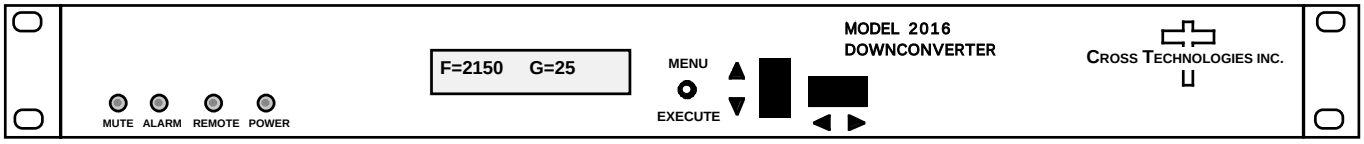
CROSS TECHNOLOGIES, INC.

DATA SHEET

REV_C 9/01/10

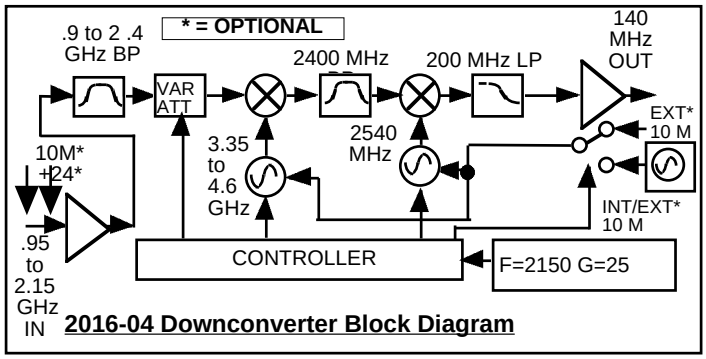
2016-04A L-band Downconverter

2016-04A L-Band Downconverter - Converts 950 to 2150 MHz to 140 MHz in 1 MHz steps with low group delay and flat frequency response. The 2016-04A Input and Output levels have been optimized to support transmit from an L-band modem to a 140 MHz IF upconverter. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), and remote operation (yellow). The gain is adjustable from 0 to +50 dB. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Standard connectors are BNC female for IF output and the optional external reference input and reference output, and Type F female for the RF input. A high stability (±0.01ppm) reference, LNB +24 VDC, 0.4 Amps power and 10 MHz reference (includes a 10 MHz output connector), are available Options. The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1.75" X 19" X 16" 1RU chassis.



2016-04A DOWNCONVERTER

EQUIPMENT SPECIFICATIONS*



2016-04 Downconverter Block Diagram

Input Characteristics

Impedance/Return Loss	75Ω / 12 dB
Frequency	950 to 2150 MHz
Noise Figure, Max.	15 dB (max gain)
Input Level range	-60 to - 10 dBm
Input 1 dB compression	-5 dBm

Output Characteristics

Impedance/Return Loss	75Ω / 18 dB
Frequency	70 ± 18 MHZ
Output Level/max. linear	-10 to 0 dBm
Output 1 dB compression	+5 dBm

Channel Characteristics

Gain	0.0 to 50.0 dB, 1 dB steps (manually adjustable)
Image Rejection	> 50 dB, min.
Spurious Response	<-45 dBC in band (± 36 MHZ) at -20 dBm out
Frequency Response	±1.5 dB, 950 -2150 MHz; ± 0.5 dB, 72 MHz BW
Group Delay, max.	0.0035 ns/MHz 2 parabolic; 0.025 ns/MHz linear; 1 ns ripple
Frequency Sense	Non-inverting

Synthesizer Characteristics

Frequency Accuracy	± 1.0 ppm max over temp (± 0.02 ppm optional) internal reference; ext. ref. input, optional
Frequency Step	1.0 MHz minimum

Phase Noise @ Freq	*100Hz*	*1kHz*	*10kHz*	*100kHz*	*1MHz*
dBC/Hz	*70*	*80*	*90*	*100*	*100*

External 10 MHz level 0 dBm, ± 3 dB, 75 ohms (option -E)

Controls, Indicators

Frequency Selection	direct readout LCD; pushbutton switches or remote selection
Gain Selection	direct readout LCD; pushbutton switches or remote selection
PWR; Alarm;Rem	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud

Other

RF,IF, 10MHz Connectors	Type F, female, BNC, female, BNC, female
Connector, Alarm,Remote	DB9 - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 16.0" deep
Power	100 - 240 ±10% VAC, 47 - 63 Hz, 25 watts max.

MODELS, OPTIONS

2016-04	950-2150 Input, 140 MHz Output
- E	Allows external 10 MHz reference input, 10 MHz reference can be inserted on the RF in
- L	LNB +24 VDC, 0.4 Amps with readout of current
- H	High Stability (± 0.02 ppm) internal reference

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