

# Software Concepts, Inc.

Providing embedded software development, test tools and solutions to the wireless telecom industry

## MOB-IP-SIM Mobile IP Simulators MIP-5800 & MIP-5850 Supporting the Agilent E5515



### Introduction

Software Concepts is pleased to offer the MOB-IP-SIM family of Mobile IP Simulators to provide wireless device testing and data connectivity for mobile units using Mobile IP technology for seamless high-speed data connections in a mobile environment. The simulators provide the necessary PDSN, Foreign Agent, Home Agent, and RADIUS (AAA) server functions to allow the wireless device to complete a Mobile IP connection with all registration and security functionality. The system provides access to MOB-IP-SIM supplied web content for stand-alone operation or to the public Internet. A comprehensive set of test configuration commands combined with detailed protocol logging provide a wide range of test scenarios that include normal and impaired operation, fault recovery, and performance testing needed to verify compliance with the **TIA/IS-835** standard when linked to the Agilent E5515 Communications Test Set.

The MIP-5800, developed primarily for application engineers, provides the minimum configurability needed to support Mobile IP connectivity under standard network conditions. The MIP-5850 provides additional configuration parameters to allow the network error simulation and control required to verify mobile device compliance with the IS-835 standard.

### MIP-5800 and MIP-5850 Features

- Simulation of Primary Home and Foreign Agents
- Configurable IP Addresses for all Software Components
- Data Message / Protocol Logging for Troubleshooting
- Auto Detection of Authentication Type for Registration Requests using MD5 or HMAC-MD5 with or without SPI authentication
- Web-Based Configuration using HTML Forms
- RS-232 and Ethernet Configuration Links
- Internal HTTP Proxy Server for Format Translations
- Built-in HTML Content for Stand-alone Testing
- Built-in FTP Server
- Configurable Network Address Translation

### Additional MIP-5850 Features

- Secondary HA Simulation
- Registration Response with configurable Lifetime & Code
- Configurable CHAP or PAP authentication for Simple IP
- Extended AT Command Set for message parsing, handoff control, remote test configuration, and log searching
- Configurable Error Conditions such as:
  - Missing Router Advertisement
  - PPP Link Failure
  - Delayed FA Registration Response
  - Invalid Care-of Address(es)
  - Registration Failure
- Configurable Agent Advertiser parameters such as:
  - Delay
  - Number of Repeats
  - Delay between Repeats
  - Advertisement Lifetime
  - Advertised Registration Lifetime
  - Care-of Address
  - Bit Options

## Specifications for Mobile IP Simulators MIP-5800 and MIP-5850

### General:

- Cabinet painted steel
- 8.5" W x 1.1" H x 6.0" D

### Connections:

- Power 2.1mm coaxial 9 to 12VDC, 800ma
- Serial port DE-9 DTE
- Ethernet RJ-45 (only one of three is active with standard firmware)

### LED Indicators:

- power, activity, and error

### Factory Supplied Equipment:

- MOB-IP-SIM processor (Either MIP-5800 or MIP-5850)
- DE-9 to DE-9 null modem serial cable
- Cat-5 10BaseT cable
- External 12VDC power supply (110VAC American Standard—alternatives available)
- MIP-Manager configuration utility on CD-ROM
- User manual

### Available Accessories:

- CSP-5850 Conformance test script package for the MIP-5850

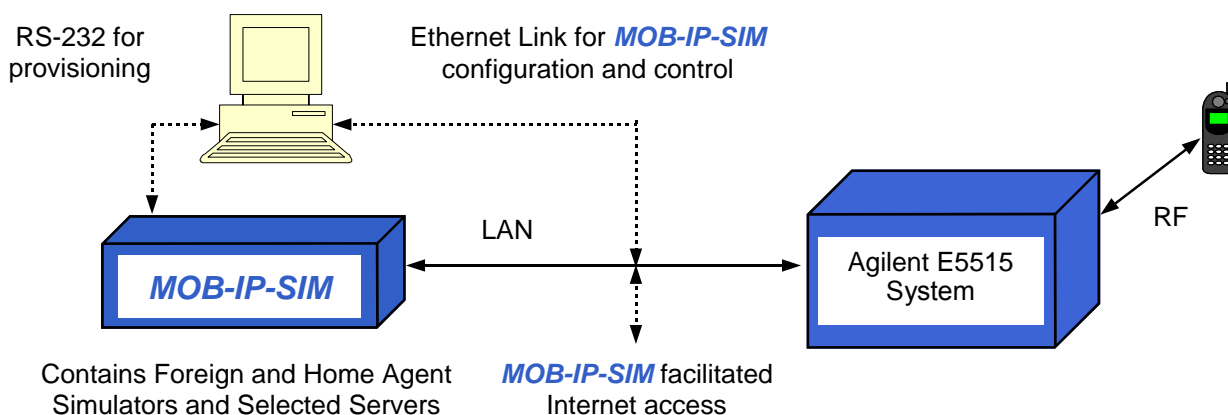
### User Interface:

- Configuration and control via MIP Manager and AT commands
- Simulator utilities accessible via any standard web browser

### Standards Conformance:

- The Mobile IP Simulators provide for testing of TIA IS-835B systems in accordance with 3GPP2 C.S0037-0 v1.0. Mobile IP is conformant to RFC 3344.

## Block Diagram



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