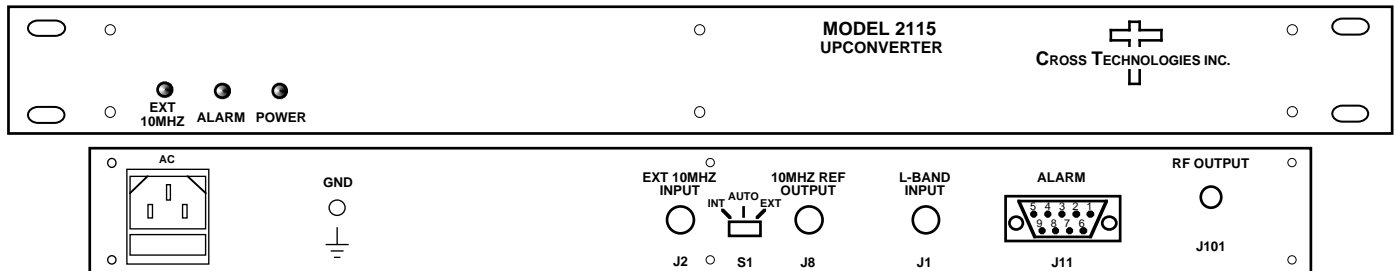


2115-178-500 Block Upconverter, 250 - 750 MHz to 17.3 - 17.8 GHz

The 2115-178-500 Block Upconverter converts 0.25 - 0.75 GHz to 17.3 - 17.8 GHz with a local oscillator at 17.05 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. **The L-band to RF gain is 0 ± 1 dB at Fc.** 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 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 \pm 3 dB, 10MHz reference signal is connected to the external reference input. It is powered by a 100-240 \pm 10% VAC power supply, and is in a 1 3/4" X 19" X 14" rack mount chassis.



2115-178-500 Upconverter Front and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss	50 Ω /14 dB
Frequency	0.25 to 0.75 GHz
Noise Figure, Max.	20 dB max gain
Input Level range	-10 to -30 dBm
Input 1 dB compression	+5 dBm

Output Characteristics

Impedance/Return Loss	50 Ω /14 dB
Frequency	17.3 to 17.8 GHz
Output Level Range	-10 to -30 dBm
1 dB compression	+5 dBm

Channel Characteristics

Gain at Fc	+ 0 \pm 1 dB
Image Rejection	> 60 dB, min
Spurious, Inband	SIGNAL RELATED <-50 dBC in band, -10 dBm out; SIGNAL INDEPENDENT, <-70 dBC
Spurious, Out of band	<-60 dBm , 16.3-17.3 and 17.8-20.8 GHz
Intermodulation	<-50 dBC for two carriers each at -13 dBm out
Frequency Response	\pm1.5 dB , 17.3 - 17.8 GHz out; \pm 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	17.05 GHz
Frequency Accuracy	\pm 0.01 ppm max over temp internal reference; external reference input
10 MHz level	3 dBm, \pm 3 dB, 75 ohms, External In or Internal out

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-65	-75	-80	-100	-115

Controls, Indicators

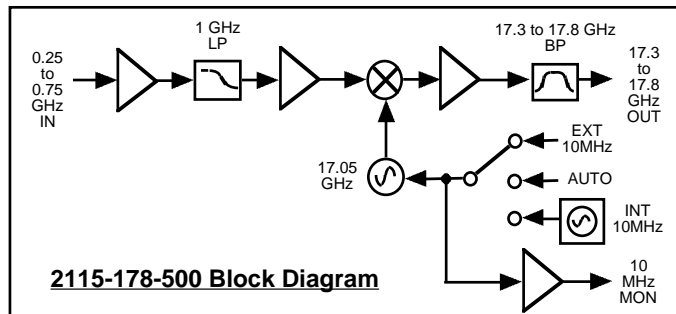
INT/AUTO/EXT Switch	Selects internal or external 10 MHz (rear panel DP3T switch)
Ext 10 MHz	Yellow LED, indicates external 10 MHz reference selected
PLL Alarm	Red LED, External contact closure
Power	Green LED

Other

RF Connector	SMA (female), 50 Ω , standard
L-Band Connector	BNC (female), 50 Ω , standard
10 MHz connectors	BNC (female), 75 Ω connector; Works with 50 Ω or 75 Ω
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 \pm 10% VAC, 47 - 63 Hz, 25 watts max.

Available Connector Options

S7 - 50 Ω SMA (RF), 75 Ω BNC (L-BAND)
SF- 50 Ω SMA (RF), 75 Ω F-type (L-BAND)
SN - 50 Ω SMA (RF), 50 Ω N-type (L-BAND)
SS - 50 Ω SMA (RF), 50 Ω SMA (L-BAND)



2115-178-500 Block Diagram

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