CROSS TECHNOLOGIES, INC.

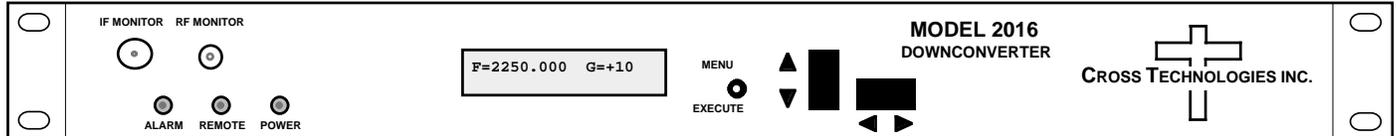# 2016-25-01 Downconverter, 2.0 - 2.5 GHz to 70 MHz

The 2016-25 Downconverter converts **2000 to 2500** MHz to 70 ± 18 MHz in **100 KHz steps** with low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection. Multi-function push button switches select the RF frequency and gain. Front panel LEDs provide indication of DC power (green), remote operation (yellow), and PLL alarm (red). Variable attenuators for the RF input provide a gain range of 0 to +50 dB as adjusted by the front panel multi-function pushbutton switches. Frequency and gain settings appear on the LCD display. Connectors are **N-Type for RF, BNC female for IF and 10 MHz Input and Output signals.** The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chaissis.

IF MONITOR   RF MONITOR

F=2250.000   G=+10

MENU
EXECUTE

MODEL 2016
DOWNCONVERTER

CROSS TECHNOLOGIES INC.

ALARM   REMOTE   POWER

Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)
Impedance/Return Loss	50Ω / 12 dB
Frequency	2.0 to 2.5 GHz
Level Range	-70 to -20 dBm
Input 1dB compression	-15 dBm

Output Characteristics (IF)
Impedance/Return Loss	75Ω / 18 dB
Frequency	70 ± 18 MHz
Level Range	-30 to -20 dBm
Output 1 dB compression	-15 dBm

Channel Characteristics
Gain range (adjustable)	**0 to 50 dB in 1 db steps**
Image Rejection	> 50 dB, min.
Frequency Response	±1.5 dB, **2.0 - 2.5 GHz; ± 1.0 dB,** 36 MHz BW
Spurious Response	< -45 dBC, in band
Group Delay, max.	0.01 ns/MHz^2 parabolic; 0.03 ns/MHz linear; 1 ns ripple
Frequency Sense	Inverting or Non-inverting (selectable)

Synthesizer Characteristics
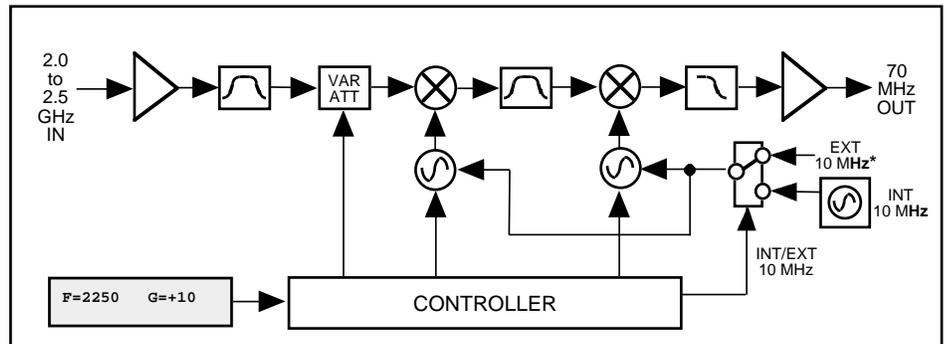|	
Frequency Accuracy	**±0.01 ppm internal reference**
Frequency Step	**100 KHz**
10 MHz In/Out Level	+3 dBm ± 3 dB **w/Auto-detect feature**

Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-70	-80	-95	-105

Controls, Indicators
Freq/Gain Selection	Direct readout LCD; manual or remote selection
Pwr; Alarm; Rem; Mute	Green LED; Red LED; Yellow LED; Red LED
Remote	**Ethernet, with SNMP**

Other
RF, IF Connectors	**N-type (female) (RF), BNC 50Ω (female) (IF)**
10MHz Connectors	BNC (female), 50Ω/75Ω
Alarm/Remote Connector	DB9 (female) - NO or NC contact closure on Alarm / RJ45 Ethernet
Size	19 inch, 1RU standard chassis 1.75" high x 16.0" deep
Power	100-240 ± 10% VAC, 47-63 Hz, 45 W max

2.0
to
2.5
GHz
IN

VAR
ATT

70
MHz
OUT

EXT
10 MHz*

INT
10 MHz

INT/EXT
10 MHz

F=2250   G=+10

CONTROLLER

2016-25-01 Block Diagram

ALL STANDARD INCLUDED Options
W7 -   Front Panel, RF (SMA) and
         IF (BNC 50Ω) Monitor Ports,
W13 - Rear Panel, LO Monitor Port, SMA
W16 - Individual Test/Calibration Data

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