2 MHz BW	Available Options
Spurious Response	< -50 dBc, in band		E - External 10 MHz ref input & output
Group Delay, max	0.0035 ns/MHz ² parabolic; 0.025 ns/M	Hz linear; 1 ns ripple	H - High Stability (±0.01) Internal Ref
Synthesizer Characteris			Q - RS485 Remote Interface
Frequency Accuracy	\pm 1.0 ppm internal reference (\pm .01 ppm	n, option H)	L - LNB Voltage (+24VDC, 0.4 amps max) V - SSPB Voltage (+24VDC, 2.5 amps max
Frequency Step 10 MHz In/Out Level	1 MHz (125 kHz, option X)		T - Temperature Sensor
TO MHZ IN/OUT Level	3 dBm ± 3 dB (option E only)		X - 125 kHz Frequency Steps
Phase Noise @ F (Hz) >	100 1K 10K 100K		Z - 0.1 dB Attenuator Steps on Upconverte
dBC/Hz	-70 -80 -90 -100		Connectors/Impedance
Controls, Indicators			B - 75Ω BNC (RF), 75Ω BNC (IF)
Freq/Gain Selection	Direct readout LCD; manual or remote	selection	$C - 50\Omega BNC (RF), 75\Omega BNC (IF)$
Power; Alarm; Up Mute	Green LED; Red LED; Yellow LED		D - 50Ω BNC (RF), 50Ω BNC (IF)
Remote	Yellow LED; RS232C, 9600 baud (RS4	485, option Q)	N - 50Ω N-type (RF), 75Ω BNC (IF)
<u>Other</u>			M - 50Ω N-type (RF), 50Ω BNC (IF)
RF, IF Connectors	Type F (female), BNC (female)		
10MHz Connectors	BNC (female), $50\Omega/75\Omega$ (option E only		
	DB9 (female) - NO or NC contact closu		
Size	19 inch, 1RU standard chassis 1.75" h		
Power	100-240 ±10% VAC, 47-63 Hz, 45 W r	nav	

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

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