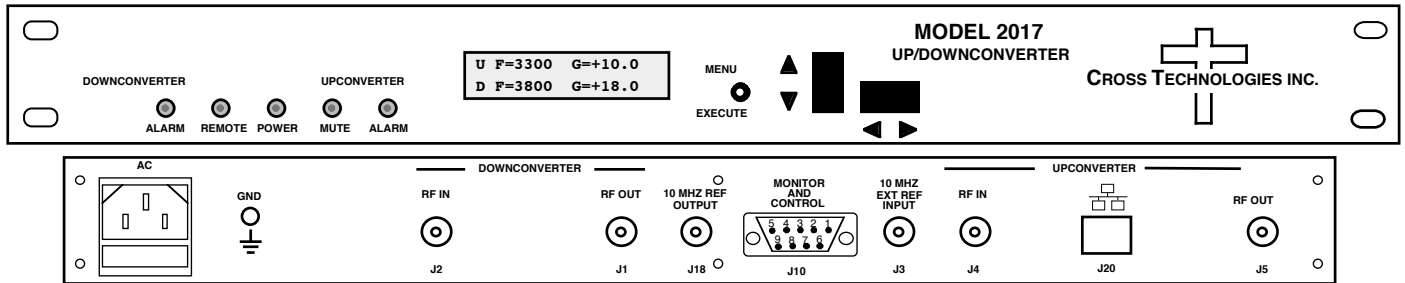


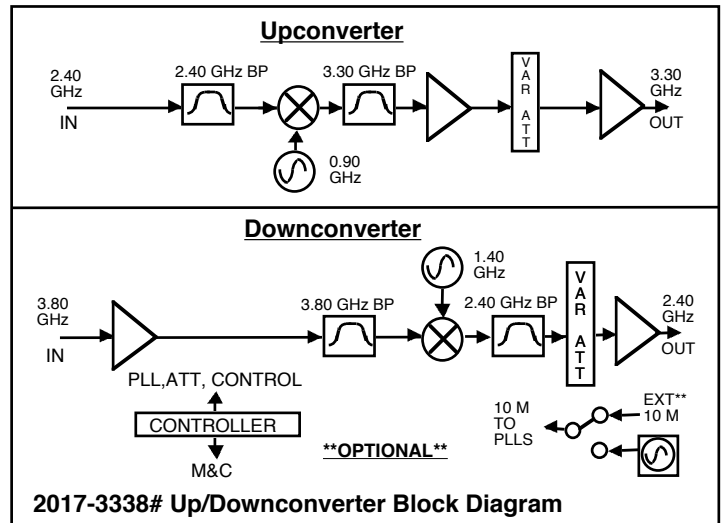
2017-3338# Up/Downconverter

The 2017-3338# Up/Downconverter converts a 20 MHz band from 2.40 GHz to 3.30 GHz and 3.80 GHz to 2.40 GHz. Multi-function switches select the gain (0 to +20 dB in 0.5 ± 0.5 dB steps), and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow), and Upconverter mute (yellow). Remote operation allows selection of gain and external 10 MHz reference (option E). Gain settings appear on the LCD display. Connectors are BNC female for the optional external reference input and output (option E), and **BNC female for RF IN and RF OUT**. A high stability (±0.01 ppm) option (H) is also available. It is powered by a 100-240 ±10% VAC power supply and in a 1.75" X 19" X 16" 1RU chassis.



Front and Rear Panel (Shown with options E, W8)

EQUIPMENT SPECIFICATIONS*		
Input Characteristics	UP, S	DOWN, L
Impedance/Return Loss	50Ω/14 dB	50Ω/14 dB
Frequency	2.40 GHz	3.80 GHz
Noise Figure, Max.	25 dB @ Gmax	15 dB @ Gmax
Input Level range	-20 to 0 dBm	-40 to -20 dBm
Output Characteristics		
Impedance/Return Loss	50 Ω /14 dB	50 Ω /14 dB
Frequency (GHz)	3.30 GHz	2.40 GHz
Output Level Range	-20 to 0 dBm	-20 to 0 dBm
1 dB comp, max gain	+10 dBm	+10 dBm
Channel Characteristics		
Gain, max. at Fc	+20 ±2 dB	+20 ±2 dB
Gain, range, 0.5±0.5 dB step	+20 to 0 dB	+20 to 0 dB
Image Rejection	<-50 dBc, Gmax	<-50 dBc, Gmax
Spurious, Inband, sig. rel.	<-50 dBc, Gmax	<-50 dBc, Gmax
Spurious, Inband, sig. ind.	<-50 dBc, Gmax	<-50 dBc, Gmax
Spurious, Out of band	<-50 dBm, Gmax	<-50 dBm, Gmax
Intermod - 2 carriers 4MHz	<-50 dBc, Gmax	<-50 dBc, Gmax
Frequency Resp. 20 MHz BW	± 0.75 dB	± 0.75 dB
Frequency Sense	Non-Inverting	Non-Inverting



Synthesizer Characteristics

Frequency Accuracy ± 1.0 ppm internal reference (±0.01 ppm, option H)
 Frequency Step **None; Fixed LOs, 0.90 GHz Up; 1.40 GHz Down**

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBc/Hz	-70	-80	-90	-100	-110

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

Controls, Indicators

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, Ethernet, optional)

Other

RF IN/RF OUT Connector **BNC (female)**
 10 MHz Connectors BNC (female), 50Ω/75Ω
 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

Available Options

E - External 10 MHz ref in & out;
 H - High Stability (±0.01 ppm) int. ref.
 W31 - Ext. Temp 0C to +50C

Remote M&C Interfaces:

Q - RS485/422
 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), 50Ω BNC (IF)
 M - 50Ω N-type (RF), 50Ω BNC (IF)
 S- 50Ω, SMA (RF), 50Ω 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