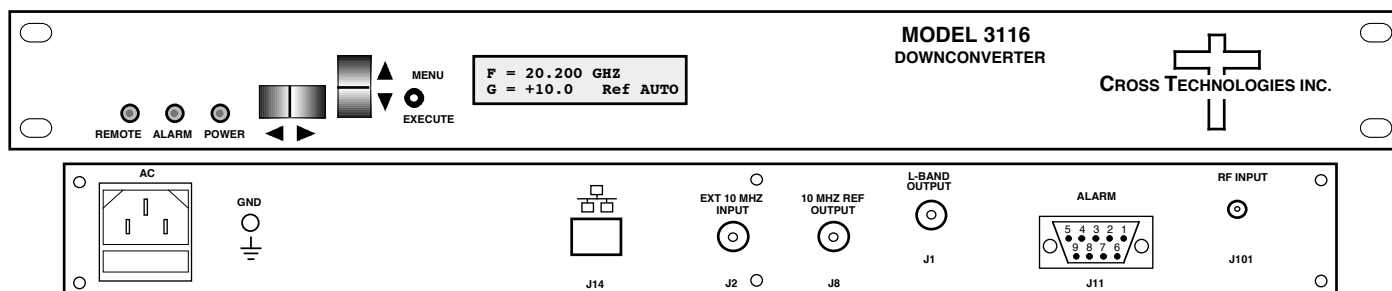


3116-192#-1200 Agile Block Downconverter, 19.2 - 21.2 GHz to 1200 ± 200 MHz

The **3116-192#-1200 Agile Block Downconverter** converts 19.2 - 21.2 GHz to 1.20 ± 0.200 GHz (1.00 - 1.40 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, Fc
 Noise Figure, Max. 20 dB Gmax
 Input Level range -50 to -30 dBm
 Input 1 dB compression -20 dBm at Gmax, at Fc

Output Characteristics (L-Band)

Impedance/Return Loss 50Ω /14 dB
 Frequency 1.20 ± 0.200 GHz (1.00 - 1.40 GHz)
 Output Level Range -20 to 0 dBm
 Output 1 dB compression +10 dBm at Gmax, at Fc

Channel Characteristics

Gain, max; adj. at Fc +30 dB ±3 dB, Gmax; 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 Gmax (1.00 - 1.40 GHz out)
 Spurious, Out of Band <-50 dBm, 0.5-1.00 GHz and 1.40- 3.0 GHz, at Gmax
 Intermodulation <-50 dBC for two carriers at Fc ±2 MHz, each at -10 dBm out, at Gmax
 Frequency Response ±1.5 dB, 1.20 ± 0.200 GHz out; ± 0.5 dB, 40 MHz BW
 Frequency Sense Non-inverting

LO Characteristics

Freq Step 1 MHz
 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

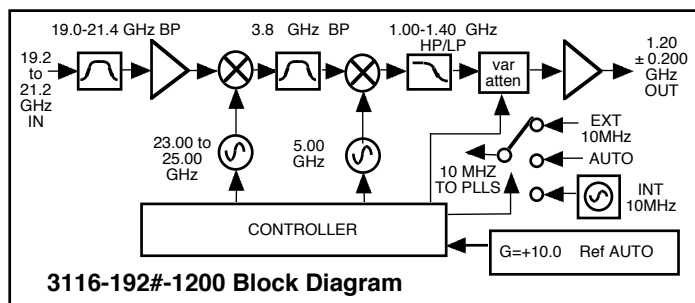
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	60	70	80	90	100

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