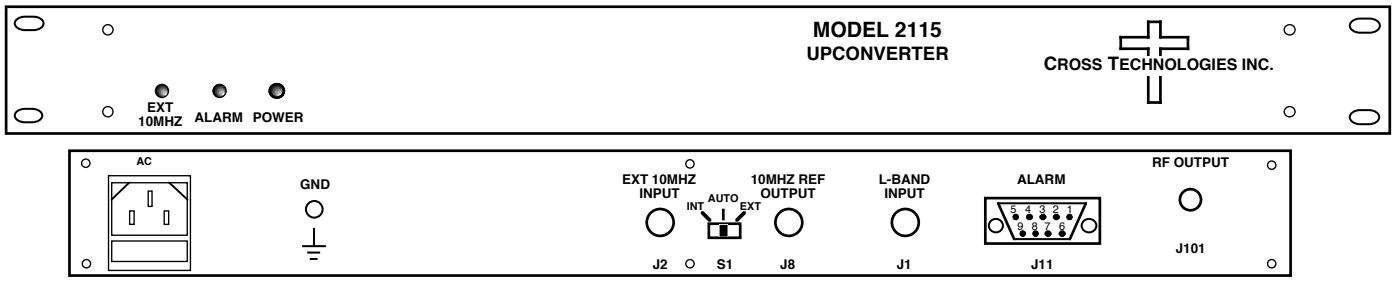
CROSS TECHNOLOGIES, INC.

DATA SHEET
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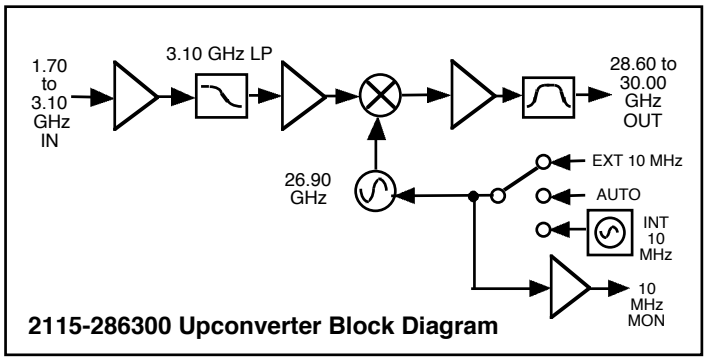
2115-286300 Block Upconverter, 1.70 - 3.10 GHz to 28.60- 30.00 GHz

The 2115-286300 Block Upconverter converts **1.70 - 3.10 GHz to 28.60- 30.00 GHz** with a local oscillator at **26.90 GHz.** Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +20 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 the 10 MHz reference 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, 10 MHz 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.



2115-286300 Front and Rear Panels

EQUIPMENT SPECIFICATIONS*



2115-286300 Upconverter Block Diagram

Input Characteristics (designated L-Band)

Impedance/Ret. Loss	50Ω/14 dB
Frequency	**1.70 to 3.10 GHz**
Noise Figure, Max.	20 dB max gain **at Fc**
Input Level range	-40 to -25 dBm **at Fc**
Input 1 dB compression	**-15 dBm at Fc**

Output Characteristics (RF)

Impedance/Ret. Loss	50 Ω /14 dB
Frequency	**28.60 to 30.00 GHz**
Output Level Range	-20 to -5 dBm **at Fc**
Output 1 dB compr.	+5 dBm **at Fc**

Channel Characteristics

Gain	+20 ±1 dB **at Fc**
Image Rejection	> 60 dB, min
Spurious, Inband	SIGNAL RELATED<-60 dBc in band, -5 dBm out; SIGNAL INDEPENDENT,<-60 dBm;
Spurious, Out of band	<-50 dBm, **27.6**-28.60 and 30.00-31.00 GHz out**; LO, <-35 dBm, <-40 dBm typical**
Intermodulation	<-55 dBc for two carriers at Fc ± 2 MHz, each at -10 dBm out
Frequency Response	**±2.0 dB**, **28.60- 30.00 GHz** out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	**26.90 GHz**
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input

Phase Noise @ F (Hz) >	*100*	*1K*	*10K*	*100K*	*1M*
dBc	*-70*	*-75*	*-80*	*-90*	*-110*

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), 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.

Available Connector Options

297 - 50Ω 2.92 mm (RF), 75Ω BNC (L-BAND)
29N - 50Ω 2.92 mm (RF), 50Ω N-type (L-BAND)
29S - 50Ω 2.92 mm (RF), 50Ω SMA (L-BAND)

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

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