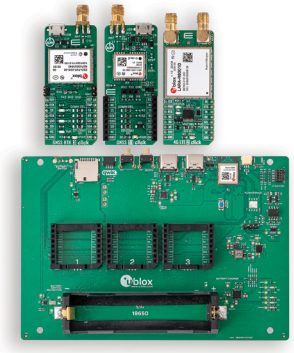
Product summary

XPLR-HPG-1

High precision GNSS explorer kit



Flexible 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
- Click boards™ for flexible adaptation and expansion

Product description

XPLR-HPG-1 provides a complete platform to evaluate and prototype u-blox's high precision GNSS 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 receiver (use case 1) or IP connectivity using LTE (use case 2) or Wi-Fi (use case 3).

PointPerfect GNSS augmentation service provides correction data via the Thingstream IoT delivery platform. XPLR-HPG-1 supports NTRIP for use with other error correction services.

With the board's flexible design and mikroBUS™ connectors it is easy to evaluate various communication channels for correction data and to monitor the results. The NORA-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.

Integrated positioning and communication

On base board **NORA-W106**	Dual-core MCU for applications and Wi-Fi 4 / Bluetooth LE v5 connectivity
Click board **ZED-F9R**	High precision GNSS receiver module with dead reckoning
Click board **NEO-D9S**	L-band GNSS correction receiver module
Click board **LARA-R6001D**	LTE Cat 1 multi-mode module to receive PointPerfect correction data via mobile network
Correction service **PointPerfect**	PointPerfect based on SPARTN messaging format and MQTT delivery protocol.

Electrical data and interfaces

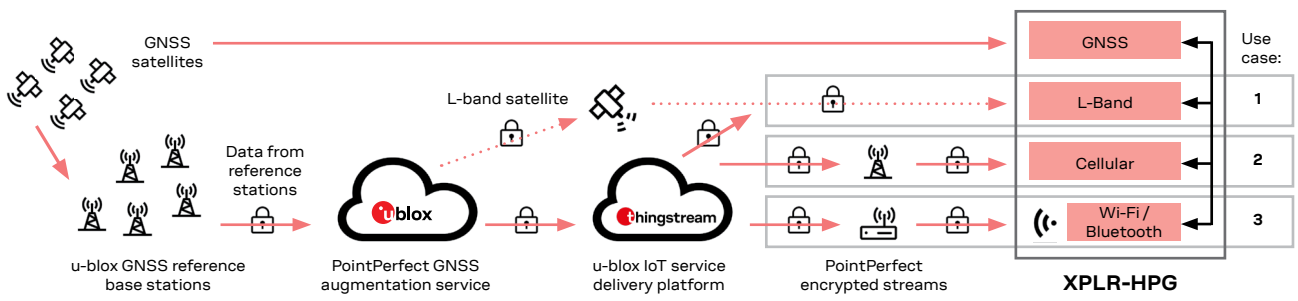
Power supply	USB and onboard battery (not included)
Application MCU	Dual LX7 with 8 MB flash and 512 kB RAM
Data storage	SD card slot for max 32 GB (card not included)
Antennas	Bluetooth and Wi-Fi on NORA-W106; two LTE, one GNSS, and one L-band antenna

Kit includes

- C213 application board with mounted Click boards™
- GNSS antenna, L-Band antenna and two LTE antennas
- USB-C to USB-A cable
- Application software example in source code
- Trial PointPerfect and AssistNow location services supporting delivery over IP (LTE & Wi-Fi)

Product variants

XPLR-HPG-1	High precision GNSS explorer kit with Wi-Fi, Bluetooth, cellular, and GNSS technologies. PointPerfect and AssistNow services



Further information

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

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

For more product details and ordering information, visit **www.u-blox.com/product/xplr-hpg-1**.

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