swift NAVIGATION

SKYLARK™
Cloud Corrections Service

Skylark™
PRODUCT SUMMARY

Cloud Corrections

Swift Navigation's Skylark is a wide area, cloud-based GNSS corrections service that delivers real-time high-precision positioning to autonomous vehicles. Skylark is now available throughout all of the contiguous U.S. (CONUS). Built from the ground-up for autonomy at scale, Skylark enables lane-level positioning, fast convergence times and high integrity and availability required by mass market automotive and autonomous applications.

HIGH-PRECISION CORRECTIONS

Skylark creates a precise and constantly adapting model of the Earth's atmosphere and other errors affecting GNSS signals. These models are computed in the cloud based on data collected from Swift's hundreds of GNSS reference stations around the globe. This correction data is delivered over the Internet to the user where it can be seamlessly accessed anywhere within the Skylark network. Connected users simply turn on their devices to get the correction stream they need.

ACCURACY, INTEGRITY AND FAST CONVERGENCE

Skylark is built from the ground up for the needs of emerging autonomous applications, with performance to match—10 cm accuracy* delivers the performance autonomous vehicles require, enabling ADAS, V2X and Autonomous Driving use cases that require lane-level positioning. Skylark reduces initialization times to seconds, ensuring high-accuracy and high-integrity positioning is available when you need it. Skylark is designed for the most demanding safety-of-life critical applications. When used with Swift's Starling positioning engine, Skylark is capable of delivering Protection Levels (PL) down to 1 m and Target Integrity Risk (TIR) down to 10^{-7} / hour. Skylark supports automotive functional safety standard ISO 26262 (ASIL B).

MASS MARKET SCALABILITY

From its GNSS reference network to its use of the cloud, Skylark is built for scale. Skylark is a secure and highly available cloud service delivering a continuous stream of real-time corrections. Skylark supports State Space Representation (SSR) formats for broadcast to millions of devices, reducing data costs and bandwidth. Ntrip and RTCM are also supported for compatibility with existing equipment. Skylark is designed for large scale deployments in mass market applications, with seamless coverage over continents. It supports state-of-the-art security and enterprise management features so you can integrate tightly with your existing infrastructure.

BENEFITS

- Designed for Autonomy
- Lane Level Positioning with Fast Initialization
- High Integrity and Availability for Safety-of-Life Critical Applications
- Scalable to Millions of Connected Vehicles and Devices
- Enterprise Security and Back-End Integrations

FEATURES

- < 10 cm Accuracy*
- < 20 Seconds Convergence to Sub-Meter Accuracy
- Full CONUS (Contiguous United States) Coverage
- Integrity with PLs down to 1 m and TIR down to 10^{-7} / hour
- Supports SSR Broadcast Corrections Format
- Provides Corrections for GPS L1 / L2 and Galileo E1 / E5b
- RTCM v3.1 and v3.2 MSM over Ntrip 2 Supported for Compatibility
- Automotive Functional Safety to Support ASIL B (ISO 26262)

* 10 cm 50% accuracy measured over 24 hours stationary. Actual system performance may vary, dependent but not limited to: environmental, receiver and antenna characteristics.

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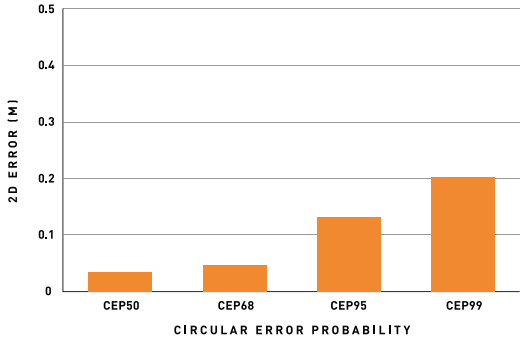
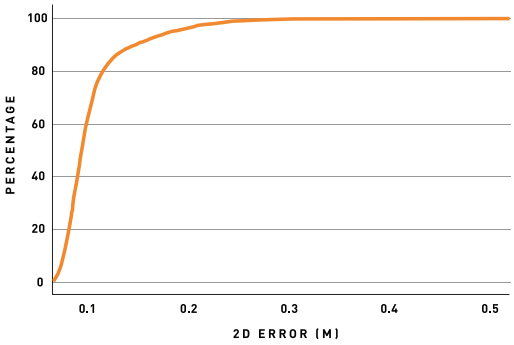
INFRASTRUCTURE AS A SERVICE

