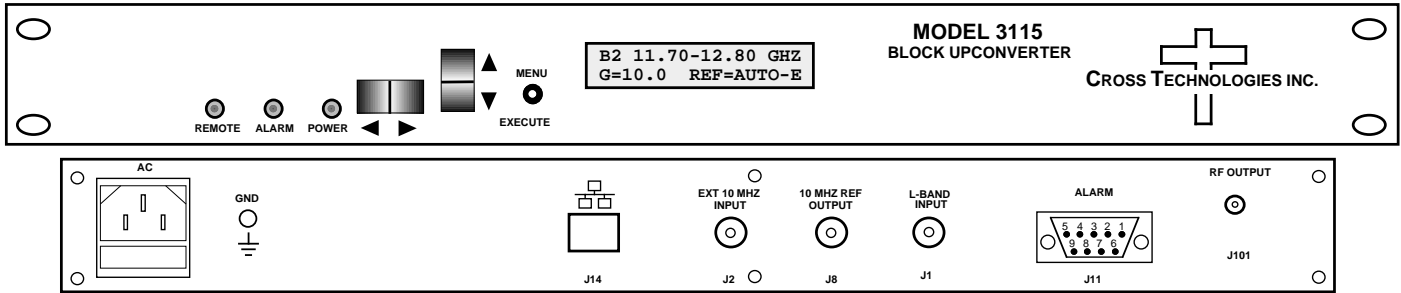


3115-21-109# Block Upconverter 10.90-11.80 or 11.70-12.80 GHz, 2 Bands

The 3115-21-109# Block Upconverter converts 0.95-1.85 to 10.90-11.80 GHz or 0.95-2.05 to 11.70-12.80 GHz. The gain range is 0 to +20 dB, adjustable in 0.5±0.5 dB steps. Front panel LEDs indicate Remote operation, PLL Alarm and DC Power. Band select, gain and internal/external/Auto reference frequency selection are controlled by front panel switches or remotely via RS 232C or RS485/422 (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 in the +2 to +8 dBm range. It is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4" X 19" X 14" rack mount chassis.



Front and Rear Panel (shown with Ethernet option)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB
Frequency Band 1;2 0.95 -1.85; 0.95-2.05 GHz;
 Noise Figure, Max. 20 dB max gain
 Input Level range -40 to -20 dBm

Output Characteristics (L-Band)

Impedance/Return Loss 50Ω/14 dB, Mute and UnMute
Frequency Band 1;2 10.90-11.80;11.70 -12.80 GHz
 Output Level Range -20 to -10 dBm
 Output 1 dB compression +0 dBm, at max. gain
Mute >50 dB @ 0 dBm out

Channel Characteristics

Gain, max; adjustment **+20 dB ±2 dB, max. gain @Fc; 0 to +20 dB variable in 0.5 ±0.5 dB Steps**
 Image Rejection > 60 dB, min
 Spurious, In Band SIGNAL RELATED<-50 dBC in band, -10 dBm out; SIGNAL INDEPENDENT, <-60 dBm
 Spurious, Out of Band <-50 dBm, Band 1; 9.7-10.7 and 11.9-15.5 GHz; Band 2; 10.7-11.6 and 12.8-15.5 GHz
 Intermodulation <-50 dBC for two carriers at 4 MHz spacing, each at -15 dBm out, Gain = +20 dB
 Frequency Response ±1.5 dB, 10.90 -11.80 GHz and 11.70 -12.80 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense 1;2 Non-inverting

LO Characteristics

LO Freq. Band 1;2 9.95 GHz; 10.75 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input
 10 MHz level In/Mon +2 to +8 dBm in, w/Auto-detect; Monitor Output = +3 ±3 dBm

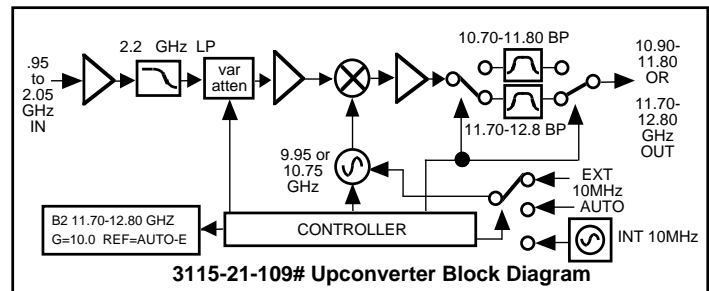
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-75	-85	-95	-110

Controls, Indicators

Band; Gain;10M Ref Sel. Direct readout LCD; pushbutton switches or remote
 Rem; Alarm; Mute; Pwr Yellow LED; Red LED; Yellow LED; Green 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), 50Ω/75Ω
 Alarm/Remote Conn. DB9 - NO or NC contact closure on Alarm
 Size 19 inch standard chassis 1.75" high X 14.0" deep
 Power 100-240 ± 10% VAC, 47 - 63 Hz, 45 watts max.



Available Options

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 - 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