



# NuWaves

## RF Solutions

### ConvertaWave™ RF Downconverter

225 - 500 MHz RF Input  
70 MHz IF Output

P/N: RF225-500DCV1



**The ConvertaWave™ is a robust RF downconverter, providing high dynamic range performance over the 225 to 500 MHz frequency range. The 70 MHz IF output is band-limited to ~500 kHz.**

The ConvertaWave downconverter provides superior rejection of out-of-band signals, Automatic Gain Control / Manual Gain Control (AGC/MGC) operation, and operates over VHF and UHF frequencies in 100 kHz steps. The ConvertaWave has extremely low noise figure and user-selectable features.

The ConvertaWave has over 100 dB of manual gain control, inclusive of an automatic gain control (AGC) mode. Boasting a system noise figure under 5 dB and a local oscillator (LO) with extremely low phase noise, the ConvertaWave is well suited for industrial, commercial, and military applications.

### Features

- 225 to 500 MHz
- Small Form Factor
- High Intercept Point
- Low Phase Noise
- 70 MHz IF Output
- 100 kHz Tuning Resolution
- Manual and Automatic Gain Control (MGC / AGC)
- 50 dB RF Attenuation
- 50 dB IF Attenuation
- Excellent Out-of-Band Rejection
- Wide Supply Voltage Range
- Simple RS-232 Interface

### Applications

- RF Signal Receivers
- RF Front-End for Tactical Receivers
- Software Defined Radios (SDR)
- Test Bed Developments
- Programmable RF Frequency Conversion
- Waveform Receivers

# ConvertaWave™ RF Downconverter

## Specifications



### Operational

|                     |                                  |
|---------------------|----------------------------------|
| Frequency Range     | 200 MHz to 500 MHz               |
| IF Output           | 70 MHz                           |
| IF Bandwidths       | 500 KHz                          |
| IF Rejection        | 80 dB (typ)                      |
| Image Rejection     | 76 dB (typ)                      |
| Tuning Resolution   | 100 kHz                          |
| Noise Figure        | 5 dB (max)                       |
| Supply Voltage      | +10 to +18 VDC (+12 VDC Nominal) |
| Current Consumption | 220 mA @ +12 VDC (typ)           |
| Serial Interface    | RS-232                           |
| Interface Connector | 9 pin Micro-D (Socket)           |
| RF Connectors       | SMA (Female)                     |

### Mechanical

|        |                                   |
|--------|-----------------------------------|
| Size   | 6.50" x 4.00" x 0.75" (L x W x H) |
| Weight | 11.3 oz.                          |

### Environmental

|                       |               |
|-----------------------|---------------|
| Operating Temperature | -20 to +50 °C |
| Storage Temperature   | -40 to +85 °C |

### Export

|                |                 |
|----------------|-----------------|
| Classification | ITAR Controlled |
|----------------|-----------------|

For information on product disposal (end-of-life), please refer to this document:  
<https://nuwaves.com/wp-content/uploads/Product-Disposal-End-of-Life.pdf>

## Contact NuWaves



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