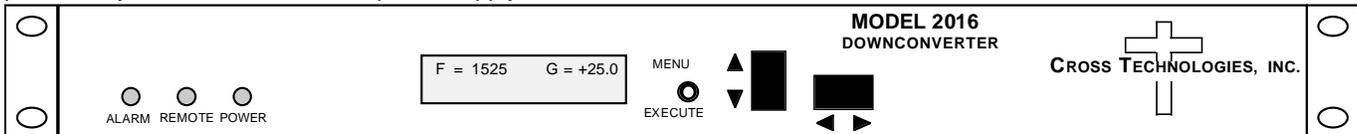


2016-03A L-Band Downconverter

2016-03A L-Band Downconverter - The 2016-03A L-band Downconverter converts 950-1525 MHz to 70 (± 18) MHz in 1 MHz steps with low group delay and flat frequency response. The 2016-03A Input and Output levels have been optimized to support transmit from an L-band modem to a 70 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. LNB +24 VDC, 0.4 Amps and 10 MHz reference can be inserted on the RF line as added options. The 10 MHz option also includes a 10 MHz output connector, which contains either the internal or external 10 MHz reference signal. A high stability (± 0.01 ppm) option is also available. The unit is powered by a 100-240 $\pm 10\%$ VAC power supply, and housed in a 1.75" X 19" X 16" 1RU chassis.



2016-03A DOWNCONVERTER

EQUIPMENT SPECIFICATIONS*

Input Characteristics

Impedance/Return Loss	75 Ω /10 dB
Frequency	950 to 1525 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	75 Ω /18 dB
Frequency	70 \pm 18 MHz
Output Level/max linear	-10 - 0 dBm
Output 1 dB compression	-5 dBm

Channel Characteristics

Gain range (adjustable)	0 to +50 dB
Image Rejection	> 50 dB, min.
Frequency Response	± 1.5 dB, 950 to 1525 MHz; ± 0.5 dB, 36 MHz BW
Spurious Response	< -50 dBc, in band, f > 970 MHz
Group Delay, max	.01 ns/MHz ² parabolic; .03 ns/MHz linear; 1 ns ripple
Freq Sense (selectable)	Inverting or Non-inverting (selectable)

Synthesizer Characteristics

Frequency Accuracy	± 1.0 ppm max over temp (± 0.01 ppm, option H)
Frequency Step	1.0 MHz (as low as 1 kHz steps available)

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 (option E)

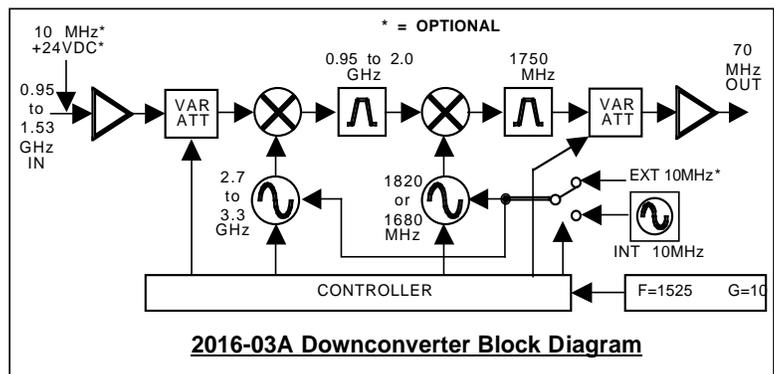
Controls, Indicators

Frequency Selection	direct readout LCD; manual or remote selection
Gain Selection	direct readout LCD; manual or remote selection
PWR; Alarm; Rem	Green LED; Red LED; Yellow LED
Remote	RS232C, 9600 baud (RS485 Option Q)

Other

RF Connector	Type F (female)
IF Connector	BNC (female)
10 MHz Connectors	BNC (female) (option-E)
Alarm/Remote Connector	DB9 (female) - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 16.0" deep
Power	100-240 $\pm 10\%$ VAC, 47 - 63 Hz, 45 watts max.

*+10 to +40 degrees C; Specifications subject to change without notice



Available Options

- E – External 10 MHz ref input & output w/ RF insertion
- H – High Stability (± 0.01 ppm) internal reference
- L – LNB Voltage, +24VDC, 0.4 amps
- Q – RS485 Remote Interface
- T – Temperature Sensor
- 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)