

Secure User Plane Location Hosted Data Service

A SUPL 1.0 compliant service delivering out-of-the-box Assisted-GPS support for any standard device.



XYbrid **SUPL™**
light edition

SUPL is an Open Mobile Alliance (OMA) Standard for Wireless Device Location Determination

Overview

Rx Networks' XYBRID SUPL LE™ (Secure User Plane Location Light Edition) data service provides SUPL 1.0 AGPS compliant devices with real-time GPS assistance, enabling rapid determination of position. The service targets mobile handset manufacturers, Location Based Service (LBS) providers and mobile operators who want to provide AGPS but do not yet need or want to invest in a full-featured mobile location center.

Many mobile applications require knowledge of position and, in order to deliver a high quality user experience, user location must be determined in mere seconds. XYBRID SUPL LE provides this fast time to first fix. By using a global base station almanac, XYBRID SUPL LE also provides worldwide AGPS coverage whether a user is on their home network or roaming.

Terminal manufacturers can use any SUPL 1.0 client to access XYBRID SUPL LE, providing their customers a fully operational AGPS experience right out of the box. This broadens user appeal for handsets and increases usage of LBS applications, increasing revenues for both OEMs and mobile operators.

SUPL LE is a SET (SUPL Enabled Terminal) Initiated service. Network Initiated requests, such as for asset tracking applications, can be supported by sending position requests through SMS messages to the client device. The client device then requests position and AGPS assistance from the SUPL LE server.

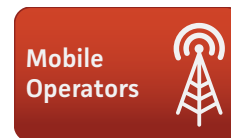
XYBRID SUPL LE offers two deployment choices:

Shared Hosted Service: A turnkey solution that is shared with other customers and does not require any additional server resources.

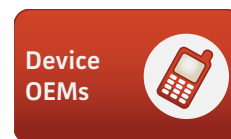
Virtual Private Hosted Service: A turnkey solution using Rx Networks' infrastructure that lets customers brand the service as their own and have dedicated server resources.



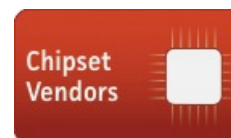
- ✓ SUPL 1.0
- ✓ Assisted-GPS
- ✓ Global Access
- ✓ Global Base Station Almanac
- ✓ Reliable
- ✓ Low Cost
- ✓ Hosted Service



- Cost effective AGPS without requiring the high cost of running your own SUPL server.
- Ideal way to service your users when roaming.
- Multi-GNSS chipset support
- Consistent user-experience
- Improved LBS/E-911 user experience



- Provides worldwide AGPS coverage out of the box



- Complements your SUPL client

Features and Benefits

SET Initiated Transactions: Responds to handset requests for assistance on SUPL Enabled Terminal (SET) initiated transactions.

Home Network and Roaming Support: Use as a primary SUPL data source to provide AGPS services within your home network or as a platform to support your subscribers when roaming. For roaming, otherwise unserviceable requests (due to a user roaming onto networks for which you do not have a base station almanac) can be rerouted to XYBRID SUPL LE for processing.

Global Coverage: Globally accessible and supported by a worldwide base station almanac means ubiquitous AGPS coverage. The XYBRID SUPL LE service sources its assistance data from Rx Networks' GPStream GRN™ global reference network of GNSS monitoring stations.

Cost Optimization: Highly scalable from even the smallest of applications to large scale LBS provider and operator needs.

Reliability: The XYBRID SUPL LE service maintains a carrier-grade, 99.999% service level availability by using a geo-redundant, fault-tolerant, and secure delivery infrastructure - one of the many reasons carriers rely on Rx Networks as part of their E-911 service.

Device Interoperability: Works with new or existing SUPL 1.0 standard compliant devices. This ensures device compatibility across OEMs.

