The 2015-2026 S-band Upconverter converts 70 ± 18 MHz to 2000 to 2600 MHz in 1 MHz steps (0.5 MHz to 1 kHz step options available) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for RF, IF and the optional external reference input and output. The -E external 10 MHz option includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A -H high stability (±0.01ppm) option is also available. The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1 3/4” X 19” X 16” rack mount chassis.

**Equippment Specifications**

**Input Characteristics (IF)**
- Impedance / Return Loss: 75Ω / 18dB
- Frequency: 70 ± 18 MHz
- Input Level Range: -40 to -10 dBm

**Output Characteristics (RF)**
- Impedance / Return Loss: 50Ω / 12dB
- Frequency: 2.0 to 2.6 GHz
- Output level: -20 to 0 dBm
- Output 1 dB compression: +5 dBm

**Channel Characteristics**
- Gain range (adjustable): -10 to +30 dB
- Image Rejection: > 50 dB, min.
- Frequency Response: ±1.5 dB, 2.0-2.6 GHz; ± 0.5 dB, 36 MHz BW
- Spurious Response: < -50 dBC, in band
- Group Delay, max: 0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ± 1.0 ppm internal reference (±0.01 ppm, option H)
- Frequency Step: 1.0 MHz (0.5 MHz to 1 kHz step options available)
- 10 MHz In/Out Level: 3 dBm ± 3 dB (option -E)

**Phase Noise @ F (Hz) > dBC/Hz**
- 10: -55
- 100: -70
- 1K: -70
- 10K: -80
- 100K: -95
- 1M: -105

**Controls, Indicators**
- Freq/Gain Selection: direct readout LCD; manual or remote selection
- Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote: RS232C, 9600 baud (RS485, Ethernet Optional)

**Other**
- RF, IF Connectors: 50Ω BNC (female), 75Ω BNC (female)
- 10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms (option E)
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75" high X 16.0” deep
- Power: 100-240 ±10% VAC, 47-63 Hz, 45 W max. (24 and 48 VDC Optional)

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