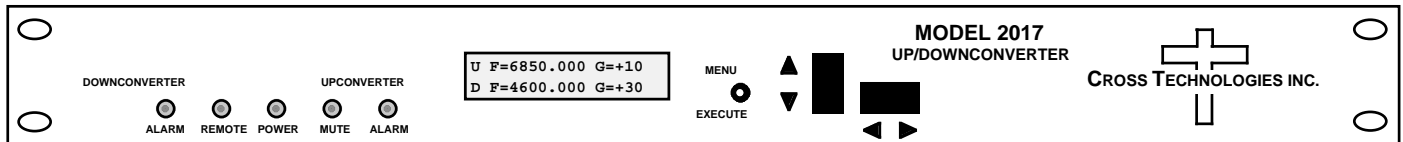


2017-74 Up/Downconverter, C-Band

The 2017-74 C-band Up/Downconverter converts 70 MHz to **6.7 - 7.025 GHz** (Up) and **4.5 - 4.8 GHz** to 70 MHz (Down) in 0.125 MHz steps with low group delay and flat frequency response. A common synthesized local oscillator (LO) provides frequency selection for the Up and Down converter simultaneously. 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 can be manually controlled over a **0 to +30 dB** range for the upconverter and over a +30 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 for IF and the optional external reference input and output, and N female for RF. A high stability (± 0.01 ppm) option is also available. It is powered by a 100-240 $\pm 10\%$ VAC power supply and housed in a 1.75" X 19" X 16" 1RU chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

-----UPCONVERTER-----

Input Characteristics (IF)

Impedance/Return Loss 75Ω /18 dB
Frequency 70 ± 18 MHz
Level -40 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB
Frequency **6.7 - 7.025 GHz**
Level -20 to 0 dBm
1dB compression +10 dBm

Channel Characteristics

Gain range (adjustable) **-10 to +20 dB, 1dB steps**
Frequency Sense Non-inverting

-----UP and DOWNCONVERTER-----

Channel Characteristics

Frequency Response ±1.5 dB, in band; ±0.5 dB, 36 MHz BW
Spurious Response <-50 dBC
Group Delay, max 0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple

Synthesizer Characteristics

Frequency Accuracy ±0.01 ppm
Frequency Step 1MHz (125 / 100 KHz frequency steps **option X / X1**)
10 MHz In/Out Level 3 dBm ± 3 dB (**option E**)

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-60	-70	-80	-90	-100

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 (**options RS485/Ethernet, Q / W8,W18**)

Other

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

-----DOWNCONVERTER-----

Input Characteristics (RF)

Impedance/Return Loss 50Ω /14 dB
Frequency **4.5 - 4.8 GHz**
Noise Figure, max. 15 dB (max gain)
Level -60 to -30 dBm
1dB compression -10 dBm (min gain)

Output Characteristics (IF)

Impedance/Return Loss 75Ω/18 dB
Frequency 70 ± 18 MHz
Output Level Range -10 dBm to 0 dBm
1dB compression +10 dBm

Channel Characteristics

Gain range (adjustable) +30 to +50 dB
Image Rejection > 50 dB, min
Frequency Sense Non-inverting

Available Options

E - External 10 MHz ref with RF insertion
O - Frequency Reference Offset Adjust
M&C Remote Interfaces:
Q - RS485
W8 - Ethernet w/Web Browser
W18 - Ethernet w/Web & SNMP
T - Temperature Sensor
X - 125 KHz frequency steps
X1 - 100 KHz frequency steps

Connectors/Impedance

M - 50Ω N-type (RF), 50Ω BNC (IF)

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