The DRT4311B provides a miniature, yet powerful, receiver measurement capability for testing and monitoring for the wireless industry. DRT’s advanced SDR (software-defined radio) architecture coupled with the flexibility of a wideband receiver offers a versatile measurement solution that is optimized for today’s complex cellular environments and protocols. This test receiver uses the latest in digital signal processing (DSP) and microprocessor technology to provide the following capabilities:

- **Wideband tuners** allow coverage of all bands within the system’s frequency range. Two frequency range versions available: 2 MHz to 3 GHz; 2 MHz to 6 GHz.

- **Support of the most common wireless scanner measurements.**

- **Multi-protocol and simultaneous support** for TD-SCDMA, GSM, cdma2000, 1xEV-DO, UMTS WCDMA, FDD-LTE and TD-LTE. LTE-Advanced (capable).

- **Simultaneous multi-band or MIMO measurements** with dual or triple receiver configuration.

- **Removable flash device** for localized logging.

- **Embedded application** ideal for OEM use.

- **Internal GPS receiver** for frequency and timing discipline.

- **Bluetooth connectivity.**

- **True SDR:** Wideband front-end + user-defined bands + Field upgradeable software.

- **100 Mbps Ethernet and USB 2.0 interfaces** to the host allow for high throughput of logged test data and remote operation.

- **Small size, low power consumption, lightweight.**

- **Optional long-life battery operation.**

- **100% DRT warranty for three (3) years.**

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Non-technical / Administrative Data Only. Not subject to EAR or ITAR Export Regulations.

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Available Protocols and Measurements

GSM:
- Channel Average Power
- Spectral Display
- BSIC
- C/I
- Cell Identity
- MCC/MNC/LAC
- Neighbor Cell List
- Cell Selection Parameters
- GPRS Indication
- GPRS PBCCH Info

UMTS:
- Channel Average Power
- Spectral Display
- Synchronization Channel
- CPICH Pilot Measurements
- Code Domain
- Network Identification Info
- Cell Selection Parameters
- Common Channel Configuration
- Dynamic and Interference Parameters
- Measurement Control Info
- Neighbor Cells

FDD/LTE:
- Channel Average Power
- Spectral Display
- Synch Detection
- Reference Signals
- Interface Analysis
- MIMO
- Auto-Detect
- Bandwidth
- TX Port
- Duplexing Mode (FDD/TDD)
- Cyclic Prefix (CP)
- Decode
- MIB
- SIB1
- SI Messages

cdma2000 / 1xEV-DO:
- Channel Average Power
- Spectral Display
- Pilot Measurements
- Code Domain
- Sync Information
- Paging System Information
- Paging Channel Access Information
- Extended Paging System Information
- Code Channel Allocation

TD-SCDMA:
- DwPTS: RSSI, Ec/Io
- P-CCPCH: RSCP, C/I, Ec/Io, TS0 RSSI,
- Time Offset, Delay Spread,
- Cell Scrambling Code
- Decode
- MIB
- SIB1
- SI Messages

Specifications

RF:
- Band Coverage: All bands covered within the system’s frequency range. Available frequency ranges: 2-3000 MHz or 2-6000 MHz.
- Amplitude Accuracy: ±1dB (-100 dBm to -25 dBm)
- Frequency Accuracy: 1.0 ppm
- Noise Figure: 0.05 ppm with GPS (20 min holdover)
- Input 3rd Order Intercept: 11.0 dB Typ. (6.0 dB with pre-amp)
- Phase Noise: -90 dBc Typ. at 10 khz offset
- VSWR: 2.5:1
- Internal Generated Spurs: -114 dBm
- Maximum Safe Input: +30 dBm

Physical:
- Dimensions w/o Battery: V1/V2: 1.32 in. H x 3.0 in. W x 6.82 in. D (3.4 cm H x 7.6 cm W x 17.3 cm D)
- Dimensions with Battery: V1/V2: 1.6 in. H x 3.0 in. W x 10.0 in. D (4.1 cm H x 7.6 cm W x 25.4 cm D)
- Weight w/o Battery: V1: 1.36 lbs. (617 g); V2: 1.59 lbs. (721 g)
- Weight with Battery: V1: 2.21 lbs. (1002 g); V2: 2.44 lbs. (1107 g)
- Operating Temp: +32° to +122°F (0° to +50°C)
- Storage Temp: -40° to +185°F (-40° to +85°C)
- Power Consumption: V1: < 8 W; V2: < 10 W; V3: < 13 W
- Power Required: 9-30 VDC

Interfaces:
- (continued)
- RF Input: SMA - 50Ω
- Internal GPS: SMB - 50Ω
- Terminal: Mini DB-9
- Removable Flash: High-Speed SD

Select Performance Data

- RSSI Scan Rate: 500 channels / sec
- BSIC Scan Rate: 150 channels / sec
- Pilot Scan Rate: 50 channels/sec
- Ec/Io Sensitivity: -21 dB
- LTE Scan Rate: 25 channels / sec
- Spectrum Analyzer: 1 kHz to 20 MHz RBW

Ordering Information

- Single Receiver System: DRT4311B-V1
- Dual Receiver System: DRT4311B-V2
- Triple Receiver System: DRT4311B-V3
- Protocol measurement software separately priced. Consult DRT for details.

Available Accessories

- External AC Power Adapter & Cables
- Cigarette Lighter Adapter Cable
- Ethernet LAN Cable
- USB Cable
- GPS Antenna
- Omni-directional Antenna with Magnetic Mount and Coaxial Cable
- API Development Software
- Operator’s Manual
- Hard Carrying Case
- Battery Pack
- Battery Charging Station

1 Consult DRT for Detailed Specifications

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