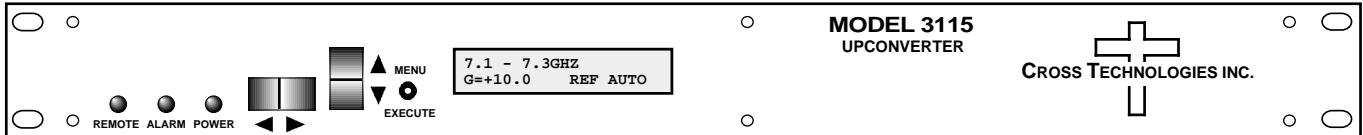


## 3115-73 Block Upconverter, 7.1 - 7.3 GHz

The 3115-73 Upconverter converts 2.1 - 2.3 GHz to 7.1 - 7.3 GHz with low phase noise and flat frequency response. Frequency translation is via a 5.00 GHz local oscillator. The gain is +30 dB maximum and is adjustable in 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 Type N female for the RF and BNC female for the L-Band 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 3115 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 Panel**

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics

Impedance/Return Loss	50Ω/14 dB
Frequency	<b>2.1 to 2.3 GHz</b>
Noise Figure, Max.	12 dB max gain
Input Level range	-40 to -20 dBm

#### Output Characteristics

Impedance/Return Loss	50Ω/18 dB
Frequency	<b>7.1 to 7.3 GHz</b>
Output Level Range	-20 to 0 dBm
Output 1 dB compression	+10 dBm

#### Channel Characteristics

Gain, max; adjustment	+30 dB ±2 dB, max. gain; 30 dB adjustment in <b>0.5 ±0.5 dB</b> Steps
Image Rejection	> 60 dB, min
Spurious, In Band	SIGNAL RELATED<-60 dBC in band, 0 dBm out; SIGNAL INDEPENDENT,<-60 dBm
Spurious, Out of Band	<b>&lt;-50 dBm, 6.1 to 7.1 and 7.3 to 8.3 GHz</b>
Intermodulation	<-55 dBC for two carriers each at <b>-5 dBm</b> out, <b>GAIN = +30 dB</b>
Frequency Response	±1.5 dB, 7.1 -7.3 GHz out; ± 0.5 dB, 40 MHz BW
Frequency Sense	Non-inverting

#### LO Characteristics

LO Frequency	<b>5.00 GHz</b>
Frequency Accuracy	± 0.01 ppm max over temp internal reference; ext. ref. input
10 MHz level In/Out	+2 to +8 dBm in, w/ Auto-detect;10M Ref Out = +3 ±3 dBm

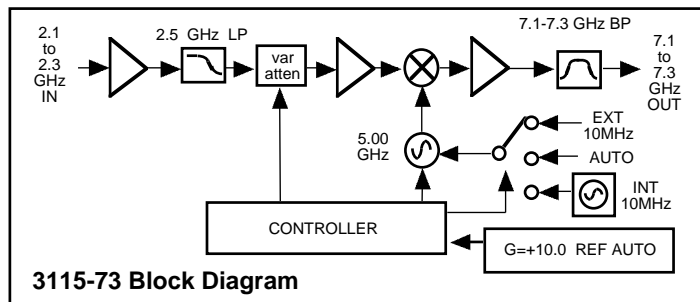
Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
Standard dBC/Hz	-55	-70	-80	-85	-100	-110
Opt W87 Enhanced dBC/Hz	-60	-75	-90	-95	-105	-120

#### 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 Connector	N-type (female), 50Ω
L-Band Connector	BNC (female), 50Ω
10 MHz Connectors	BNC (female), 50Ω/75Ω
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.



**3115-73 Block Diagram**

#### Available Options

- W7 L-band/RF front panel Monitors(-20dBC)
- W31 0 to +50 degrees C operation
- W87 Enhanced phase noise

#### 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.