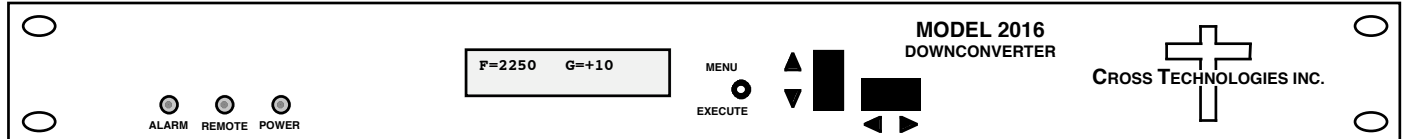


2016-25-01 Downconverter, 2.0 - 2.5 GHz to 70 MHz

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 $\pm 10\%$ VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.



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 \pm 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/MHz² 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 \pm 3 dB w/Auto-detect feature**

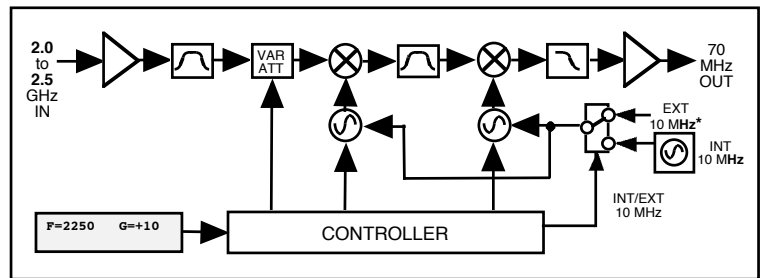
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-70	-80	-95	-105

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 $\pm 10\%$ VAC, 47-63 Hz, 45 W max



Block Diagram

ALL STANDARD INCLUDED Options

- W7 - Front Panel, RF (SMA) & 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