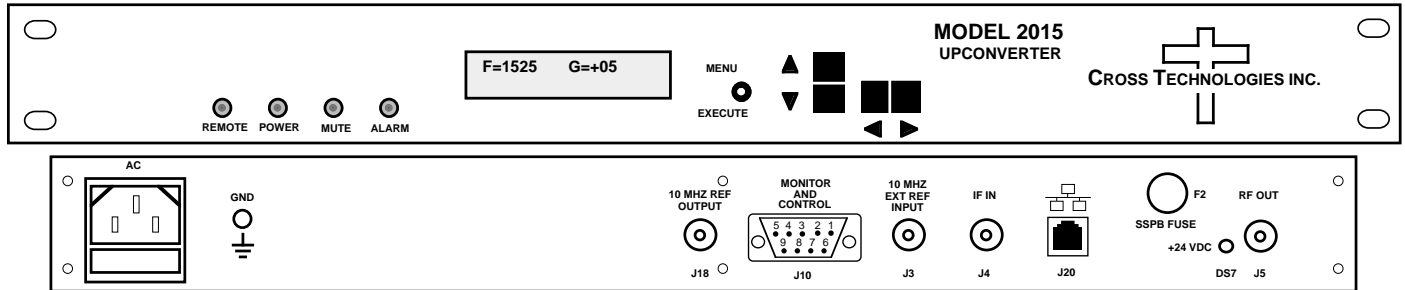


2015-03A Upconverter, 70 MHz to 0.95 - 1.525 GHz

The 2015-03A L-band Upconverter converts 70 MHz to 950-1525 MHz in 1 MHz steps with low group delay and flat frequency response. The 2015-03A has lower RF level out of the upconverter than the 2017-03. Multi-function push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm for up and downconverters (red), remote operation (yellow), and Upconverter mute (yellow). Gain can be manually adjusted over a -25 to +15 dB range 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 and the optional external reference input and output, and Type F female for RF. A high stability (± 0.01 ppm) option is also available. It is powered by a 100-240 \pm 10% VAC power supply and housed in a 1.75" X 19" X 16" 1RU chassis.



EQUIPMENT SPECIFICATIONS*

2015-03A Front and Rear Panels

Input Characteristics (IF)

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

Output Characteristics (RF)

Impedance/Return Loss 75 Ω /12 dB
 Frequency 950 to 1525 MHz
 Output level -35 to -15 dBm
 Output level 1 dB -10 dBm

Channel Characteristics

Gain range (adjustable) -25 to +15 dB, **1 \pm 1 dB steps**
 Frequency Response \pm 1.5 dB, 950 - 1525 MHz; \pm 0.5 dB, 36 MHz BW; **\pm 1.0 dB, 40 MHz BW**
 Spurious Response < -50 dBC, in band
 Group Delay, max **0.015 ns/MHz² parabolic; 0.05 ns/MHz linear; 1 ns ripple**
 Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy \pm 1.0 ppm max over temp (\pm 0.01 ppm, option H)
 Frequency Step 1.0 MHz (**125 kHz to 1 kHz step options available**)

Phase Noise @ F (Hz) >	10	100	1K	10K	100K	1M
dBC/Hz	-55	-75	-75	-85	-95	-120

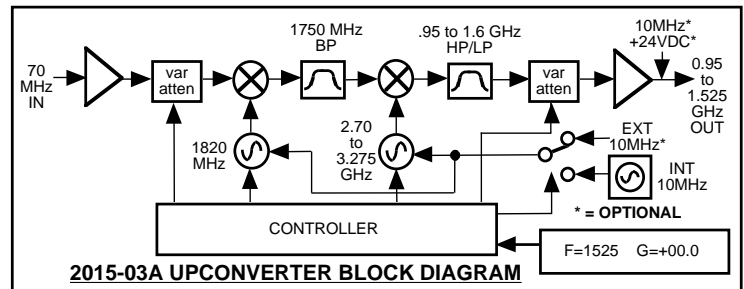
10 MHz Level (In or Out) 3 dBm, \pm 3 dB, 75 ohms (option E)

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, Ethernet Optional**)

Other

RF, IF Connectors Type F (female), BNC (female)
 10 MHz Connectors BNC (female), **75 Ω , works with 50 or 75 ohms (option E)**
 Alarm/Remote Connector DB9 (female) - NO or NC contact closure on Alarm
 Size 19 inch, 1RU standard chassis 1.75" H x 16.0" D
 Power 100-240 \pm 10% VAC, 47-63 Hz, **25 W max. (24, 48 VDC Optional)**



Available Options

- E - External 10 MHz ref in & out; RF Ins.
- H - High Stability (\pm 0.01ppm) Internal Ref
- V - SSB Voltage, +24VDC, 2.5 amps
- V48 - SSB Voltage, +48VDC, 1.25 A**
- V41 - SSB Voltage, +48VDC, 2.10 A**
- X or X1- 125 kHz or 100 kHz step size
- X1003 - 1 kHz step, includes option -H**
- Z5 - Attenuator 0.5 dB \pm 0.5 dB Steps**
- Comm. Interface/Standard RS232**
- Q - RS485 Remote Interface
- W8 - Ethernet; w/Web Browser (WB)
- W18 - Ethernet; w/WB & SNMP
- W28 - Ethernet; w/TCP/IP, Telnet
- 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)
- Contact Cross for other options**

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