2017-35 Up/Downconverter, 2.0-2.5 GHz Up, 950-1525 MHz Down

The 2017-35 RF Up/Downconverter converts 950-1525 MHz to 70 MHz (Down) and 70 MHz to 2.0-2.5 GHz (Up) in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm for up and downconverters (red), remote operation (yellow), and Upconverter mute (yellow). Gain is manually controlled over a –10 to +30 dB range for the upconverter and over a 0 to +50 dB range for the downconverter as adjusted by the front panel multi-function 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 IF and the optional external reference input and output, and BNC female for RF. A high stability (±0.01 ppm) option is also available. It is powered by a 100-240 ± 10% VAC power supply and housed in a 1.75” X 19” X 16” 1RU chassis.

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**EQUIPMENT SPECIFICATIONS**

**-----------UPCONVERTER-----------**

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

**Output Characteristics (RF)**
- Impedance/Return Loss: 50Ω/12 dB
- Frequency: 2000 to 2500 GHz
- Level: -20 to 0 dBm
- 1dB compression: +5 dBm

**Channel Characteristics**
- Gain range (adjustable): -10 to +30 dB
- Frequency Sense: Non-inverting
- Frequency Response: ±1.5 dB, 2.0-2.5 GHz; ±0.5 dB, 36 MHz BW

**-----------DOWNCONVERTER-----------**

**Input Characteristics (RF)**
- Impedance/Return Loss: 50Ω/12 dB
- Frequency: 950 to 1525 MHz
- Noise Figure, max.: 15 dB (max gain)
- Level: -70 to -20 dBm
- 1dB compression: -15 dBm at min. gain

**Output Characteristics (IF)**
- Impedance/Return Loss: 75Ω/18 dB
- Frequency: 70 ± 18 MHz
- Level/Max Linear: -20 dBm / -10 dBm
- 1dB compression: -5 dBm

**Channel Characteristics**
- Gain range (adjustable): 0 to +50 dB
- Image Rejection: > 50 dB, min
- Freq. Sense (selectable): Inverting or Non-inverting
- Frequency Response: ±1.5 dB, 950-1525 MHz

**Controls, Indicators**
- Frequency Accuracy: ± 1.0 ppm internal reference (±0.01 ppm, option H)
- Frequency Step: 1 MHz (125 kHz, option X)
- 10 MHz In/Out Level: +3 dBm ± 3 dB (option E)
- Phase Noise: @ Freq: 100Hz 1kHz 10kHz 100kHz 1MHz dBc/Hz | < -70 | < -70 | < -80 | < -95 | < -110

**Available Options**
- E - External 10 MHz reference
- H - High Stability (±0.01 ppm) internal ref
- L - LNB Voltage, +24VDC, 0.4 amps
- Q - RS485 Remote Interface
- T - Temperature Sensor
- X - 125 Khz frequency steps

**Other**
- RF Connector: BNC (female), 50Ω
- IF Connector: BNC (female), 75Ω
- 10 MHz Connectors: BNC (female), 50Ω/75Ω
- Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75”H X 16.0”D
- Power: 100-240 ± 10% VAC, 47-63 Hz, 45 watts max

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