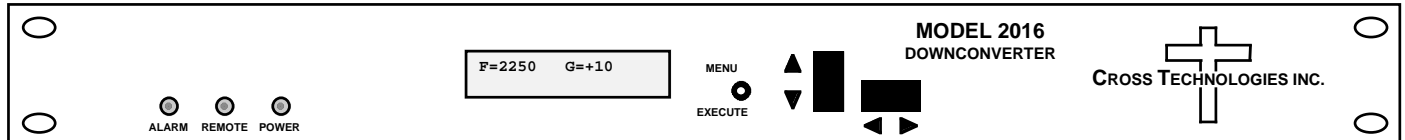


## 2016-26 Downconverter, 2.0 - 2.5 GHz to 140 MHz

The 2016-26 Downconverter converts 2000 to 2500 MHz to 140 ± 36 MHz in 1 MHz 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 BNC female for RF, IF and optional 10 MHz Input and Output signals (**option E**). 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 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 140 ± 36 MHz  
Level Range -30 to -20 dBm  
Output 1 dB compression -15 dBm

#### Channel Characteristics

Gain range (adjustable) 0.0 to +50.0 dB  
Image Rejection > 50 dB, min.  
Frequency Response ±1.5 dB, 2.0 - 2.5 GHz; ± 0.5 dB, 36 MHz BW  
Spurious Response < -45 dBC, in band  
Group Delay, max 0.01 ns/MHz<sup>2</sup> parabolic; 0.03 ns/MHz linear; 1 ns ripple  
Frequency Sense Inverting or Non-inverting (selectable)

#### Synthesizer Characteristics

Frequency Accuracy ±1.0 ppm internal reference (±0.01 ppm, **option H**)  
Frequency Step 1.0 MHz  
10 MHz In/Out Level +3 dBm ± 3 dB (**option E**)

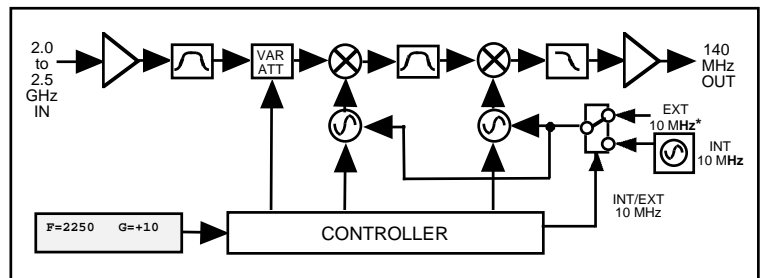
Phase Noise @ Freq	100 Hz	1kHz	10kHz	100kHz	1 MHz
dBC/Hz	-70	-70	-80	-95	-105

#### 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 RS232C, 9600 baud (RS485, **option Q**)

#### Other

RF, IF Connectors BNC (female), 50Ω/75Ω  
10MHz Connectors BNC (female), 75Ω (**option E**)  
Alarm/Remote Connector DB9 (female) - 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 W max.



**Block Diagram**

#### Available Options

E - External 10 MHz ref input & output  
H - High Stability Internal Ref (±0.01 ppm)  
Q - RS485 Remote Interface  
X - 125 kHz Frequency Steps  
Connectors/Impedance  
B - 75Ω BNC (RF), 75Ω BNC (IF)  
D - 50Ω BNC (RF), 50Ω BNC (IF)  
N - 50Ω N-type (RF), 75Ω BNC (IF)  
M - 50Ω N-type (RF), 50Ω BNC (IF)

\*10°C to 40°C; Specifications subject to change without notice