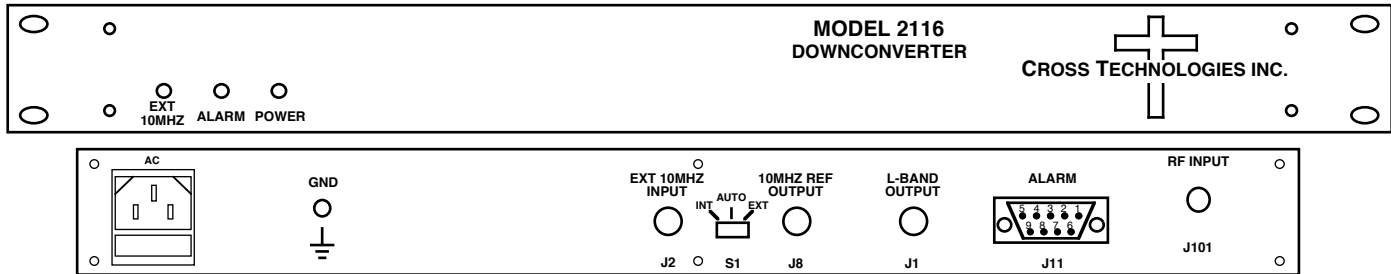


2116-202-1600 Block Downconverter, 20.2 - 21.2 GHz to 1100 - 2100 MHz

The 2116-202-1600 Downconverter converts **20.2 - 21.2 GHz** to **1100 - 2100 MHz (Fc=1600 MHz)** with a local oscillator at **19.1 GHz**. Front panel LEDs indicate DC Power, External 10 MHz, and PLL Alarm. The gain is **+20 dB**. Connectors are **SuperSMA** female for the RF input and BNC female for the RF output (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 (RF)

Impedance/Return Loss	50Ω/14 dB
Frequency	20.2 to 21.2 GHz
Noise Figure, Max.	12 dB max gain
Level	-45 to -25 dBm
1dB Compression	-15 dBm

Output Characteristics (designated L-Band)

Impedance/Return Loss	50Ω/14 dB
Frequency	1100 to 2100 MHz
Level	-25 to -5 dBm
1dB Compression	+5 dBm

Channel Characteristics

Gain	+20 dB ±2 dB at Fc
Image Rejection	> 55 dB, min
Spurious, In Band	SIGNAL RELATED <-55 dBC in band, -5 dBm out; SIGNAL INDEPENDENT, <-60 dBC
Spurious, Out of Band	<-50 dBm (0.5-1.1 GHz and 2.1-3.3 GHz Out)
Intermodulation	<-55 dBC for two carriers at Fc ± 2MHz, each at -10 dBm out
Frequency Response	±2.0 dB, 1100-2100 MHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	19.1 GHz
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input

Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-60	-70	-80	-90	-110

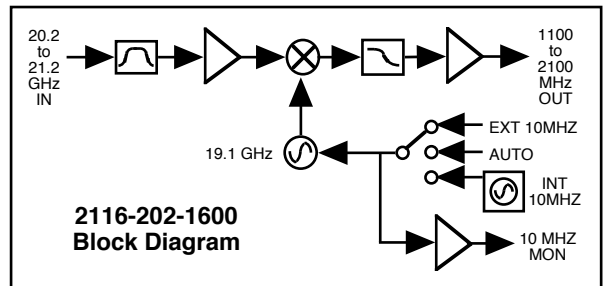
10 MHz level +3 dBm, ± 3 dB, 75 ohms, External In or Internal out

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	SuperSMA (female), 50Ω
RF Out Connector	BNC (female), 50Ω (designated L-band)
10 MHz connectors	BNC (female), works with 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 maximum



Available Connector Options

267 - 50Ω SuperSMA (RF), 75Ω BNC (L-BAND)
26N - 50Ω SuperSMA (RF), 50Ω N-type (L-BAND)
26S - 50Ω SuperSMA (RF), 50Ω SMA (L-BAND)

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