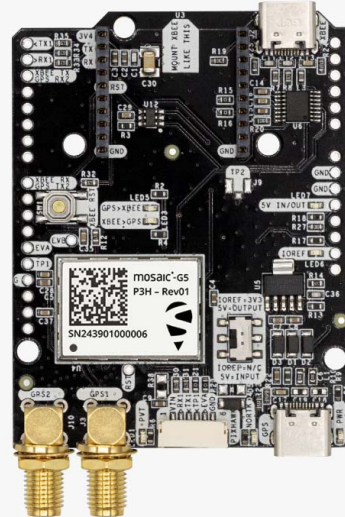


simpleRTK 4 Heading

Millimeter-level Septentrio RTK accuracy and AIM+ anti-jamming in a compact, low power board with dual antenna for accurate static and dynamic attitude.



More info about the product!



simpleRTK 4 Heading SKU is: AS-RTK4-G5P3H-NH-00

Get a discounted bulk price on this product for orders of 50 units or more. Contact us at info@ardusimple.com to get a quote.

Description

simpleRTK 4 Heading is a Septentrio mosaic-G5 P3H evaluation board for RTK and vehicle heading.

It can be used standalone connected to a PC, tablet or mobile phone. Or you can also connect it with Arduino, Ardupilot / Pixhawk (JST connector), Raspberry Pi, Nvidia Jetson and STM32 Nucleo platforms, as a shield. It can provide up to 20 highly reliable and accurate GPS positions every second. Thanks to the dual antenna input, in addition to that, it also provides accurate vehicle orientation: that means vehicle heading, and also roll/pitch depending if the antennas are mounted longitudinally or transversely.

This board is ideal to start developing your own product with RTK technology with dual antenna inside. More details are available in the Specifications and Documentation tabs.

Good to know:

- This product is compatible but doesn't include [multiband GNSS antenna](#), which is necessary to use the product.
- The module will not give good performance with a standard GNSS antenna, requires a multiband one.
- This board is recommended if you want to test Septentrio mosaic-G5 P3 performance.
- The onboard XBee socket can be used to expand functionality with Plugin accessories (MR/LR/XLR radios, Bluetooth, WiFi, Ethernet, Dataloggers, RS232, Canbus, L-Band, 4G/3G/2G).
- You can use the [Shield for Second Plugin socket](#) to connect 2 plugins at the same time.
- Compatible with ArduSimple plastic case

Includes:

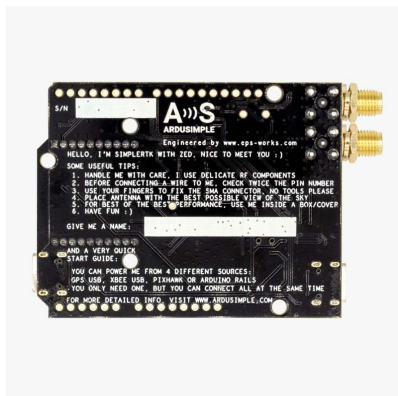
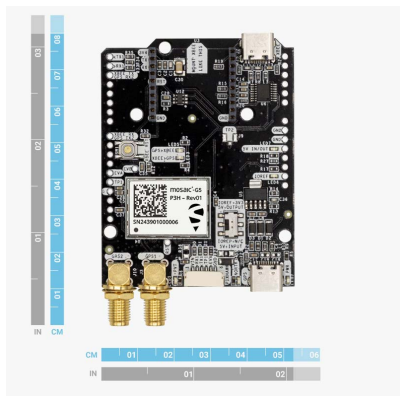
- 1 simpleRTK 4 Heading (mosaic-G5 P3H)

