

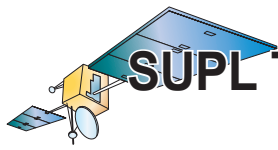
Product Brochure

Anritsu

MX848600A

SUPL Simulation Server





SUPL Terminal Function Tests and Software Emulation

Following the expanding market for Location-Based Services (LBS) supporting emergency use of mobile terminals as Personal Navigation Devices (PND), more mobile manufacturers are now linking GPS signals with mobile networks by incorporating high-accuracy A-GPS*1 positioning functions into their terminals. In particular, SUPL*2 A-GPS is being widely adopted to receive global positioning services using packet data, irrespective of the communications carrier and location. Anritsu's MX848600A SUPL Simulation Server is a software package for performing tests meeting the SUPL v1.0 standard of the Open Mobile Alliance (OMA). Installing it in a PC simplifies testing, including ULP*3/RRLP*4 layer normal/sub-normal sequence tests and assistance data parameter variation tests to support efficient function tests and software emulation for various typical 2G and 3G mobile SUPL terminals (SET*5).

Features

- Full OMA SUPL v1.0 Compliance
- TLS Authentication Function
- Objective SUPL Function Evaluation using Standalone Terminal Emulator
- Any Defined Test Sequence and Parameters
- Accessory Sample Scenarios
- External Control Function for 24/7 Testing
- Encode/Decode SUPL (ULP/RRLP) Messages
- Evaluation Results Reflected in Real Terminal Tests

Key Applications

- Terminal Emulator (OS, Middleware, etc.) SUPL Function Evaluation
- 2G/3G Terminal A-GPS Function Tests, Performance Tests
- ULP/RRLP Normal/Sub-normal/Abnormal Sequence Tests
- TLS Normal Sequence Test
- Assistance Data Parameter Variation Test

- *1: Assisted GPS
- *2: Secure User Plane Location
- *3: User Plane Location Protocol
- *4: Radio Resource LCS Protocol
- *5: SUPL Enable Terminal

Full OMA SUPL v1.0 Compliance

The MX848600A SUPL Simulation Server software meets the Open Mobile Alliance (OMA) SUPL v1.0 standards. Moreover, it supports verification of popular SUPL A-GPS terminals used worldwide by implementing functions based on the following international standards.

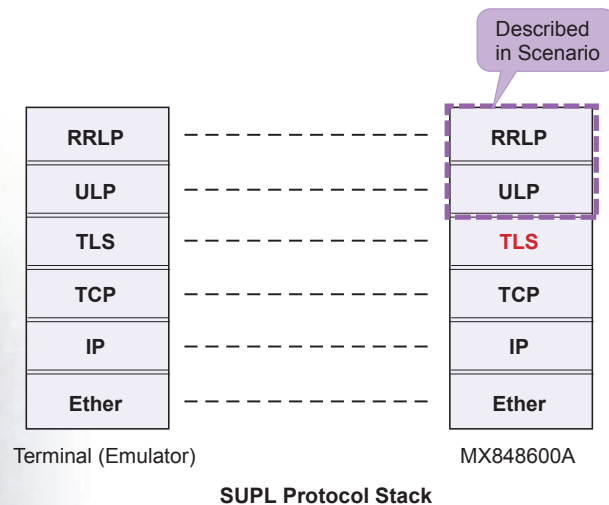
Reference Standards

- SUPL: OMA-AD-SUPL-V1_0-20070615-A
- ULP: OMA-TS-ULP-V1_0-20070615-A
- RRLP: 3GPP TS44.031 Radio Resource LCS Protocol v5.12.0
- SSL/TLS: IETF RFC 2246 The TLS Protocol v1.0

TLS Authentication Function

The TLS (Transport Layer Security) authentication function is built into the MX848600A software. The TLS normal sequence test*6 using server authentication is supported by supplying a PEM-format CA certificate and private key file to the SET side.

*6: The TLS sub-normal and abnormal tests are not supported and neither is client authentication.



