



SKYLARK™
DGNSS

Skylark DGNSS

PRODUCT SUMMARY

Precise Positioning for DGNSS Enabled Platforms

Swift Navigation's Skylark DGNSS (differential global navigation satellite system) is a cloud-based service that delivers real-time, high-precision differential GNSS corrections to mobile handsets, positioning engine modules and mass-market applications. Skylark DGNSS enables lane level location accuracy, in turn enabling new consumer location experiences and improving location based services to increase efficiency. The suite of Skylark products is built from the ground-up for scale, resilience, ease of integration and delivers seamless corrections to continents across the globe including the United States, Europe, South Korea, Japan, Taiwan and Australia.

ENHANCING TODAY'S MOBILE AND IOT APPLICATIONS

Skylark DGNSS delivers high-precision location to increase productivity of modern corporate and consumer applications. Improving accuracy allows mobile and delivery customers to benefit from improved mapping, targeted advertising and other location-based services (LBS), all typically without requiring any change to the existing hardware, code base or installed application.

DIFFERENTIATING WITH DGNSS

Skylark DGNSS is ideal for small battery powered devices with size constrained antennas. It offers a low power, lightweight method to improve accuracy, and unlike RTK it is not dependent on continuous, strong signal level tracking. It also offers a substantially reduced processing and data receipt burden on the system compared to RTK.

INDUSTRY STANDARD IMPLEMENTATION

Skylark DGNSS implements industry standard RTCM MSM1 messages with cloud-based streaming corrections with corresponding Skylark client library installed on the target device. The Skylark client library authenticates the device with the Skylark cloud based service using unique credentials that provides for secure GNSS corrections and optional usage tracking for each customer implementation. Skylark DGNSS (NTRIP) is widely supported by most mainstream positioning engines.

EASILY INTEGRATED

Corrections from Skylark DGNSS are easily integrated into your current platform and have been tested and validated with industry-leading platforms with integrated positioning engines. Skylark DGNSS offers a portable client library for integration into the OEM (original equipment manufacturer) domain and provides D-GNSS MSM1 corrections in RTCM format.

ONLINE MANAGEMENT FOR MASS-MARKET APPLICATIONS

Skylark DGNSS provides an online management tool that enables individual users or large institutional customers to set-up corrections services for one end point to millions. Authentication credentials and usage tracking (optional) can be enabled for groups of or individual devices.

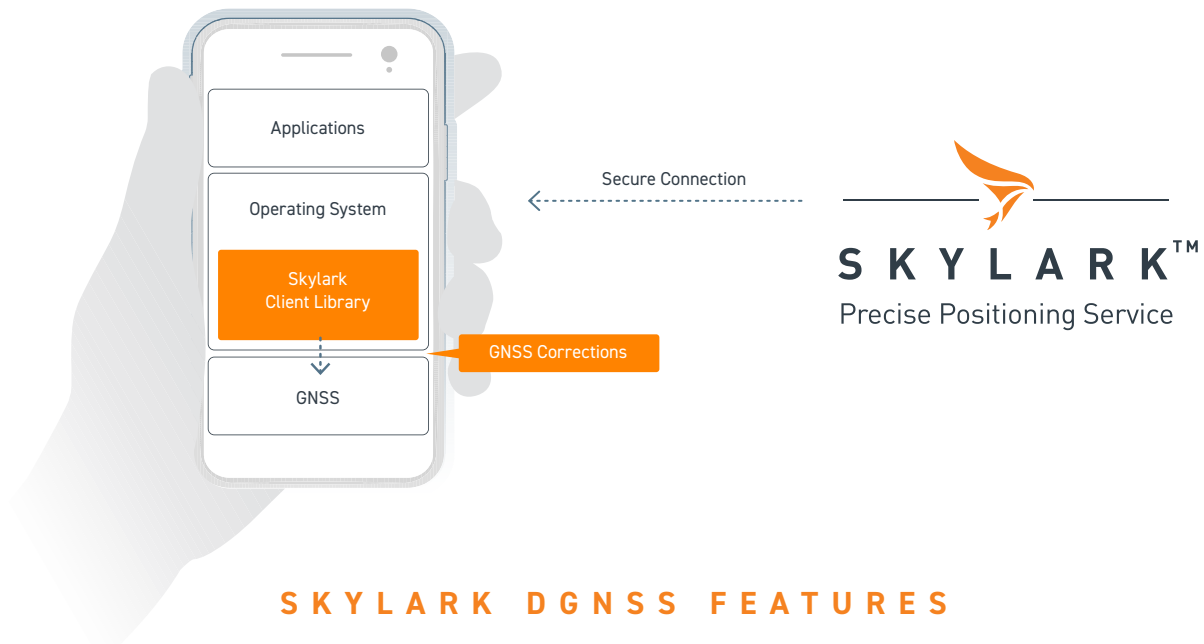
BENEFITS

- Supported by wide range of chipsets, modules and devices
- Enables meter level accuracy*
- Improves the efficiency of today's applications
- Most applications require no change to gain precision location
- Scalable to support billions/millions of devices

FEATURES

- Industry standard implementation
- Broad availability around the world
- Supports GPS, Galileo and BeiDou GNSS constellations
- Proven high availability
- Secure with unique customer authentication

* Accuracy measured in open sky drive scenarios. Actual system performance may vary, dependent but not limited to: environmental, receiver and antenna characteristics and location of operation.



SKYLARK DGNSS FEATURES

Simple and Easy to Use	✓
Fast Time-to-Market	✓
Corrections Distribution	Directly Through Skylark or Indirectly Through Customer Backend ¹
Supported GNSS Signals	GPS L1CA, L2C, L5 Galileo E1, E5b, E5a Beidou B1i, B2a
Supported 3rd-Party Clients	3rd Party GNSS Receivers supporting MSM1 Broadcom BCM4776x Other Leading-Edge Mobile Platforms
Accuracy	Sub meter ²
Corrections Availability	99.9% Minimum
Interface	NTRIP 1.0 / 2.0
Data Formats	RTCM 3.2 MSM1

¹ For customers wanting to distribute Skylark corrections through their backend, please contact sales at sales@swiftnav.com to learn more.

² Actual system performance may vary, dependent but not limited to: use-case dynamics, receiver and antenna characteristics, location of operation.