

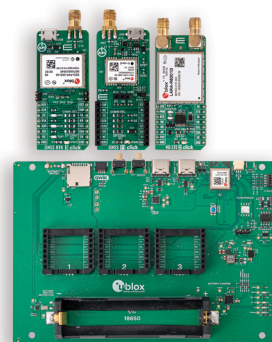
## Product summary

# 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.

### 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)

### Integrated positioning and communication

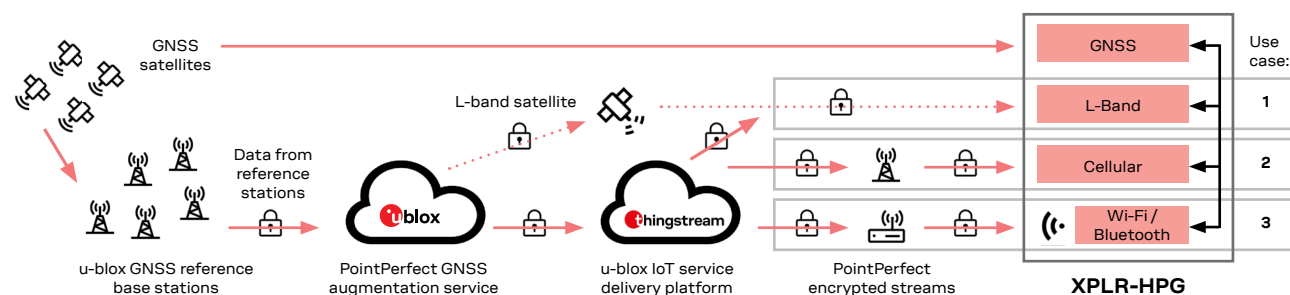
|                                   |  |
|-----------------------------------|--|
| On base board                     | Dual-core MCU for applications and Wi-Fi 4 / Bluetooth LE v5 connectivity              |
| Click board<br><b>NORA-W106</b>   | High precision GNSS receiver module with dead reckoning                                |
| Click board<br><b>ZED-F9R</b>     | L-band GNSS correction receiver module   |
| Click board<br><b>NEO-D9S</b>     | LTE Cat 1 multi-mode module to receive PointPerfect correction data via mobile network |
| Click board<br><b>LARA-R6001D</b> | 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 |

### Product variants

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



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