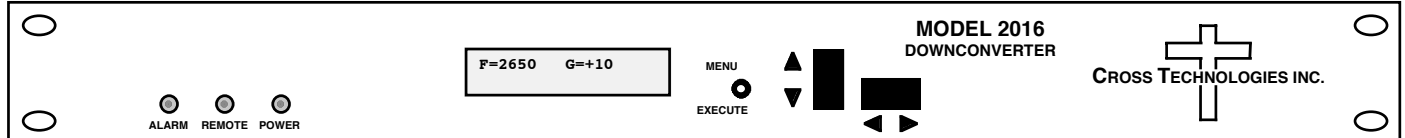


**2016-27 Downconverter, 2.5 - 2.7 GHz to 70 MHz**

The 2016-27 Downconverter converts 2500 to 2700 MHz to 70 ± 18 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 2.5 to 2.7 GHz  
 Noise Figure 15dB max, max gain  
 Level Range -70 to -20 dBm  
 Input 1dB compression -15 dBm, min gain

**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) 0.0 to +50.0 dB, 1dB steps, manually adjusted  
 Image Rejection > 50 dB, min.  
 Frequency Response ±2.0 dB, 2500 to 2700 MHz ; ±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**

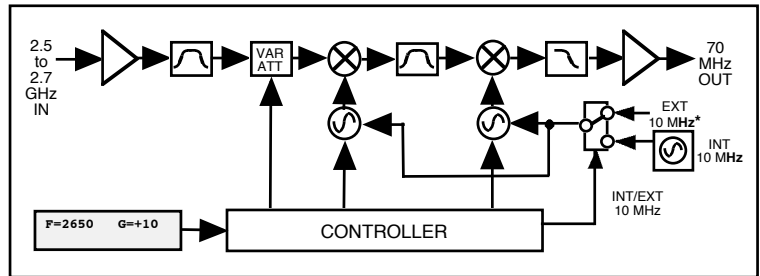
Frequency Accuracy ±1.0 ppm internal reference (±0.01 ppm, **option H**)  
 Frequency Step 1.0 MHz  
 10 MHz In/Out Level +3 dBm ± 3 dB (**option E**)  
 Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz  
 dBC/Hz | < -70 < -70 < -80 < -95 < -105

**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)  
 10MHz Connectors BNC (female), 50Ω/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)
- S - 50Ω SMA (RF), 50Ω BNC (IF)

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