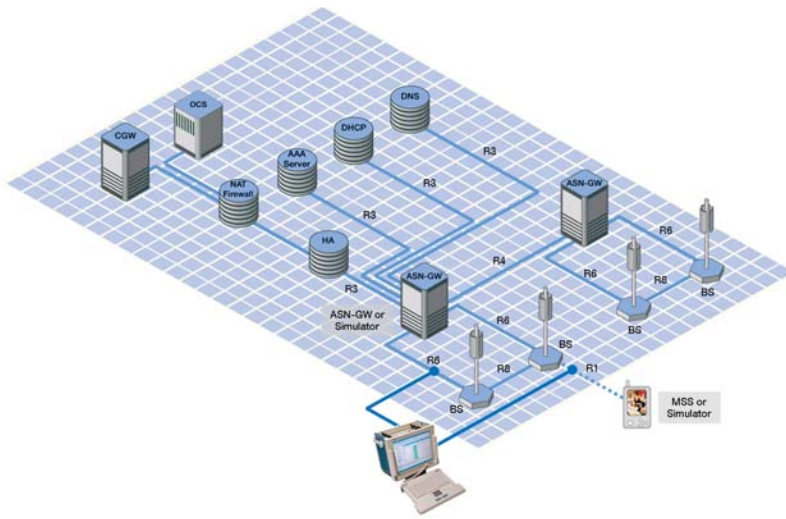# WiMAX Testing on the K1297-G35 Platform
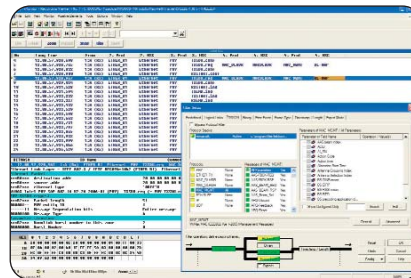
▶ **K1297-G35-WiMAX**

▶ Figure 1. WiMax Monitoring at a base station.

K1297-G35-WiMAX Takes Protocol Test to the Next Level

The combination of protocol analysis and real-time user plane Bit Error Test (BERT) allows testing of mobile WiMAX MAC and physical layer of the air interface (PHY) layer performance under varying radio conditions. These unique insights allow the correlation between Base Station behavior and end user performance.

The G35 accesses the R1 interface at a Gigabit Ethernet monitoring port on the WiMAX Base Station. By accessing the interface between Medium Access Control (MAC) and PHY, the G35 gets full visibility on protocol traffic. In addition, the G35-WiMAX can monitor the R6 interface between the base station and the Access Service Network Gateway (ASN-GW). It is possible to correlate the Base Station behavior with end user performance by viewing protocol traces on R1 and R6 at the same time. (Since R6 includes proprietary protocols, please contact us for information on the support of specific R6 implementations.)

▶ Figure 2. WiMax Monitoring Window with Filter Dialog.

▶ Figure 3. K1297-G35 Protocol Tester.

▶ **Features & Benefits**

Accelerate Time to Market: Full Protocol Visibility Down to Bit Level Speeds Up Diagnosis of Design Problems; Real-time Decoding Capabilities Reduce Time to Perform System and Interoperability Tests; Complex Filters Allow Quick Problem Isolation

Reduce Development and Support Costs: Finding Problems Earlier in the Development Cycle is Vital; G35; Solution Can Be Upgraded Following Your Needs

Message Exchanges Between the Protocol Tester and the Device Under Test

Sophisticated Filters: Reduce the Data Received to the Desired Essential Results; Several Customizable Display Formats Are Available

Record Playback: Offline Analysis with the Same Features as Online is Available for Use on a PC

R1 Interface – PHY Decode and Reassembly of the PHY Layer (Based on the Interface – SAP – Between PHY and MAC). IEEE 802.16e MAC Decode and Reassembly of the 802.16e MAC Protocol

R6 Interface – Decode of the Interface Between Base Station and ASN-GW Includes Mobility Management (Handovers)

R1 and R6 Interfaces: Presented in the Same Window, Time-ordered

PRBS-based BERT: Using Real-time User Plane Bit Error Test; Works in Parallel with Protocol Analysis and Does Not Require RF Tools

The K1297-G35-WiMAX Allows Quick and Cost-effective Diagnosis of All Network Functions, such as:

▶ Network entry

▶ Radio resource management

▶ Mobility management

The G35 Removes the Limitations of RF Tools, such as:

▶ The capability to trace on multiple, concurrent interfaces

▶ The duration and size of capture

▶ The depth of the analysis especially at higher protocol layers

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▶ Ordering Information

K1297-G35-WiMAX

Hardware and Software Bundle

G35BU001 – WiMAX Monitoring Bundle; G35 Platform includes Base SW (G35PT200), GbE board (G35SB040), WiMAX R1 protocol decodes and BERT application.

Please refer to the K1297-G35 datasheet for details at: http://www.tek.com/home/products.html.

Software Package

G35SW00-8CB – WiMAX R6 protocol decodes.

Please contact your local sales representative for availability information on manufacturer specific packages.

Hardware

G35SB040 – G35 HW Mon/Sim Interface Board Gigabit Ethernet 2x Rx/Tx.

Please refer to the K1297-G35 datasheet for details at: http://www.tek.com/home/products.html.

Support Options

G35SUP-HW-FT1-R3 – 3-year support including warranty period for G35 platform and GbE board (G35BU001).

G35SUP-0SC – Base Software support.

G35SUP-8CA – WiMAX R1 and BERT Software support.

G35SUP-8CB – R6 Software support.

Please contact your local sales representative for availability information on manufacturer specific packages.

Accessories

Please refer to the Cable Selection Guide for a wide range of accessories including cables, adapters and more at: http://www.tek.com/home/products.html.

Software Packages

A wide range of software packages (e.g., full 3G network support) are available covering more than 3000 protocols relevant in mobile networks. Please contact your local sales representative to obtain detailed information about the packages that fit your needs best.

Please refer to the K1297-G35 datasheet for details at: http://www.tek.com/home/products.html.

Contact Tektronix:

Our most up-to-date product information is available at:
www.tektronix.com

CE   ISO 9001   GPIB IEEE-488

Product(s) are manufactured in ISO registered facilities.

Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

10/06   HB/WOW   2FW-20129-1

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