The 2017-2016 Up/Downconverter converts 70 MHz to 2027.1 MHz (Up) and 1694.1 MHz to 70 MHz (Down) with low group delay and flat frequency response. An integrated Loopback translator is included. Multi-function push button switches select Loopback, the 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 0 dB for the upconverter, +10 dB for the downconverter and -10 dB for Loopback. 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. The unit is powered by a 100-240 ± 10% VAC power supply and housed in a 1.75” X 19” X 16” 1RU chassis.

---

**EQUIPMENT SPECIFICATIONS**

**UPCONVERTER**

- **Input Characteristics (IF)**
  - Impedance/Return Loss: 50Ω / 14 dB
  - Frequency: 70 ± 10 MHz
  - Level: 0 to -30 dBm

- **Output Characteristics (RF)**
  - Impedance/Return Loss: 50Ω / 14 dB
  - Frequency: 2027.1 MHz
  - Level: 0 to -30 dBm
  - 1dB compression: +10 dB

- **Channel Characteristics**
  - Gain: 0 dB, fixed
  - Frequency Sense: Non-inverting

---

**DOWNCONVERTER**

- **Input Characteristics (RF)**
  - Impedance/Return Loss: 50Ω / 14 dB
  - Frequency: 1694.1 MHz
  - Noise Figure: max. 15 dB (max gain)
  - Level: -50 to -20 dBm
  - 1dB compression: -10 dB

- **Output Characteristics (IF)**
  - Impedance/Return Loss: 50Ω / 14 dB
  - Frequency: 70 ± 10 MHz
  - Output Level Range: -40 dBm to -10 dBm
  - 1dB compression: 0 dBm

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

---

**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: BNC (female), 50Ω
- 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.

---

**Available Options**

- E - External 10 MHz ref
- H - High Stability (±0.01ppm) Internal 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)

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