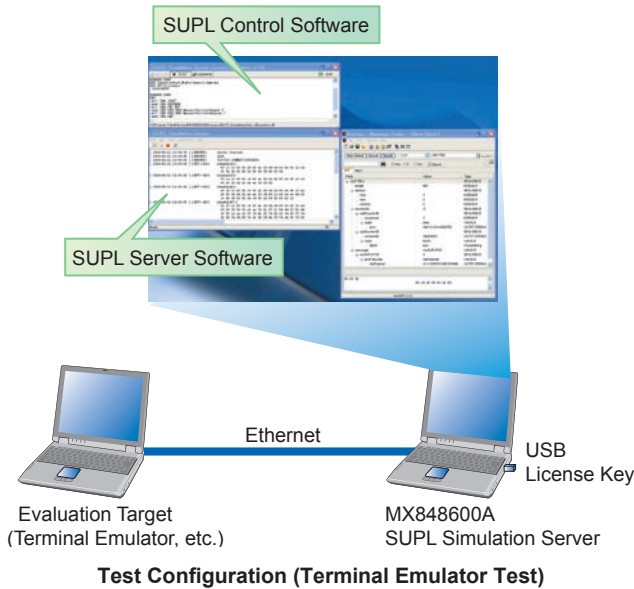


Efficient SUPL Terminal Emulation Environment

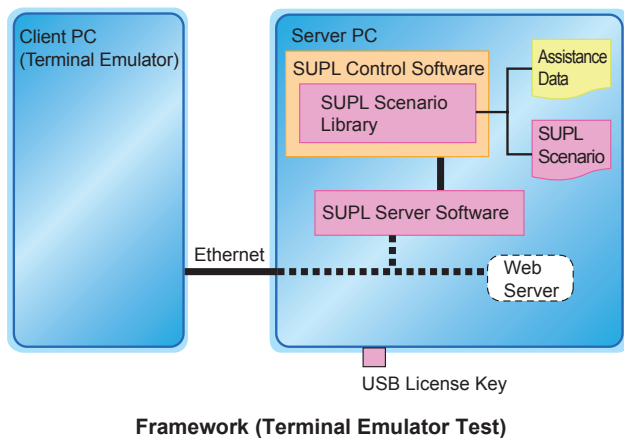
Objective SUPL Evaluation using Standalone Terminal Emulator

The MX848600A uses a high-reliability platform architecture based on Anritsu's long experience in mobile terminal protocol evaluation to deliver objective and highly reliable SUPL Location Platform tests*.

*: Only one evaluation target (SET) can be connected to the SUPL simulation server. However, tests can also be run on one PC.

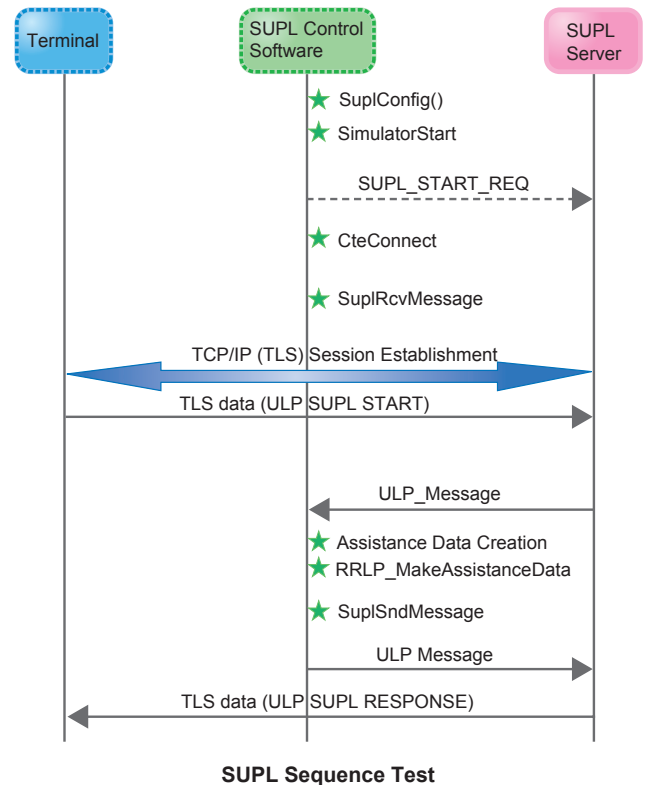


Any IP address can be set in the SUPL Server software and when the MX848600A is installed in the same PC running a Web server as shown below, application tests, etc., using position results can also be performed.



