The 3115-35 Upconverter converts 0.95 - 1.45 GHz to 3.59 - 4.09 GHz (non-inverted) with 11.48 and 8.84 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 Type N female for the RF Out 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. 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.

**Front and Rear Panel**

## EQUIPMENT SPECIFICATIONS*  

### Input Characteristics  
- Impedance/Return Loss: 50Ω/14 dB  
- Frequency: 0.95 to 1.45 GHz  
- Noise Figure, Max.: 15 dB max gain  
- Input Level range: -40 to -20 dBm

### Output Characteristics  
- Impedance/Return Loss: 50Ω/18 dB  
- Frequency: 3.59 to 4.09 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 dB in band, -20 to -5 dBm out  
- Spurious, Out of Band: -50 dBc, FL -0.9 GHz to FL and FH to FH +0.9 GHz ;FL= 3.59 GHz and FH = 4.09 GHz  
- Intermodulation: < -55 dBc for two carriers each at -10 dBm out, GAIN = +30 dB

### LO Characteristics  
- LO Frequencies: 11.48 and 8.84 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

### Controls, Indicators  
- Gain: Ext Ref Selection  
- Pwr; Alarm; Rem; Mute Remote  
- RS232C/RS485/422, 9600 baud (Ethernet Optional)

**Other**  
- RF Out 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  
- 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**  
- W28 - Ethernet w/direct TCP/IP Interface  
- W18 - Ethernet w/SNMP (and MIB) Interface  
- W8 - Ethernet w/web browser Interface

**Attention**  
- 10°C to 40°C; Specifications subject to change without notice.

---

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