3115-72 Block Upconverter, 0.95 - 1.45 GHz to 7.25 - 7.75 GHz

The 3115-72 Upconverter converts 0.95 - 1.45 GHz to 7.25 - 7.75 GHz (non-inverted) with a 6.3 GHz local oscillator. 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 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 standard; Ethernet Optional) and are viewable on the LCD Display.

Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power.

**EQUIPMENT SPECIFICATIONS***

**Input Characteristics**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 0.95 to 1.45 GHz
- Noise Figure, Max.: 12 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 FH +0.9 GHz ;FH = 7.75 GHz and FL = 7.25 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 Frequency: 6.3 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) >**

<table>
<thead>
<tr>
<th>Standard dBC/Hz</th>
<th>10</th>
<th>100</th>
<th>1K</th>
<th>10K</th>
<th>100K</th>
<th>1M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase Noise</td>
<td>-55</td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-100</td>
<td>-110</td>
</tr>
</tbody>
</table>

**Controls, Indicators**
- Gain: Ext Ref Selector, direct readout LCD; pushbutton switches or remote
- Pwr; Alarm; Rem; Mute: 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), 75Ω, works with 50 or 75 ohms
- Alarm/Remote Conn.: 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(-20dB)
- 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.

Cross Technologies, Inc.  •  www.crosstechnologies.com
6170 Shiloh Road  •  Alpharetta, GA 30005  •  770.886.8005  •  FAX 770.886.7964