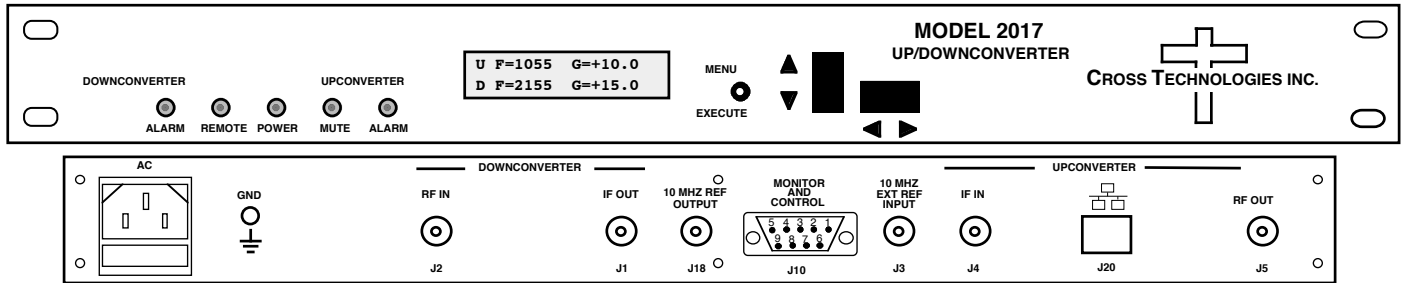


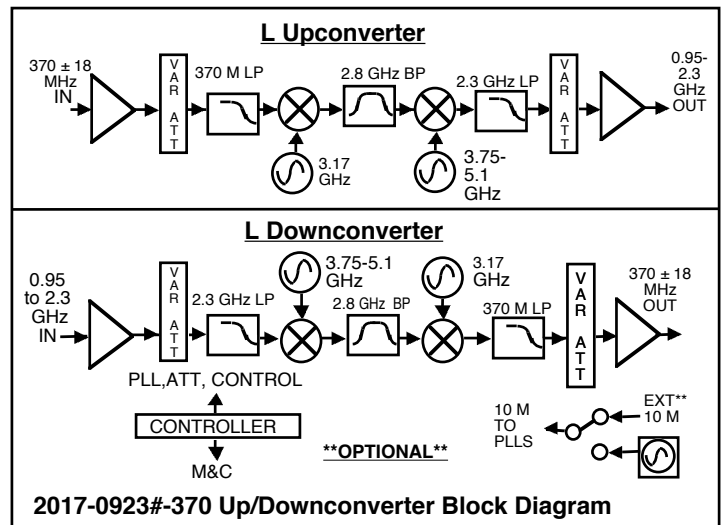
**2017-0923#-370 L Band Up/Downconverter**

The 2017-0923#-370 L-band Up/Downconverter has a 370 Mhz to 950-2300 MHz upconverter channel and a 950-2300 MHz to 370 MHz downconverter channel with 1 MHz step size tuning, low group delay and flat frequency response. Multi-function switches select the frequency, gain ( upconverter **0 to +20 dB**; downconverter **0 to +20 dB**), and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow). Remote operation allows selection of frequency and gain. L-Band Frequency and Gain settings appear on the LCD display. Connectors are BNC female for the IF, optional ext 10 MHz, and the RF. A high stability ( $\pm 0.01$  ppm) option (H) 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 and Rear Panel (Shown with options E, W8)**

EQUIPMENT SPECIFICATIONS*		
Input Characteristics	UP, L	DOWN, L
Impedance/Return Loss	75Ω/18 dB	50Ω/12 dB
Frequency	370 ± 18 MHz	<b>0.95-2.30GHz</b>
Noise Figure, Max.	20 dB @ max gain	15 dB @ max gain
Input Level range	-30 to -10 dBm	-30 to -10 dBm
Output Characteristics		
Impedance/Return Loss	50 Ω /12 dB	75 Ω /18 dB
Frequency (GHz)	<b>0.95-2.30 GHz</b>	370 ± 18 MHz
Output Level Range	-20 to 0 dBm	-30 to -10 dBm
<b>1 dB comp, max gain</b>	+5 dBm	-5 dBm
<b>Mute @ 0 dBm out</b>	>60 dB	N/A
Channel Characteristics		
<b>Gain, max. at Fc</b>	+20 ±3 dB	+20 ±3 dB
Gain, range, 1±1 dB steps	+20 to 0 dB	+20 to 0 dB
Image Rejection	N/A	> 50 dB, min
Spurious, Inband, sig. rel.	<-50 dBC, 0dBm	<-50 dBC, 0dBm
Spurious, Inband, sig. ind.	<-50 dBC, Gmax	<-50 dBC, Gmax
<b>Spurious, Out of band</b>	<-50 dBC, Gmax	<-50 dBC, Gmax
<b>Intermod - 2 carriers 4MHz</b>	<-50 dBC, Gmax	<-50 dBC, Gmax
Frequency Resp. band	±2.0 dB	±2.0 dB
Frequency Resp. 36,40 MHz	±0.5 dB, ±1.0 dB	±0.5 dB, ±1.0 dB
Frequency Sense	Non-inverting	Inv/Non-inverting



**Synthesizer Characteristics**

Frequency Accuracy	± 1.0 ppm max over temp ( $\pm 0.01$ ppm, option H)					
Frequency Step	1.0 MHz ( <b>125 kHz to 1 kHz step options available</b> )					
Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
dBC/Hz	-55	-70	-70	-80	-90	-110

10 MHz Level (In or Out) 3 dBm, ± 3 dB, 75 ohms (option E)

**Controls, Indicators**

Freq/Gain Selection direct readout LCD; manual or remote selection  
Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED  
Remote RS232C, 9600 baud (**RS485, Ethernet Optional**)

**Other**

RF, IF Connectors 50 Ω BNC (female), 75 Ω BNC (female)  
10 MHz Connectors BNC (female), **75Ω, works with 50 or 75 ohms** (option E)  
Alarm/Remote Connector DB9 (female) - NO or NC contact closure on Alarm  
Size 19 inch, 1RU standard chassis 1.75" H X 16.0" D  
Power 100-240  $\pm 10\%$  VAC, 47-63 Hz, **25 W max. (24 , 48 VDC Optional)**

**Available Options**

- E - External 10 MHz ref in & out
- H - High Stability ( $\pm 0.01$ ppm) Internal Ref
- X - 125 kHz step size
- X1 - 100 kHz step size
- X1002 - 1 kHz step, includes option -H**
- Z5- Attenuator **0.5 ± 0.5dB Steps**
- Comm. Interface/Standard RS232**
- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet
- W828 - W8 + W18 + W28
- Connectors/Impedance**
- STD. - 50Ω 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)
- SS - 50Ω SMA (RF), 50Ω SMA (IF)
- Contact Cross for other options**

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