CROSS TECHNOLOGIES, INC.

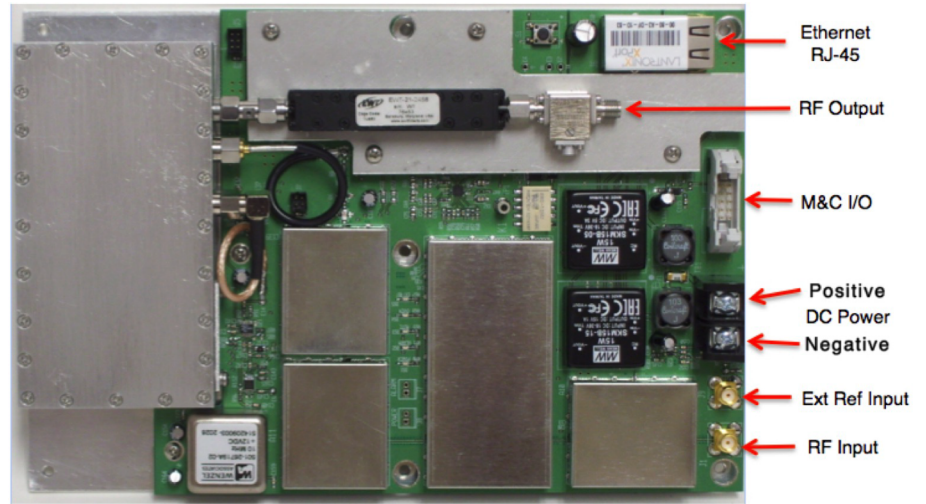# 1015-154-130 Upconverter, 130 MHz to 14.75 - 15.4 GHz

The Model 1015-154-130 Upconverter converts 130 ± 18 MHz to 14.75 to 15.4 GHz in 125 kHz steps. Synthesized local oscillators (LO) provide low phase noise, ±0.05 ppm stability frequency selection. RF frequency, gain, and other parameters are set by the Monitor and Control (M&C) which also provides indication of PLL alarm, TX carrier Mute and frequency and gain (range of 0 to **+15 dB)** settings**.** Connectors are SMA female for the RF Out, RF In, and external 10 MHz reference input (a +3 dBm ± 3 dB, 10MHz signal) and DB9 for the M&C (Ethernet Optional). It is powered by an external 18 to 36 VDC power source, and is mounted on an 9.0" L X 6.0" W X 1.50" H plate assembly.

- Ethernet RJ-45
- RF Output
- M&C I/O
- Positive DC Power
- Negative
- Ext Ref Input
- RF Input

1015-154-130 Upconverter

EQUIPMENT SPECIFICATIONS*

Input Characteristics
Impedance/Return Loss	50Ω/18 dB
Frequency	130 ±18 MHZ
Level range	-10 to 0 dBm

Output Characteristics
Impedance/Return Loss	50 Ω /14 dB
Frequency	**14.75** to **15.4** GHz
Level Range	-5 to +5 dBm
1 dB compression	**+15 dBm, at max. gain**
Mute	**>60 dB @ +5 dBm out**

Channel Characteristics
Gain	**+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 - 14.75 and 15.4 - 20 GHz, at max. gain**
Intermodulation	**< -45 dBc for two carriers spaced at Fc ±2 Mhz apart each at 0 dBm out, at max. gain**
Frequency Response	±1.0 dB, 14.75-15.4 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics
Freq. Accuracy/Stability	± 0.05 ppm max over temp with external ± 0.01 ppm reference
Frequency Step	125 kHz minimum
10 MHz level	+3 dBm, ± 3 dB, 50 ohms, External In

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc/Hz	-70	-70	-80	-95	-105
EXT 10M dBc/Hz	**-140**	**-155**	**-160**	**-160**	**-160**

Controls, Indicators
Freq/Gain Selection	RS232C, 9600 baud **(Ethernet optional)**
PLL Alarm	NO or NC External contact closure

Other
RF IN, RF OUT,10M	**All connecctors are SMA (female)**
M&C, ALarm Connector	10 Pin Latching Connector
Size	9.0" long X 6.0" wide X 1.50" high
Power	18 to 36 VDC, 20 watts max., standard - Contact Cross for other voltage options.

*+10 to +40 degrees C; Specifications subject to change without notice
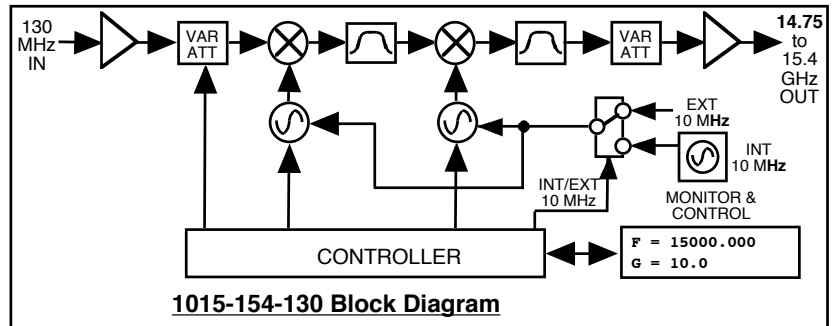
1015-154-130 Block Diagram

Available Options
 W31 - Ext. Temp 0C to +50C
 W41 - Ext. Temp -20C to +50C
Remote M&C Interfaces:
 W8 - Ethernet; w/Web Browser (WB)
 W18 - Ethernet; w/WB & SNMP
 W28 - Ethernet; w/TCP/IP, Telnet
 W828 - W8 +W18 +W28

 Contact Cross for other options