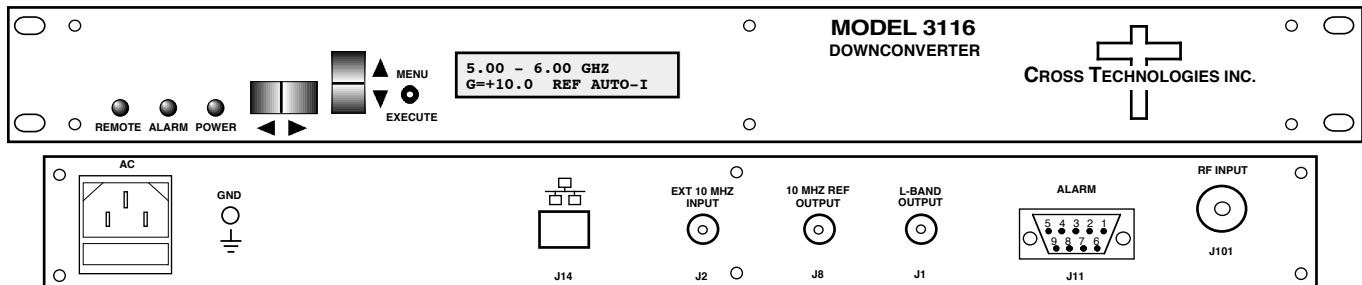


3116-5060#-2000 Block Downconverter, 5.00 - 6.00 GHz to 1.50 - 2.50 GHz

The 3116-5060#-2000 Downconverter converts 5.00 - 6.00 GHz to 1.50 - 2.50 GHz (inverted) with a 7.50 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 50 Ω /14 dB
- Frequency 5.00 to 6.00 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 50 Ω /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 7.50 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

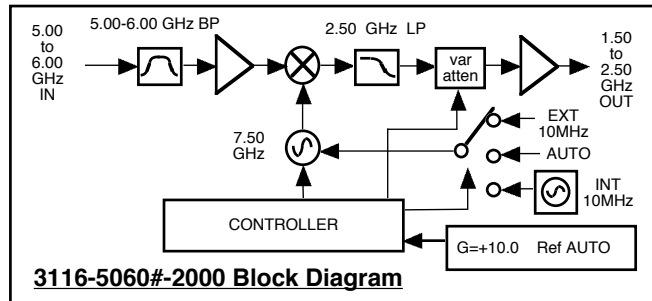
Controls, Indicators

- 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), 50 Ω
- L-Band Connector BNC (female), 50 Ω
- 10 MHz Connectors BNC (female), **75 Ω , 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 - 50 Ω N-type (RF), 75 Ω BNC (L-BAND)
- NN - 50 Ω N-type (RF), 50 Ω N-type (L-BAND)
- S7 - 50 Ω SMA (RF), 75 Ω BNC (L-BAND)
- SN - 50 Ω SMA (RF), 50 Ω N-type (L-BAND)
- SS - 50 Ω SMA (RF), 50 Ω SMA (L-BAND)

Contact Cross for other options

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