The 3115-7984-720-400# Upconverter converts 720 ± 200 MHz to 7.9 to 8.4 GHz (non-inverted) in 125 kHz steps, \( F_c = 8.05-8.355 \text{ GHz} \) (8.40 GHz max RF output). The gain is 0 to +20 dB, adjustable in 0.5 ± 0.5 dB steps. Front panel LEDs provide indication of Remote operation, PLL Alarm and DC Power. Gain, \( F_c \) frequency (8.05-8.355 GHz, 8.40 max output frequency) and internal/external/Auto reference frequency selection are controlled by front panel switches or remote selection (via RS-232C/485, standard; Ethernet Optional) and are viewable on the LCD Display. Connectors are Type N female for the RF and BNC female for the RF Input and external reference input and reference output. In AUTO, the 10 MHz reference stays in external if the external level is +3 dBm, ±3 dB. It is powered by a 100-240 ± 10% VAC power supply, and in a 1 3/4” X 19” X 14” rack mount chassis.

**EQUIPMENT SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Input Impedance/Return Loss</th>
<th>75Ω/14 dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>720 ± 200 MHz</td>
</tr>
<tr>
<td>Input Level</td>
<td>-30 to -10 dBm</td>
</tr>
<tr>
<td>Output Impedance/Return Loss</td>
<td>50Ω/14 dB min.</td>
</tr>
<tr>
<td>Frequency</td>
<td>7.9 to 8.4 GHz, ( F_c = 8.05-8.355 \text{ GHz} )</td>
</tr>
<tr>
<td>Output level</td>
<td>-25 to -5 dBm</td>
</tr>
<tr>
<td>Output 1 dB compression</td>
<td>+5 dBm at max. gain</td>
</tr>
</tbody>
</table>

**Channel Characteristics**

Gain, max; adjustment: +20 ± 1 dB, max gain at \( F_c \); +0 to +20 dB adjustment in 0.5 ± 0.5 dB steps

Spurious Response: \( <50 \text{ dBC carrier and non-carrier related, Inband; } \leq 55 \text{ dBm out of band (} F_c \pm 1 \text{ GHz) } \)

Intermodulation: \( <50 \text{ dBC for two carriers each at } -8 \text{ dBm out } \)

Frequency Response: \( \pm 1.5 \text{ dB, } 400 \text{ MHz BW, (FC = 8.05-8.355 GHz, 8.40 max output frequency) } \)

Group Delay, max: 10 ns total (parabolic + linear + ripple)

Frequency Sense: Non-inverting

**Synthesizer Characteristics**

Frequency Accuracy: ±0.01 ppm internal reference; External reference input

LO Frequency: 7.33 - 7.635 GHz (\( F_c = 8.05-8.355 \text{ GHz, 8.40 GHz max output) } \)

Frequency Step: 125 kHz min, \( F_c = 8.05-8.355 \text{ GHz; (1 kHz steps, X1006) } \)

10 MHz In/Out Level: 3 dBm, ± 3 dB, w/ Auto-detect.

Phase Noise @ Freq: 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz

-70, -80, -85, -100, -120

**Controls, Indicators**

Freq/Gain/Ext Ref Select: direct readout LCD; pushbutton switches or remote selection

Pwr; Alarm; Rem; Mute: Green LED; Red LED; Yellow LED; Yellow LED

Remote: RS232C, 9600 baud; RS485/422 or Ethernet optional

**Other**

RF Out, RF In Connector: RF Out - Type N (female), 50Ω; RF In - BNC (female), 75Ω

10 MHz Connectors: BNC (female), 75Ω, works with 50 or 75 ohms

Alarm/Remote Connector: DB9 - NO or NC contact closure on Alarm

Size: 19 inch, 1RU standard chassis 1.75”high x 14” deep

Power / Temp Range: 100-240 ± 10% VAC, 47-63 Hz, 45 watts max.

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

Available Options:

W31 0 to +50 degrees C operation
X1006 - 1 kHz frequency step

Remote M&C Interfaces:

W8 - Ethernet w/web browser Interface
W18 - Ethernet w/SNMP (and MIB) Interface
W28 - Ethernet w/direct TCP/IP Interface

Connector Options:

STD - N-type (RF Out), 75Ω BNC (RF In)
M - N-type (RF Out), 50Ω BNC (RF In)
NN - N-type (RF Out), 50Ω N-type (RF In)
S - SMA (RF Out), 50Ω BNC (RF In)
SN - SMA (RF Out), 50Ω N-type (RF In)
SS - SMA (RF Out), 50Ω SMA (RF In)

Contact Cross for other options