



Up Converter

UPC201

Features

- ◆ **Up Converter in a single 1U Chassis**
 - ◆ **L-Band UP**
 - ◆ (1750 to 1850 MHz)
- ◆ **Tunable in 125 kHz steps**
 - ◆ **1 kHz steps (Option)**
- ◆ **Low Group Delay**
- ◆ **Flat Frequency Response**
- ◆ **Low Spurious Response**
- ◆ **Low Phase Noise**
- ◆ **Adjustable Gain**
 - ◆ **UP Converter**
 - ◆ **-10 To +30 dB**
- ◆ **Front Panel**
 - ◆ **LED Status Indicators**
 - ◆ **LCD Parameter Display**
 - ◆ **User Control**
- ◆ **Remote Control**
 - ◆ **RS-232**
 - ◆ **Ethernet Optional**

General Description

The UPC201 RF Upconverter converts 70 MHz to 1750-1850 MHz (Up) in 125 kHz steps (1 kHz steps Optional). The unit exhibits low group delay and flat frequency response. Synthesized local oscillators (LO) provide frequency selection.

Using Multi-function push button switches, the user selects the RF frequency, gain, and other parameters.

Front panel LEDs provide indication of DC power (green), PLL Alarm for the up-converter (red), Remote operation (yellow), and Up converter mute (yellow).

Gain is manually controlled in the range of -10 to +30 dB for the Up converter. These settings are adjusted using the front panel multi-function push-button switches.

Remote operation allows selection of frequency and gain. Parameter selection, frequency and gain settings appear on the LCD display.

Connectors are SMA female for IF and an external reference, and SMA female for RF. A high stability (± 0.01 ppm) option is also available. The unit is powered by a 90-260 VAC power supply and housed in a 1.75" X 19" X 16" 1U chassis.





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SPECIFICATIONS

-----UPCONVERTER-----

Input Characteristics (IF)

Impedance/Return Loss: 50 Ohms /18 dB

Frequency: 70 ± 18 MHz

Input Level: -40 to -10 dBm

Output Characteristics (RF)

Impedance/Return Loss: 50 Ohms /12 dB

Frequency: 1750 MHz to 1850 MHz

Output level: 0 to -20 dBm

Output: 1 dB comp. +5 dBm

Channel Characteristics

Gain range: (adjustable) -10.0 to +30.0 dB

Frequency Sense: Non-inverting

Frequency Response: ±1.5 dB, 1750 – 1850 MHz;



Channel Characteristics

Spurious Response: < -50 dBc in band

Group Delay: max 0.01 ns/MHz 2 parabolic; 0.03 ns/MHz linear; 1 ns ripple

Synthesizer Characteristics

Frequency Accuracy: ± 1.0 ppm max over temp

Frequency Step: 125 kHz (1 kHz steps Optional)

Phase Noise (dBc/Hz): < -70 @ 100 Hz, 1kHz; < -80 @ 10 kHz;

< -95 @ 100 kHz; < -110 @ 1 MHz

10 MHz Reference Level: 3 dBm, ± 3 dB, 50 ohms

Controls, Indicators

Frequency Selection direct readout LCD; manual or remote selection

Gain Selection direct readout LCD; manual or remote selection

Power; Alarm; Remote Green LED; Red LED; Yellow LED

Remote RS232C, 9600 baud (Ethernet optional)

Other

RF Connectors: SMA, 50 Ohm (female)

IF Connectors: 10 MHz Connectors SMA, 75 Ohm (female)

Alarm/Remote Connector: DB9 (female) - NO or NC contact closure on Alarm

Size: 19 inch, 1U standard chassis 1.75"H X 16.0"D

Power: 90-260 VAC, 47-63 Hz, 45 watts

Ordering Information

UPC201

Basic Unit

OPUPC-01

1 kHz Steps

Recognizing that no standard product can meet all the needs of all users, GDP stands ready to provide units tailored to unique applications.

The statements in this data sheet are not intended to create any warranty, expressed or implied. Equipment specifications are subject to change without notice.

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