2015-57 Upconverter, 70 ± 18 MHz to 5.845 - 6.725 GHz

The 2015-57 Upconverter converts 70 ± 18 MHz to 5.845 to 6.725 GHz in 125 kHz steps (1 kHz steps, option X1005) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection with ±0.01 ppm stability. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), remote operation (yellow), PLL alarm (red), or the TX carrier is muted (yellow). Variable attenuators for the IF input and RF output provide a gain range of 0 to +30 dB as adjusted by the front panel pushbutton switches. Remote M&C allows selection of the 10 MHz reference, frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF input and 10MHz reference input and output, and Type N female for the RF output (other connector configurations available). The unit is powered by a 100-240 ±10% VAC power supply; and housed in a 1.75" X 19" X 16" rack mount chassis.

Front and Rear Panels (shown with optional Ethernet)

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics (IF)**
- Impedance/Return Loss: 75Ω / 18 dB min.
- Frequency: 70 ± 18 MHz
- Input Level: -30 to -10 dBm

**Output Characteristics (RF)**
- Impedance/Return Loss: 50Ω / 14 dB min.
- Frequency: 5.845 to 6.725 GHz
- Output level: -20 to 0 dBm
- Output 1 dB compression: +10 dBm, Gain = +30 dB

**Channel Characteristics**
- Max. Gain: range +30 ± 2 dB; 0 to +30 dB, 0.5 ± 0.5 dB steps
- Spurious Response: <= 50 dBc
- Intermodulation: <= 50 dBc for two carriers each at -5 dBm output
- Frequency Response: ±1.5 dB, 5.845-6.725 GHz; ±0.5 dB, 36 MHz BW
- Group Delay, max: 0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ±0.01 ppm; Ext. ref. input
- Frequency Step: 125 kHz minimum; (1 kHz steps, option X1005)
- 10 MHz In/Out Level: 3 dBm ± 3 dB

**Phase Noise @ Freq**
- 100 Hz: -70 dBc
- 1 kHz: -75 dBc
- 10 kHz: -80 dBc
- 100 kHz: -95 dBc
- 1 MHz: -110 dBc

**Controls, Indicators**
- Freq/Gain Selection: direct readout LCD; pushbutton switches or remote selection
- Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote M&C: RS232C, 9600 baud; RS485/422 or Ethernet optional

**Other**
- RF / IF Connectors: RF - Type N (female) / IF - BNC (female)
- 10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms
- Alarm/Remote Connector: DB9 - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75" high X 16.0" deep
- Power / Temp Range: 100-240 ±10% VAC, 47-63 Hz, 45 watts max

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

**Available Options**
- W7 - RF/IF Monitor Ports (Front)
- W31 - Ext. Temp 0°C to +50°C
- X1005 - 1 kHz frequency step

**Remote M&C Interfaces:**
- Q - RS485/422
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet

**Connectors/Impedance**
- STD - 50Ω Type N (RF), 75Ω BNC (IF)
- M - 50Ω Type N (RF), 50Ω BNC (IF)
- S - 50Ω SMA (RF), 50Ω BNC (IF)
- S7 - 50Ω SMA (RF), 75Ω BNC (IF)

**Contact Cross for other options**