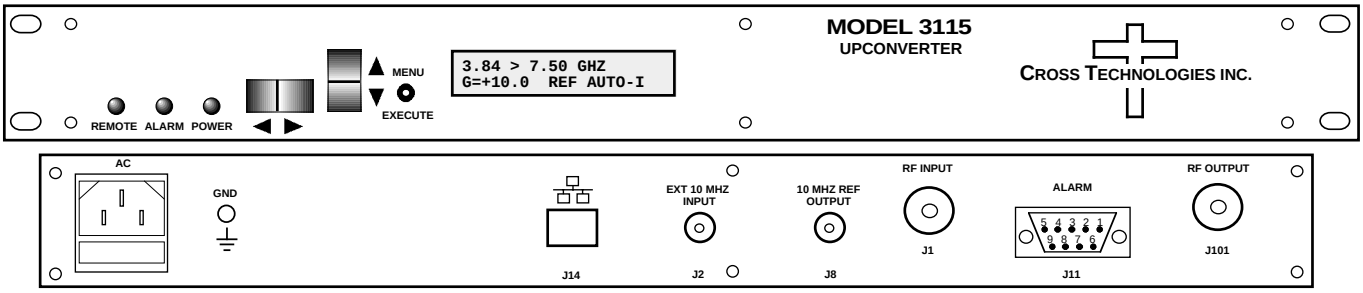
CROSS TECHNOLOGIES, INC.

DATA SHEET
REV_C
12/05/13

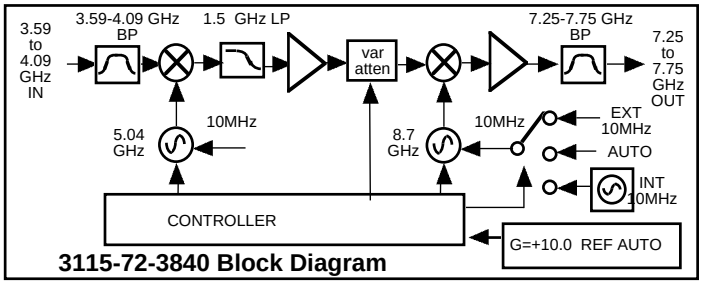
3115-72-3840 Block Upconverter, 3.59 - 4.09 GHz to 7.25 - 7.75 GHz

The 3115-72-3840 Upconverter converts 3.59 - 4.09 GHz to 7.25 - 7.75 GHz (non-inverted) with 5.04 and 8.70 GHz local oscillators. 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. 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 N-Type female for the RF In and RF Out and BNC female for the external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is **+3 dBm, ±3 dB**. It 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*

Front and Rear Panel



3115-72-3840 Block Diagram

Input Characteristics

Impedance/Return Loss	50Ω/14 dB
Frequency	**3.59 to 4.09 GHz**
Noise Figure, Max.	**15 dB** max gain
Input Level range	-40 to -20 dBm

Output Characteristics

Impedance/Return Loss	50Ω /**18 dB**
Frequency	**7.25 to 7.75 GHz**
Output Level Range	-20 to **-5 dBm**
Output 1 dB compression	**+5 dBm at max. gain**

Channel Characteristics

Gain, max; adjustment	**+30 dB ±1 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, -20 to -5 dBm out**
Spurious, Out of Band	**-55 dBC, FL -0.9 GHz to FL and FH to FH +0.9 GHz ;FL= 7.25 GHz and FH = 7.75 GHz**
Spurious, Out of Band	**-50 dBm, FL -2 GHz to FL -0.9 GHz and FH +0.9 GHz to FH +2 GHz**
Intermodulation	<-55 dBC for two carriers each at **-10 dBm** out, **GAIN = +30 dB**
Frequency Response	**±1.0 dB**, 7.25 -7.75 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

LO Characteristics

LO Frequencies	**5.04 and 8.70 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*	***-80***	***-95***	*-110*

Controls, Indicators

Gain; Ext Ref Selection	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 Connector	N-Type (female), 50Ω
RF In Connector	**N-Type (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, 45 watts max.

Available Options

W7 L-band/RF front panel Monitors(-20dBC)
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

Available 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)

*10˚C to 40˚C; Specifications subject to change without notice.