2016-1522# Downconverter, 1.544 or 2.226 GHz to 70 ± 5 MHz

The 2016-1522# Downconverter converts 1.544 or 2.226 GHz to 70 MHz. The gain is 0 to +50 dB, adjustable in 1 ± 1 dB steps. Push button switches select the input frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and Remote operation (yellow). Gain is adjustable manually (MGC) over a 0 to 30 dB range. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are Type N female for the IF out and RF in and BNC female for the external 10 MHz reference input (Option E) which includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. The unit is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4” X 19” X 16” rack mount chassis.

### Equipment Specifications

**Input Characteristics**
- Impedance/Return Loss: 50Ω/12 dB
- Frequency: 1.544 and 2.226 GHz
- Noise Figure, Max.: 15 dB at max gain
- Input Level range: -50 to -20 dBm

**Output Characteristics**
- Impedance/Return Loss: 50 Ω/18 dB
- Frequency: 70 ± 5 MHz
- Output level range: -20 to 0 dBm
- Output 1 dB compr.: +10 dBm, max. gain

**Channel Characteristics**
- Gain at Fc: +50 ±3 dB max., (+50 to 0 dB variable in 1 ± 1 dB steps)
- Image Rejection: > 50 dB, min.
- Frequency Response: 1544 or 2226, 10 MHz BW, ± 0.75 dB
- Spurious Response: < -50 dBc, in band, 70 ± 5 MHz
- Group Delay, max: 0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

**LO Characteristics**
- LO step size: NONE, Fixed tuned to 1544 or 2226 MHz
- LO Accuracy: ± 0.01 ppm max over temp internal reference

### Controls, Indicators

- Freq/Gain Selection: Direct readout LCD; manual or remote selection
- Pwr; Alarm; Rem: Green LED; Red LED; Yellow LED;
- Remote: RS232C, 9600 baud (RS485, Ethernet Optional)

### Other

- RF, IF Connectors: N (female), N (female)
- 10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms (option E)
- Alarm/Remote Conn.: DB9 (female) - NO or NC contact closure on Alarm
- Size: 19 inch, 1RU standard chassis 1.75” H X 16.0” D
- Power: 100-240 ±10% VAC, 47-63 Hz, 25 W max;

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