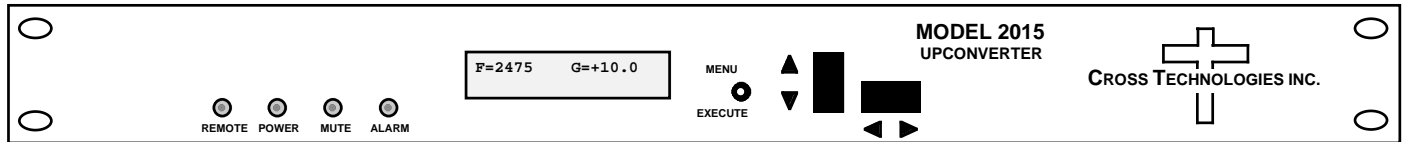


2015-25, -26 Upconverter, 70 MHz to 2.0 - 2.5 GHz

The 2015-25 S-band Upconverter converts 70 ± 18 MHz to 2000 to 2500 MHz in 1 MHz steps (0.5 MHz steps, option -5) with low group delay and flat frequency response. Synthesized local oscillators (LO) provide 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), remote operation (yellow) or the TX carrier is muted (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB 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 RF, IF and the optional external reference input and output. 10 MHz reference can be inserted on the RF line as an added option. The 10 MHz option includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability (±0.01ppm) option is also available. The unit is powered by a 100-240 ±10% VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.



Front Panel

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance / Return Loss 75Ω / 18dB
Frequency 70 ± 18 MHz
Input Level Range -40 to -10 dBm

Output Characteristics (RF)

Impedance / Return Loss 50Ω / 12dB
Frequency 2.0 to 2.5 GHz
Output level -20 to 0 dBm
Output 1 dB compression +5 dBm

Channel Characteristics

Gain range (adjustable) -10 to +30 dB
Image Rejection > 50 dB, min.
Frequency Response ±1.5 dB, 2.0-2.5 GHz ; ± 0.5 dB, 36 MHz BW
Spurious Response < -50 dBc, in band
Group Delay, max 0.01 ns/MHz² parabolic; 0.03 ns/MHz linear; 1 ns ripple
Frequency Sense Non-inverting

Synthesizer Characteristics

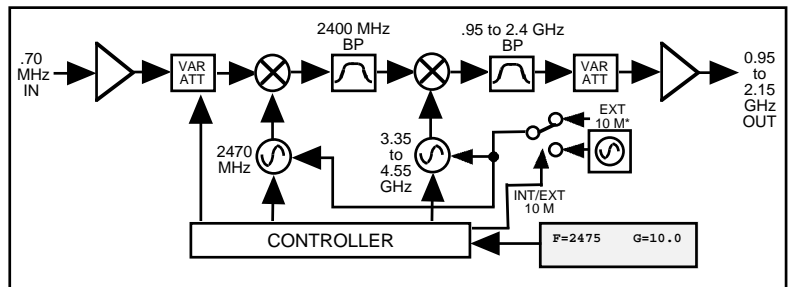
Frequency Accuracy ± 1.0 ppm internal reference (±0.01 ppm, option H)
Frequency Step 1.0 MHz (0.5 MHz, option -5)
10 MHz In/Out Level 3 dBm ± 3 dB (option E)
Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz
dBc/Hz | < -70 < -70 < -80 < -95 < -105

Controls, Indicators

Freq/Gain Selection direct readout LCD; manual or remote selection
Pwr; Alarm; Rem; Mute Green LED; Red LED; Yellow LED; Yellow LED
Remote RS232C, 9600 baud (RS485, option Q)

Other

RF, IF Connectors BNC (female)
10MHz Connectors BNC (female), 50Ω/75Ω (option E)
Alarm/Remote 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



Block Diagram

Available Options

- E - External 10 MHz ref input & output
- H - High Stability (±0.01ppm) Internal Ref
- Q - RS485 Remote Interface
- Z - Attenuator 0.1 dB steps on Upconverter
- 5 - 0.5 MHz Frequency Steps
- Connectors/Impedance
- B - 75Ω 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)

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