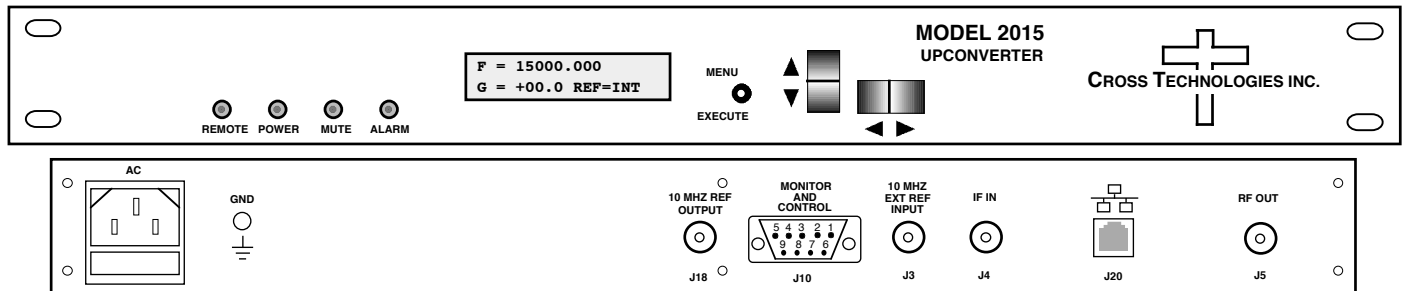


2015-154-130 Upconverter, 130 MHz IF to 14.8 - 15.4 GHz

The Model 2015-154-130 Upconverter converts 130 ± 18 MHz to 14.8 to 15.4 GHz in 125 kHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide low phase noise, ±0.01 ppm stability frequency selection. Push button switches select RF frequency, gain, and other parameters. Front panel LEDs indicate PLL alarm (red), remote operation (yellow) or the TX carrier is Muted (red). Variable attenuators for the IF input and RF output provide a gain range of 0 to +15 dB as adjusted by the front panel 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, external reference input and 10MHz reference output, and SMA (female) for the RF output. It is powered by a 100-240 ±10% VAC power supply, and in a 1.75" x 19" x 16" 1RU chassis.



2015-154-130 Front and Rear Panels (Optional Ethernet shown)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 75Ω / 18 dB
 Frequency 130 ± 18 MHz
 Input Level -10 to 0 dBm

Output Characteristics

Impedance/Return Loss 50Ω / 14 dB
 Frequency (See Models) 14.8 to 15.4 GHz
 Output level -5 to +5 dBm
 Output 1 dB compression +10 dBm, at max. gain
 Mute >50 dB @ +5 dBm out

Channel Characteristics

Gain Max. / range +15.0 ± 1 dB at Fc; adjustable from 0 to +15.0 dB, 0.5 ± 0.5 dB steps
 Spurious, Inband < -50 dBc, at max. gain, +5 dBm out
 Spurious, Out of band < -50 dBm, 10.0 - 14.8 and 15.4 - 20 GHz, at max. gain
 Intermod < -45 dBc for two carriers spaced at Fc ± 2 Mhz apart each at 0 dBm out, at max. gain
 Frequency Response ± 1.5 dB, 14.8-15.4 GHz ; ± 0.5 dB, 36 MHz BW
 Group Delay, maximum 0.015 ns/MHz², parabolic, 0.035 ns/MHz, linear, 1 ns ripple
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ± 0.01 ppm max. over temp internal ref.; ext ref. input
 Frequency Step 125 kHz minimum
 10 MHz In/Out Level 3 dBm, ± 3 dB

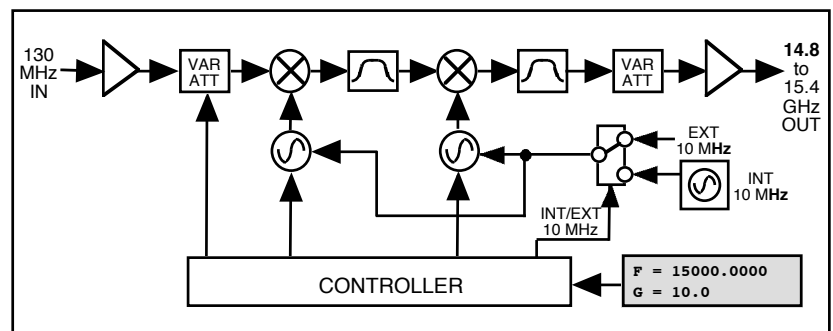
Phase Noise @ Freq	100 Hz	1 kHz	10 kHz	100 kHz	1 MHz
dBc	-70	-70	-80	-95	-105

Controls, Indicators

Freq/Gain Selection Direct readout LCD; pushbutton switches or remote selection
 Pwr; Alm; Remote; Mute Green LED; Red LED; Yellow LED; Yellow LED
 Remote RS232C, 9600 baud (options; RS485, Q; Ethernet)

Other

RF / IF Connector SMA (female) / BNC (female), 75Ω
 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 100-240 ± 10% VAC, 47-63 Hz, 45 watts maximum



2015-154-130 Block Diagram

Available Options

Z - Attenuator 0.1 dB on Upconverter
Remote M&C Interfaces:
 Q - RS485/422
 W8 - Ethernet; w/Web Browser (WB)
 W18 - Ethernet; w/WB & SNMP
 W28 - Ethernet; w/TCP/IP, Telnet
W828 - W8 + W18 + W28
Connectors/Impedance
 M - 50Ω N-type (RF), 50Ω BNC (IF)
 N - 50Ω N-type (RF), 75Ω BNC (IF)
 S - 50Ω SMA (RF), 50Ω BNC (IF)
 SS - 50Ω SMA (RF), 50Ω SMA (IF)
Contact Cross for other options

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