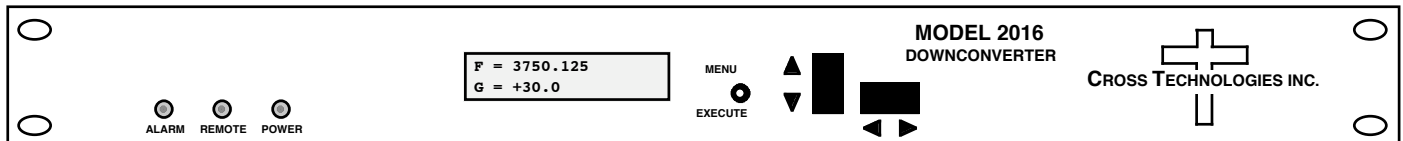


2016-37 Downconverter, 3.625 - 4.2 GHz

The 2016-37 Downconverter converts 3.625 to 4.2 GHz in 125 kHz steps to 70 ± 18 MHz with low group delay and flat frequency response. Synthesized local oscillators (LO) provide very low phase noise and ± 0.01 ppm stability frequency selection. 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). Gain is adjustable manually over a +30 to +50 dB range as adjusted by the front panel multi-function push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC (female) for IF output and the 10MHz reference input and output, and Type N (female) for the RF input. External 10 MHz is standard. A 10 MHz output connector contains either the internal or external 10 MHz reference signal. The unit is powered by a 90-260 VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (RF)

Impedance/Return Loss 50Ω/14 dB
 Frequency 3.625 to 4.2 GHz
 Level -70 to -30 dBm
 1dB compression -15 dBm

Output Characteristics (IF)

Impedance/Return Loss 75Ω/18 dB
 Frequency 70 ± 18 MHz
 Level -25 to -5 dBm
 1dB compression +5 dBm

Channel Characteristics

Gain range (adjustable) +30 to +50 dB
 Image Rejection > 50 dB, min
 Spurious Response <-50 dBC
 Frequency Response ± 1.5 dB, 3.625-4.2 GHz ; ± 0.6 dB, 36 MHz BW
 Group Delay, max 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear; 1 ns ripple
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ± 0.01 ppm internal reference; external reference input
 Frequency Step 125 kHz minimum
 10 MHz In/Out Level 3 dBm \pm 3 dB

| Phase Noise @ Freq | 100 Hz | 1kHz | 10kHz | 100kHz | 1 MHz |
|--------------------|--------|------|-------|--------|-------|
| | -60 | -70 | -80 | -90 | -100 |

Controls, Indicators

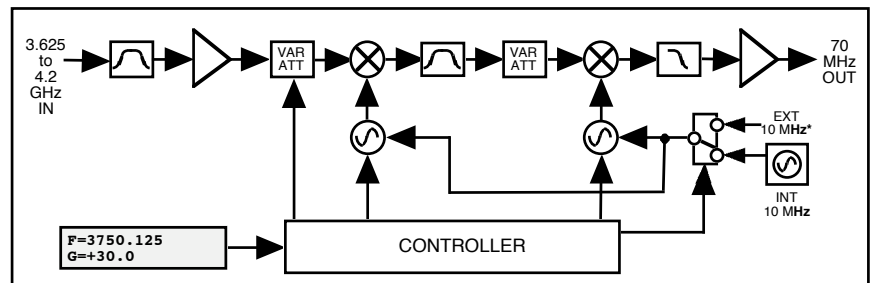
Freq/Gain Selection direct readout LCD; pushbutton switches or remote selection
 Power; Alarm; Remote Green LED; Red LED; Yellow LED
 Remote RS232C, 9600 baud

Other

RF Connector Type N (female)
 IF Connector BNC (female)
 10 MHz Connectors BNC (female), 50Ω/75Ω
 Alarm/Remote Connector DB9 - 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 watts max

Available Options

Q - RS485/RS422 Remote Interface
 Connectors/Impedance
 M - 50Ω Type N (RF), 50Ω BNC (IF)



Block Diagram

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