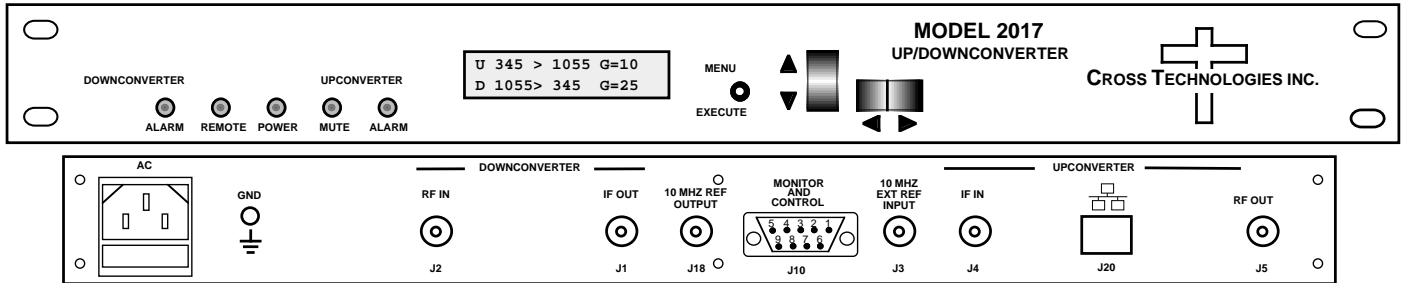


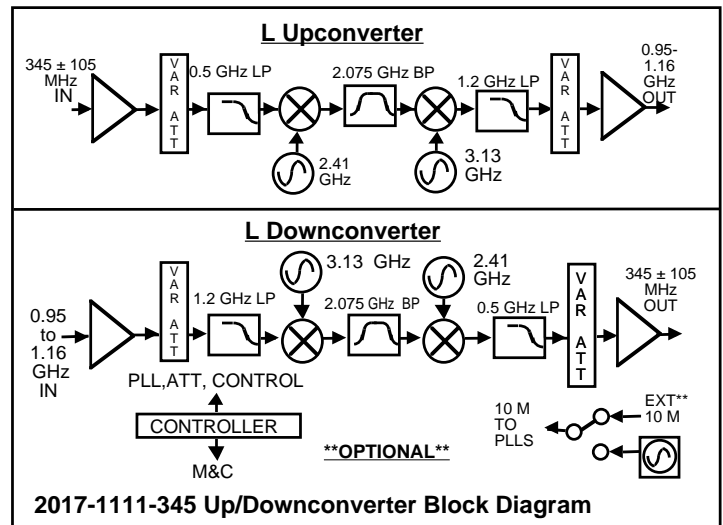
2017-1111-345 Up/Downconverter, L-BAND, 345 ± 105 MHz IF

The 2017-1111-345 L-band Up/Downconverter converts **345 ± 105 MHz to 0.95-1.16 GHz (Up)** and **0.95-1.16 GHz to 345 ± 105 MHz (Down)**. Multi-function switches select the gain (upconverter 0 to +30 dB; downconverter 0 to +30 dB), 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 IF, RF (SMA and N optional)** and optional external reference input and output (**option E**). A high stability (**±0.01 ppm**) option (H) 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 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	345 ± 105 MHz	0.95-1.16GHz
Noise Figure, Max.	20 dB @ max gain	15 dB @ max gain
Input Level range	-40 to -10 dBm	-40 to -10 dBm
Output Characteristics		
Impedance/Return Loss	50 Ω /14 dB	50 Ω /14 dB
Frequency (GHz)	0.95-1.16 GHz	345 ± 105 MHz
Output Level Range	-20 to 0 dBm	-20 to 0 dBm
1 dB comp, max gain	+5 dBm	+5 dBm
Mute @ 0 dBm out	>60 dB	N/A
Channel Characteristics		
Gain, max. at Fc	+30 ±3 dB	+30 ±3 dB
Gain, range, 1±1 dB steps	+30 to 0 dB	+30 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
Spurious, Out of band	<-50 dBC, Gmax	<-50 dBC, Gmax
Intermod - 2 carriers 4MHz	<-50 dBC, Gmax	<-50 dBC, Gmax
Frequency Resp. band	±1.5 dB	±1.5 dB
Frequency Resp. 36,40 MHz	±0.5 dB, ±1.0 dB	±0.5 dB, ±1.0 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 tuned**

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-70	-80	-95	-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, IF Connector BNC (female), 50Ω RF, 75Ω IF

10 MHz Connectors BNC (female), **75Ω connector, works with 50 or 75 ohms**

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.

Remote M&C Interfaces:

Q - RS485/422
 W8 - Ethernet; w/Web Browser (WB)
 W18 - Ethernet; w/WB & SNMP
 W28 - Ethernet; w/TCP/IP, Telnet
W28 - W18 + W28

Connectors/Impedance

D - 50Ω BNC (RF), 50Ω BNC (IF)
 N - 50Ω N-type (RF), 75Ω BNC (IF)
N N- 50Ω N-type (RF), 50Ω N-type (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