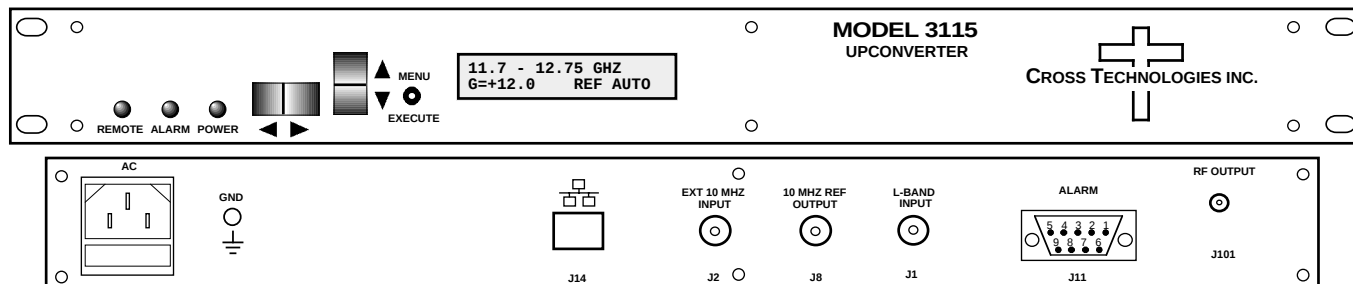


3115-117 Block Upconverter, 0.95 - 2.00 GHz to 11.7 - 12.75 GHz

The 3115-117 Upconverter converts 0.95 - 2.00 GHz to 11.7 - 12.75 GHz (non-inverted) with a 10.75 GHz local oscillator. The gain is **+30 dB** maximum and is adjustable in 0.5 ± 0.5 dB steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain and internal/external/Auto reference frequency selection are controlled by front panel switches or remote selection (via RS-232C/485, standard; Ethernet Optional) and are viewable on the LCD Display. Connectors are SMA female for the RF and BNC female for the L-Band and external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is **+3 dBm**, **± 3 dB**. The 3115 is powered by a $100\text{-}240 \pm 10\%$ VAC power supply, and housed in a $1\frac{3}{4} \times 19 \times 14$ " rack mount chassis.



EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss	50Ω/14 dB
Frequency	0.95 to 2.00 GHz
Noise Figure, Max.	20 dB max gain
Input Level range	-40 to -25 dBm

Output Characteristics

Impedance/Return Loss	50Ω /14 dB
Frequency	11.7 to 12.75 GHz
Output Level Range	-20 to -5 dBm
Output 1 dB compression	+5 dBm at max. gain

Channel Characteristics

Gain, max; adjustment	+30 dB ± 2 dB , max. gain at F_c ; 30 dB adjustment in 0.5 ± 0.5 dB Steps
Image Rejection	> 60 dB, min
Spurious, In Band	SIGNAL RELATED< -50 dBC in band, -5 dBm out; SIGNAL INDEPENDENT,<-60 dBm
Spurious, Out of Band	<-50 dBm, 10.5 to 11.69 and 12.751 to 13.7 GHz
Intermodulation	<-50 dBC for two carriers each at -10 dBm out, GAIN = +30 dB
Frequency Response	± 1.5 dB, 11.7 -12.75 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	10.75 GHz
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz In/Out Level	3 dBm, ± 3 dB, w/ Auto-detect

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
dBc/Hz	-55	-70	-80	-85	-100	-110

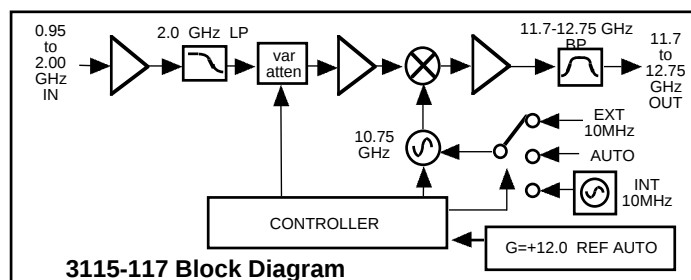
Controls, Indicators

Gain; Ext Ref Selection	direct readout LCD; pushbutton switches or remote
Pwr; Alarm; Rem; Mute	Green LED; Red LED; Yellow LED; Yellow LED
Remote	RS232C/RS485/422, 9600 baud (Ethernet Optional)

Other

RF Connector	SMA (female), 50Ω
L-Band Connector	BNC (female), 50Ω
10 MHz Connectors	BNC (female), 75Ω, works with 50 or 75 ohms
Alarm/Remote Conn.	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 11.7" deep
Power	$100\text{-}240 \pm 10\%$ VAC, 47 - 63 Hz, 45 watts max.

Front and Rear Panel (Shown with optional Ethernet)



Available Options

W31 0 to +50 degrees C operation

Remote M&C Ethernet Options

W8 - Ethernet w/web browser Interface
W18 - Ethernet w/SNMP (and MIB) Interface
W28 - Ethernet w/direct TCP/IP Interface
W828 - Ethernet; W8,W18,W28

Available Connector Options

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

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