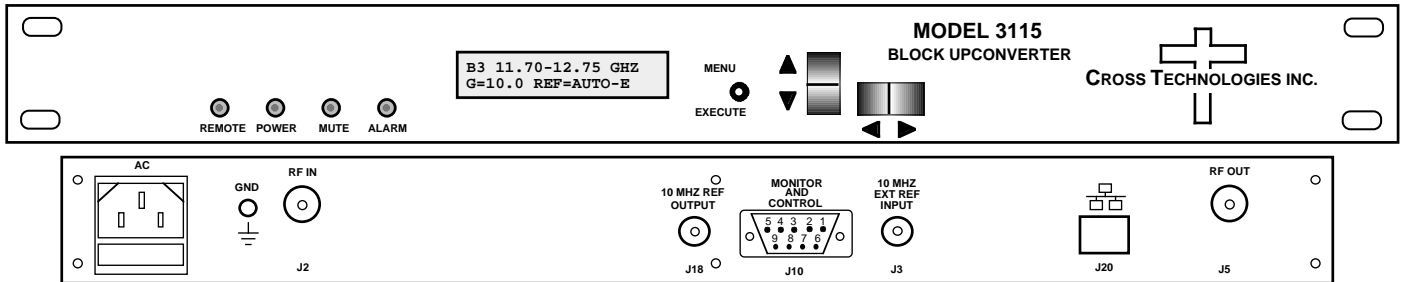


## 3115-31-128 Block Upconverter, Tri Band 3.4-4.2, 10.70-11.80, 11.70-12.75 GHz

The 3115-31-128 Block Upconverter converts 0.95-1.75 to 3.4-4.2 GHz or 0.95-2.05 to 10.70-11.80 GHz or 0.95-2.0 to 11.70-12.75 GHz. The gain range is 0 to +30 dB, adjustable in 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. The 3115 is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4" X 19" X 16" 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;3 0.95 -1.75; 0.95 -2.05;0.95-2.0 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;3 3.4-4.2;10.70-11.80;11.70 -12.75 GHz**  
 Output Level Range -20 to -5 dBm  
 Output 1 dB compression +5 dBm, at max. gain  
**Mute >60 dB @ 0 dBm out**

#### Channel Characteristics

Gain, max; adjustment +30 dB ±2 dB, max. gain; 30 dB adjustment in **0.5 ±0.5 dB Steps**  
 Image Rejection > 60 dB, min  
 Spurious, In Band SIGNAL RELATED<-60 dBC in band, 0 dBm out; SIGNAL INDEPENDENT,<-60 dBC  
 Spurious, Out of Band <-50 dBm, Band 1,2,3; 2.5-3.3 and 4.3-6 GHz ; 9.7-10.7 and 11.9-15.5 GHz; 10.7-11.6 and 12.8-15.5 GHz  
 Intermodulation <-55 dBC for two carriers at 4 MHz spacing, each at -10 dBm out, **Gain = +30 dB**  
 Frequency Response ±1.5 dB, 3.4-4.2 GHz, 10.70 -11.80 GHz and 11.70 -12.75 GHz out; ± 0.5 dB, 40 MHz BW  
**Frequency Sense 1;2;3 Non-inverting**

#### LO Characteristics

**LO Freq. Band 1;2;3 11.40/8.95 GHz; 9.75 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

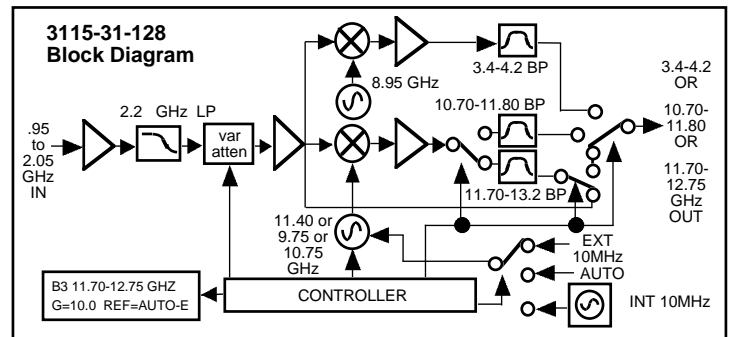
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-75	-85	-95	-110

#### 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 16.0" 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

##### 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