Specifications

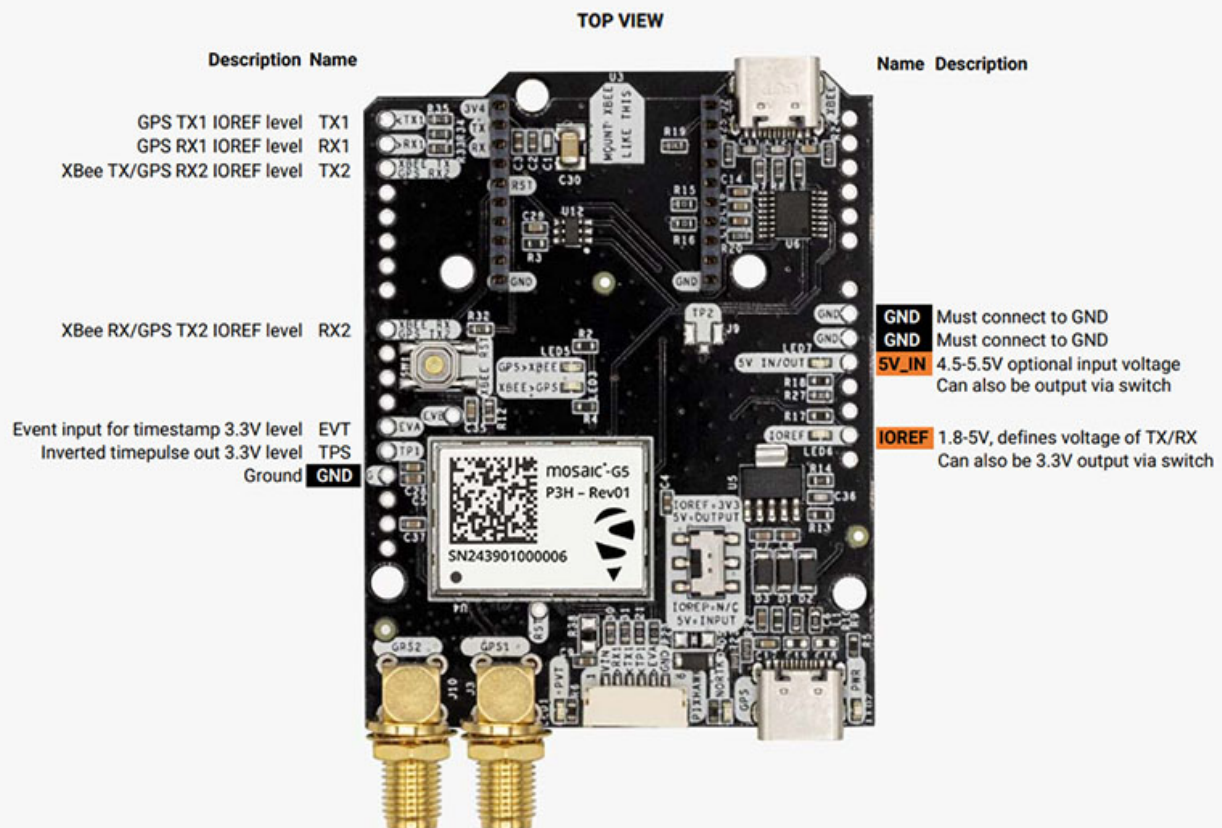
Mosaic-G5 P3H features

- Millimeter level precision:
 - <1cm with a base station up to 35km
 - <1cm with NTRIP up to 35km
 - <1.2m in standalone mode
 - <0.6m standalone with SBAS coverage
- GNSS attitude accuracy
 - 1m antenna separation: 0.15deg heading, 0.25deg pitch/roll
 - 5m antenna separation: 0.03deg heading, 0.05deg pitch/roll
- Update rate
 - Default: 1Hz
 - With maximum performance: up to 20Hz
- Multi band: L1, L2 and L5 support, 789 hardware channels
- Multifrequency and Multiconstellation:
 - GPS: L1C/A L2C L2PY L5
 - GLONASS: L1CA L2CA L2P L3 CDMA
 - Galileo: E1 E5a E5b EE6
 - BeiDou: B1I B1C B2a B2I B2b B3I
 - QZSS: L1C/A L1C/B L2C L5 L6
 - Navic: L5
 - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM (L1 L5)
- Start-up times:
 - Cold start: <45s
 - Warm start: <20s
 - Re-acquisition: 1s
- Protocols
 - Septentrio Binary Format (SBF)
 - NMEA 0183, v2.3, v3.03, v4.0
 - RTCM v2.x, v3.x (MSM included)
- Interfaces (**check user guide to verify which are available**):
 - USB
 - UART
 - XBee
 - Timepulse
 - Event
- Rover functionality
- Operating temperature Range: -40 to +85 deg C
- Certification: CE, WEEE, ISO 9001-2015
- Documentation: RED, RoHS

Image Gallery



Pinout



Documentation

User Guide	https://www.ardusimple.com/user-guide-simplertk-4-heading/
how to configure Septentrio mosaic-G5 boards	https://www.ardusimple.com/how-to-configure-septentrio-mosaic-g5/
Download CAD model	https://www.ardusimple.com/wp-content/uploads/2026/10/AS-RTK4-G5P3H-NH-00-R00.step

simpleRTK 4 Heading includes free basic technical support. Contact info@ardusimple.com for more information.

Data and descriptions in this document are subject to change without notice. Product photos and pictures are for illustration purposes only and may differ from the real product appearance.