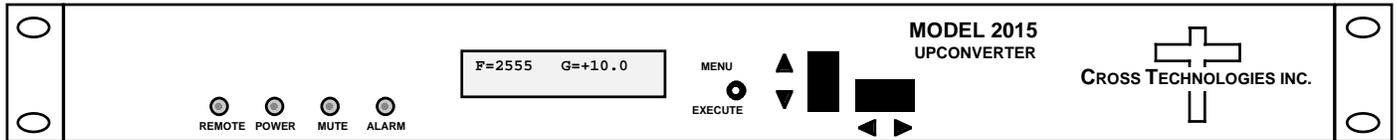


2015-27 Upconverter, 2.5 - 2.7 GHz

The 2015-27 Upconverter converts 70 ± 18 MHz to 2500 to 2700 MHz in 1 MHz steps 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. 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/18 dB
 Frequency 70 ± 18 MHz
 Input Level -40 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss 50Ω/12 dB
 Frequency 2.5 to 2.7 GHz
 Output level -20 to 0 dBm
 Output 1 dB compression +5 dBm

Channel Characteristics

Gain range (adjustable) -10 to +30 dB
 Spurious Response <-50 dBC, in band
 Frequency Response ±1.5 dB, 2.5-2.7 GHz ; ± 0.5 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

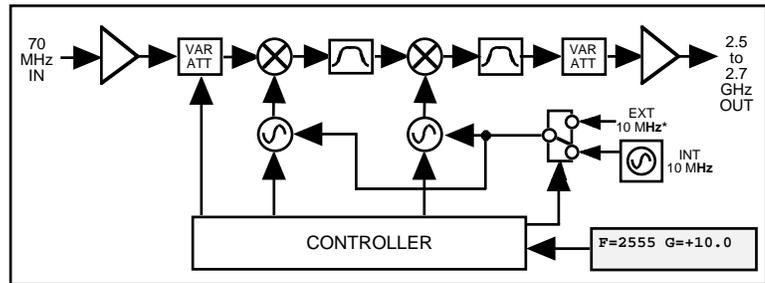
Frequency Accuracy ± 1.0 ppm internal reference; external reference input
 Frequency Step 1.0 MHz minimum
 10 MHz In/Out Level 3 dBm ± 3 dB
 Phase Noise @ Freq | 100Hz 1kHz 10kHz 100kHz 1MHz
 dBc/Hz | < -70 < -70 < -80 < -95 < -110

Controls, Indicators

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

Other

RF Connector BNC (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 ±10% VAC, 47-63 Hz, 45 watts max



Block Diagram

Available Options

- E - External 10 MHz Ref in/out
 - H - High Stability (±0.01ppm) internal Ref.
 - Q - RS485 Remote Interface
 - Z - Attenuator 0.1 dB 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)
 - S - 50Ω SMA (RF), 50Ω BNC (IF)

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