



DRT

Digital Receiver Technology, Inc.



4101B – Multi Measurement Platform

High Capacity and Throughput Equivalent to Multiple Scanners

DESCRIPTION

The DRT4101B is a comprehensive wireless test solution addressing the need for high capacity or multi-standard analysis of wireless cellular systems. Other products tend to require multiple scanners linked together to perform such system measurements. Thanks to the latest in digital signal processing (DSP) and microprocessor technology within the 4101B, one device offers the following capabilities:

- Simultaneous software defined support of the most popular protocols and bands within one unit, including both forward and reverse channels.
- Ability for time slot-based measurements for IS-136 and GSM.
- Support for up to 10,000 user scheduled measurement tasks.
- Support of most popular drive test measurements along with data decoding capability beyond normal drive-test scanners.
- Support of indoor IS-95 pilot measurements without the need for GPS.
- Ideal for OEM use, or can be bundled with DRT's Pioneer™ data collection tool.
- Measurement throughput capacity of up to 24 regular drive-test scanners, depending on protocols selected.
- Support for Lee criterion scanning of all channels over an entire band.
- 100 Mbps Ethernet interface to the host allows for high throughput of logged test data and remote operation.
- Integrated Spectrum Analysis Tool for all protocols and bands.
- Better Alternative to Ganged Scanners - requires less cabling and provides support for a single antenna.
- Support for Interoperability testing with DRT's Spectator™ field protocol analyzer application.
- Small size and low weight.

Air Interfaces Supported

GSM Protocol:

Channel Average Power
CW Power
Time Slot Power
Spectral Display
BSIC
Cell Identity
MCC/MNC/LAC
RACH Parameters
Neighbor Cell List
Cell Selection Parameters
GPRS Indication
Other Broadcast Messages
Forward and Reverse Channel Support
EDGE Modulation Support *
GPRS PBCCH Info

WCDMA Protocol: *

Primary and Secondary Pilot Scans
PSCH,SSCH Scans
PCCPCH Messages
Spectral Display
Pilot Multipath
Code Domain
Slot Format
Forward and Reverse Channel Support

IS-136 Protocol:

Channel Average Power
CW Power
Time Slot Power
Spectral Display
SAT, DCC, DVCC
System Identity
DCCH Structure
Neighbor Cell Information
Registration Parameters
Access Parameters
Selection Parameters
Other Broadcast Messages
Forward and Reverse Channel Support

cdma2000 Protocol:

GPS Assisted Pilot Scan
Indoor Pilot Scan
Spectral Display
Pilot Multipath
Code Domain
System Parameters
Access Parameters
Neighbor Cell List
Channel List
Quasi Orthogonal Channels
1XRTT, 1XEV-DO/DV Support *
Sync Message
Forward and Reverse Channel Support

iDEN Protocol:

Channel Average Power
SubCarrier Power
CW Power
Time Slot Power
Spectral Display
DCC
Cell Identity
MCC/NDC/LAI
Access Parameters
Neighbor Cell List
Handover Parameters
Reselection Parameters
Forward and Reverse Channel Support

* Future

Radio Specifications

Band Coverage:

All assigned protocol bands in the range of 400-2500 MHz.

Amplitude Accuracy -100dBm to -25 dBm (+/- 1dB)

RSSI Scan Rate

Contiguous, single protocol 16,000 channels/sec

Pilot Scan Time:

GPS assist IS-95/cdma2000: 250 msec
Indoor IS-95/cdma2000: 700 msec
WCDMA: 140 msec

Frequency Accuracy:

0.06 ppm

Noise Figure:

7.0 dB

Input 3rd Order Intercept

-11.5 dBm

Phase Noise

-90 dBc at 10 kHz offset

VSWR

2.5:1

Internal Generated Spurs

-115 dBm

Maximum Safe Input

+15 dBm

Physical

Dimensions:

8.13 cm H x 14.22 cm x 21.34 cm D
(3.2"H x 5.6"W x 8.4"D)

Weight:

2.81 kg (6.2 lbs.)

Operating Temp:

0° to +50° C. (+32 to +122° F.)

Power Consumption:

40 W

Power Required:

9-16 VDC

Interfaces

Host Link: RJ45 - Ethernet 100 Base T

RF Input: SMA - 50Ω

Internal GPS: SMB - 50Ω

External GPS: DB-9 – RS232

Host Application OS: Windows 2000, NT, XP

Standard system ships with:

- External AC Power Adapter & cables
- User Requested Default 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
- Training Video on CD-ROM
- Additional Software Enabled Protocols
- Advanced Measurements

The One
Measure for
Wireless
Performance



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