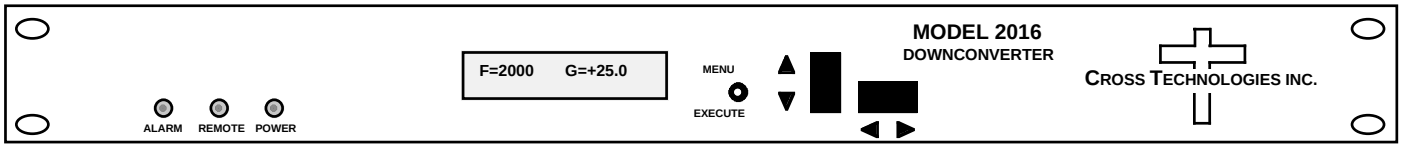
CROSS TECHNOLOGIES, INC.

DATA SHEET
REV. B
07/15/10

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 ±10% VAC power supply, and is contained in a 1 3/4" X 19" X 16" rack mount chassis.



Front Panel

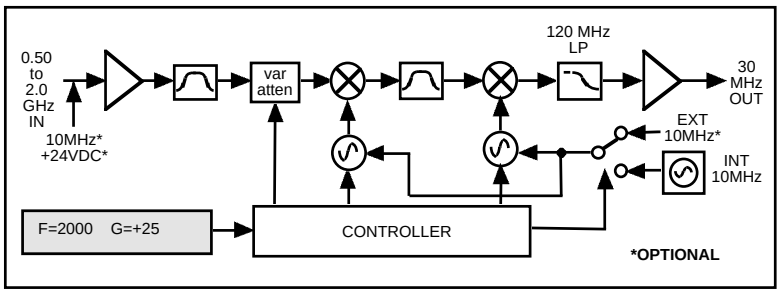
EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

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



Block Diagram

Channel Characteristics

Gain range (adjustable)	**0 to +30.0 dB**, 1dB steps
Image Rejection	> 50 dB, min.
Frequency Response	**± 2.0 dB, 500 to 2000 MHz**; ± 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	± 1.0 ppm internal reference (±.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*	*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), 75Ω
10MHz Connectors	BNC (female), 75Ω; 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 ±10% VAC, 47-63 Hz, 45 W max

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

Available Options

E - External 10 MHz ref input & output
H - High Stability (±0.01) Internal Ref
Q - RS485 Remote Interface
T - Temperature Sensor
W8 - Ethernet M & C Remote Interface

Connectors/Impedance

B - 75Ω BNC (RF), 75Ω BNC (IF)
C - 50Ω 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)

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