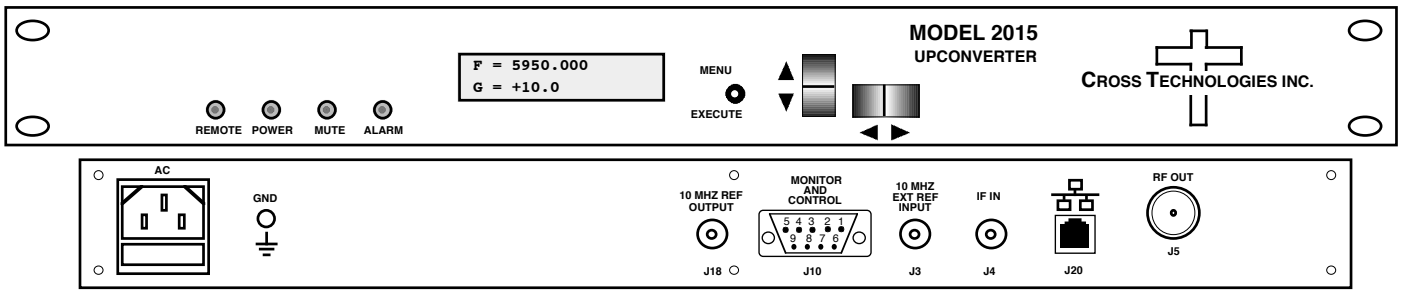
CROSS TECHNOLOGIES, INC.

DATA SHEET
Rev. A
8/11/15

2015-57 Upconverter, 70 ± 18 MHz to 5.845 - 6.725 GHz

The 2015-57 Upconverter converts 70 ± 18 MHz to 5.845 to 6.725 GHz in 125 kHz steps **(1 kHz steps, option X1005)** with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection with ±0.01 ppm stability. Push button switches select the RF frequency, gain, and other parameters. 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 0 to **+30** dB as adjusted by the front panel pushbutton switches. Remote **M&C** allows selection of the **10 MHz reference,** frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF input and 10MHz reference input and output, and Type N female for the RF output (other connector configurations available). The unit is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75" X 19" X 16" rack mount chassis.



Front and Rear Panels (shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss	75Ω /**18 dB min.**
Frequency	70 ± 18 MHZ
Input Level	-30 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss	50Ω/**14 dB min.**
Frequency	5.845 to 6.725 GHz
Output level	-20 to 0 dBm
Output 1 dB compression	+10 dBm**, Gain = +30**

Channel Characteristics

Max. Gain; range	**+30 ± 2 dB;** 0 to +30 dB, 0.5 ± 0.5 dB steps
Spurious Response	<-50 dBC
Intermodulation	<**-50** dBC for two carriers each at -5 dBm out
Frequency Response	±1.5 dB, 5.845-6.725 GHz; ±0.5 dB, 36 MHz BW
Group Delay, max	**0.015** ns/MHz^2 parabolic; **0.05** ns/MHz linear; 1 ns ripple
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	±0.01 ppm; Ext. ref. input
Frequency Step	125 kHz minimum; **(1 kHz steps, option X1005)**
10 MHz In/Out Level	3 dBm ± 3 dB

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-75	-80	-95	-110

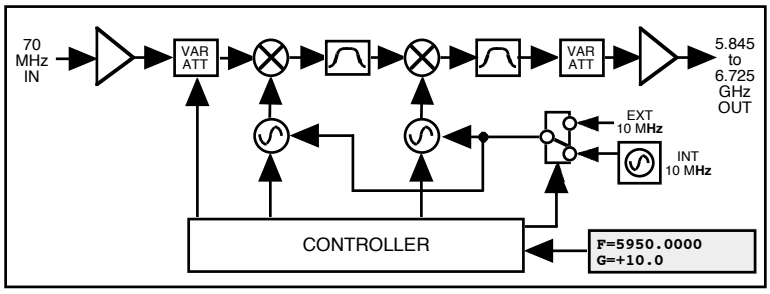
Controls, Indicators

Freq/Gain Selection	direct readout LCD; pushbutton switches or remote selection
Pwr; Alarm; Rem; Mute	Green LED; Red LED; Yellow LED; Yellow LED
Remote **M&C**	RS232C, 9600 baud**; RS485/422 or Ethernet optional**

Other

RF / IF Connectors	RF - Type N (female) / IF - BNC (female)
10 MHz Connectors	BNC (female)**, 75Ω, works with 50 or 75 ohms**
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 / Temp Range	100-240 ±10% VAC, 47-63 Hz, 45 watts max /

*+10˚C to +40˚C; Specifications subject to change without notice



Block Diagram

Available Options

W7 - RF/IF Monitor Ports (Front)
W31 - Ext. Temp 0C to +50C
X1005 - 1 kHz frequency step

Remote M&C Interfaces:

Q - RS485/422
W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet

Connectors/Impedance

STD. - 50Ω Type N (RF), 75Ω BNC (IF)
M - 50Ω Type N (RF), 50Ω BNC (IF)
S - 50Ω SMA (RF), 50Ω BNC (IF)
S7 - 50Ω SMA (RF), 75Ω BNC (IF)

Contact Cross for other options

Request A Quote