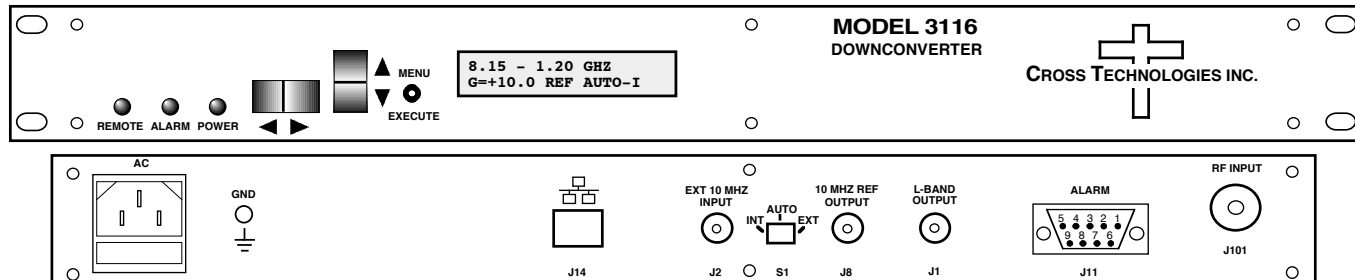


3116-79 Block Downconverter, 7.9 - 8.4 GHz to 0.95 - 1.45 GHz

The 3116-79 Downconverter converts 7.9 - 8.4 GHz to 0.95 - 1.45 GHz (non-inverted) with a 6.95 GHz local oscillator. The gain is +35 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. 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 $100-240 \pm 10\%$ VAC power supply, and housed in a $1 \frac{3}{4} \times 19 \times 14$ rack mount chassis.



EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

| | |
|------------------------|----------------|
| Impedance/Return Loss | 50Ω/14 dB |
| Frequency | 7.9 to 8.4 GHz |
| Noise Figure, Max. | 12 dB max gain |
| Input Level range | -55 to -35 dBm |
| Input 1 dB compression | -25 dBm |

Output Characteristics (L-Band)

| | |
|-------------------------|----------------------|
| Impedance/Return Loss | 50Ω/14 dB |
| Frequency | 0.95 to 1.45 GHz |
| Output Level Range | -20 to 0 dBm |
| Output 1 dB compression | +10 dBm at max. gain |

Channel Characteristics

| | |
|-----------------------|--|
| Gain, max; adjustment | +35 dB ± 2 dB, max. gain; 30 dB adjustment in 0.5 ± 0.5 dB Steps |
| Image Rejection | > 60 dB, min |
| Spurious, In Band | -55 dBC in band, 0 dBm out; (0.95-1.45 GHz Out) |
| Spurious, Out of Band | <-50 dBC (0.5-0.95 GHz and 1.45-2.5 GHz Out) |
| Intermodulation | <-55 dBC for two carriers each at -10 dBm out |
| Frequency Response | ± 1.0 dB, 0.95 - 1.45 GHz out ; ± 0.5 dB, 40 MHz BW |
| Frequency Sense | Non-inverting |

LO Characteristics

| | |
|---------------------|--|
| LO Frequency | 6.95 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) > | 10 | 100 | 1K | 10K | 100K | 1M |
|------------------------|-----|-----|-----|-----|------|------|
| Standard dBC/Hz | -55 | -70 | -80 | -85 | -100 | -110 |

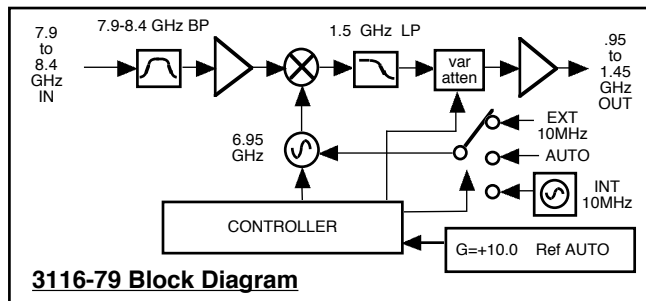
Controls, Indicators

| | |
|-------------------------|---|
| 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 1.75" high X 14.0" deep |
| Power | 100-240 $\pm 10\%$ VAC, 47 - 63 Hz, 30 watts max. |

Front and Rear Panel



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

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)

Contact Cross for other options

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