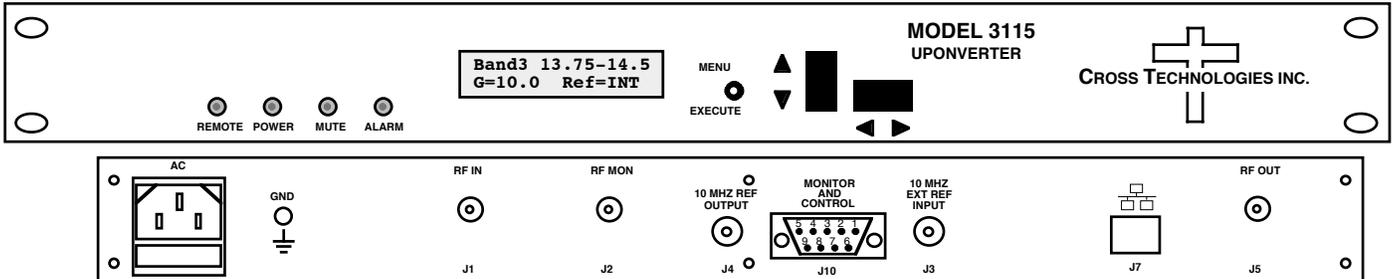


3115-41-184 Multi-Band Block Upconverter

The 3115-41-184 Block Upconverter converts L-band to one of four RF bands. The L-band to RF gain is +30 dB, maximum. **Connectors are SMA female for the L-band (RF In), RF Out, and RF Monitor and BNC female for the external reference input and reference output.** Front panel LEDs provide indication of Remote Operation, DC Power, Mute, and PLL Alarm. Gain, band select, and internal/external/Auto reference selection are controlled by front panel switches or remote selection (Ethernet M&C or via the RS-232C/485 Monitor and Control connector) and are viewable on the LCD Display. 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 1RU rack mount chassis, 1.75" H X 19.0" W X 19.0" deep.**



3115-41-184 FRONT AND REAR PANELS

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 50Ω/14 dB min.
 Frequency Band 1,2 0.95-1.825, 0.95-1.95 GHz
 Frequency Band 3,4 0.95-1.700, 0.95-2.05 GHz
 Noise Figure, Max. **20 dB at max. gain**
 Input Level range -50 to -30 dBm

Non-damage input

0 dBm at max. gain

Output Characteristics

Impedance/Return Loss 50 Ω /14 dB, Mute/Unmute
 Frequency Band 1,2 5.85-6.725, 12.75-13.75 GHz
 Frequency Band 3,4 13.75-14.5, 17.3-18.4 GHz
 Output Level Range -15 to 0 dBm
 Output 1 dB compr. +10 dBm, at max. gain

Mute

>60 dB from 0 dBm unmuted output (RF Mon. not muted)

Channel Characteristics

Gain at **F_c**, RF;RF Mon +30 ±3 dB **maximum**, (+30 to 0 dB variable in 0.5 ± 0.5 dB steps);RF Mon -20 dBC of RF Out, ±3 dB
 Input to Output Isolation > 45 dB, min, **at max. gain and -30 dBm input**
 Spurious, Inband SIGNAL RELATED <-55 dBC in band, -15 to 0 dBm out; SIGNAL INDEPENDENT, <-60 dBm, **at max. gain**
 Spurious, Out of band <-55 dBm spurious, signal independent and signal dependent; **F_c ± 1 GHz, at max. gain**
 Spurious, LO <-50 dBm at the output, **at max. gain**
 Intermodulation <-50 dBC for two carriers at 4 MHz spacing, each at -5 dBm out, **at max. gain**
 Frequency Response ±2 dB, over RF band; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency Band Specific
 Frequency Accuracy ± 0.05 ppm max over temp internal reference; ext. ref. input

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
Specification dBC/Hz	-70	-80	-85	-98	-110

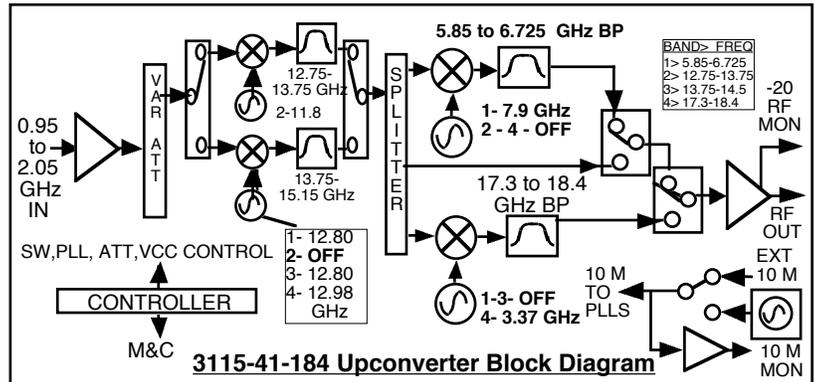
10 MHz level In/Mon Input=+2 to +8 dBm in; Monitor Output = Input Level ± 1.0 dB, 50 ohms

Controls, Indicators

Gain, Band, 10M Freq. **Direct readout LCD; pushbutton switches** or via Ethernet M&C or Monitor and Control Connector.
 PLL Alarm Red LED, External contact closure
 Remote, Power, Mute **Yellow LED: Green LED: Yellow LED**

Other

RF In, Out, Mon. Conn. **SMA (female), 50Ω**
 10 MHz connectors **BNC (female), 50 ohms; Works with 75Ω**
 Monitor/Control Conn. **RS232C/485, DB9, Female; Ethernet, RJ45, Female, w/Web Browser & SNMP User interfaces.**
 Size **1RU rack mount chassis, 1.75" H X 19.0" W X 19.0" deep**
 Power 100-240 ±10% VAC, 47-63 Hz, 25 watts max



* **+0 to +50 degrees C Operating; -30 to +60 degrees C Non-operating; 95% relative humidity, non-condensing;**
 Specifications subject to change without notice