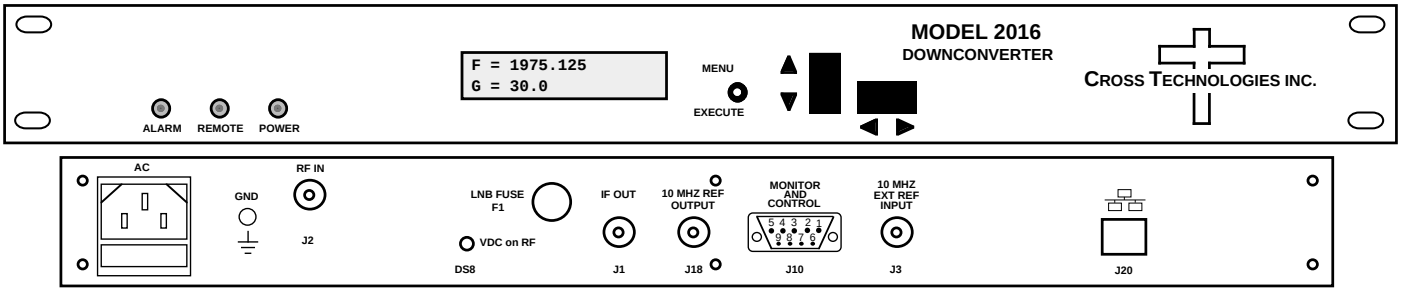
CROSS TECHNOLOGIES, INC.

DATA SHEET
REV. 0 08/16/17

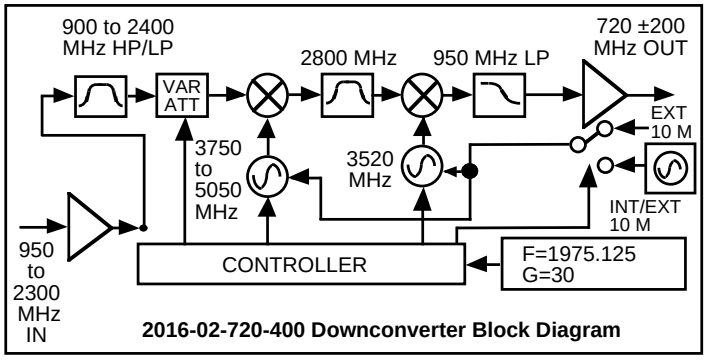
2016-02-720-400 L-Band Downconverter, 720 ±200 MHz IF

The 2016-02-720-400 Downconverter converts signals in the 950 to 2300 MHz rnage to 720 MHz in **125 kHz** steps. **The center frequency is selctable from 1050 to 2250 MHz.** Synthesized local oscillators (LO) provide frequency selection. Multi-function 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 N female for the RF**, and BNC female for the IF and **external 10 MHz reference input and output**. **External 10 MHz is standard. A 10 MHz output connector contains either the internal or external 10 MHz reference signal whichever is selected by the user.** The 2016-02-720-400 is powered by a 100-240 ±10% VAC, 47-63 Hz power supply, and is contained in a 1 3/4" X 19" X 16" rack mount chassis.



2016-02-720-400 Front and Rear Panels (Optional Ethernet and LNB insertion shown)

EQUIPMENT SPECIFICATIONS*



2016-02-720-400 Downconverter Block Diagram

Input Characteristics	
Impedance/Return Loss	**50Ω/10 dB**
Frequency	950 to 2300 MHz
Noise Figure, Max.	**20** dB max. gain
Input Level range	**-50 to -20 dBm**
Output Characteristics	
Impedance/Return Loss	**50 Ω /12 dB**
Frequency	**720 ± 200 MHz**
Output Level Range	-20 to -10 dBm
Output 1 dB compression	**0 dBm, max. gain**
Channel Characteristics	
Gain range (adjustable)	**0.0 to +30.0 dB, 1 ±1 dB steps**
Image Rejection	**> 45 dB, min., 50 dB typical**
Frequency Response	**±2.0 dB, 950 to 2300 MHz; ±1.0 dB, 400 MHz BW**
Spurious Response	**< -45 dBc, typical, <-40 dBC max., in band**
Group Delay, max	**10 ns total, Max. (parabolic + linear + ripple), 400 MHz BW**
Frequency Sense	**Non-inverting**
Synthesizer Characteristics	
Frequency Accuracy	± 1.0 ppm max. over temp (± 0.01 ppm option -H)
Frequency Step, Fc range	**125 kHz; Fc=1050 to 2250 MHz**

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

10 MHz Level (In or Out)	**3 dBm, ± 3 dB, 75 ohms**
Controls, Indicators	
Frequency Selection	Direct readout LCD; manual or remote selection
Gain Selection	Direct readout LCD; ma nual or remote selection
Power; Alarm; Remote	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud **(RS485, Ethernet Optional)**
Other	
RF Connector	Type **N (female)**
IF, 10 MHz Connectors	BNC (female)
Alarm/Remote Connector	DB9 (female) - NO or NC contact closure on Alarm
Size	19 inch, 1RU chassis 1.75" high X 16.0" deep
Power	100-240 ± 10% VAC, 47-63 Hz, **30 watts max.**

Available Options

H - High Stability (±0.01ppm) Internal Ref
L - LNB Voltage, +24 VDC, 0.4 amps
Q - RS485 Remote Interface
W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet®
W8W28 - Ethernet; w/Web Browser; w/TCP/IP

Connectors/Impedance

STD - 50Ω Type N (RF), 50Ω BNC (IF)
C - 50Ω BNC (RF), 75Ω BNC (IF)
D - 50Ω BNC (RF), 50Ω BNC (IF)
N - 50Ω Type N (RF), 75Ω BNC (IF)
S - 50Ω SMA (RF), 50Ω BNC (IF)

Contact Cross for other options

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

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