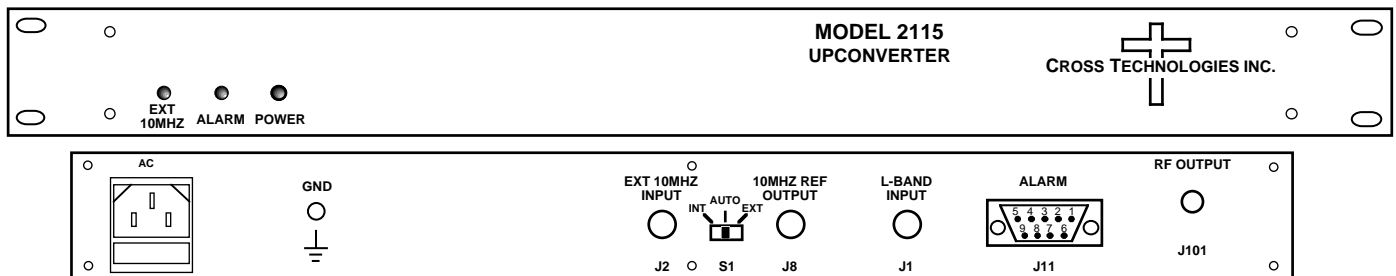


2115-143 Block Upconverter, 0.95 - 2.00 GHz to 14.35 - 15.40 GHz

The 2115-143 Block Upconverter converts 0.95 - 2.00 GHz to 14.35 - 15.40 GHz with a local oscillator at 13.4 GHz. Front panel LEDs provide indication of DC Power, External 10 MHz, and PLL Alarm. The L-band to RF gain is +20 dB. Connectors are SMA female for the RF and BNC female for the L-Band and external reference input and reference output. A three-way switch controls which 10 MHz reference is being used. In the INT position, the internal reference is used, in the EXT position, the external reference is used, and in the AUTO position, the internal reference is used unless a +3 dBm \pm 3 dB, 10MHz reference signal is connected to the external reference input. The 2115 is powered by a 100-240 \pm 10% VAC power supply, and mounted in a 1 3/4" X 19" X 14" rack mount chassis.



Front and Rear Panels

EQUIPMENT SPECIFICATIONS*

Input Characteristics

| | |
|------------------------|--------------------|
| Impedance/Ret. Loss | 50 Ω /14 dB |
| Frequency | 0.95 to 2.00 GHz |
| Noise Figure, Max. | 20 dB max gain |
| Input Level range | -40 to -25 dBm |
| Input 1 dB compression | -10 dBm |

Output Characteristics

| | |
|---------------------|--------------------|
| Impedance/Ret. Loss | 50 Ω /14 dB |
| Frequency | 14.35 to 15.40 GHz |
| Output Level Range | -20 to -5 dBm |
| Output 1 dB compr. | +5 dBm |

Channel Characteristics

| | |
|-----------------------|---|
| Gain | +20 \pm 1 dB at Fc |
| Image Rejection | > 60 dB, min |
| Spurious, Inband | SIGNAL RELATED<-60 dBC in band, -5 dBm out; SIGNAL INDEPENDENT,<-60 dBC |
| Spurious, Out of band | <-50 dBC, Fc \pm 2 GHz |
| Intermodulation | <-55 dBC for two carriers each at -10 dBm out |
| Frequency Response | \pm 1 dB, 14.35 - 15.40 GHz out; \pm 0.5 dB, 40 MHz BW |
| Frequency Sense | Non-inverting |

LO Characteristics

| | |
|--------------------|--|
| LO Frequency | 13.4 GHz |
| Frequency Accuracy | \pm 0.01 ppm max over temp internal reference; ext. ref. input |

| Phase Noise @ F (Hz) > | 100 | 1K | 10K | 100K | 1M |
|------------------------|-----|-----|-----|------|------|
| dBC/Hz | -70 | -80 | -85 | -100 | -110 |

10 MHz level +3 dBm, \pm 3 dB, 75 ohms, External In or Internal out

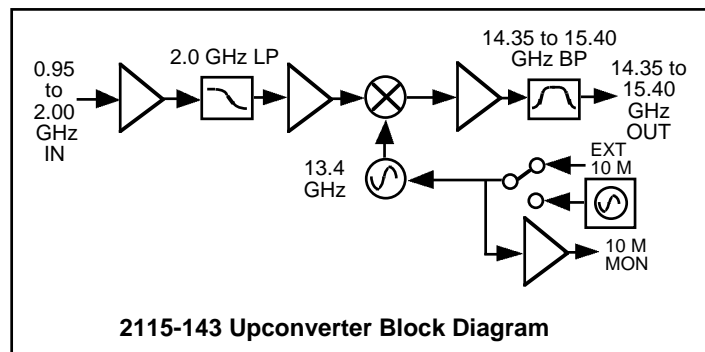
Controls, Indicators

| | |
|------------|---|
| Ext 10 MHz | Yellow LED, indicates external 10 MHz reference selected (rear panel DPDT switch) |
| PLL Alarm | Red LED, External contact closure |
| Power | Green LED |

Other

| | |
|-------------------|---|
| RF Connector | SMA (female), 50 Ω |
| L-Band Connector | BNC (female), 50 Ω |
| 10 MHz connectors | BNC (female), 75 Ω connector; Works for 50 Ω or 75 Ω |
| Alarm Connector | DB9 - NO or NC contact closure on Alarm |
| Size | 19 inch standard chassis 1.75" high X 14.35" deep |
| Power | 100-240 \pm 10% VAC, 47 - 63 Hz, 25 watts max. |

*+10 to +40 degrees C; Specifications subject to change without notice



2115-143 Upconverter Block Diagram

Available Connector Options

| |
|--|
| S7 - 50 Ω SMA (RF), 75 Ω BNC (L-BAND) |
| SF- 50 Ω SMA (RF), 75 Ω F-type (L-BAND) |
| SN - 50 Ω SMA (RF), 50 Ω N-type (L-BAND) |
| SS - 50 Ω SMA (RF), 50 Ω SMA (L-BAND) |