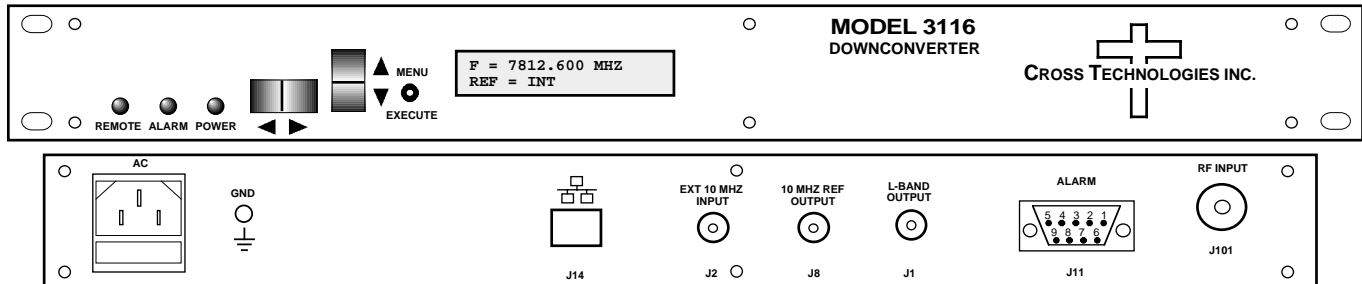


3116-77#-1200 Block Downconverter, 7.75 - 8.45 GHz to 1200 ± 20 MHz

The 3116-77#-1200 Downconverter converts **7.75 - 8.45 GHz** to **1200 ± 20 MHz** (non-inverted) in **100 kHz steps** with a **6.55 - 7.25 GHz** local oscillator. **The gain is -5 ± 2 dB**. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. **Frequency** and internal/external/Auto reference **mode** selection are controlled by front panel switches or remote selection (via RS-232C/485, standard; Ethernet Optional) and are viewable on the LCD Display. 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**. The 3116 is powered by a 100-240 ± 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	7.75 to 8.45 GHz
Noise Figure, Max.	20 dB
Input Level range	-10 to 0 dBm
Input Non-damage	+10 dBm

Output Characteristics (L-Band)

Impedance/Return Loss	50Ω/14 dB
Frequency	1200 ± 20 MHz
Output Level Range	-15 to -5 dBm
Output 1 dB compression	+5 dBm

Channel Characteristics

Gain at Fc	-5 dB ± 2 dB
Image Rejection	> 60 dB, min
Spurious, In Band	SIGNAL RELATED <-45 dBC, -5 dBm out ; SIGNAL INDEPENDENT, <-60 dBm (1200 ±20 MHz Out)
Spurious, Out of Band	<-50 dBm (0.5-1.17 and 1.23-2.0 GHz Out)
Intermodulation	<-50 dBC for two carriers at 4 MHz spacing, each at -15 dBm out
Frequency Response	±1.5 dB over the band, ± 0.75 dB 1200 ±20 MHz out;
Frequency Sense	Non-inverting

LO Characteristics

LO Frequency	6.55 - 7.25 GHz, 100 kHz steps
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) >	10	100	1K	10K	100K	1M
Standard dBC/Hz	-55	-75	-80	-80	-100	-120

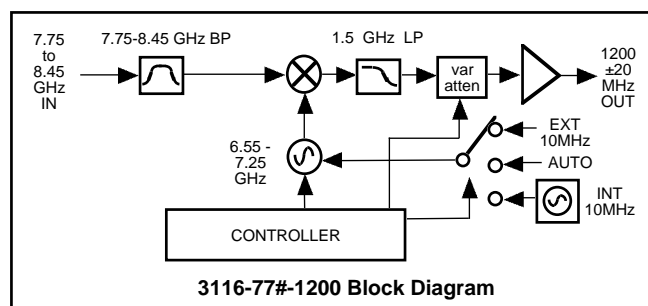
Controls, Indicators

Freq.; 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	N-Type (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 1.75" high X 14.0" deep
Power	100-240 ± 10% VAC, 47 - 63 Hz, 30 watts max.

Front and Rear Panel



Available Options

W71 - IF Monitor Port (-20 dB, Front)
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

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