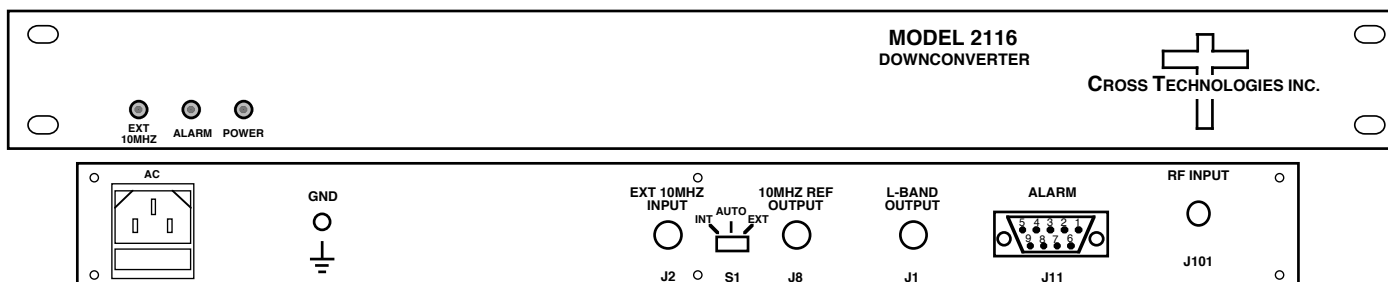


2116-143 Block Downconverter, 14.35 - 15.40 GHz to 0.95 - 2.0 GHz

The 2116-143 Downconverter converts **14.35 - 15.40 GHz** to **0.95 - 2.0 GHz** with a local oscillator at 13.4 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +35 dB. Connectors are SMA female for the RF input and BNC female for the L-band output 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. The 2116 is powered by a 100-240 ± 10% VAC power supply, and mounted 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 **14.35 to 15.40 GHz**
 Noise Figure, Max. 12 dB max gain
 Level -55 to -35 dBm
 1dB Compression -25 dBm

Output Characteristics (L-Band)

Impedance/Return Loss 50Ω/14 dB
 Frequency **0.95 to 2.0 GHz**
 Level -20 to 0 dBm
 1dB Compression +10 dBm

Channel Characteristics

Gain +35 dB ±2 dB at Fc
 Image Rejection > 60 dB, min
 Spurious, In Band SIGNAL RELATED <-60 dBC in band, 0 dBm out; SIGNAL INDEPENDENT, <-60 dBC
 Spurious, Out of Band **<-50 dBm (0.5-0.9 GHz and 2.05-3.0 GHz Out)**
 Intermodulation <-55 dBC for two carriers each at -10 dBm out
 Frequency Response ±1.5 dB, **0.95-2.0 GHz** out; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

LO Frequency 13.4 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	-70	-80	-85	-95	-110

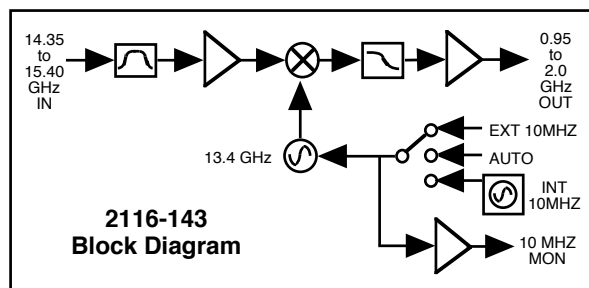
10 MHz level +3 dBm, ± 3 dB, 75 ohms, External In or Internal out

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 SMA (female), 50Ω
 RF Out Connector BNC (female), 50Ω (designated L-band)
 10 MHz connectors BNC (female), 75Ω connector; 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

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

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