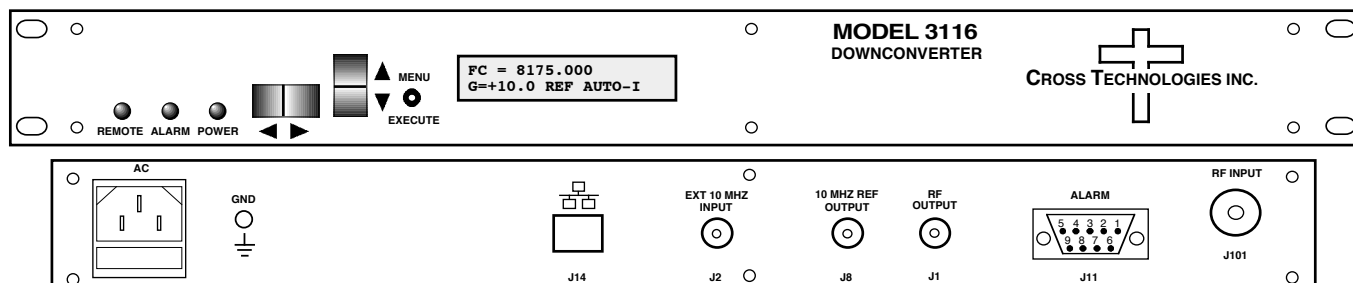


3116-7984-720-400# Block Downconverter, 7.9 - 8.4 GHz to 720 ± 200 MHz

The 3116-7984-720-400# Downconverter converts 7.9 - 8.4 GHz to 720 ±200 MHz (non-inverted) in 125 kHz steps, **Fc = 8.05-8.355 GHz**. The gain is **+30 to +50 dB** and is adjustable in **0.5 ±0.5 dB** steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain, **Fc frequency (8.05-8.355 GHz)** 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 In and BNC female for the RF Out 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.



Front and Rear Panel (Shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF In)

- Impedance/Return Loss 50Ω/14 dB
- Frequency 7.9 to 8.4 GHz, (**Fc = 8.05-8.355 GHz**)
- Noise Figure, Max. 15 dB max gain
- Input Level range -70 to -40 dBm

Output Characteristics (RF Out)

- Impedance/Return Loss **50Ω /14 dB min.**
- Frequency 720 ±200 MHz
- Output Level Range -20 to 0 dBm
- Output 1 dB compression +10 dBm at max. gain

Channel Characteristics

- Gain, max; adjustment **+50 dB ±2 dB, max. at Fc; +30 to +50 dB, 0.5 ±0.5 dB steps**
- Image Rejection **> 50 dB, min**
- Spurious, In Band **-55 dBC, typical; <-50 dBC, maximum, inband; (720 ±200 MHz Out)**
- Frequency Response **± 1.5 dB, 400 MHz BW, Fc = 8.05-8.355 GHz**
- Group Delay, max **10 ns total (parabolic + linear + ripple), 400 MHz band, Fc = 8.05-8.355 GHz**
- Frequency Sense Non-inverting

LO Characteristics

- Frequency Accuracy ±0.01 ppm internal reference; External reference input
- LO Frequency **7.33 - 7.635 GHz (Fc = 8.05-8.355 GHz)**
- Frequency Step 125 kHz min, **Fc= 8.05-8.355 GHz; (1 kHz steps, X1006)**
- 10 MHz In/Out Level 3 dBm, ± 3 dB, w/ Auto-detect

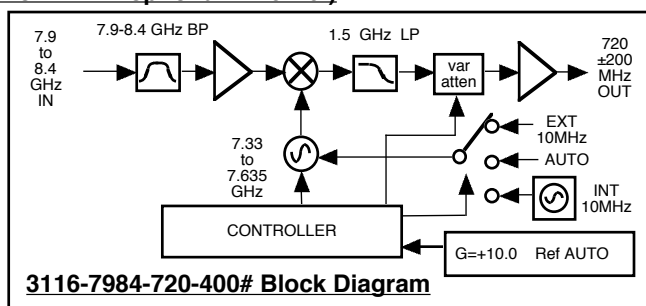
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-80	-85	-100	-120

Controls, Indicators

- Freq/Gain/Ext Ref Select 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 Out, RF In Connector **RF Out - BNC (female), 50Ω, RF In - Type N (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.**



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 - N-type (RF In), 75Ω BNC (RF Out)
- NF - N-type (RF In), 75Ω F-type (RF Out)
- NN - N-type (RF In), 50Ω N-type (RF Out)
- S7 - SMA (RF In), 75Ω BNC (RF Out)
- SF- SMA (RF In), 75Ω F-type (RF Out)
- SN - SMA (RF In), 50Ω N-type (RF Out)
- SS - SMA (RF In), 50Ω SMA (RF Out)
- Contact Cross for other options**

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