### EQUIPMENT SPECIFICATIONS*

<table>
<thead>
<tr>
<th><strong>UPCONVERTER</strong></th>
<th><strong>DOWNCONVERTER</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Input Characteristics (IF)</strong></td>
<td><strong>Input Characteristics (RF)</strong></td>
</tr>
<tr>
<td>Impedance/Return Loss</td>
<td>75Ω/18 dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>70 ± 18 MHz</td>
</tr>
<tr>
<td>Level</td>
<td>-40 to -10 dBm</td>
</tr>
<tr>
<td><strong>Output Characteristics (RF)</strong></td>
<td><strong>Output Characteristics (IF)</strong></td>
</tr>
<tr>
<td>Impedance/Return Loss</td>
<td>75Ω/12 dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>950 to 1525 MHz</td>
</tr>
<tr>
<td>Level</td>
<td>-20 to 0 dBm</td>
</tr>
<tr>
<td>1dB compression</td>
<td>+5 dBm</td>
</tr>
<tr>
<td><strong>Channel Characteristics</strong></td>
<td><strong>Channel Characteristics</strong></td>
</tr>
<tr>
<td>Gain range (adjustable)</td>
<td>-10 to +30 dB, 1dB steps</td>
</tr>
<tr>
<td>Frequency Sense</td>
<td>Non-inverting</td>
</tr>
</tbody>
</table>

**Channel Characteristics**
- Frequency Response ±1.5 dB, in band; ±0.5 dB, 36 MHz BW
- Spurious Response <50 dBc
- Group Delay, max 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear; 1 ns ripple

**Synthesizer Characteristics**
- Frequency Accuracy ±1.0 ppm internal reference (±0.01 ppm, option-H)
- Frequency Step 1 MHz (125 kHz, option-X)

<table>
<thead>
<tr>
<th>Frequency</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>-75</td>
<td>-75</td>
<td>-85</td>
<td>-100</td>
<td>-120</td>
</tr>
</tbody>
</table>

**10 MHz In/Out Level**
- 3 dBm ± 3 dB, 75 ohms (option-E)

**Controls, Indicators**
- Freq/Gain Selection direct readout LCD; pushbutton switches or remote selection
- Power; Alarm; Remote Green LED; Red LED; Yellow LED
- Remote RS232C, 9600 baud
  (RS485, option-Q, Ethernet Remote Interface, option-W8)

**Other**
- RF Connector Type F (female)
- IF Connector BNC (female)
- 10 MHz Connectors BNC (female), 50Ω/75Ω
- 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 with RF insertion
- H: High Stability (±0.01ppm) internal ref.
- L: LNB Voltage, +24VDC, 0.4 amps
- V: SSPB Voltage, +24VDC, 2.5 amps
- T: Temperature Sensor
- X: 125 kHz frequency step
- Z: Upconverter Attenuator, 0.1 dB

**Connectors/Impedance**
- B: 75Ω BNC (RF), 75Ω BNC (IF)
- C: 50Ω BNC (RF), 50Ω BNC (IF)
- D: 50Ω BNC (RF), 50Ω BNC (IF)
- J: 75Ω F-type (RF), 50Ω BNC (IF)
- N: 50Ω N-type (RF), 75Ω BNC (IF)
- M: 50Ω N-type (RF), 50Ω BNC (IF)
- S: SMA, 50Ω (RF), 50Ω BNC (IF)

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

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