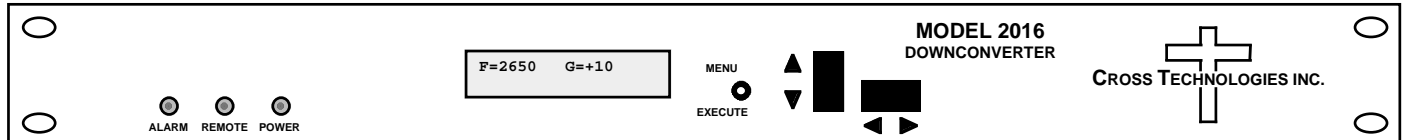


2016-27 Downconverter, 2.5 - 2.7 GHz to 70 MHz

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 ² 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)

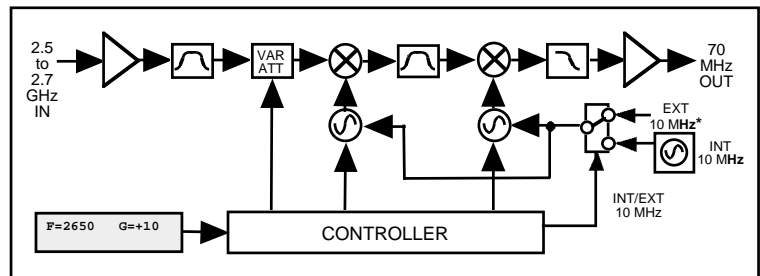
Phase Noise @ Freq	100Hz	1kHz	10kHz	100kHz	1MHz
dBC/Hz	-70	-70	-80	-95	-105

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)
- W8**- Ethernet M&C Remote Interface

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

