4301A - Miniature Test Receiver - WCDMA

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 remotable operation.

- Option of localized logging to removable flash device.

- WCDMA protocol support for measurements and decoding features, with alternate model software supporting GSM, EDGE, cdma2000

- Integrated Spectrum Analysis Tool for all protocols and bands.

- Small size and low power with full power management capability.

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

WCDMA Measurements:
Channel Average Power
Spectral Display
Synchronization Channel
   -PSCH Ec/Io, time
   -SSCH Ec/Io, time
CPICH Pilot Measurements
   -Ec/Io
   -Pilot Time Domain
   -Delay Spread
   -Secondary Pilots
   -Diversity STTD
Code Domain
PCCPCH Measurements and Decode

WCDMA Decoding:
Channel Number
Scrambling Code
Identification Info
   -Cell Identity
   -PLMN Type
   -Mobile Country Code
   -Mobile Network Code
   -URA Identity
Cell Selection Parameters
   -Search Thresholds
   -RAT List
   -RAT Identifier
   -Qual min
   -RxLev min
   -Hysteresis
   -HCS Serving Cell
   -Max UL Power
   -Cell Barred Indication
   -Operation Reservation
   -Access Class List
Common Channel Configuration
   -PICH Power Offset
   -AICH Power Offset
   -PCCPCH Diversity Indication
   -PRACH Info
   -Primary CPICH Tx Power
   -PRACH Power Offset
   -RACH Transmission Parameters
   -AICH Info
   -SCCPCH Info
   -FACH/PCH Info
   -PICH Info
   -CTCH Allocation Period
Dynamic and Interference Parameters
CPCH Information
Measurement Control Information
Neighbor Cells
   -Idle mode Neighbors
      -MCC, MNC
   -Connected mode Neighbors
      -MCC, MNC

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

-100dBm to -25 dBm	+/- 1dB
Ec/Io Sensitivity	-21 dB ; 2048 taps
Pilot Scan Time:	250 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

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 CPICH and Code Domain
- PCCPCH Broadcast Data
- Pioneer Collection Tool
- Internal GPS
- 802.11 Wireless Control
- Additional Software Enabled Protocols and Measurements

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

The One Measure for Wireless Performance