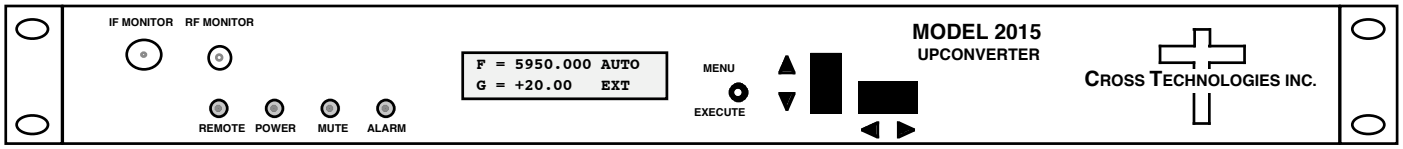
CROSS TECHNOLOGIES, INC.

DATA SHEET
Rev. E
4/14/08

2015-61 Upconverter, 5.85 - 6.425 GHz, Monitors

The 2015-61 Upconverter converts 70 ± 18 MHz to 5.85 to 6.425 GHz in 1kHz, 10kHz, 100kHz, or 125kHz steps (user selectable) with low group delay and flat frequency response. Push button switches select the RF frequency, gain, and other parameters. Front panel connectors provide -20 dB monitors of the IF and RF signals. Front panel LEDs provide indication of DC power (green), remote operation (yellow), PLL alarm (red), or the TX carrier is muted (yellow). Variable attenuators for the IF input and RF output provide a gain range of +10 to +30 dB as adjusted by the front panel pushbutton switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency, gain and 10MHz reference source settings appear on the LCD display. Connectors are BNC for IF input, IF monitor, and 10MHz reference input and output, and Type N for the RF output and SMA for the RF monitor. The 2015-61 is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75" X 19 " X 16" rack mount chassis.



Front Panel

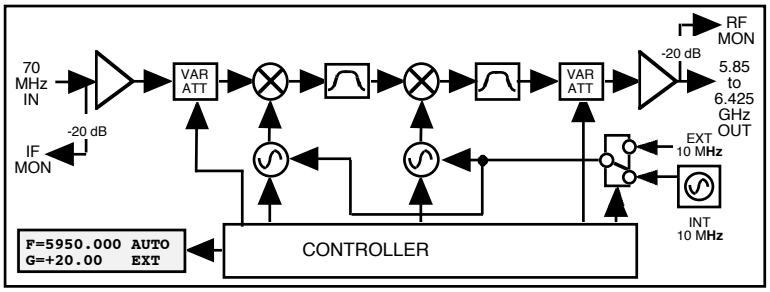
EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss	50Ω /18 dB
Frequency	70 ± 18 MHZ
Input Level	-40 to -20 dBm

Output Characteristics (RF)

Impedance/Return Loss	50Ω/14 dB
Frequency	5.85 to 6.425 GHz
Output level	-20 to 0 dBm
Output 1 dB compression	+9 dBm
Carrier Mute	-60 dBC



Block Diagram

Channel Characteristics

Gain range (adjustable)	+10 to +30 dB, 0.25 db steps
Spurious Response	<-55dBC @ 0dBm output
Intermodulation	<-38 dBC for two carriers each at 0 dBm output
Frequency Response	±1.5 dB, 5.85-6.425 GHz ; ± 0.5 dB, 36 MHz BW; 0.1dB /MHz Gain slope max
AM/PM Conversion:	0.1 deg/dB max @ -5 dBm output
Gain Stability	± 0.25 dB/day
Group Delay, max	0.01 ns/MHz^2 parabolic; 0.03 ns/MHz linear, 1 ns ripple
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	± 0.01 ppm internal reference; Auto locks to external reference at 0 ± 3 dBm input
Frequency Step	1, 10, 100, or 125 kHz (selectable)
10 MHz In/Out Level	3 dBm ± 3 dB

Phase Noise @ F (Hz) >	*100*	*1K*	*10K*	*100K*	*1M*
dBC/Hz	*-65*	*-75*	*-85*	*-95*	*-105*

Controls, Indicators, Monitors

Freq/Gain/Ref Selection	direct readout LCD; pushbutton switches or remote selection
Pwr; Alarm; Rem; Mute	Green LED; Red LED; Yellow LED; Yellow LED
Remote	RS232C, 9600 baud
Monitors	IF: -20dB of input, 75Ω BNC, female / RF: -20dB of output, 50Ω SMA, female
Other	
RF/IF/Mon Connectors	RF-Type N (female); IF-BNC (female): RF Monitor-SMA (female); IF Monitor-BNC (female)
10 MHz Connectors	BNC (female), 75Ω; works for 50 or 75 ohm impedance
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	100-240 ±10% VAC, 47-63 Hz, 45 watts max

***0˚C to 50˚C**; Specifications subject to change without notice

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