

Protocol

6113 AIME Base Station Protocol Test

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A passion for performance.



- BTS Air Interface Monitor/MS Emulator for protocol analysis
- Applications in R & D, test, evaluation and support
- Protocol regression testing and fault finding
- User friendly Windows™ user interface

INTRODUCTION

The 6113E base station protocol tester provides the user with layer 1, layer 2 and layer 3 monitoring and emulation capability for the Um interface. It uses the 6113E test set and 6113E AIME (Air Interface Monitor Emulation) software package, which is a member of the ProCLAIME series of protocol testers.

The features of this powerful test and development tool allow the software designer to monitor, debug and fault find the layer 1 and protocol interchanges on the Um interface. The tester is suitable for GSM development programs as well as integration and regression testing of base stations.

PRODUCT DESCRIPTION

The 6113E AIME is a script driven software package which runs on a separate PC controlling a 6113E Digital Radio Test Set via its GPIB/IEEE488 interface.

The AIME user interface provides the user with a sophisticated script editing and control facility, captures all the layer 2 and 3 signalling exchanges with frame and time stamps and logs all the traffic frames.

USER INTERFACE

The user interface software runs under WindowsXP based environments, providing the following functionality:

- Control of the 6113E via GPIB interface
- Script editing, debugging, execution and automation
- Logging of all air interface signaling
- Logging of all traffic frames
- Filtering of viewed data
- Fully decoded display of layer 2 and 3 messages
- Remote control ethernet interface

PHYSICAL LAYER LINK FUNCTION

- GSM logical channels
- GSM 51 & 52 Multiframe formats
- Includes ability to test R99 terminals
- FR, HR, EFR and AMR (Narrowband and Wideband) circuit switched voice

SIGNALING

- All air interface GSM L2 signaling (LAPDm) and L3 system information

ADDITIONAL OPTIONS

- Additional options are available which significantly reduce the engineering time needed to develop scripts to implement test cases:
- Layer 3 encoder - a productivity tool which automatically generates correctly formatted Layer 3 script commands using plain language instructions
- Aeroflex Instruments can provide a cost-effective script development service to implement customer specific test cases
- The Base Station On-Air Service System (B.O.S.S) adds greater receive sensitivity enabling monitoring of CCCH, BCCH and SDCCH throughout a live cell area.

SPECIFICATION

RF INTERFACE

Frequency Range

GSM 850	869 to 894 MHz
E-GSM 900	880 to 960 MHz
DCS 1800	1710 to 1880 MHz
PCS 1900	1850 to 1990 MHz

Resolution

1 Hz

Level

Tx Output: -47 to -120 dBm

Rx Input : -1 to -47 dBm

BOSS Level

Tx Output: 20 to -100 dBm

Rx Input: 0 to -70 dBm

RF Layer Function

GMSK modulation and demodulation

GSM and GPRS frequency hopping

(one frequency per frame)

SYNCHRONIZATION

Conventional GSM FCCH, SCH, BCCH for synchronization

SCRIPT

Visual Basic based shell

SAX Basic scripting language and interpreter

CHINA Beijing
Tel: [+86] (10) 6539 1166
Fax: [+86] (10) 6539 1778

CHINA Shanghai
Tel: [+86] (21) 5109 5128
Fax: [+86] (21) 5150 6112

FINLAND
Tel: [+358] (9) 2709 5541
Fax: [+358] (9) 804 2441

FRANCE
Tel: [+33] 1 60 79 96 00
Fax: [+33] 1 60 77 69 22

GERMANY
Tel: [+49] 8131 2926-0
Fax: [+49] 8131 2926-130

HONG KONG
Tel: [+852] 2832 7988
Fax: [+852] 2834 5364

INDIA
Tel: [+91] 80 5115 4501
Fax: [+91] 80 5115 4502

KOREA
Tel: [+82] (2) 3424 2719
Fax: [+82] (2) 3424 8620

SCANDINAVIA
Tel: [+45] 9614 0045
Fax: [+45] 9614 0047

SPAIN
Tel: [+34] (91) 640 11 34
Fax: [+34] (91) 640 06 40

UK Burnham
Tel: [+44] (0) 1628 604455
Fax: [+44] (0) 1628 662017

UK Cambridge
Tel: [+44] (0) 1763 262277
Fax: [+44] (0) 1763 285353

UK Stevenage
Tel: [+44] (0) 1438 742200
Fax: [+44] (0) 1438 727601
Freephone: 0800 282388

USA
Tel: [+1] (316) 522 4981
Fax: [+1] (316) 522 1360
Toll Free: 800 835 2352

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www.aeroflex.com
info-test@eroflex.com



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