Any Defined Test Sequence and Parameters

The ULP/RRLP protocol sequence, message elements and parameters passing between the terminal and SUPL server can be freely defined in C++ scenarios. In addition to the usual normal sequence tests, sub-normal and abnormal sequence tests, which are not supported by a real server, can be performed too, offering flexible fault testing.

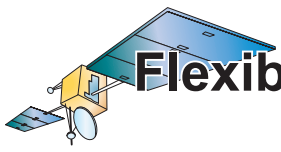


Accessory Sample Scenarios

Since sample scenarios describing basic SUPL sequences (Proxy Mode, SET Initiated support) are bundled with the control software as accessories, testing can start immediately.

External Control Function for 24/7 Testing

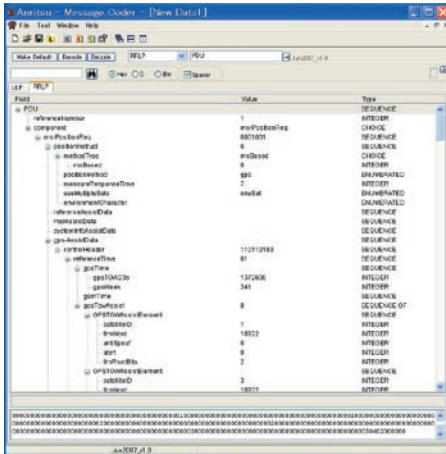
Commands such as scenario selection and execution can be remotely controlled from an external PC, supporting time-saving, 24/7 testing by configuring an SLP (SUPL Location Platform) test rig on a PC with installed terminal emulator.



Flexible SUPL Terminal Simulation Environment

Encode/Decode SUPL (ULP/RRLP) Messages

Not only does the SUPL control software support scenario execution, it also encodes the GPS Almanac and Ephemeris data defined in the assistance data file in ASN.1 format and sends the assistance data to the terminal. In addition, the SUPL server software displays and saves the communications log with the terminal. Messages can be decoded to find problems using both the accessory MessageCoder tool as shown below and other commercial IP analysis tools.

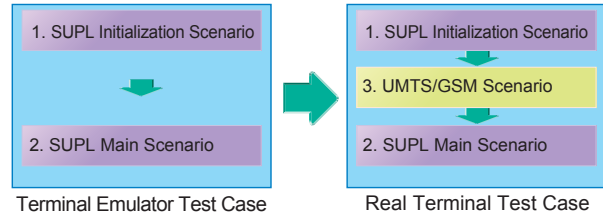


RRLP Message Analysis

Evaluation Results Reflected in Real Terminal Tests

Test efficiency is increased by using SUPL test scenarios created in the MX848600A terminal emulation environment in real terminal tests. Reflecting upstream evaluation results in real terminal tests helps clarify evaluation tasks and shortens the development cycle.

The SUPL sequence and parameters detected by the terminal emulator can be applied to real terminals.



Test Scenario-Sharing

Ordering Information

Please specify the model/order number, name and quantity when ordering. The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Name
MX848600A	Software SUPL Simulation Server (CD-ROM with software and USB license key)
MX848600A-TS110 MC0011A	Technical Support Service 1-year Technical Support Service Website Access Key (For downloading software upgrades)



Specifications are subject to change without notice.

Anritsu Corporation

5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan
Phone: +81-46-223-1111
Fax: +81-46-296-1264

• U.S.A.

Anritsu Company

1155 East Collins Blvd., Suite 100, Richardson,
TX 75081, U.S.A.
Toll Free: 1-800-267-4878
Phone: +1-972-644-1777
Fax: +1-972-671-1877

• Canada

Anritsu Electronics Ltd.

700 Silver Seven Road, Suite 120, Kanata,
Ontario K2V 1C3, Canada
Phone: +1-613-591-2003
Fax: +1-613-591-1006

• Brazil

Anritsu Eletrônica Ltda.

