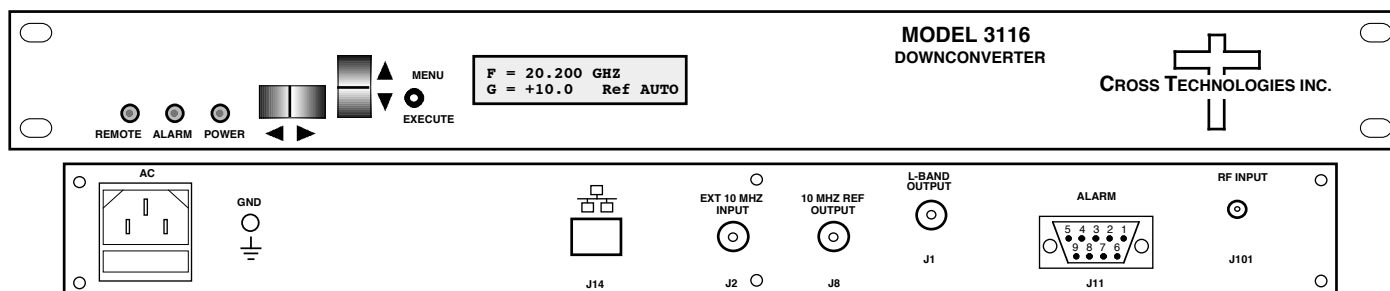


3116-192#-2050 Agile Block Downconverter, 19.2 - 21.2 GHz to 2050 ± 250 MHz

The **3116-192#-2050 Agile Block Downconverter** converts 19.2 - 21.2 GHz to **2.05 ± 0.250 GHz (1.80 - 2.30 GHz)** in **1 MHz steps** with low phase noise and flat frequency response. Frequency translation is via dual conversion. The gain is **+30 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. Frequency, gain and internal/external/auto reference frequency selection are controlled by front panel switches or remote selection (via RS232C/RS485/422, standard; Ethernet Optional) and are viewable on the LCD Display. Connectors are **2.92 mm (female)** for the RF and BNC female for the L-Band and external reference input and reference output. In AUTO, the 10 MHz reference switches to internal when the external is below +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 Panels (Shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB
 Frequency **19.2 to 21.2 GHz**
 Noise Figure, Max. **20 dB max gain**
 Input Level range **-50 to -30 dBm**
 Input 1 dB compression **-20 dBm at max. gain, at Fc**

Output Characteristics (L-Band)

Impedance/Return Loss **50Ω** /14 dB
 Frequency **2.05 ± 0.250 GHz (1.80 - 2.30 GHz)**
 Output Level Range **-20 to 0 dBm**
 Output 1 dB compression **+10 dBm at max. gain, at Fc**

Channel Characteristics

Gain, max; adj. at Fc **+30 dB ±3 dB**, max. gain; 0 to +30 dB adjustment in **0.5± 0.5 dB Steps at Fc**
 Image Rejection > 60 dB, min
 Spurious, In Band SIGNAL RELATED < **-50 dBC** in band; SIGNAL INDEPENDENT, < -60 dBm, at max. gain (1.80 - 2.30 GHz out)
 Spurious, Out of Band < -50 dBm, **0.5-1.79 GHz and 2.31- 3.0 GHz, at max. gain**
 Intermodulation < -50 dBC for two carriers at Fc ±2 MHz, each at -10 dBm out, at max. gain
 Frequency Response **±1.5 dB, 2.05 ± 0.250 GHz out; ± 0.5 dB, 40 MHz BW**
 Frequency Sense Non-inverting

LO Characteristics

Freq Step; FLO; Fc **1 MHz; FLO = 23.0 - 25.0 GHz; Fc = 19.20 - 21.20 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

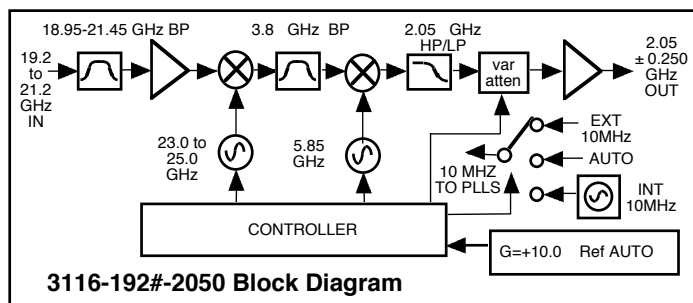
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	60	70	80	90	100

Controls, Indicators

Freq., Gain, Ext Ref Sel. Direct readout LCD; pushbutton switches or remote
 Power; Alarm; Remote Green LED; Red LED; Yellow LED
 Remote RS232C/RS485/422, 9600 baud (Ethernet Optional)

Other

RF Connector **2.92 mm (female)**
 L-Band Connector BNC (female), **50Ω**
 10 MHz Connectors BNC (female), **50Ω**
 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

W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet
W828 - Ethernet; W8 + W18 + W28
W8W28 - Ethernet; W8 + W28

Connectors/Impedance

SS2- 2.92mm (RF), SMA (IF)

Contact Cross for other options

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