4301A - Miniature Test Receiver - GSM

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.

- GSM protocol support for measurements and decoding features, with future models supporting EDGE, cdma2000, WCDMA

- 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

GSM Measurements:
Channel Average Power
CW Power
Time Slot Power
Spectral Display
Interference Ratio

GSM Decoding:
BSIC
  -PLMN Color Code
  -Base Station Color Code
Cell Identity
  -Location Area Identification
  -Mobile Country Code
  -Mobile Network Code
  -Location Area Code:
Control Channel Description
  -IMSI Attach/Detach Enable
  -Number Access Grant Blocks
  -Number CCCH Physical Channels
  -Combined SDCCH
  -Multiframe Period Paging Request
  -Periodic Update Timeout
Cell Allocation Information
  -Number of Channels
  -Channel List
RACH Control Parameters
  -Max ReXmit
  -Xmit Slot Numbers
  -Cell Barred
  -Call Reestablishment Disable
  -Emergency Call Disable
  -Access Control Bitmap
Cell Options
  -Power Control Indication
  -Uplink Discontinuous Xmit State
  -Radio Link Timeout
Cell Selection Parameters
  -Cell Reselect Hysteresis
  -Maximum Transmit Power Index
  -New Establ. Causes Supported
  -Minimum Received Signal Level
Neighbor Cell Information
  -Number of Channels
  -Channel List
Additional Entries
  -GPRS Enabled Indication
  -GPRS RA Color

Radio Specifications

Band Coverage	869-894 MHz
	925-960 MHz
	1805-1880 MHz
	1930-1990 MHz
(Other band configurations are possible.)	
Amplitude Accuracy	
-100dBm to -25 dBm	+/- 1dB
RSSI Scan Rate	
Contiguous	500 channels/sec
Frequency Accuracy:	0.06 ppm
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
- Carrying Case
- Battery Cable
- Cigarette Lighter Adapter Cable

Options:
- Fully configured Laptop including installed Ethernet port & CD-ROM Drive
- Application Programming Interface Drivers and Documentation
- Pioneer Collection Tool
- BCCH Decoding
- 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