2017-7216 Up/Downconverter

The 2017-7216 Up/Downconverter converts 70 MHz to 7.2166 GHz (Up) and 1.6866 GHz to 70 MHz (Down) with low group delay and flat frequency response. An integrated Loopback translator is included. Multi-function push button switches select the Downconverter frequency sense (non-invert/invert), Loopback (on/off), reference mode and remote interface 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 fixed at +10dB for the upconverter and downconverter. The Loopback gain is -10dB. Remote operation allows selection of all user front panel settings with the exception of remote interface. Frequency and gain appear on the LCD display except when Loopback is indicated. All connectors are 50Ω BNC female except the upconverter RF output which is SMA female. A high stability (±0.01ppm) OCXO is included. The unit 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: 50Ω/14 dB
  - Frequency: 70 ± 20 MHz
  - Level: 0 to -20 dBm

- **Output Characteristics (RF)**
  - Impedance/Return Loss: 50Ω/14 dB
  - Frequency: 7.2166 GHz
  - Level: -10 to +10 dBm
  - 1dB compression: +20 dBm

**Channel Characteristics**

- Gain: +10 dB, fixed
- Frequency Sense: Non-inverting

**DOWNCONVERTER**

- **Input Characteristics (RF)**
  - Impedance/Return Loss: 50Ω/14 dB
  - Frequency: 1.6866 GHz
  - Noise Figure, max.: 15 dB (max gain)
  - Level: -50 to -20 dBm
  - 1dB compression: -10 dBm

- **Output Characteristics (IF)**
  - Impedance/Return Loss: 50Ω/14 dB
  - Frequency: 70 ± 20 MHz
  - Level: 0 to -10 dBm
  - 1dB compression: 0 dBm

**Channel Characteristics**

- Gain (fixed): +10 dB
- Image Rejection: > 50 dB, min
- Frequency Sense: Selectable

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**Controls, Indicators**

- Freq/Gain Indication: Direct readout LCD (no control)
- Power; Alarm; Remote: Green LED; Red LED; Yellow LED
- Remote: RS232C, 9600 baud (options RS485/Ethernet, Q / W8, W18)

**Other**

- RF Connector: Upconv.: SMA (female), Downconv.: BNC 50Ω (female)
- IF Connector: BNC (female), 50Ω
- 10 MHz Connectors: BNC (female), 50Ω (option E)
- 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, 45 watts max

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

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**Available Options**

- E - External 10 MHz ref
- M&C Remote Interfaces:
  - Q - RS485
  - W8 - Ethernet w/Web Browser
  - W18 - Ethernet w/Web & SNMP
  - W28 - Ethernet w/TCPIP
  - W77 - FP Monitors IF/RF (BNC/SMa)

**Connectors/Impedance**

- M - 50Ω N-type (RF), 50Ω BNC (IF)