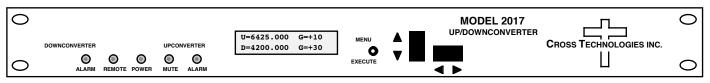


DATA SHEET REV E 06/10/09

2017-64 Up/Downconverter, C-Band, Common LO

The 2017-64 C-band Up/Downconverter converts 70 MHz to 5.85-6.425 **GHz** (Up) and 3.625-4.2 **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 (±0.01ppm) option is also available. It is powered by a 100-240 ±10% VAC power supply and housed in a 1.75" X 19" X 16" 1RU chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

-----UPCONVERTER-----

Input Characteristics (IF)

 $\begin{array}{ll} \text{Impedance/Return Loss} & 75\Omega\,/18 \text{ dB} \\ \text{Frequency} & 70 \pm 18 \text{ MHz} \\ \text{Level} & -40 \text{ to -10 dBm} \end{array}$

Output Characteristics (RF)

 $\begin{array}{lll} \text{Impedance/Return Loss} & 50 \Omega / 14 \text{ dB} \\ \text{Frequency} & 5.85 \text{ to } 6.425 \text{ GHz} \\ \text{Level} & -20 \text{ to } 0 \text{ dBm} \\ \text{1dB compression} & +10 \text{ dBm} \end{array}$

Channel Characteristics

Gain range (adjustable) 0 to +30 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 internal reference Frequency Step ± 0.01 ppm internal reference 1 MHz (125 kHz, **option X**)

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

Controls, Indicators

Freg/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)

Other

RF Connector N (female)
IF Connector BNC (female)

10 MHz Connectors BNC (female), $50\Omega/75\Omega$ (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

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

-----DOWNCONVERTER-----

Input Characteristics (RF)

Output Characteristics (IF)

1dB compression +15 dBm

Channel Characteristics

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

Available Options

O - Frequency Reference Offset Adjust

Q - RS485 Remote Interface T - Temperature Sensor X- 125 kHz frequency steps

Connectors/Impedance

M - 50Ω N-type (RF), 50Ω BNC (IF)