

simpleRTK 4 Pro

Millimeter-level Septentrio RTK accuracy and AIM+ anti-jamming in a compact, low power board.



More info about the product!



simpleRTK 4 Pro SKU is: AS-RTK4-G5P3-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 Pro is a Septentrio mosaic-G5 P3 evaluation board for RTK.

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.

This board is ideal to start developing your own product with RTK technology 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:

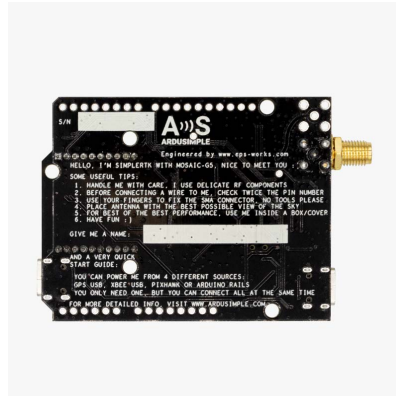
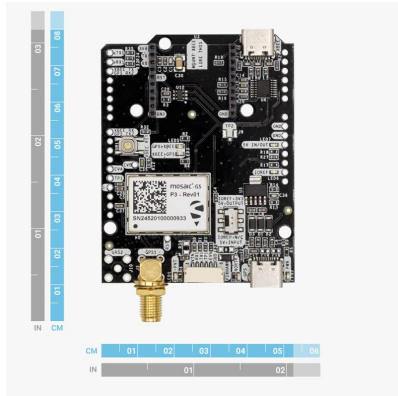
- 1 simpleRTK 4 Pro (mosaic-G5 P3)

Specifications

Mosaic-G5 P3 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
- 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

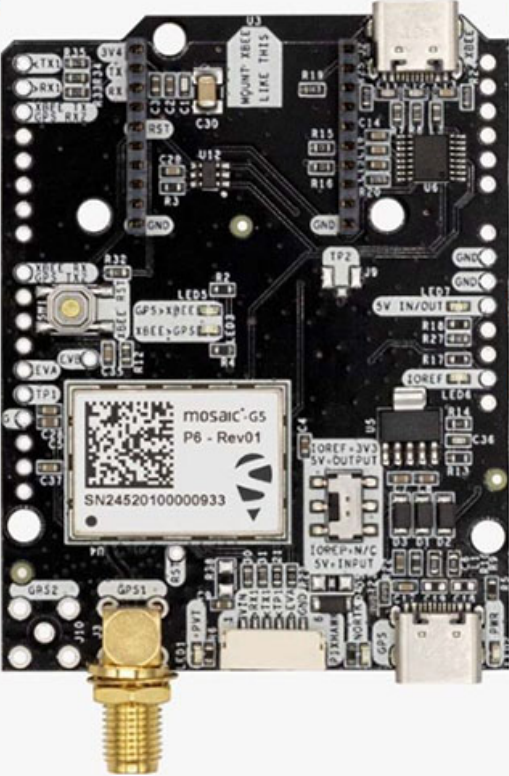
Image Gallery



Pinout

TOP VIEW

Description	Name
GPS TX1 IOREF level	TX1
GPS RX1 IOREF level	RX1
XBee TX/GPS RX2 IOREF level	TX2
XBee RX/GPS TX2 IOREF level	RX2
Event input for timestamp 3.3V level	EVT
Inverted timepulse out 3.3V level	TPS
Ground	GND



Name	Description
GND	Must connect to GND
GND	Must connect to GND
5V_IN	4.5-5.5V optional input voltage Can also be output via switch
IOREF	1.8-5V, defines voltage of TX/RX Can also be 3.3V output via switch

Documentation

how to configure Septentrio
mosaic-G5 boards

<https://www.ardusimple.com/how-to-configure-septentrio-mosaic-g5/>

simpleRTK 4 Pro 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.