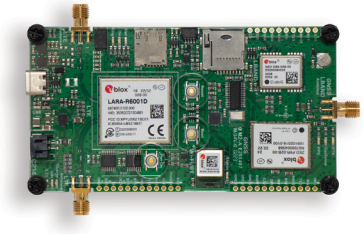
Product summary

XPLR-HPG-2

High precision GNSS explorer kit

Compact platform for u-blox high precision GNSS solutions

- Prototyping kit for cm-level accuracy positioning applications
- High precision GNSS, LTE, Wi-Fi, Bluetooth, and antennas
- PointPerfect GNSS augmentation service
- Dual-core MCU for applications
- Software components and demo apps in source code



Product description

The XPLR-HPG-2 explorer kit provides a complete platform for evaluation and prototyping of u-blox's high precision GNSS (HPG) solution with the PointPerfect GNSS augmentation service. With its GNSS and communication modules it can access correction data from a satellite broadcast via L-band satellite GNSS receiver (use case 1) or IP connectivity using LTE (use case 2) or Wi-Fi (use case 3).

PointPerfect, the u-blox GNSS augmentation service, provides correction data, delivered via the Thingstream IoT service delivery platform. The XPLR-HPG-2 supports NTRIP so can also be used with other error correction services.

The NINA-W10 wireless MCU module with Bluetooth and Wi-Fi connectivity runs the HPG software and controls the communications between the u-blox wireless modules.

The HPG software runs on top of ubxlib, a set of software modules to connect u-blox modules with concise C APIs.

The hardware design and software source code are available on Github so that customers can modify code as needed, add functionality, and start developing their own product.

Electrical data and interfaces

Power supply	USB and onboard battery (not included)
Application MCU	Dual-core with 8 MB flash and 520 kB RAM
Data storage	SD card slot for max 32 GB (card not included)
Antennas	Bluetooth and Wi-Fi on NINA-W106, two LTE, one GNSS with L-band support

Integrated positioning and communication on one board

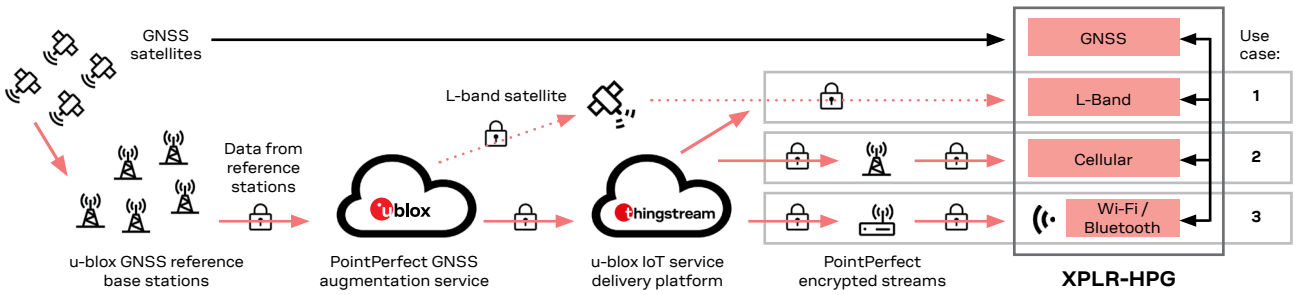
NINA-W106	Dual-core MCU for applications and Wi-Fi 4 / Bluetooth v4.2 connectivity
ZED-F9R	High precision GNSS receiver module with dead reckoning
NEO-D9S	L-band GNSS correction receiver module
LARA-R6001D	LTE Cat 1 multi-mode module to receive PointPerfect correction data via mobile network
PointPerfect Correction service	PointPerfect based on SPARTN messaging format and MQTT delivery protocol.

Kit includes

- C214 application board with u-blox modules
- LTE and GNSS antennas
- Application software example in source code
- Trial PointPerfect and AssistNow location services supporting delivery over IP (LTE & Wi-Fi)
- Type-C USB cable
- GNSS antenna ground plane

Product variants

XPLR-HPG-2	High precision GNSS explorer kit with Wi-Fi, Bluetooth, cellular, and GNSS technologies. PointPerfect and AssistNow services.



Legal Notice:

u-blox or third parties may hold intellectual property rights in the products, names, logos, and designs included in this document. Copying, reproduction, or modification of this document or any part thereof is only permitted with the express written permission of u-blox. Disclosure to third parties is permitted for clearly public documents only.

The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by u-blox at any time. For most recent documents, please visit www.u-blox.com.

Copyright © 2023, u-blox AG

Further information

For contact information, see **www.u-blox.com/contact-u-blox**.

For more product details and ordering information, visit **www.u-blox.com/product/xplr-hpg-2**

For ubxlib repository, application software, and hardware schematics, see **https://github.com/u-blox**