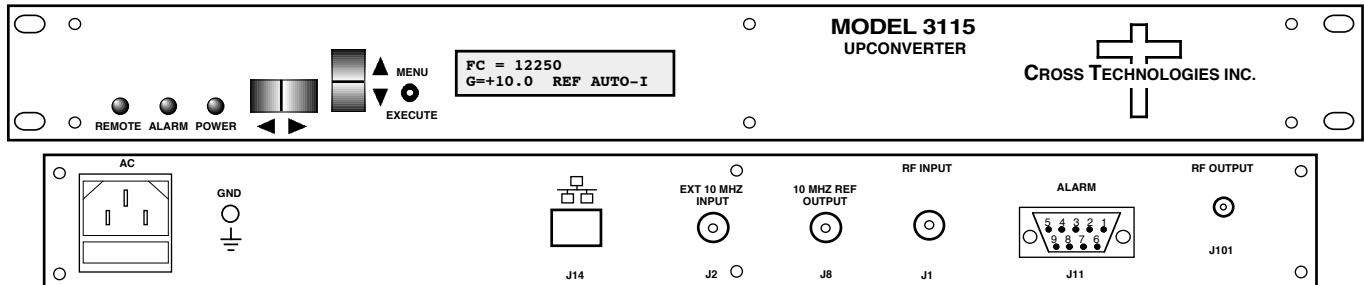


3115-107-1975 Agile Upconverter, 1975 ±125 MHz to 10.7 - 12.7 GHz

The 3115-107-1975 Agile Upconverter converts **1975 ± 125 MHz** to 10.7 to 12.7 GHz (non-inverted) in 1 MHz steps, **Fc = 10.8-12.6 GHz (12.70 GHz max RF out)** by switching between two bandpass output filters. The gain is 0 to +20 dB, adjustable in 0.5 ± 0.5 dB steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain, **Fc frequency (10.8-12.6 GHz, 12.70 max output frequency)** 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 SMA female for the RF and BNC female for the **RF Input** and external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is **+1 to +8 dBm**. It is powered by a 100-240 ± 10% VAC power supply, and 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 Input)

Impedance/Return Loss 50Ω /14 dB
 Frequency 1975 ± 125 MHz
 Input Level -30 to -10 dBm

Output Characteristics (RF Output)

Impedance/Return Loss 50Ω/14 dB min.
 Frequency 10.7 to 12.7 GHz,
Fc = 10.8-12.6 GHz
 Output level -25 to -5 dBm
 Output 1 dB compression +5 dBm at max. gain

Channel Characteristics

Gain, max; adjustment **+20 ± 1 dB, max gain at Fc; +0 to +20 dB adjustment in 0.5 ± 0.5 dB steps**
 Spurious Response <-50 dBC carrier and non-carrier related, **Inband; ≤ -50dBm out of band (9.7 -13.7 GHz)**
 Intermodulation <-50 dBC for two carriers each at -8 dBm out
 Frequency Response **± 1.5 dB, 250 MHz BW, (Fc = 10.8-12.6 GHz, 12.70 max output frequency)**
 Group Delay, max **10 ns total (parabolic + linear + ripple)**
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ±0.01 ppm internal reference; External reference input
 LO Frequency **9.6 - 11.4 GHz (Fc = 10.8-12.6 GHz, 12.70 GHz max out)**
 Frequency Step 1 MHz min, **Fc= 10.8-12.6 GHz;**
 10 MHz In/Out Level 3 dBm, ± 3 dB, w/ Auto-detect

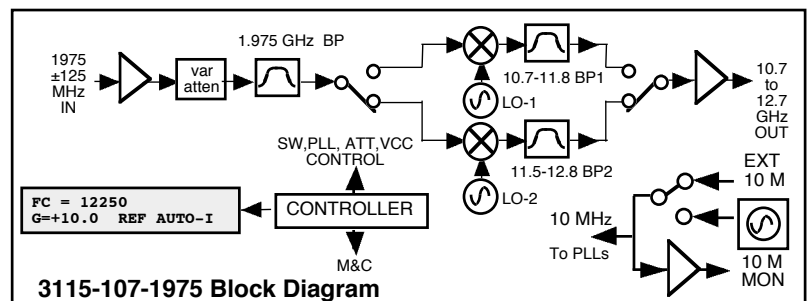
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-80	-85	-100	-120

Controls, Indicators

Freq/Gain/Ext Ref Select direct readout LCD; pushbutton switches or remote selection
 Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED
 Remote RS232C, 9600 baud; **RS485/422 or Ethernet optional**

Other

RF Out, RF In Connector RF Out - SMA (female), **50Ω**, RF In - BNC (female), **50Ω**
 10 MHz Connectors BNC (female), **75Ω, works with 50 or 75 ohms**
 Alarm/Remote Connector DB9 - NO or NC contact closure on Alarm
 Size 19 inch, 1RU standard chassis 1.75"high X **14" deep**
 Power / Temp Range 100-240 ±10% VAC, 47-63 Hz, 45 watts max.



3115-107-1975 Block Diagram

Available Options

E6-25X Int 10MHz ref. locked to ext 25 MHz
 W31 0 to +50 degrees C operation

Remote M&C Interfaces

W8 - Ethernet w/web browser Interface
 W18 - Ethernet w/SNMP (and MIB) Interface
 W28 - Ethernet w/direct TCP/IP Interface
 W828 - W8 +W18 +W28

Connector Options

STD - N-type (RF Out), 50Ω BNC (RF In)
 NN - N-type (RF Out), 50Ω N-type (RF In)
 S7 - SMA (RF Out), 75Ω BNC (RF In)
 SN - SMA (RF Out), 50Ω N-type (RF In)
 SS - SMA (RF Out), 50Ω SMA (RF In)

Contact Cross for other options

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