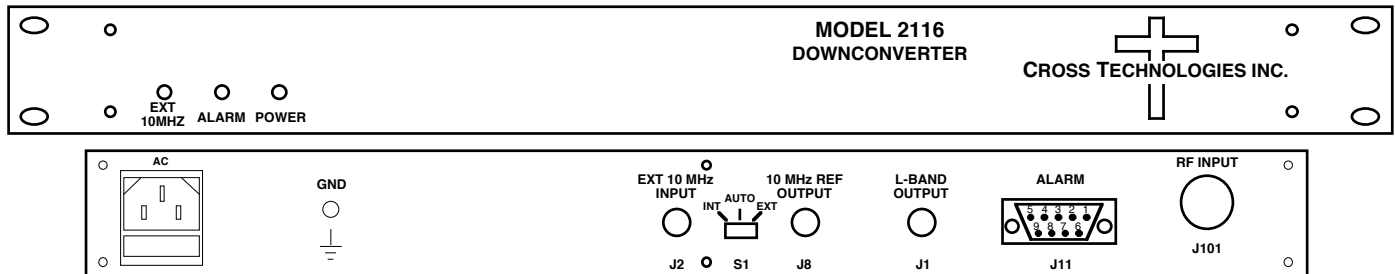


**2116-44# Block Downconverter, 4.40 - 5.85 GHz to 0.95 - 2.40 GHz**

The 2116-44# Block Downconverter converts **4.40 - 5.85 GHz** to **0.95 - 2.40 GHz** (inverted) with a **6.80 GHz** local oscillator. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is **+35 dB (+25 dB for Option W25)**. Connectors are Type N 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 ± 3 dB, 10MHz 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.



**EQUIPMENT SPECIFICATIONS\***

**Input Characteristics (RF)**

Impedance/Return Loss 50Ω/14 dB  
 Frequency **4.40 to 5.85 GHz**  
 Noise Figure, Max. 15 dB max gain  
 Input Level range -55 to -35 dBm (**-45 to -25 dBm; OPTION W25**)  
 Input 1 dB compression -25 dBm (**-15 dBm; OPTION W25**)

**Output Characteristics**

Impedance/Return Loss 50Ω /14 dB  
 Frequency **0.95 to 2.40 GHz**  
 Output Level Range -20 to 0 dBm  
 Output 1 dB compression +10 dBm

**Channel Characteristics**

Gain **+35 dB ±2 dB (+25 dB ±2 dB; OPTION W25)**  
 Image Rejection > 60 dB, min  
 Spurious, In Band SIGNAL RELATED < -50 dBc in band, 0 dBm out; SIGNAL INDEPENDENT, < -60 dBm (**0.95-2.40 GHz Out**)  
 Spurious, Out of Band < -45 dBm (**0.5-0.94 GHz and 2.41-3.0 GHz Out**)  
 Intermodulation < -55 dBc for two carriers each at -10 dBm out  
 Frequency Response **±2.0 dB**, 0.95 to 2.40 GHz out; ± 0.5 dB, 40 MHz BW  
 Frequency Sense Inverting

**LO Characteristics**

LO Frequency 6.80 GHz  
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input  
 10 MHz In/Out Level 3 dBm, ± 3 dB

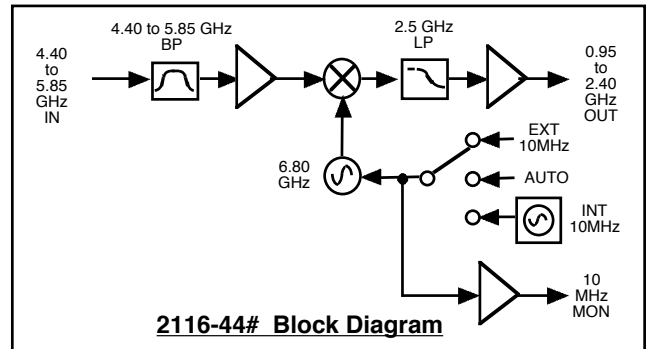
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-80	-85	-100	-120

**Controls, Indicators**

Ext 10 MHz Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch)  
 Power Green LED  
 PLL Alarm Red LED, External contact closure

**Other**

RF, L-band Connector N-type (female), 50Ω, BNC (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 1.7" high X 14.0" deep  
 Power 100 - 240 ±10% VAC, 47 - 63 Hz, 25 watts max.



**Available Options**

**W25, +25dB gain**

**Connectors/Impedance**

N - 50Ω N-type (RF), 75Ω BNC (L-BAND)  
 NF - 50Ω N-type (RF), 75Ω F-type (L-BAND)  
 NN - 50Ω N-type (RF), 50Ω N-type (L-BAND)  
 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°C to 40°C; Specifications subject to change without notice