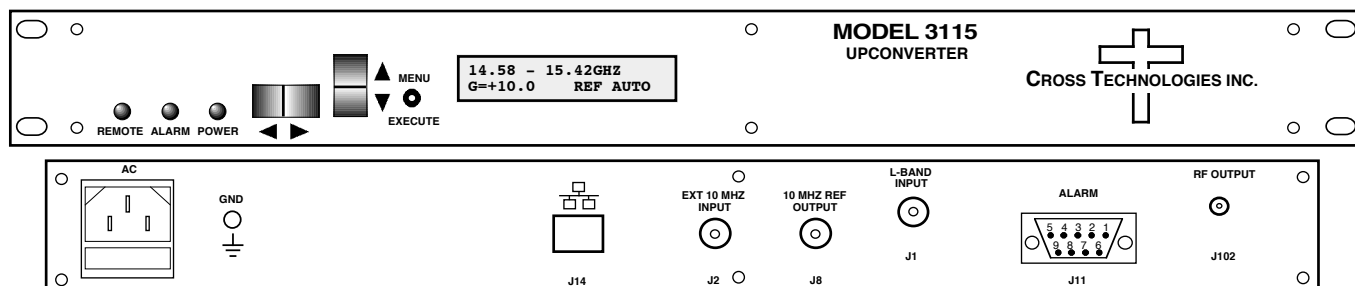


3115-145-1600 Block Upconverter, 1600 ± 420 MHz to 14.58 - 15.42 GHz

The 3115-145-1600 Upconverter converts **1.18 - 2.02 GHz (1600 ± 420 MHz)** to **14.58 - 15.42 GHz (Fc =15.0 GHz)** (non-inverted) with a 13.4 GHz local oscillator. The maximum gain is **+20 dB** (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**. It is powered by a 100-240 ± 10% VAC power supply, and in a 1 3/4" X 19" X 14" rack mount chassis.



Front Panel and Rear Panel (shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss	50Ω/14 dB
Frequency	1.18 to 2.02 GHz
Noise Figure, Max.	20 dB max gain
Input Level range	-40 to -25 dBm

Output Characteristics

Impedance/Return Loss	50Ω /14 dB
Frequency	14.58 to 15.42 GHz
Output Level Range	-20 to -5 dBm
Output 1 dB compression	+5 dBm at max. gain

Channel Characteristics

Gain, max; adjustment	+20 dB ±2 dB , max. gain at Fc; 20 dB adjustment in 0.5 ±0.5 dB Steps
Image Rejection	> 60 dB, min
Spurious, In Band	SIGNAL RELATED<-60 dBC in band, -5 dBm out; SIGNAL INDEPENDENT,<-60 dBm
Spurious, Out of Band	<-50 dBm, 13.0 to 14.57 and 15.43 to 16.5GHz
Intermodulation	<-50 dBC for two carriers each at -10 dBm out, GAIN = +20 dB
Frequency Response	±1.5 dB, 14.58 -15.42 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	13.4 GHz, fixed LO
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

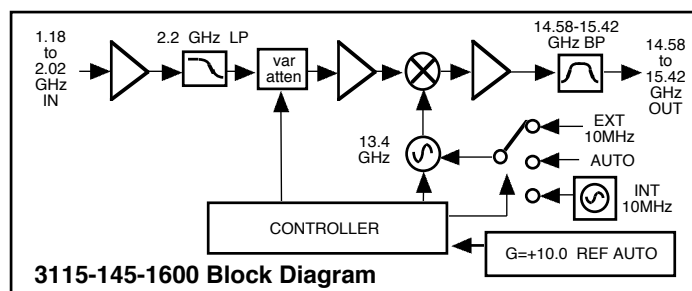
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-80	-85	-100	-110

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 14.58" deep
Power	100-240 ± 10% VAC, 47 - 63 Hz, 45 watts max.



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

Available Connector Options

- 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

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