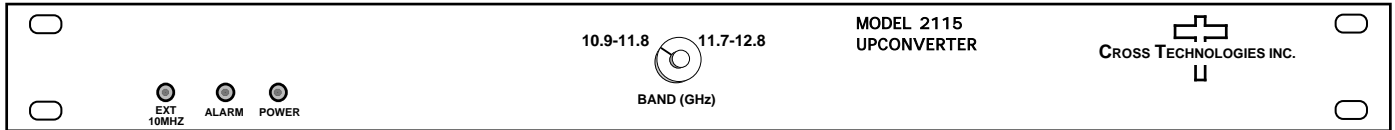
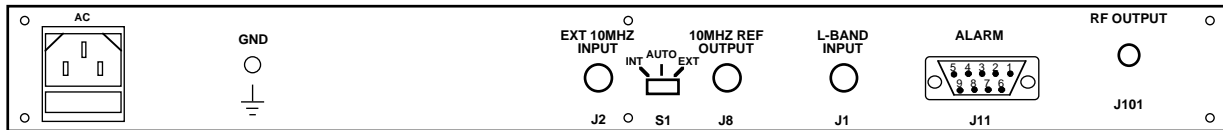


2115-21-109# Block Upconverter, 0.95-2.05 to 10.9-11.8 or 11.7-12.8 GHz, 2 Bands

The 2115-21-109# Block Upconverter, Dual Band converts 0.95 - 2.05 GHz to 10.9 - 11.8 or 11.7-12.8 GHz with a switchable filter and switchable local oscillator at 9.95 and 10.75 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The L-band to RF gain is +10 ±2 dB. Connectors are SMA female for the RF and BNC female for the L-Band and external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the INT position, the internal reference (**design goal**) is used, in the EXT position, the external reference is used, and in the AUTO position, the internal reference is used unless a +3 dBm ± 3 dB, 10MHz reference signal is connected to the external reference input. The 2115 is powered by a 100-240 ± 10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



(SHOWN WITH CUSTOM SP2T BAND SWITCH)



Front and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss 50Ω/14 dB
 Frequency **0.95 to 2.05 GHz**
 Noise Figure, Max. 20 dB max gain
 Input Level range **-30 to -20 dBm**
 Input 1 dB compression **-10 dBm**

Output Characteristics

Impedance/Return Loss 50 Ω /14 dB
 Frequency **10.9 - 11.8 or 11.7-12.8 GHz**
 Output Level Range **-20 to -10 dBm**
 Output 1 dB compression **+0 dBm**

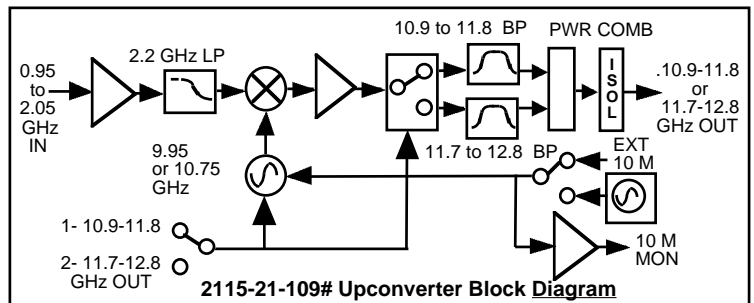
Channel Characteristics

Gain **+10 ±2 dB at Fc**
 Image Rejection > 60 dB, min
 Spurious, Inband **<-50 dBC in band, -10 dBm out, 10.9 - 11.8 and to 11.7-12.8 GHz**
 Spurious, Out of band **<-50 dBm, 9.9 - 10.89 and 12.81 to 13.8 GHz out**
 Intermodulation <-50 dBC for two carriers each at **-15 dBm out**
 Frequency Response **±2 dB, 10.9 - 11.8 or 11.7-12.8 GHz out; ± 0.5 dB, 40 MHz BW**
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency **9.95 or 10.75 GHz, switchable with front panel switch**
 Frequency Accuracy **ext. ref. input; ± 1 ppm max over temp internal reference; design goal**
 10 MHz level **+3 dBm, ± 3 dB, 75 ohms, External In or Internal out**

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-60	-70	-80	-95	-105



Controls, Indicators

Band Select Switch

Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)
 PLL Alarm Red LED, External contact closure
 Power Green LED

Other

RF Connector SMA (female), 50Ω
 L-Band Connector BNC (female), 50Ω
 10 MHz connectors BNC (female), 75Ω Connector; Works for 50Ω or 75Ω
 Alarm Connector 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, 25 watts max.

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

