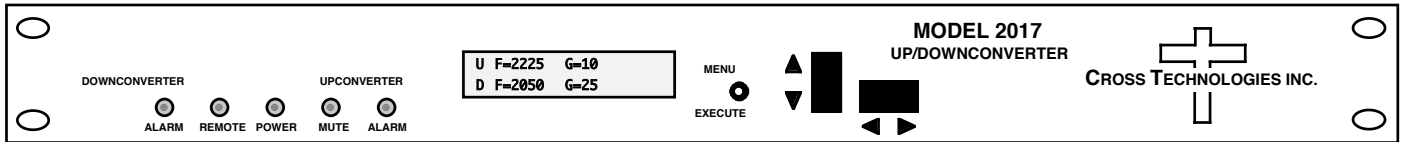


**2017-26 Up/Downconverter, 2.0 - 2.5 GHz, 140 MHz IF**

The 2017-26 Up/Downconverter converts 140 MHz to 2000-2500 MHz (Up) and 2000-2500 MHz to 140 MHz (Down) 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 for up and downconverters (red), remote operation (yellow), and upconverter mute (yellow). Gain is manually controlled over a -10 to +30 dB range for the upconverter and over a 0 to +50 dB range for the downconverter as adjusted by the front panel multi-function push-button 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 (75Ω) for IF and the optional external reference input and output, and BNC female (50Ω) for RF. A high stability (±0.01ppm) option (-H) is also available. The unit is powered by a 100-240 ±10% VAC power supply and housed in a 1.75" X 19" X 16" rack mount chassis.



**Front Panel**

**EQUIPMENT SPECIFICATIONS\***

**UPCONVERTER**

**Input Characteristics (IF)**

Impedance/Return Loss 75Ω /18 dB  
 Frequency 140 ± 36 MHz  
 Input Level Range -40 to -10 dBm

**Output Characteristics (RF)**

Impedance/Return Loss 50Ω/12 dB  
 Frequency 2.0 to 2.5 GHz  
 Output level -20 to 0 dBm  
 Output 1 dB compression +5 dBm

**Channel Characteristics**

Gain range (adjustable) -10 to +30 dB  
 Frequency Sense Non-inverting

**UP AND DOWNCONVERTER**

**Channel Characteristics**

Frequency Response ±1.5 dB, 2.0-2.5 GHz ; ± 0.75 dB, 72 MHz BW, ± 1.2 dB, 80 MHz BW  
 Spurious Response < -50 dBc, in band  
 Group Delay, max 0.0035 ns/MHz<sup>2</sup> parabolic; 0.025 ns/MHz linear; 1 ns ripple

**Synthesizer Characteristics**

Frequency Accuracy ± 1.0 ppm internal reference (±0.1 ppm, option H)  
 Frequency Step 1.0 MHz minimum (125 kHz, **option X**)  
 10 MHz In/Out Level 3 dBm ± 3 dB (option E only)  
 Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz  
 dBC/Hz | < -70 < -70 < -80 < -95 < -105

**Controls, Indicators**

Freq/Gain Selection direct readout LCD; manual or remote selection  
 Power; Alarm; Up Mute Green LED; Red LED; Yellow LED  
 Remote Yellow LED; RS232C, 9600 baud (RS485, option Q)

**Other**

RF, IF Connectors BNC (female), BNC (female)  
 10MHz Connectors BNC (female), 50Ω/75Ω (**option E**)  
 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 W max

**DOWNCONVERTER**

**Input Characteristics (RF)**

Impedance/Return Loss 50Ω /12 dB  
 Frequency 2.0 to 2.5 GHz  
 Noise Figure, max. 15 dB (max gain)  
 Input Level Range -70 to -20 dBm  
 Input 1dB compression -15 dBm @ 0 dB gain

**Output Characteristics (IF)**

Impedance/Return Loss 75Ω/18 dB  
 Frequency 140 ± 36 MHz  
 Output level -20 to -10 dBm  
 Output 1 dB compression -5 dBm

**Channel Characteristics**

Gain range (adjustable) 0.0 to +50.0 dB, 1dB steps  
 Image Rejection >50 dB, min.  
 Frequency Sense Inverting or Non-inverting (selectable)

**Available Options**

E - External 10 MHz ref input & output  
 H - High Stability (±0.01) Internal Ref  
 Q - RS485 Remote Interface  
 T - Temperature Sensor  
 X - 125 kHz Frequency Steps  
 Z - 0.1 dB Attenuator Steps on Upconverter  
 Connectors/Impedance  
 B - 75Ω BNC (RF), 75Ω BNC (IF)  
 D - 50Ω BNC (RF), 50Ω BNC (IF)  
 N - 50Ω N-type (RF), 75Ω BNC (IF)  
 M - 50Ω N-type (RF), 50Ω BNC (IF)  
 S - 50Ω SMA (RF), 50Ω BNC (IF)  
 S7 - 50Ω SMA (RF), 75Ω BNC (IF)

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

