



ThinkRF RDC2000-108 RF Tuner/Down-Converter

High performance RF tuner and down-converter with frequency tuning range of 100 kHz to 10 GHz and capable of processing up to 450 MHz of instantaneous RF bandwidth.

Industry Leading

- Patent-pending software-defined RF receiver technology
- 100 kHz to 10 GHz tuning range
- As low as 30 kHz tuning resolution
- I and Q outputs with up to 225 MHz instantaneous bandwidth each
- Gigabit Ethernet, USB 2.0 or GPIO for configuration and control
- Compact, single-unit “brick” approach simplifies transport and deployment
- Total power consumption of less than 10 watt



Overview

The RDC2000 RF Tuner is a Gigabit Ethernet or USB-controlled, wideband radio receiver front end capable of tuning over the frequency range 100 kHz to 10 GHz in as low as 30 kHz steps.

The RDC2000 can process up to 450 MHz of instantaneous bandwidth and is well-suited to demanding applications in wideband data acquisition, spectrum monitoring, SIGINT and next generation wireless system development.

The RDC2000's radio receiver provides both performance and versatility by design. It is built on a direct-conversion architecture and can interface with both AC- and DC-coupled dual-channel digitizers and data-acquisition systems.

Furthermore, its small size, weight and low power consumption make the unit ideal for portable applications.

The RDC2000 can be interfaced with off-the-shelf digitizers or data acquisition boards. The RDC2000 radio front end is also available as a unit integrated within ThinkRF's WSA4000 Wireless Signal Analyzer system.





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Specifications

Tuning and Bandwidth

| | |
|---|-------------------|
| Tuning range | 100 kHz to 10 GHz |
| Tuning resolution | 30 kHz |
| Tuning speed | < 500 μ s |
| Maximum instantaneous bandwidth (0.4 - 4 GHz) | 450 MHz |
| Instantaneous bandwidth (100 kHz - 10 GHz) | 100 MHz |

Front Panel Connectors

| | |
|----------------------------------|----------------------------|
| Antenna 1 input | SMA-F |
| Antenna 2 input | SMA-F |
| 10 MHz Reference Clock In | SMA-F |
| 10 MHz Reference Clock Out | SMA-F |
| I Out | SMA-F |
| Q Out | SMA-F |
| GPIO | 25-pin male D-Subminiature |
| USB | USB-B |
| Ethernet | RJ-45 |

Physical

| | |
|---------------------------------------|-------------------------------------|
| Power Supply | +12Vdc |
| Power Consumption | < 12 watts |
| Operating Temperature Range | 0°C to +50°C |
| Non-operating Temperature Range | -40°C to +85°C |
| Enclosure Dimensions | 11.7 (L) x 6.5 (W) x 2.1 (H) inches |

Ordering Information

Order Number • Freq Range
RDC2000-108 • 100 kHz to 10 GHz

Contact Us

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