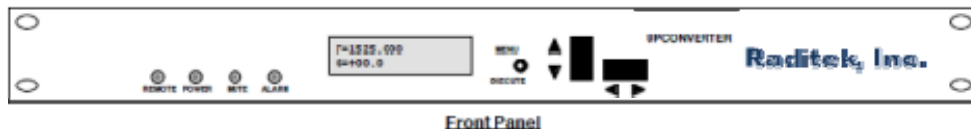


Up Converter, IF-140MHz to L(950-2150MHz)-High Performance RUC-IF-140M to LBand(950-2150M)-HP-optX-t6

RADITEK

SATCOM 140M to LBand UC



Our *High Performance L-band Up Converter converts* 140 ± 36 MHz to 950 to 2150 MHz *in 1kHz, 10kHz, 100kHz, or 125kHz steps* (user selectable) 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), 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 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 the optional external reference input and output, and Type F (female) for the RF output. SSPB +24 VDC, 2.5 Amps and 10 MHz reference can be inserted on the RF line as added options. The 10 MHz option also includes a 10 MHz output connector, which contains either the internal or external 10 MHz reference signal.

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.

Order Examples: RUC-IF-140M to LBand(950-2150M)-HP-optD-t6

Description: (Up Converter, IF-140MHz to LBand(950-2150MHz), High Performance, (1/10/100 & 125 KHz Steps), Opt D - 50Ω Impedance BNC Connectors(RF & IF))

EQUIPMENT SPECIFICATIONS*

Input Characteristics (IF)

Impedance/Return Loss 75Ω /18 dB
Frequency 140 ±36 MHz
Input Level -40 to -10 dBm

Output Characteristics (RF)

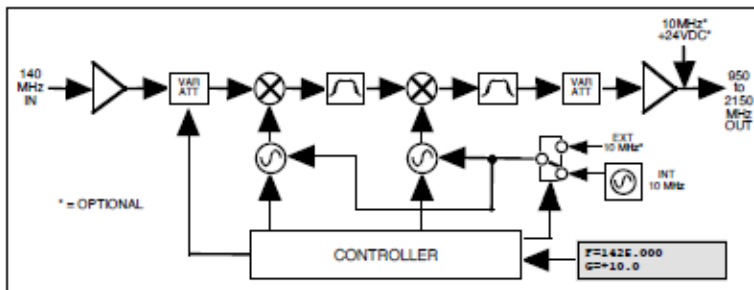
Impedance/Return Loss 75Ω/12 dB
Frequency 950 to 2150 MHz
Output level -20 to 0 dBm
Output 1 dB comp. +5 dBm

Channel Characteristics

Gain range (adjustable) -10.0 to +30.0 dB
Frequency Response ±1.5 dB, 950 - 2150 MHz ; ± 0.5 dB, 72 MHz BW
Spurious Response < -50 dBc, in band
Group Delay, max 0.0035 ns/MHz² parabolic; 0.025 ns/MHz linear; 1 ns ripple
Frequency Sense Non-inverting

Synthesizer Characteristics

Frequency Accuracy ±0.01 ppm internal reference
Frequency Step 1kHz, 10kHz, 100kHz, or 125kHz (user selectable)
10 MHz In/Out Level 3 dBm ± 3 dB (option E)



Block Diagram

Up Converter, IF-140MHz to LBand(950-2150MHz)-High Performance

| Phase Noise @ Freq dBc/Hz | 100 Hz | 1kHz | 10kHz | 100kHz | 1 MHz |
|------------------------------|--------|------|-------|--------|-------|
| | -75 | -85 | -90 | -110 | -120 |

Controls, Indicators

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

Other

RF Connector Type F (female)
 IF Connector BNC (female)
 10 MHz Connectors BNC (female), 50Ω/75Ω (option E)
 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

Available Options

E - External 10 MHz ref in & out w/ RF insertion
 V - SSPB Voltage, +24VDC, 2.5 amps
 Q - RS485 Remote Interface
 Z - Attenuator 0.1 dB on Upconverter

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)

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