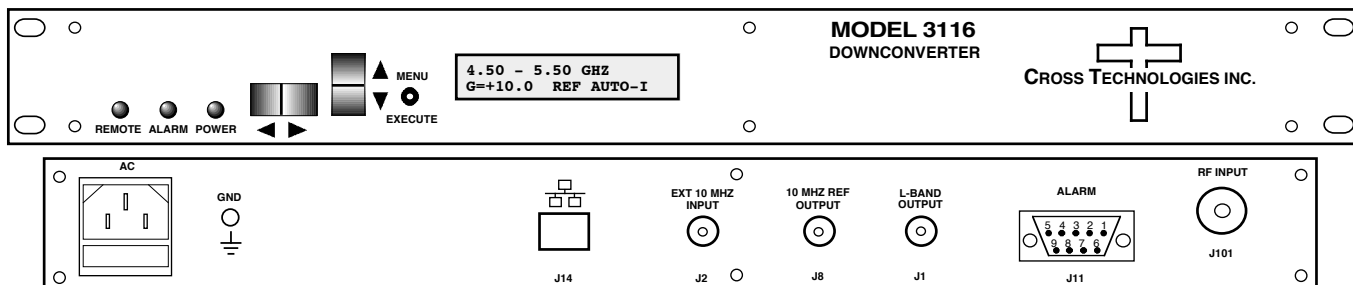


3116-4555#-2000 Block Downconverter, 4.50 - 5.50 GHz to 1.50 - 2.50 GHz

The 3116-4555#-2000 Downconverter converts 4.50 - 5.50 GHz to 1.50 - 2.50 GHz (inverted) with a 7.00 GHz local oscillator. The gain is +25 dB maximum and is adjustable in 0.5 ± 0.5 dB steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain and internal/external/Auto reference frequency selection are controlled by front panel switches or remote selection (via RS-232C/485, standard; Ethernet Optional) and are viewable on the LCD Display. The connectors are Type N female for the RF and BNC female for the L-Band and external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is +3 dBm, ± 3 dB. It is powered by a 100-240 $\pm 10\%$ VAC power supply, and housed in a 1 3/4" X 19" X 14" rack mount chassis.



EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss	50Ω/14 dB
Frequency	4.50 to 5.50 GHz
Noise Figure, Max.	12 dB at max gain (Gmax), Fc
Input Level range	-45 to -25 dBm
Input 1 dB compression	-25 dBm at min gain (Gmin), Fc

Output Characteristics (L-Band)

Impedance/Return Loss	50Ω / 14 dB
Frequency	1.50 to 2.50 GHz
Output Level Range	-20 to 0 dBm, at Fc
Output 1 dB compression	+10 dBm at Gmax, Fc

Channel Characteristics

Gain, max; adjustment	+25 dB ± 2 dB max.; 0 to +25 dB adjustment in 0.5 ± 0.5 dB Steps, Gmax, at Fc
Image Rejection	> 60 dB, min
Spurious, In Band	<-50 dBc in band, 0 dBm out; (1.50-2.50 GHz Out), at Gmax
Spurious, Out of Band	<-50 dBm (0.5-1.50 GHz and 2.500-3.5 GHz Out), at Gmax
Intermodulation	<-50 dBc for two carriers spaced at $F_c \pm 2$ MHz, each at -10 dBm out, at Gmax
Frequency Response	± 2.0 dB, 1.50 - 2.50 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Inverting

LO Characteristics

LO Frequency	7.00 GHz
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz In/Out Level	3 dBm, ± 3 dB, w/ Auto-detect

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

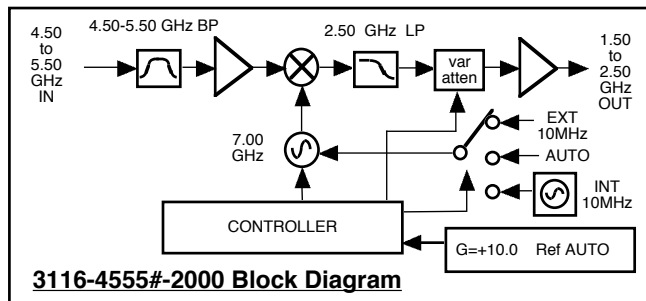
Controls, Indicators

Gain; Ext Ref Selection	Direct readout LCD; pushbutton switches or remote
Pwr; Alarm; Rem; Mute	Green LED; Red LED; Yellow LED; Yellow LED
Remote	RS232C/RS485/422, 9600 baud (Ethernet Optional)

Other

RF Connector	Type N (female), 50Ω
L-Band Connector	BNC (female), 50Ω
10 MHz Connectors	BNC (female), 75Ω, works with 50 or 75 ohms
Alarm/Remote Conn.	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 2.50" high X 14.0" deep
Power	100-240 $\pm 10\%$ VAC, 47 - 63 Hz, 30 watts max.

Front and Rear Panel (Shown with optional Ethernet)



Available Options

W31 0 to +50 degrees C operation

Remote M&C Ethernet Options

- W8 - Ethernet w/web browser Interface
- W18 - Ethernet w/SNMP (and MIB) Interface
- W28 - Ethernet w/direct TCP/IP Interface
- W828 - W8 +W18 +W28

Connector Options

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

Contact Cross for other options

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