The 2017-02A L-band Up/Downconverter converts 70 MHz to 950-2150 MHz (Up) and 950-2150 MHz to 70 MHz (Down) in 1 MHz steps with low group delay and flat frequency response. The 2017-02A has lower RF level out of the upconverter and higher RF level into the downconverter than the 2017-02 and is typically used to interface an L-band modem to a 70 MHz IF upconverter and downconverter. 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 can be manually adjusted over a -25 to +15 dB range for the upconverter and over a 0 to +50 dB range for the downconverter 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 Type F female for RF. A high stability (±0.01ppm) 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**

**UP CONVERTER**

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

**Output Characteristics (RF)**
- Impedance/Return Loss: 75Ω/12 dB
- Frequency: 950 to 2150 MHz
- Level: -35 to -15 dBm
- 1dB compression: -10 dBm, (max gain)

**Channel Characteristics**
- Gain range (adjustable): -25 to +15 dB, 1x1 dB steps
- Frequency Sense: Non-inverting

**DOWN CONVERTER**

**Input Characteristics (RF)**
- Impedance/Return Loss: 75Ω/12 dB
- Frequency: 950 to 2150 MHz
- Noise Figure, max.: 15 dB (max gain)
- Level: -60 to -10 dBm
- 1dB compression: -5 dBm, (min gain)

**Output Characteristics (RF)**
- Impedance/Return Loss: 75Ω/18 dB
- Frequency: 70 MHz ± 18 MHz
- Level: -10 to 0 dBm
- 1dB compression: +5 dBm, (max gain)

**Channel Characteristics**
- Gain range (adjustable): 0 to +50 dB, 1x1 dB steps
- Image Rejection: > 50 dB, min.
- Frequency Sense: Inverting or Non-inverting (selectable)

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**Available Options**

- E - External 10 MHz ref. with RF insertion
- H - High Stability (±0.01ppm) internal ref.
- L - LNB Voltage, +24VDC, 0.4 amps
- V - SSPB Voltage, +24VDC, 2.5 amps
- X - 125 kHz frequency steps

**Comm. Interface/Standard RS232**

- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet

**Connectors/Impedance**

- B - 75Ω BNC (RF), 75Ω BNC (IF)
- C - 50Ω BNC (RF), 75Ω BNC (IF)
- D - 50Ω BNC (RF), 50Ω BNC (IF)
- J - 75Ω F-type (RF), 50Ω BNC (IF)
- N - 50Ω N-type (RF), 75Ω BNC (IF)
- M - 50Ω N-type (RF), 50Ω BNC (IF)

**Contact Cross for other options**