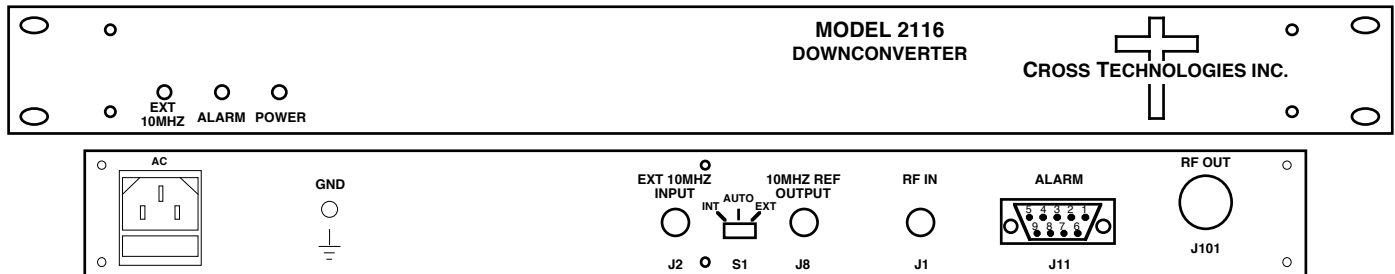


2116-21#-1014 Block Downconverter, 2114 ±50 MHz to 1014 ±50 MHz

The **2116-21#-1014** Block Downconverter converts **2114 ±50 MHz** to **1014 ±50 MHz** (inverted) with a **3.128 GHz** local oscillator. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The gain is +0 dB. Connectors are Type N female for the RF and BNC female for RF out 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 3dBm ± 3dB, 10MHz signal is connected to the external reference input. The 2116-21#-1014 is powered by a 100-240 ±10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



2116-21#-1014 Front and Rear Panels (shown with connector option SN)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB
 Frequency 2114 ±50 MHz
 Noise Figure, Max. 20 dB
 Input Level range -20 to 0 dBm
 Input 1 dB compression +10 dBm

Output Characteristics

Impedance/Return Loss 50Ω /14 dB
 Frequency 1014 ±50 MHz
 Output Level Range -20 to 0 dBm
 Output 1 dB compression +10 dBm

Channel Characteristics

Gain @ Fc +0 dB ±1 dB
 Image Rejection > 60 dB, min
 Spurious, In Band SIGNAL RELATED <-55 dBC, 0 dBm out; SIGNAL INDEPENDENT, <-60 dBm (1014 ±50 MHz Out)
 Spurious, Out of Band <-50 dBm (0.2-0.95 and 1.07-1.80 GHz Out)
 Intermodulation <-55 dBC for two carriers at Fc ± 2 MHz spacing, each at -5 dBm out
 Frequency Response ±1.5 dB, 1014 ±50 MHz out; ± 0.5 dB, 40 MHz BW;
 Frequency Sense Inverting

LO Characteristics

LO Frequency 3.128 GHz
 Frequency Accuracy ± 0.01 ppm max over temp internal reference; ext. ref. input
 10 MHz In/Out Level 3 dBm, ± 3 dB

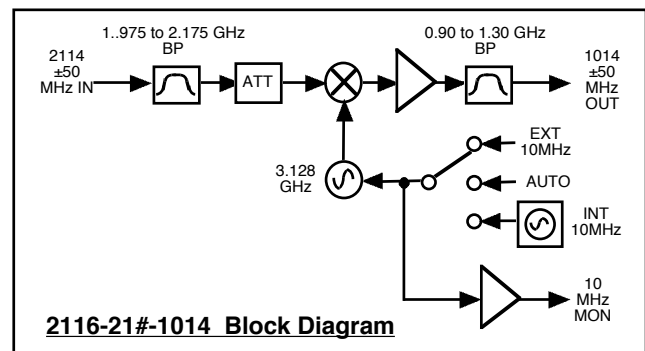
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-80	-90	-95	-100	-120

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), 50Ω/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.



2116-21#-1014 Block Diagram

Available Connector Options-

- 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