### 2017-03A Up/Downconverter, 950 - 1525 MHz

The 2017-03A L-band Up/Downconverter converts 70 MHz to 950-1525 MHz (Up) and 950-1525 MHz to 70 MHz (Down) in 1 MHz steps with low group delay and flat frequency response. The 2017-03A has lower RF level out of the upconverter and higher RF level into the downconverter than the 2017-03 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.

#### Front Panel

### 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: 75Ω/12 dB
- Frequency: 950 to 1525 MHz
- Level: -35 to -15 dBm
- 1dB compression: -10 dBm

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

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

**Input Characteristics (RF)**
- Impedance/Return Loss: 75Ω/12 dB
- Frequency: 950 to 1525 MHz
- Noise Figure, max.: 15 dB (max gain)
- Level: -60 to -10 dBm
- 1dB compression: -5 dBm

**Output Characteristics (IF)**
- Impedance/Return Loss: 75Ω/18 dB
- Frequency: 950 to 1525 MHz
- Level: -35 to -15 dBm
- 1dB compression: +5 dBm

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

### Controls, Indicators

- Freq/Gain Selection: direct readout LCD; pushbutton switches or remote selection
- Power; Alarm; Remote: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud

### Connectors/Impedance

- RF Connector: Type F (female)
- IF Connector: BNC (female)
- 10 MHz Connectors: BNC (female), 50Ω/75Ω
- 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: 100-240 ± 10% VAC, 47-63 Hz, 25 watts maximum

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

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**Available Options**

- E - External 10 MHz ref
- H - High Stability (±0.01 ppm) internal ref
- L - LNB Voltage, +24VDC, 0.5 amps
- Q - RS485 Remote Interface
- T - Temperature Sensor
- V - SSPB Voltage, +24VDC, 2.5 amps
- X - 125 kHz frequency steps

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