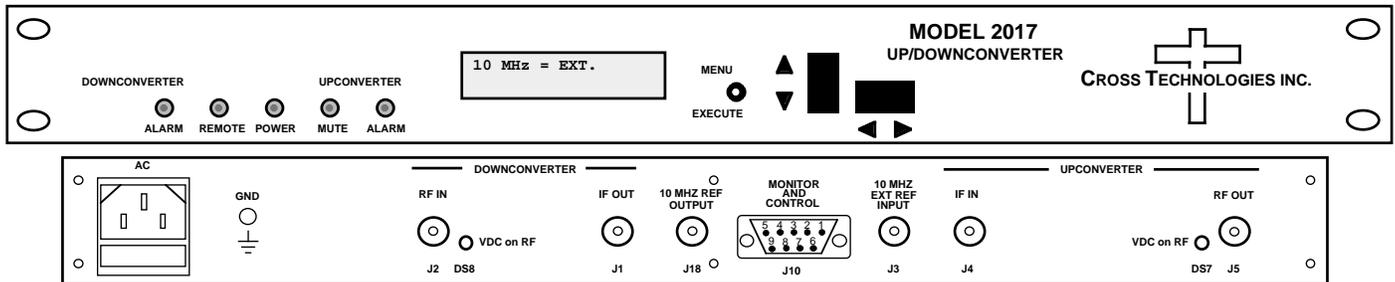


2017-T03-400 Up/Downconverter, 1100 - 1275 MHz

The 2017-T03-400 L-band Up/Downconverter for loop-back applications, converts a **225-400 MHz block to/from the 1100-1275 MHz block with a fixed 875 MHz LO**. The 2017-T03-400 is used in applications such as connecting L-band modems to signals in the 225-400 MHz band. In this application, when converting 225-400 to L-band, the modem itself contains internal filtering making it unnecessary for the 2017-T03-400 to filter out all the other products (**LO; lower sideband is 30 dBC down**). In the 2017-T03-400 down conversion, because the L-band modem's transmit output is a clean signal with no image frequency, the signal can be converted to 225-400 with **minimum filtering (30 dBC min image rejection)**. Front panel LEDs indicate DC power, PLL alarm, and remote operation. **Connectors are 50 ohm BNC female for IF and RF**. 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 & Rear Panels (Front Panel shown with -E Option 10 MHz selection)

EQUIPMENT SPECIFICATIONS*

-----UPCONVERTER-----

Input Characteristics (IF)

Impedance/Return Loss **50 Ω /12 dB**
 Frequency **225-400 MHz block**
 Level **-40 to -10dBm**

Output Characteristics (RF)

Impedance/Return Loss **50 Ω /12 dB**
 Frequency **1100 to 1275 MHz block**
 Level **-40 to -10dBm**
 1dB compression **0 dBm**

Channel Characteristics

Gain **0 \pm 2 dB, fixed**
 Frequency Sense **Non-inverting**
Low Sideband Rejection 30 dBC min, 40 dBC typical

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

Channel Characteristics

Frequency Response **\pm 1.5 dB, over band; \pm 0.75 dB, 36 MHz BW**
 Spurious Response **<-30 dBC, <-40 dBC typ., any 36 MHz band; Signal related**
 Spurious Response, LO **< 0 dBC, < -10 dBC typ at -10 dBm in and out; at L-band input and output.**
 Group Delay, max **0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple any 36 MHz band**

Synthesizer Characteristics

Frequency Accuracy **\pm 1.0 ppm internal reference (\pm 0.01 ppm, option H)**
Frequency Step None, fixed 875 MHz LO
 10 MHz In/Out Level **3 dBm \pm 3 dB (option E)**

Phase Noise @ F (Hz) >	100Hz	1kHz	10kHz	100kHz	1MHz
dBc/Hz	70	70	80	90	100

Controls, Indicators

Freq/Gain Selection None
 Power; Alarm; **Green LED; Red LED;**
Remote RS232C, 9600 baud, to monitor alarm status only

Other

RF Connector 50 Ω BNC (female)
IF Connector 50 Ω BNC (female)
 10 MHz Connectors **BNC (female), 50 Ω /75 Ω (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 \pm 10% VAC, 47-63 Hz, 25 watts max**

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

-----DOWNCONVERTER-----

Input Characteristics (RF)

Impedance/Return Loss **50 Ω /12 dB**
 Frequency **1100 to 1275 MHz block**
 Level **-40 to -10dBm**

Output Characteristics (IF)

Impedance/Return Loss **50 Ω /12 dB**
 Frequency **225-400 MHz block**
 Level **-40 to -10dBm**

Channel Characteristics

Gain **0 \pm 2 dB, fixed**
 Frequency Sense **Non-inverting**
Image Rejection 30 dBC min, 40 dBC typical

Available Options

E - External 10 MHz ref w/Front Panel select
 H - High Stability (\pm 0.01ppm) internal ref