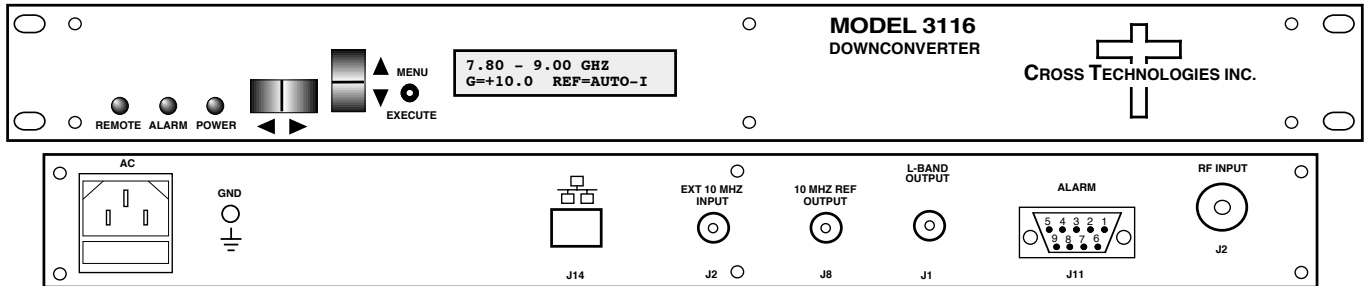


3116-7890 Block Downconverter, 7.8 - 9.0 GHz to 0.95 - 2.15 GHz

The 3116-7890 Downconverter converts 7.8 - 9.0 GHz to 0.95 - 2.15 GHz (non-inverted) with a 6.85 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 ± 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 7.8 to 9.0 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 2.15 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; (0.95-2.15 GHz Out)**
- Spurious, Out of Band <-50 dBm (**0.5-0.95 GHz and 2.15-2.5 GHz Out**)
- Intermodulation <-55 dBC for two carriers each at -10 dBm out
- Frequency Response **±1.0 dB, 0.95 -2.15 GHz out; ± 0.5 dB, 40 MHz BW**
- Frequency Sense Non-inverting

LO Characteristics

- LO Frequency 6.85 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 |

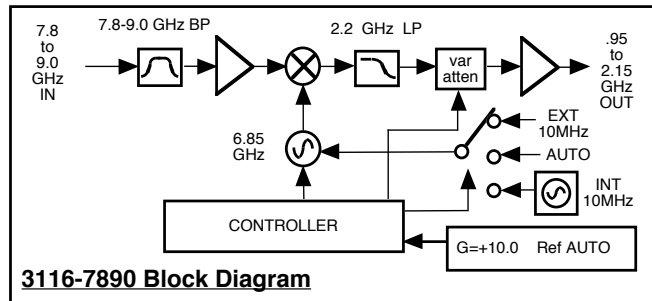
Controls, Indicators

- Gain; Ext Ref Selection Direct readout LCD; pushbutton switches or remote
- Power; Alarm; Remote 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 ± 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