



4301A - Miniature Test Receiver – cdma2000

Ultra-Compact and Diverse Measurement Capability

DESCRIPTION

The DRT4301A provides a miniature, yet powerful, receiver measurement capability for testing and monitoring of the wireless industry. DRT's advanced architecture offers a variety of solutions that are optimized to handle different needs of cellular systems. These test receivers use the latest in digital signal processing (DSP) and microprocessor technology to provide the following capabilities:

- Quad-band model for switched-support popular band coverage of forward channels, or dual band model for both forward and reverse channels.
- Support of the most common wireless scanner measurements.
- Support for up to 2,000 user scheduled measurement entries.
- Improved digital radio processing for complex waveform applications.
- Embedded Application ideal for OEM use or with DRT supplied Pioneer™ collection tool.
- Internal GPS receiver with frequency and timing discipline.
- 100 Mbps Ethernet interface to the host allows for high throughput of logged test data and removable operation.
- Option of localized logging to removable flash device.
- cdma2000 protocol support for measurements and decoding features, with alternate model software supporting GSM, EDGE, WCDMA
- Integrated Spectrum Analysis Tool for all protocols and bands.
- Small size and low power with full power management capability.

The One
Measure for
Wireless
Performance

The products described in this document are subject to the export regulations of the Commerce Department. An export license may be required for the sale of these products outside the United States.

Measurements and Features

General:

Quad Band Support
Single Protocol Operation
Option for Dual-Band Forward and Reverse Channel Support
Removable Flash Card
Integrated GPS Navigation and Disciplined Reference
Software Defined Architecture
Autonomous Operation
Sleep Mode

cdma2000 Measurements:

Channel Average Power
Spectral Display
Pilot Measurements
-Ec/Io
-Pilot Time Domain
-Delay Spread
-Secondary Pilots
-Diversity STTD
Code Domain
Broadcast Data Decode

cdma2000 Decoding:

Channel Number
Pilot PN Offset
Sync Information
-SID
-NID
-Pilot PN Offset
-Page Data Rate
-Protocol Revision
-Minimum Protocol Revision
-CDMA Channel Number
Paging System Information
-Station ID
-Latitude
-Longitude
-Number of Paging Channels
-Pilot Detection Threshold
-Pilot Drop Threshold
-Extended Sys Parameters
-Neighbor List Message
-Global Redirect Message
-Home Registration
-Registration Period
-Registration Distance
Paging Channel Access Information
-Number Access Channels
-Max Capsule Size
-Max Preamble Size
-Nominal Transmit Power Offset
-Initial Transmit Power Offset
-Power Increment
-Time Randomization
-Authentication Mode
-Random Value
Extended Paging System Information
-Preferred MSID Type
-TMSI Supported
-IMSI_T Supported
-Add Active Pilot Threshold
-Drop Active Pilot Threshold
-MCC
-IMSI_11_12
CDMA Code Channel Allocation
-Sync Code Channel
-Paging Code Channel
-Walsh Code

Radio Specifications

Frequency Coverage

ITU Quad-Band Tuner
400-500 MHz
925-960 MHz
1805-1880 MHz
2110-2170 MHz

ANSI Quad-Band Tuner

869-894 MHz
1930-1990 MHz
2110-2170 MHz
2620-2690 MHz

(Other band configurations are possible.)

Amplitude Accuracy

-95 dBm to -10 dBm

+/- 1dB

Ec/Io Sensitivity

-21 dB ; 2048 taps

Pilot Scan Time:

100 msec; 2048 taps

Noise Figure:

7.0 dB

Input 3rd Order Intercept

-10 dBm

Phase Noise

-95 dBc at 10 kHz offset

VSWR

2.5:1

Internal Generated Spurs

-115 dBm

Maximum Safe Input

+15 dBm

Interfaces

Host Link: RJ45 - Ethernet 100 Base T
RF Input: SMA - 50Ω
Internal GPS: SMB - 50Ω
Modem Link: Mini DB-9
Terminal: Mini DB-9
Removable Flash: Multimedia/SD or CF

Physical

Dimensions: 1.2"H x 3.0"W x 5.8"D
Weight: 1.25 lbs./567 grams
Operating Temp: 0 to +50° C.
Power Consumption (max) 8W
Power Required: 6-30 VDC

Standard system ships with:

- External AC Power Adapter & cables
- User Requested Protocol
- Basic Measurements
- User-friendly software with online help
- Ethernet crossover cable
- Omni-directional Cellular/PCS Band antenna with magnetic mount and coaxial cable
- Battery Cable
- Cigarette Lighter Adapter Cable

Options:

- Fully configured Laptop including installed Ethernet port & CD-ROM Drive
- Application Programming Interface Drivers and Documentation
- Enhanced Pilot and Code Domain
- Broadcast Data
- Pioneer Collection Tool
- Internal GPS
- 802.11 Wireless Control
- Additional Software Enabled Protocols and Measurements

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