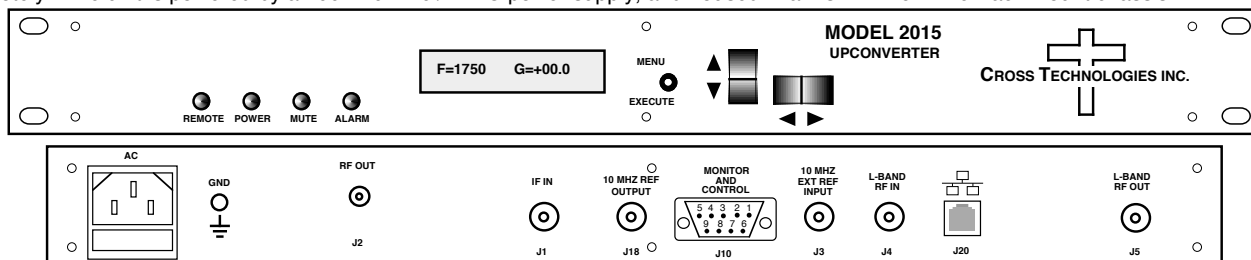


**2015-02U59 Upconverter, 70 to 950 - 1750 MHz & 0.95 - 1.75 to 5.85-6.65 GHz**

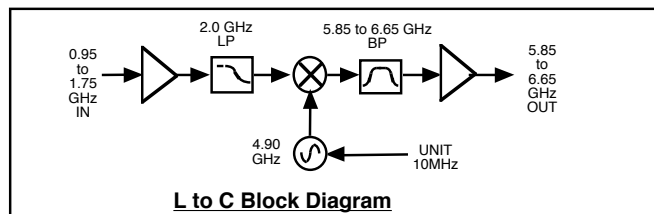
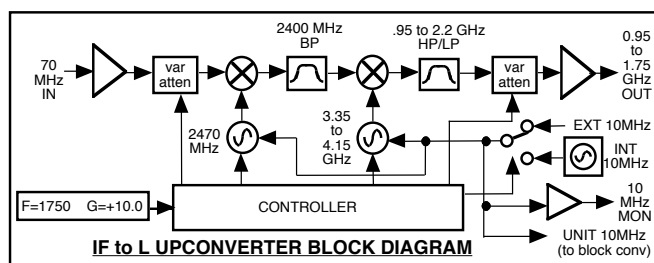
The 2015-02U59 Upconverter consists of an agile IF to L-band upconverter (in 1 MHz steps; 125 kHz and 100 kHz step options available) and a 950 to 1750 MHz to 5.85-6.65 GHz block upconverter with a fixed frequency LO and fixed gain.

For the agile IF to L-band upconverter, the front panel push button switches select the RF frequency, gain (-10 to +30 dB), and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) and TX carrier MUTE (yellow). Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are 75Ω, BNC (female) for the IF input and the external reference input and output, 50Ω, BNC (female) for the L-band RF output and L-band input, and SMA for the C band RF output. It has a high stability ( $\pm 0.01$  ppm) 10 MHz reference. The 10 MHz output connector contains either the internal or external 10 MHz reference signal as selected locally or remotely. 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.



**2015-02U59 Front and Rear Panels (shown with optional Ethernet)**

EQUIPMENT SPECIFICATIONS*		
Input Characteristics	IF to L	L to C Block
Impedance/Return Loss	75Ω/18 dB	50Ω/14 dB
Frequency	70 $\pm$ 18 MHz	0.95 - 1.75 GHz
Noise Figure, Max.	20 dB at max gain	15 dB at max gain
Input Level range	-40 to -10 dBm	-40 to -20 dBm
Output Characteristics		
Impedance/Return Loss	50 Ω /12 dB	50 Ω /14 dB
Frequency (GHz)	0.95 - 1.750	5.85 - 6.65
Output Level Range	-30 to -10 dBm	-20 to 0 dBm
1 dB comp, max gain	+0 dBm	+10 dBm
Mute @ 0 dBm out	>55 dB	N/A
Channel Characteristics		
Gain, max. at Fc	+30 $\pm$ 2 dB	+20 $\pm$ 1 dB
Gain, range, 1 $\pm$ 1 dB steps	-10 to +30 dB	NONE
Frequency Resp. band	$\pm$ 1.5 dB	$\pm$ 1.0 dB
Frequency Resp. 36/40 MHz	$\pm$ 0.5/ $\pm$ 1 dB	$\pm$ 0.5 dB
Spurious, Inband, sig. rel. @out	<-50 dBC, 0dBm	<-50 dBC, 0dBm
Spurious, Inband, sig. ind.	<-60 dBm	<-60 dBm
Spurious, Out of band (FL-0.5 GHz & FH+0.5)	<-50dBm	<-50dBm
Intermod - 2 carriers 4MHz space @ -10dBm out each	<-50 dBC	<-55 dBC
LO frequency	1MHz Step, var.	4.90 GHz
Frequency Sense	Non-inverting	Non-inverting



**IF to L-band Converter Options**

- X or X1- 125 kHz or 100 kHz step size
- Z or Z5 - Atten. 0.1 dB or 0.5 dB steps
- Comm. Interface/Standard RS232
- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet

**Connectors/Impedance**

- B - 75Ω BNC (RF), 75Ω BNC (IF)
- D - 50Ω BNC (RF), 50Ω BNC (IF)
- N - 50Ω N-type (RF), 75Ω BNC (IF)
- M - 50Ω N-type (RF), 50Ω BNC (IF)
- S7 - 50Ω SMA (RF), 75Ω BNC (IF)

**L-band to C Block Converter Options**

- M - 50Ω N-type (RF), 50Ω BNC (L-BAND)
- N - 50Ω N-type (RF), 75Ω BNC (L-BAND)
- NN - 50Ω N-type (RF), 50Ω N-type (L-BAND)
- S7 - 50Ω SMA (RF), 75Ω BNC (L-BAND)
- SN - 50Ω SMA (RF), 50Ω N-type (L-BAND)
- SS - 50Ω SMA (RF), 50Ω SMA (L-BAND)

**Contact Cross for other options**

**Synthesizer Characteristics**

Frequency Accuracy  $\pm 0.01$  ppm,  
Frequency Step, L-band 1.0 MHz (125 kHz and 100 kHz step options available)  
10 MHz Level (In or Out) 3 dBm,  $\pm 3$  dB, 75 ohms

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
dBC/Hz	-55	-70	-70	-80	-90	-110

**Controls, Indicators L-Band Converter**

Freq/Gain Selection direct readout LCD; manual or remote selection  
Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED  
Remote RS232C, 9600 baud (RS485, Ethernet Optional)

**Other**

RF, IF Connectors **L-Band Converter; RF-50Ω, BNC (female), IF-75Ω, BNC (female)**  
RF, L-Band Connectors **C-Band Block Converter; RF-SMA (female), L-50Ω, BNC (female)**  
10 MHz Connectors BNC (female), 75Ω, works with 50 or 75 ohms (option E)  
Alarm/Remote Conn. DB9 (female) - NO or NC contact closure on Alarm  
Size 19 inch, 1RU standard chassis 1.75" H X 16.0" D  
Power 100-240  $\pm 10\%$  VAC, 47-63 Hz, 45 W max. (24, 48 VDC Optional)

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