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-W106 wireless MCU module with Bluetooth and Wi-Fi connectivity runs the HPG software and controls the communications between the u-blox 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**: PointPerfect based on SPARTN messaging Correction service 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**

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