The 2015-75 Upconverter converts 70 ± 18 MHz to 250 to 750 MHz in 1 MHz steps with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel multi-function pushbutton 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 optional external 10MHz reference input and output, and Type F (female) for the RF output. 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: 75 Ω
- Return Loss: 18 dB
- Frequency: 70 ± 18 MHz
- Input Level: -40 to -10 dBm

**Output Characteristics**
- Impedance: 75 Ω
- Return Loss: 10 dB
- Frequency: 250 to 750 MHz
- Output level: 0 to -20 dBm
- Output 1 dB compression: +5 dBm

**Channel Characteristics**
- Gain range (adjustable): -10.0 to 30.0 dB
- Spurious Response: < -50 dBC
- 2nd Harmonic: < 40 dB
- Frequency Response: ±1.5 dBA, 250-750 MHz; ± 0.5 dB, 36 MHz BW
- Group Delay, max: 0.01 ns/MHz² parabolic; 0.03ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

**Synthesizer Characteristics**
- Frequency Accuracy: ± 1.0 ppm max over temp (± 0.01 ppm, opt-H) internal ref.
- Frequency Step: 1.0 MHz minimum
- External 10 MHz level: -3 dBm ± 3 dB, 50/75 Ω (opt-E)

**Phase Noise @ Freq**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>100 Hz</th>
<th>1kHz</th>
<th>10kHz</th>
<th>100kHz</th>
<th>1 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>dBC/Hz</td>
<td>-70</td>
<td>-70</td>
<td>-80</td>
<td>-95</td>
<td>-105</td>
</tr>
</tbody>
</table>

**Controls, Indicators**
- Frequency Selection: Direct readout LCD; pushbutton switches or remote selection
- Gain Selection: Direct readout LCD; pushbutton switches or remote selection
- Pwr; Alm; Remote; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote: RS232C,9600 baud (RS422/485/Option-Q, Ethernet/Option -W8; -W18; -W28)

**Other**
- RF Connector: Type F (female)
- IF, 10 MHz Connectors: BNC (female)
- Alarm/Remote Connector: DB9 (female) - 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*