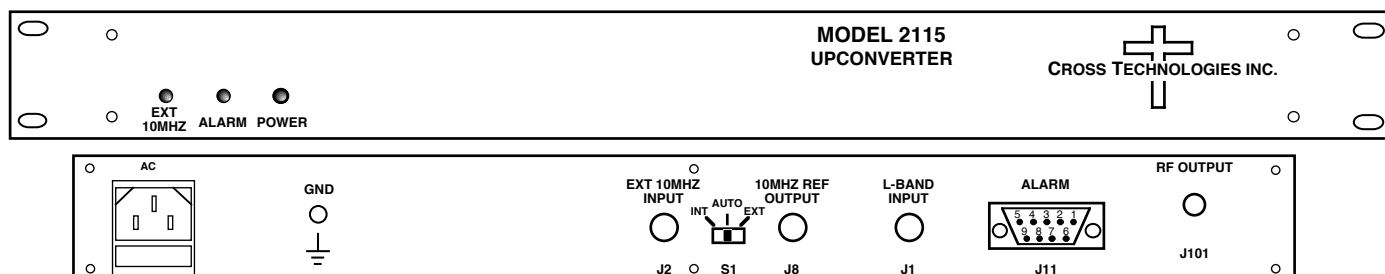


2115-310-1600 Block Upconverter, 1100 - 2100 MHz to 30.0 - 31.0 GHz

The 2115-310-1600 Block Upconverter converts **1100 - 2100 MHz (Fc=1600 MHz)** to **30.0 - 31.0 GHz** with a local oscillator at **28.9 GHz**. Front panel LEDs indicate DC Power, External 10 MHz, and PLL Alarm. The gain is +0 dB. Connectors are **2.92 mm (female)** for the RF out and BNC female for the RF in (designated 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 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. 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 and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics (designated L-Band)

Impedance/Ret. Loss	50Ω/14 dB
Frequency	1100 to 2100 MHz
Noise Figure, Max.	20 dB max gain
Input Level range	-30 to -10 dBm
Input 1 dB compression	+0 dBm

Output Characteristics (RF)

Impedance/Ret. Loss	50 Ω /14 dB
Frequency	30.0 to 31.0 GHz
Output Level Range	-30 to -10 dBm
Output 1 dB compr.	+0 dBm

Channel Characteristics

Gain	+0 ±1 dB at Fc
Image Rejection	> 55 dB, min
Spurious, Inband	SIGNAL RELATED<-55 dBc in band, -10 dBm out; SIGNAL INDEPENDENT,<-60 dBm
Spurious, Out of band	<-60 dBm, 25.0-29.9 and 31.1-35.0 GHz out
Intermodulation	<-50 dBc for two carriers at Fc ± 2 MHz each at -15 dBm out
Frequency Response	±2.0 dB, 30.0 - 31.0 GHz out ; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	28.9 GHz
Frequency Accuracy	± 0.01 ppm max over temp int. reference; ext. ref. input

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBc	-60	-70	-80	-90	-100

10 MHz level +3 dBm, ± 3 dB, 75 ohms, External In or Internal out

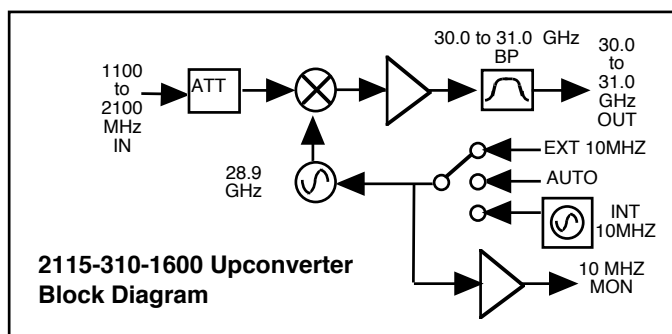
Controls, Indicators

INT/AUTO/EXT Switch	Selects internal or external 10 MHz (rear panel DP3T switch)
Ext 10 MHz	Yellow LED, indicates external 10 MHz reference selected
PLL Alarm	Red LED, External contact closure
Power	Green LED

Other

RF In Connector	BNC (female), 50Ω (designated L-band)
RF Out Connector	2.92 mm (female) 50Ω
10 MHz connectors	BNC (female), 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



Available Connector Options

S27 - 2.92mm (RF), 75Ω BNC (L-BAND)
S2N - 2.92mm (RF), 50Ω Type N (L-BAND)
SS2 - 2.92mm (RF), SMA (L-BAND)