



With Battery

Without Battery

4311B - Wideband Test Receiver

Ultra-Compact and Diverse Measurement Capability

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 2 MHz to 3000 MHz Frequency Range.
- Support of the most common wireless scanner measurements.
- Multi-protocol and simultaneous support for TD-SCDMA, GSM, cdma2000, EV-DO, 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.

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

Available Protocols and Measurements¹

GSM:

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

cdma2000 / EV-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

WCDMA:

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

TD-SCDMA:

DwPTS: RSSI, Ec/Io
P-CCPCH:
RSCP, C/I, Ec/Io, TS0 RSSI,
Time Offset, Delay Spread,
Cell Scrambling Code

FDD/TD-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

Specifications

RF:

Band Coverage: All bands in the range of 2-3000 MHz
Amplitude Accuracy: ±1dB (-100 dBm to -25 dBm)
Frequency Accuracy: 1.0 ppm
0.05 ppm with GPS (20 min holdover)
Noise Figure: 11.0 dB Typ. (6.0 dB with pre-amp)
Input 3rd Order Intercept: -10.0 dBm
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" H x 3.0" W x 6.82" D
(3.4 cm H x 7.6 cm W x 17.3 cm D)
V3: 1.6" H x 3.0" W x 6.82" D
(4.1 cm H x 7.6 cm W x 17.3 cm D)
Dimensions with Battery: **V1/V2:** 1.6" H x 3.0" W x 10.0" D
(4.1 cm H x 7.6 cm W x 25.4 cm D)
V3: 1.6" H x 3.0" W x 10.0" 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)
V3: 1.97 lbs. (894 g)
Weight with Battery: **V1:** 2.21 lbs. (1002 g); **V2:** 2.44 lbs. (1107 g)
V3: 2.82 lbs. (1279 g)
Operating Temp: +32° to +122°F (0° to +50°C)
Storage Temp: -40° to +185°F (-40° to +85°C)
Humidity: 95%, Non-condensing
Power Consumption: **V1:** < 8 W; **V2:** < 10 W; **V3:** < 13 W
Power Required: 9-30 VDC

Interfaces:

Host Link: RJ45 (Ethernet 100Base-T)
Additional Connections: 5-Pin Mini-A/B (USB 2.0)
RPSMA (802.11b/g)

Interfaces: (continued)

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

Select Performance Data¹

RSSI Scan Rate: 500 channels / sec (contiguous)
BSIC Scan Rate: 50 channels / sec
Pilot Scan Time: 100 msec
Ec/Io Sensitivity: -21 dB
LTE SCH Scan Rate: 50 channels / sec
Spectrum Analyzer: 1.6 kHz RBW
Up to 3 GHz / sec

Ordering Information

Single Receiver System: DRT4311B-V1
Dual Receiver System: DRT4311B-V2
Triple Receiver System: DRT4311B-V3
Protocol measurement software separately priced. Consult factory 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 Factory For Detailed Specifications

CE
ROHS Compliant

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