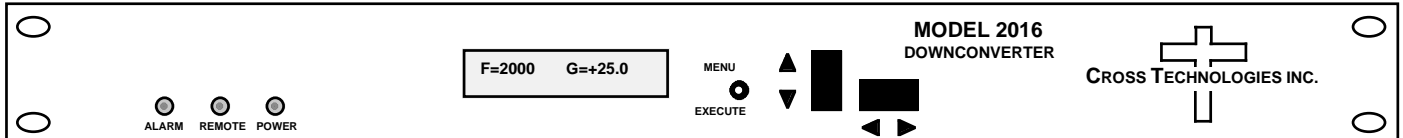


2016-02-500 Downconverter, 500 - 2000 MHz, 30 MHz IF

The 2016-02-500 Downconverter converts **500 to 2000 MHz** to **30 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 +30 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 2016-02-500 is powered by a 100-240 \pm 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 75 Ω /10 dB
 Frequency **500 to 2000 MHz**
 Noise Figure, max. 15 dB (max gain)
 Level Range **-35 to -5 dBm**
 1dB compression **+5 dBm**

Output Characteristics (IF)

Impedance/Return Loss 75 Ω /18 dB
 Frequency **30 \pm 5 MHz**
 Level range **-10 dBm to 0 dBm**
 1 dB compression **+10 dBm**

Channel Characteristics

Gain range (adjustable) **0 to +30.0 dB**, 1dB steps
 Image Rejection > 50 dB, min.
 Frequency Response **\pm 2.0 dB, 500 to 2000 MHz; \pm 0.5 dB, 10 MHz BW**
 Spurious Response **< -50 dBC**, in band
 Group Delay, max **4 ns parabolic; 4ns linear; 1 ns ripple**
 Frequency Sense **Non-inverting**

Synthesizer Characteristics

Frequency Accuracy \pm 1.0 ppm internal reference (\pm .01 ppm, option H)
 Frequency Step 1.0 MHz minimum
 10 MHz In/Out Level +3 dBm \pm 3 dB (option E)

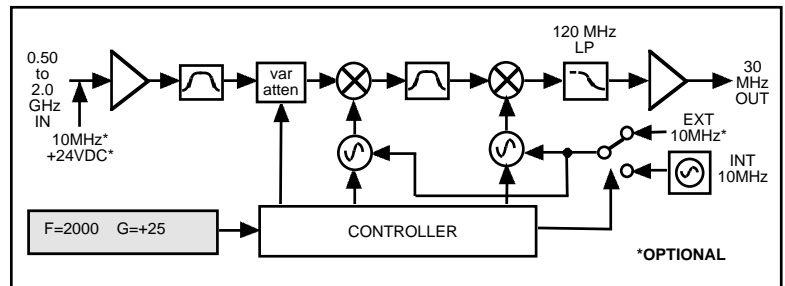
Phase Noise @ F (Hz) >	100	1K	10K	100K	1M
dBC/Hz	-70	-70	-80	90	100

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; Ethernet, option W8)

Other

RF, IF Connectors Type F (female), BNC (female), 75 Ω
 10MHz Connectors BNC (female), 75 Ω ; works with 50 or 75 ohm impedance (option E)
 M & C 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 \pm 10% VAC, 47-63 Hz, 45 W max



Block Diagram

Available Options

- E - External 10 MHz ref input & output
 - H - High Stability (\pm 0.01) Internal Ref
 - Q - RS485 Remote Interface
 - T - Temperature Sensor
 - W8 - Ethernet M & C Remote Interface
- Connectors/Impedance**
- B - 75 Ω BNC (RF), 75 Ω BNC (IF)
 - C - 50 Ω BNC (RF), 75 Ω BNC (IF)
 - D - 50 Ω BNC (RF), 50 Ω BNC (IF)
 - N - 50 Ω N-type (RF), 75 Ω BNC (IF)
 - M - 50 Ω N-type (RF), 50 Ω BNC (IF)

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

