

Precision GNSS Module Evaluation Platform

PRODUCT SUMMARY

Swift Navigation's Precision GNSS Module (PGM) Evaluation Platform—featuring Swift's mPCIe format PGM receiver installed in an IoT compute platform—provides a turn-key demonstration of Swift's precision positioning solution. Available in an easy-to-evaluate kit, the PGM Evaluation Platform is ideal for customers building industrial, last mile and Internet of Things (IoT) platforms that require the ability to evaluate the suitability of this GNSS L1/L5 solution in such applications, including the ability to quickly install on a target platform and test performance in the field. Utilizing Swift's PGM to deliver real-time precision navigation utilizing STMicroelectronics TeseoV chipset in a Quectel LG69T-AP module, this platform is designed specifically to demonstrate Swift's Starling® positioning engine running on a host application processor. When used with Swift's Skylark™ cloud-based precise positioning service, the PGM Evaluation Platform delivers even stronger performance and accuracy levels.

READY OUT-OF-THE-BOX

Swift's PGM Evaluation Platform is available in an easy-to-evaluate kit that ships with all necessary components to quickly evaluate performance on a test platform; including a multi-band antenna, power cables and a 6-month Skylark license.

EASILY CONFIGURABLE

The PGM Evaluation Platform is easily configurable, supports industry standard protocols and can be operated using Swift's suite of utilities for fast evaluation.

EASY, POST-EVALUATION INTEGRATION

The path to volume production could not be simpler. For applications with a suitable mini peripheral component interconnect express (mPCIe) slot available, customers can utilize Swift's PGM receiver. For high-volume platforms without a PCIe slot, customers can design the Quectel LG69T-AP module directly into their printed circuit board (PCB).

RUGGED HOUSING

Encased in a ruggedized, fanless housing unit and with options for bolt-down mounting, the PGM Evaluation Platform is designed to withstand the rigors of field testing.

ACTIVE ANTENNA SUPPORT

Featuring integrated antenna bias, the PGM Evaluation Platform supports an active GNSS antenna for best performance. The module supports current sensing, and short circuit protection in antenna bias, to enable high-reliability vehicle installs and ongoing diagnostics information.

SSR BASED TO OPTIMIZE DATA BANDWIDTH USAGE FOR IoT APPLICATIONS

The PGM Evaluation platform utilizes the PGM that supports end-to-end State Space Representation (SSR) format corrections when connected to Swift's wide-area corrections service, Skylark. SSR format corrections reduce bandwidth usage compared to traditional Observation Space Representation (OSR) while supporting highest performance.

INTEGRATED IMU & VEHICLE INPUT CAPABILITY

The PGM Evaluation platform demonstrates PGMs dead reckoning capabilities with a leading-edge integrated ASM330 Inertial Measurement Unit (IMU) to provide continual high-precision positioning together with the ability to receive vehicle sensor input, such as velocity. The state-of-the-art integrated algorithms in Starling fuse between the IMU data, GNSS measurements, wheel ticks and vehicle dynamics model to provide lane-accurate positioning where GNSS alone would fail.



BENEFITS

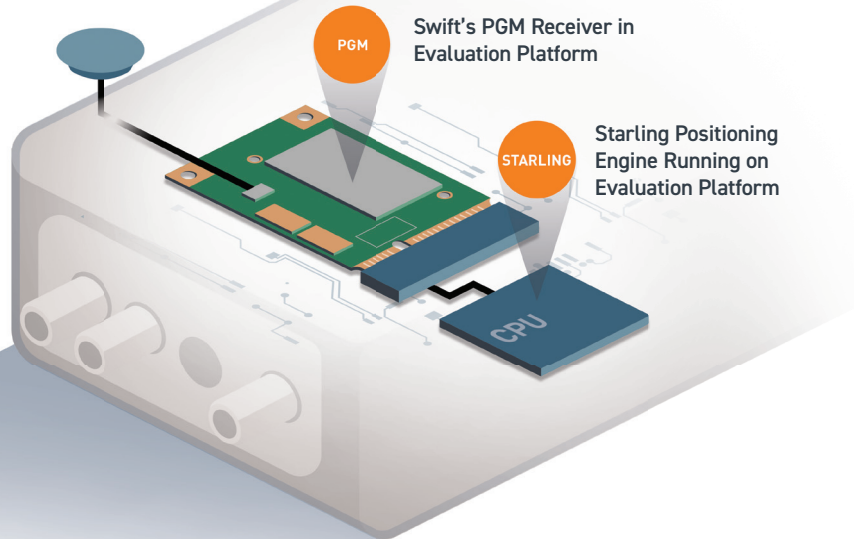
- Simple Setup
- < 4 cm Accuracy*
- < 20 Seconds Convergence to Sub-Meter Accuracy
- Dead Reckoning Support Delivers High Performance in Urban Areas
- Utilize ST Micro's Leading-Edge TeseoV Measurement Engine in a Quectel Module

FEATURES

- Lane-Level Accurate Positioning
- SSR Format Corrections Support
- Industry Standard mPCIe Format
- Supports GPS L1CA & L5, BeiDou B1 & B2a, Galileo E1 & E5a, SBAS
- Integrated IMU
- Digital Wheel Tick / Reverse and CAN Inputs
- 12 V Power Support
- Ethernet, Wi-Fi AP, Wi-Fi Client, RS232 Serial Port, USB
- Configure two PGM Evaluation Platforms to support dual-antenna heading

*Actual system performance may vary, dependent but not limited to: test environment, use-case dynamics, and antenna characteristics. 4 cm 50% accuracy measured over 24 hours stationary with open sky using Skylark SSR and a GPS1000 mini-survey antenna.

PGM Evaluation Platform is Ideal for Evaluating the Suitability of the PGM in a Variety of Industrial Applications



AUTOMOTIVE



RAIL



LAST MILE



MACHINE
CONTROL



MICROMOBILITY

DIMENSIONS

115 mm x 82 mm x 34 mm (WxHxD)

