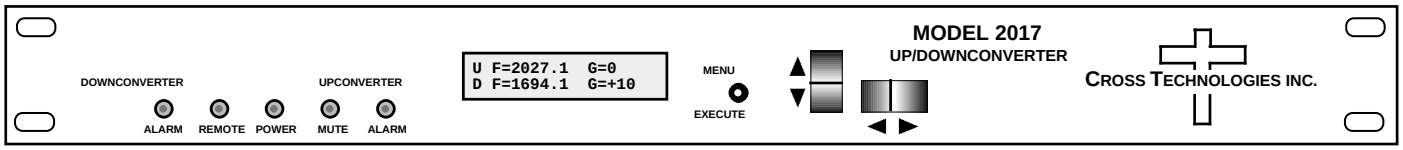
CROSS TECHNOLOGIES, INC.

DATA SHEET
04/11/12 _REV. 0

2017-2016 Up/Downconverter

The 2017-2016 Up/Downconverter converts 70 MHz to **2027.1** MHz (Up) and **1694.1** MHz to 70 MHz (Down) with low group delay and flat frequency response. An integrated Loopback translator is included. Multi-function push button switches select Loopback, the reference mode and remote interface 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 is fixed at 0 dB for the upconverter, +10 dB for the downconverter and -10dB for Loopback. Remote operation allows selection of all user front panel settings with the exception of remote interface. Frequency and gain appear on the LCD display except when Loopback is indicated. All connectors are 50Ω BNC female. The unit 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)

Impedance/Return Loss	50Ω /14 dB
Frequency	70 ± 10 MHz
Level	0 to -30 dBm

Output Characteristics (RF)

Impedance/Return Loss	50Ω/14 dB
Frequency	**2027.1** MHz
Level	0 to -30 dBm
1dB compression	+10 dBm

Channel Characteristics

Gain	**0 dB, fixed**
Frequency Sense	Non-inverting

---------DOWNCONVERTER---------

Input Characteristics (RF)

Impedance/Return Loss	50Ω /14 dB
Frequency	**1694.1** MHz
Noise Figure, max.	15 dB (max gain)
Level	-50 to -20 dBm
1dB compression	-10 dBm

Output Characteristics (IF)

Impedance/Return Loss	50Ω/14 dB
Frequency	70 ± 10 MHz
Output Level Range	-40 dBm to -10 dBm
1dB compression	0 dBm

Channel Characteristics

Gain (fixed)	+10 dB
Image Rejection	> 50 dB, min
Frequency Sense	Selectable

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

Channel Characteristics

Frequency Response	±0.5 dB, 20 MHz BW (±1.0 dB Loopback)
Spurious Response	<-50 dBC
Group Delay, max	0.015 ns/MHz^2 parabolic; 0.05 ns/MHz linear; 1 ns ripple
Loopback Gain	-10 dB

Synthesizer Characteristics

Frequency Accuracy	±1 ppm
Frequency Step	**fixed**
10 MHz In/Out Level	3 dBm ± 3 dB (**option E**)

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

Controls, Indicators

Freq/Gain Indication	Direct readout LCD (no control)
Power; Alarm; Remote	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud (**options** RS485/Ethernet, **Q / W8,W18**)

Other

RF Connector	BNC (female), 50Ω
IF Connector	BNC (female), 50Ω
10 MHz Connectors	BNC (female), 50Ω (**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

Available Options

E - External 10 MHz ref
H - High Stability (±0.01ppm) Internal Ref.
M&C Remote Interfaces:
Q - RS485
W8 - Ethernet w/Web Browser
W18 - Ethernet w/Web & SNMP
W28 - Ethernet w/TCPIP
W77 - FP Monitors IF/RF (BNC/SMA)

Connectors/Impedance

M - 50Ω N-type (RF), 50Ω BNC (IF)

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