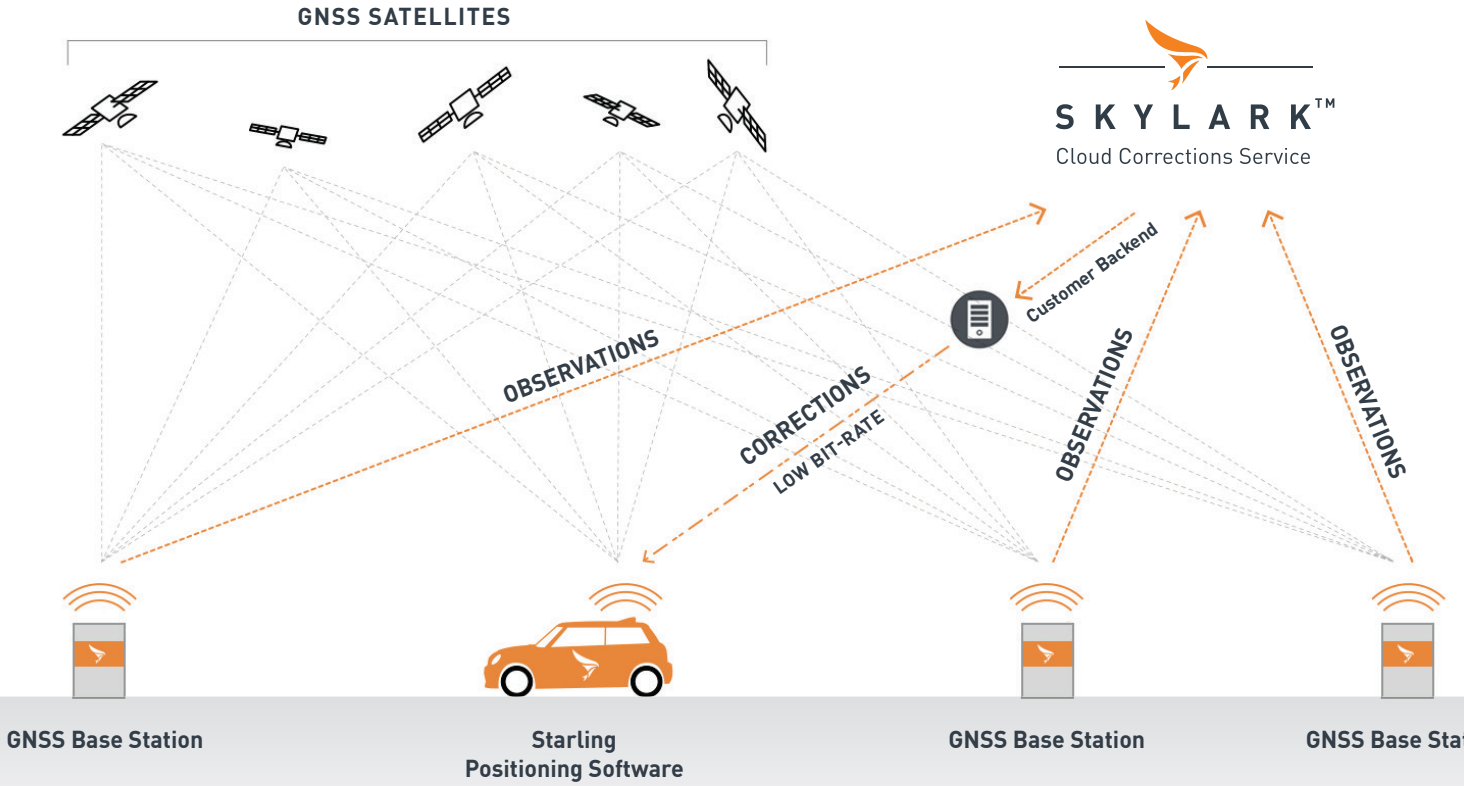
Skylark provides a simple path for customers to achieve lane-level accuracy over a wide area. Skylark's CONUS coverage is now fully operational, with plans to expand to Europe, Asia and worldwide. By moving the service to the cloud, Skylark creates a platform for accurate positioning for a wide variety of applications and industries.

LEVERAGES LEADING-EDGE TECHNOLOGY

Skylark is hardware-independent, giving customers choice in today's rapidly improving and commodifying GNSS sensor ecosystem. OEMs are able to benefit from the lane-level positioning Skylark delivers using a host of third-party receivers and microprocessors in addition to working seamlessly with Swift's Starling software positioning engine and Swift's hardware product line including Piksi® Multi and its ruggedized versions, Duro® and Duro Inertial. Skylark also supports third-party receivers using industry standard protocols.







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