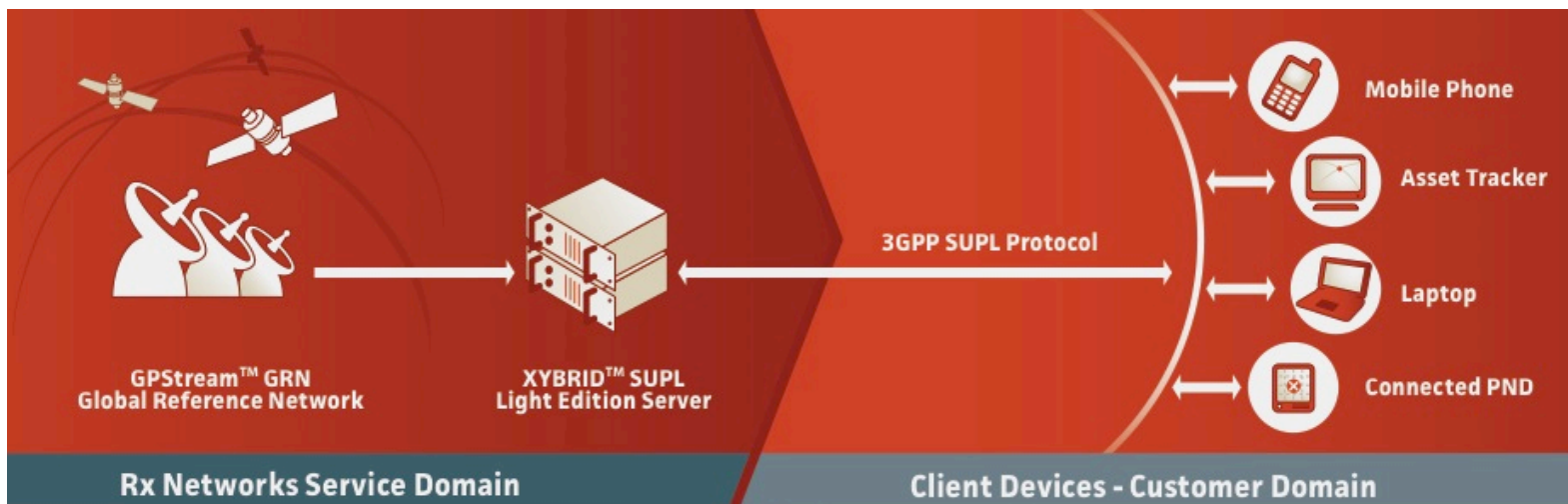
Specifications

Standards Compliance

- OMA SUPL 1.0 compliance for SET initiated AGPS requests.
- ULP protocol (OMA TS-ULP-V1.1) for the transactions between the SET and the XYBRID SUPL LE Server.
- ASN 1.0 over TCP/IP for the ULP protocol.

Authentication and Authorization

- PSK-TLS Authentication based on a private key shared between the server and the SET.
- Authorization based on all standard device ID data fields as well as the IMSI field for SIM card based authentication or the IMEI field for OEM based, operator independent manufacturer authentication.



About Rx Networks

Solving Every "Where". Rx Networks is a mobile positioning technology company that develops hybrid positioning and assisted-GPS solutions that unify any available GPS, GLONASS, cell tower or Wi-Fi information. These solutions, already licensed by leading GNSS semiconductor vendors, device OEMs, network equipment vendors, and mobile operators, bring instant location awareness and help deliver an unmatched mobile location user experience on any device and for any application. GPStream GRN™ provides global real-time and long-term prediction GPS/GLONASS reference data for use by any mobile network location server. GPStream PGPS™ adds GPS and GLONASS extended ephemeris support to increase the sensitivity and acquisition speed of any GNSS chipset, while XYBRID RT™ and XYBRID SUPL LE™ combine Wi-Fi/Cell positioning with real-time A-GPS/GLONASS support to extend the location performance of GNSS chips in difficult areas, such as indoors or urban cores.



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