

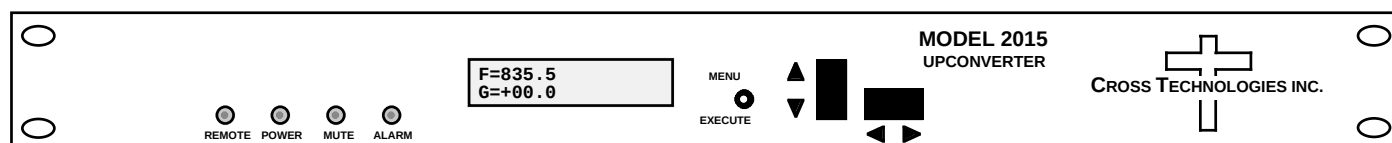


10/29/08

Rev. B

2015-1083 Fixed Frequency Upconverter, 835.5 MHz

The 2015-1083 UHF-band Upconverter converts 140 (± 36) MHz to 835.5 (± 36 MHz) Fixed 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 gain, and other variable parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of gain and other variable parameters. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC (female) for IF input and optional external reference input / output, and Type N (female) for the RF output. The External 10 MHz reference Option includes a 10 MHz output connector, which provides the selected (internal or external) 10 MHz reference signal output. 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.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss	75Ω /18 dB
Frequency	140 ±36 MHZ
Input Level	-40 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss	50Ω/12 dB
Frequency	835.5 MHz(±36 MHz) Fixed
Output level	-20 to 0 dBm
Output 1 dB comp.	+5 dBm

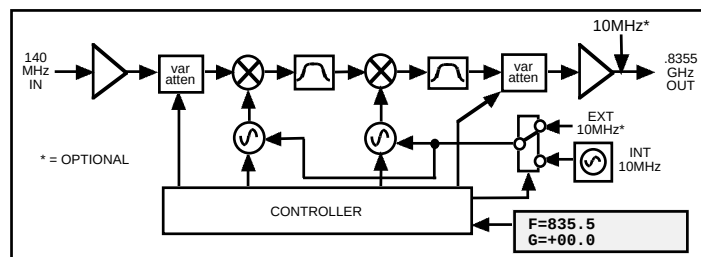
Channel Characteristics

Gain range (adjustable)	-10.0 to +30.0 dB
Frequency Response	835.5 MHz ; ± 0.5 dB, 72 MHz BW
Spurious Response	< -60 dBc, in band typical; -55 dBc max.
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	± .01 ppm internal reference
Frequency Step	None; Fixed Frequency, non-tunable
10 MHz In/Out Level	3 dBm ± 3 dB (option E)

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBc/Hz	-77	-82	-90	-102	-110



Block Diagram

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	RS232C, 9600 baud (RS485, option Q)

Other

RF Connector	N-type (female)
IF Connector	BNC (female)
10MHz Connectors	BNC (female) 50Ω/75Ω (option E)
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

Available Options

E - External 10 MHz ref input & output
Q - RS485 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)
 M - 50Ω N-type (RF), 50Ω BNC (IF)

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

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