2015-95 Upconverter, 70 MHz to 250 - 950 MHz

The 2015-95 Upconverter converts 70 ± 18 MHz to 250 to 950 MHz in 1 MHz steps (125 kHz to 1 kHz step options available). Synthesized local oscillators (LO) provide frequency selection. 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 (±1 dB steps) as adjusted by the front panel pushbutton 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 optional external 10MHz reference input and output, and Type F (female) for the RF output. The external 10 MHz option E includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability internal reference (option H, ±0.01ppm) 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 and Rear Panels (Shown with optional Ethernet)

EQUIPMENT SPECIFICATIONS*

Input Characteristics
- Impedance/Return Loss: 75 Ω/18 dB
- Frequency: 70 ± 18 MHz
- Input Level: -40 to -10 dBm
Output Characteristics
- Impedance/Return Loss: 75 Ω/10 dB
- Frequency: 250 to 950 MHz
- Output level: -20 to 0 dBm
- Output 1 dB compression: +10 dBm
Channel Characteristics
- Gain max/ range (adj.): +30 ±3 dB /-10.0 to +30.0 dB, 1 ± 1 dB steps
- Spurious Response: < -50 dBc, in band
- 2nd Harmonic: < 40 dB, in band
- Frequency Response: ±1.5 dB, 250-750 MHz; ±2.5 dB, 750-950 MHz; ± 0.5 dB, 36 MHz BW; ±1 dB, 40 MHz BW
- Group Delay, max: 0.015 ns/MHz^2 parabolic; 0.05 ns/MHz linear; 1 ns ripple
- Frequency Sense: Non-inverting

Synthesizer Characteristics
- Frequency Accuracy: ± 1.0 ppm max over temp (± 0.01 ppm, option H)
- Frequency Step: 1.0 MHz (125 kHz to 1 kHz step options available)
- External 10 MHz level: +3 dBm ± 3 dB, 50/75Ω (option E)
- Phase Noise @ Freq: dBC/Hz:
  - 100 Hz: -70
  - 1 kHz: -70
  - 10 kHz: -80
  - 100 kHz: -90
  - 1 MHz: -100

Controls, Indicators
- Freq/Gain Selection: direct readout LCD; manual or remote selection
- Pwr; Alm; Remote; Mute: Green LED; Red LED; Yellow LED; Yellow LED
- Remote: RS232C, 9600 baud (RS485, Ethernet Optional)
- RF, IF Connectors: Type F (female), BNC (female)
- 10 MHz Connectors: BNC (female), 75Ω, 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"high X 16.0" deep
- Power: 100-240 ±10% VAC, 47-63 Hz, 25 watts max.

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

Available Options
- E - External 10 MHz ref in & out; RF Ins.
- H - High Stability (±0.01ppm) Internal Ref
- X or X1 - 125 kHz or 100 kHz step size
- X1001 - 1 kHz step, includes option H
- Z5 - Attenuator 0.5 ±0.5 dB steps

Comm. Interface/Standard RS232
- O - RS485 Remote Interface
  - W8 - Ethernet; TCP/IP, Telnet
  - W18 - Ethernet; w/WB & SNMP

Connectors/Impedance
- B - 75Ω BNC (RF), 75Ω BNC (IF)
- C - 50Ω 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)

Contact Cross for other options

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