The 3115-8287 Upconverter converts 0.95 - 1.45 GHz to 8.20 - 8.70 GHz (non-inverted) with a 7.25 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 +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.

**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: 8.20 to 8.70 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 = 8.20 GHz and FH = 8.70 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: ±1.0 dB, 8.20 - 8.70 GHz out; ±0.5 dB, 40 MHz BW
  - Frequency Sense: Non-inverting

- **LO Characteristics**
  - LO Frequency: 7.25 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>F (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>-55</td>
<td>-70</td>
<td>-80</td>
<td>-85</td>
<td>-100</td>
<td>-110</td>
<td></td>
</tr>
</tbody>
</table>

- **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), 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**

- 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.*