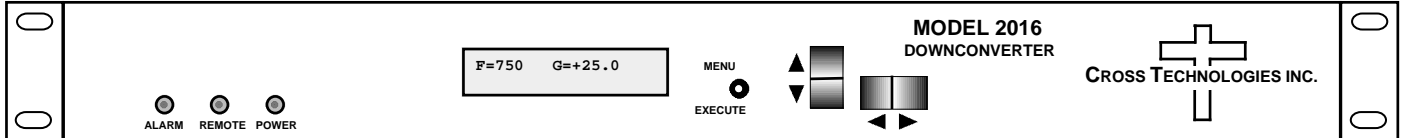


2016-95 Downconverter, 250 - 950 MHz, 70 MHz IF

The 2016-95 Downconverter converts 250 to 950 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 input frequency, gain, and other parameters. Front panel LEDs provide indication of DC power, PLL alarm or Remote operation. Gain is adjustable manually (MGC) over a 0 to 50 dB range. The frequency and gain are remotely selectable. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are Type F female for the RF, and BNC female for the IF and optional external 10 MHz reference input and output (option E). Other connector options are available. The 2016-95 is powered by a 100-240 ±10%VAC power supply, and is contained in a 1 3/4" X 19" X 16" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss 75Ω/12 dB
 Frequency 250 to 950 MHz
 Noise Figure, max. 15 dB (max gain)
 Input Level Range -70 to -20 dBm
 Input 1dB compression -15 dBm

Output Characteristics (IF)

Impedance/Return Loss 75Ω/18 dB
 Frequency 70 ± 18 MHz
 Output level Range -20 to -10dBm
 Output 1 dB compression -5 dBm

Channel Characteristics

Gain range (adjustable) 0.0 to +50.0 dB, 1dB steps
 Image Rejection > 50 dB, min.
 Frequency Response ±1.5 dB, 250 to 950 MHz ; ± 0.5 dB, 36 MHz BW; ±1.0 dB, 40 MHz BW
 Spurious Response < -50 dBc, in band
 Group Delay, max **0.02 ns/MHz² parabolic; 0.06 ns/MHz linear**; 1 ns ripple
 Frequency Sense Inverting or Non-inverting (user selectable)

Synthesizer Characteristics

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

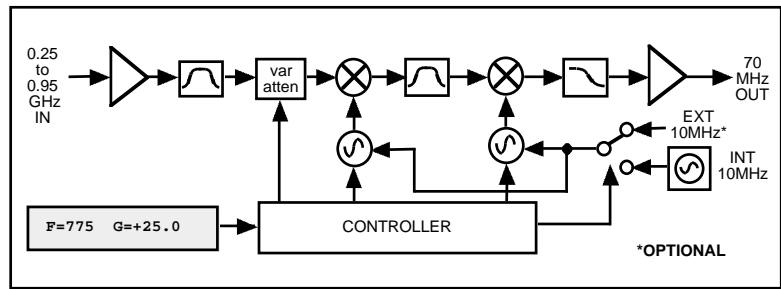
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-70	-80	-90	-105

Controls, Indicators

Freq/Gain Selection direct readout LCD; manual or remote selection
 Power; Alarm; Remote Green LED; Red LED; Yellow LED
 Remote RS232C, 9600 baud (RS485, option Q)

Other

RF, IF Connectors Type F, 75Ω (female), BNC, 75Ω (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 watts max.



Block Diagram

Available Options

E - External 10 MHz ref input & output
 H - High Stability (±0.01) Internal Ref
 Q - RS422/485 Remote Interface
 T - Temperature Sensor
 W8 - Ethernet M & C Remote Interface
 X - 125 kHz step size

Connectors/Impedance

B - 75Ω BNC (RF), 75Ω BNC (IF)
 C - 50Ω BNC (RF), 75Ω BNC (IF)
 D - 50Ω BNC (RF), 50Ω BNC (IF)
 K - 75Ω BNC (RF), 50Ω BNC (IF)
 M - 50Ω N-type (RF), 50Ω BNC (IF)
 N - 50Ω N-type (RF), 75Ω BNC (IF)

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