Praca Amadeu Amaral, 27 - 1 Andar
01327-010-Paraisópolis, São Paulo-Brazil
Phone: +55-11-3283-2511
Fax: +55-11-3288-6940

• Mexico

Anritsu Company, S.A. de C.V.

Av. Ejército Nacional, No. 579 Piso 9, Col. Granada
11520 México, D.F., México
Phone: +52-55-1101-2370
Fax: +52-55-5254-3147

• U.K.

Anritsu EMEA Ltd.

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.
Phone: +44-1582-433200
Fax: +44-1582-731303

• France

Anritsu S.A.

16/18 avenue du Québec-SILIC 720
91961 COURTABOEUF CEDEX, France
Phone: +33-1-60-92-15-50
Fax: +33-1-64-46-10-65

• Germany

Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1
81829 München, Germany
Phone: +49-89-442308-0
Fax: +49-89-442308-55

• Italy

Anritsu S.p.A.

Via Elio Vittorini 129, 00144 Roma, Italy
Phone: +39-6-509-9711
Fax: +39-6-502-2425

• Sweden

Anritsu AB

Borgarfjordsgatan 13, 164 40 KISTA, Sweden
Phone: +46-8-534-707-00
Fax: +46-8-534-707-30

• Finland

Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland
Phone: +358-20-741-8100
Fax: +358-20-741-8111

• Denmark

Anritsu A/S

Kirkebjerg Allé 90, DK-2605 Brøndby, Denmark
Phone: +45-72112200
Fax: +45-72112210

• Spain

Anritsu EMEA Ltd.

Oficina de Representación en España

Edificio Veganova
Avda de la Vega, n° 1 (edf 8, pl 1, of 8)
28108 ALCOBENDAS - Madrid, Spain
Phone: +34-914905761
Fax: +34-914905762

• Russia

Anritsu EMEA Ltd.

Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.
Russia, 125009, Moscow
Phone: +7-495-363-1694
Fax: +7-495-935-8962

• United Arab Emirates

Anritsu EMEA Ltd.

Dubai Liaison Office

P O Box 500413 - Dubai Internet City
Al Thuraya Building, Tower 1, Suit 701, 7th Floor
Dubai, United Arab Emirates
Phone: +971-4-3670352
Fax: +971-4-3688460

• Singapore

Anritsu Pte. Ltd.

60 Alexandra Terrace, #02-08, The Comtech (Lobby A)
Singapore 118502
Phone: +65-6282-2400
Fax: +65-6282-2533

• India

Anritsu Pte. Ltd.

India Branch Office

3rd Floor, Shri Lakshminarayan Niwas, #2726,
HAL 3rd Stage, Bangalore - 560 038, India
Phone: +91-80-4058-1300
Fax: +91-80-4058-1301

• P.R. China (Hong Kong)

Anritsu Company Ltd.

Units 4 & 5, 28th Floor, Greenfield Tower, Concordia Plaza,
No. 1 Science Museum Road, Tsim Sha Tsui East,
Kowloon, Hong Kong
Phone: +852-2301-4980
Fax: +852-2301-3545

• P.R. China (Beijing)

Anritsu Company Ltd.

Beijing Representative Office

Room 1515, Beijing Fortune Building,
No. 5, Dong-San-Huan Bei Road,
Chao-Yang District, Beijing 10004, P.R. China
Phone: +86-10-6590-9230
Fax: +86-10-6590-9235

• Korea

Anritsu Corporation, Ltd.

8F Hyunjuk Building, 832-41, Yeoksam Dong,
Kangnam-ku, Seoul, 135-080, Korea
Phone: +82-2-553-6603
Fax: +82-2-553-6604

• Australia

Anritsu Pty. Ltd.

Unit 21/270 Ferntree Gully Road, Notting Hill,
Victoria 3168, Australia
Phone: +61-3-9558-8177
Fax: +61-3-9558-8255

• Taiwan

Anritsu Company Inc.

7F, No. 316, Sec. 1, Neihu Rd., Taipei 114, Taiwan
Phone: +886-2-8751-1816
Fax: +886-2-8751-1817