2017-74 Up/Downconverter, C-Band

The 2017-74 C-band Up/Downconverter converts 70 MHz to 6.7 - 7.025 GHz (Up) and 4.5 - 4.8 GHz to 70 MHz (Down) in 0.125 MHz steps with low group delay and flat frequency response. A common synthesized local oscillator (LO) provides frequency selection for the Up and Down converter simultaneously. 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 controlled over a 0 to +30 dB range for the upconverter and over a +30 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 N 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*

#### 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/14 dB
- Frequency: 6.7 - 7.025 GHz
- Level: -20 to 0 dBm
- 1dB compression: +10 dBm

**Channel Characteristics**
- Gain range (adjustable): -10 to +20 dB, 1dB steps
- Frequency Sense: Non-inverting

#### Downconverter

**Input Characteristics (RF)**
- Impedance/Return Loss: 50Ω/14 dB
- Frequency: 4.5 - 4.8 GHz
- Noise Figure, max.: 15 dB (max gain)
- Level: -60 to -30 dBm
- 1dB compression: -10 dBm (min gain)

**Output Characteristics (IF)**
- Impedance/Return Loss: 75Ω/18 dB
- Frequency: 70 ± 18 MHz
- Output Level Range: -10 dBm to 0 dBm
- 1dB compression: +10 dBm

**Channel Characteristics**
- Gain range (adjustable): +30 to +50 dB
- Image Rejection: > 50 dB, min
- Frequency Sense: Non-inverting

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### Available Options

- **E** - External 10 MHz ref with RF insertion
- **O** - Frequency Reference Offset Adjust
- **Q** - RS485
- **W8** - Ethernet w/Web Browser
- **W18** - Ethernet w/Web & SNMP
- **X** - 125 KHz frequency steps
- **X1** - 100 KHz frequency steps

### Connectors/Impedance

**M** - 50Ω N-type (RF), 50Ω BNC (IF)

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