Digital Receiver Technology, Inc.

4301A+ - Miniature Test Receiver - WiMAX

Ultra-Compact and Diverse Measurement Capability

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

- WiMAX protocol support for measurements and decoding features.
- Real time decoding of WiMAX broadcast messages: FCH, DL-MAP, UL-MAP, DCD, UCD…
- Support for the most common wireless scanner measurements.
- Integrated Spectrum Analysis Tool for all protocols and bands.
- Embedded application ideal for OEM use or with DRT-supplied Pioneer™ collection tool.
- MIMO Support
- Optional removable flash device for localized logging.
- Quad-band model for switched support—band coverage of forward channels or dual-band model for both forward and reverse channels.
- Internal GPS receiver with frequency and timing discipline.
- 100 Mbps Ethernet interface to the host allows for high throughput of logged test data and remote operation.
- Small Size, Low Power, Light Weight.
- 100% DRT warranty for two (2) years.

The One Measure for Wireless Performance

May 2008
Rev. 1.5

Measurements and Features

General:

- Quad-Band Support
- Removable Flash Memory Card
- Integrated GPS Navigation and Disciplined Reference
- Software Defined Architecture
- Autonomous Operation
- Sleep Mode

WiMAX Measurements:

- Spectral Display
- Channel Response
- Carrier Frequency Offset
- Preamble Detection
- Preamble Index
- Preamble RSSI
  - Mean and Standard Deviation
- Preamble CINR
  - Mean and Standard Deviation
- DL Data Power
- DL Pilot Power
- DL Pilot CINR
- MIMO Post Processing CINR

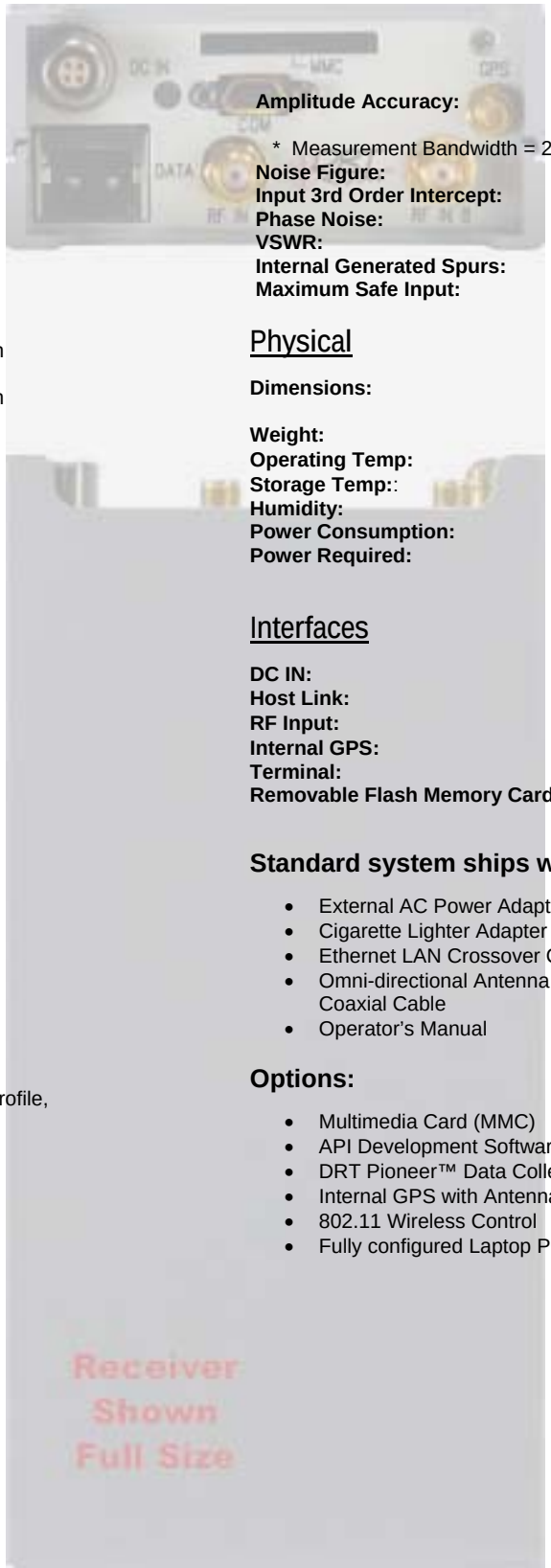
WiMAX Decoding:

- Preamble
  - Index
  - Segment
  - IDcell
- FCH
  - Used Channel Bitmap
  - Repetition Coding Indication
  - DL-MAP Length
- DL-MAP
  - Frame Duration Code
  - Frame Number
  - DCD Count
  - Base Station ID
- UL-MAP
  - UCD Count
  - Allocation Start Time
- DCD
  - Downlink Burst Profile
- UCD
  - Uplink Burst Profile

WiMAX Profile Support:

WiMAX Forum Mobile System Profile, Ver: 1.4.0

- Prof1.A 2.3*
- Prof1.B 2.3 - 5
- Prof1.B 2.3 - 10
- Prof2.A 2.305*
- Prof2.B 2.305
- Prof2.C 2.305
- Prof3.A 2.496 - 10
- Prof3.A 2.496 - 5
- Prof4.A 3.3
- Prof4.B 3.3*
- Prof4.C 3.3
- Prof5.A 3.4
- Prof5.B 3.4*
- Prof5.C 3.4
- * Consult Factory



Receiver Specifications

Band Coverage:	
WiMAX Quad-Band Tuner	2300 - 2400 MHz 2496 - 2690 MHz 3300 - 3800 MHz 5150 - 5825 MHz (Consult Factory)
Amplitude Accuracy:	-100 dBm to -25 dBm ± 1dB* -110 dBm to -100 dBm ± 2dB*
* Measurement Bandwidth = 250 kHz	
Noise Figure:	7.0 dB
Input 3rd Order Intercept:	-10 dBm
Phase Noise:	-88 dBc at 1 kHz offset
VSWR:	<2.5:1
Internal Generated Spurs:	<-115 dBm
Maximum Safe Input:	+15 dBm

Physical

Dimensions:	1.3" H x 3.0" W x 6.2" D (3.3 cm H x 7.6 cm W x 15.7 cm D)
Weight:	1.25 lbs. (567 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:	8 W (max)
Power Required:	6-30 VDC

Interfaces

DC IN:	Lemo P/N EXG.OB.304.HLN
Host Link:	RJ45 - Ethernet 100Base-T
RF Input:	SMA - 50Ω
Internal GPS:	SMB - 50Ω
Terminal:	Mini DB-9
Removable Flash Memory Card:	Multimedia Card (MMC)

Standard system ships with:

- External AC Power Adapter & Cables
- Cigarette Lighter Adapter Cable
- Ethernet LAN Crossover Cable
- Omni-directional Antenna with Magnetic Mount and Coaxial Cable
- Operator's Manual

Options:

- Multimedia Card (MMC)
- API Development Software
- DRT Pioneer™ Data Collection Software
- Internal GPS with Antenna
- 802.11 Wireless Control
- Fully configured Laptop PC

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