simpleRTK3B Heading

Most popular Septentrio mosaic-H board. Dual antenna GPS for accurate yaw information, also in static conditions. Ideal for marine applications or automatic antenna alignment systems.

More info about the product!

simpleRTK3B Heading SKU is: AS-RTK3B-MH-L1L2-NH-01

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

simpleRTK3B Heading is a standalone board that allows to evaluate dual band RTK GNSS technology including centimeter level accurate position, sub degree heading, microSD datalogging and with an accessory native Ethernet functionality.
It's based on **Septentrio mosaic-H** module and can be used standalone. Or connected with Arduino, Ardupilot / Pixhawk (JST connector), Raspberry Pi, Nvidia Jetson and STM32 Nucleo platforms, as a shield, to provide you up to 20 RTK positions and attitude (heading) every second.

This board is ideal for advanced projects with the Pixhawk autopilot.
More details available in the Specification and Documentation tabs.

Good to know:
- This product is compatible but doesn't include a multiband GNSS antenna, of which 2 are necessary to use the product.
- The module will not give good performance with any dual band GNSS antenna. The module requires that both antennas are exactly the same and with exactly the same cable length. We recommend simpleANT2B Budget Survey dual band antenna for this product.
- This product is preconfigured as a Rover, but can also be used as a Base Station.
- This board is recommended if you want to test **Septentrio Mosaic-H** performance.
- The onboard XBee socket can be used to expand functionality with Plugin accessories (MR/LR/XLR radios, Bluetooth, WiFi, 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.
- This product already includes a native microSD datalogger (microSD card not included).
- This product already has embedded Ethernet functionality (special Ethernet adapter not included, see related product below).
- Compatible with Ardusimple plastic case
- This product is an alternative to Holybro H-RTK mosaic-H (Dual Antenna Heading), just add 2x Lightweight helical antenna for multiband GNSS (IP67) and plastic case if you want boxed solution

Includes:
– 1 simpleRTK3B Heading board (Mosaic-H)

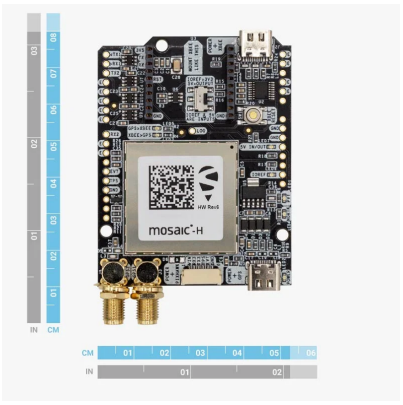
Specifications

Mosaic-H features

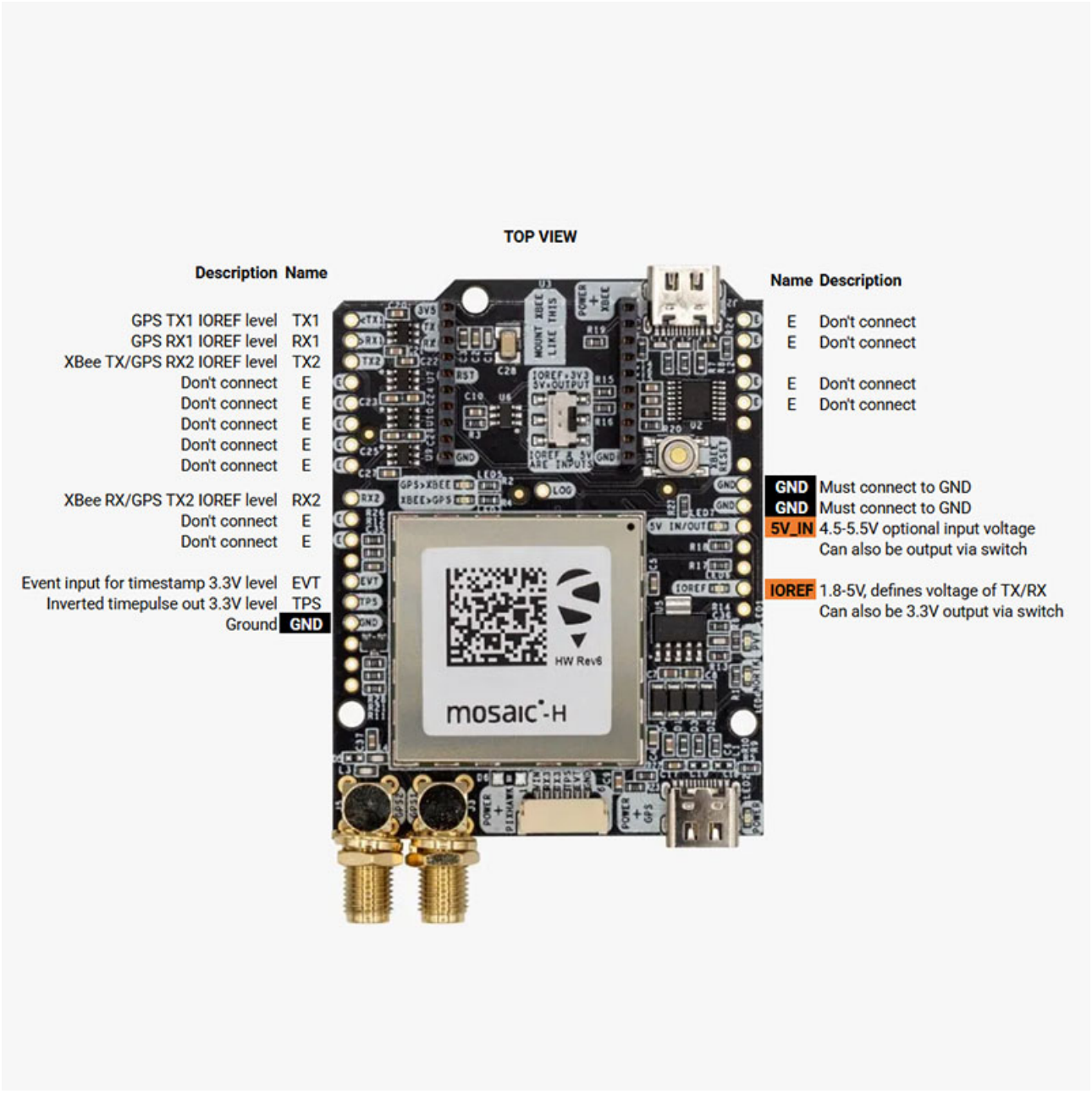
- Millimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <1.2m in standalone mode
  - <0.6m standalone with SBAS coverage
- GNSS attitude accuracy
  - 1m antenna separation: 0.15deg heading, 0.25deg pitch/roll
  - 5m antenna separation: 0.03deg heading, 0.05deg pitch/roll
- Update rate
  - Default: 1Hz
  - Standalone, SBAS, GPS + attitude: up to 50Hz
  - RTK+attitude: up to 20Hz
- Multi band: L1, L2 and E5b support, 448 hardware channels
- Multifrequency and Multiconstellation:
  - GPS: L1 L2
  - GLONASS: L1 L2
  - Galileo: E1 E5b
  - BeiDou: B1 B2
  - QZSS: L1 L2
  - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM (L1)
- 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
  - RINEX v2.x, v3.x
  - RTCM v2.x, v3.x (MSM included)
  - CMR v2.0 (out/in), CMR+ (input only)
- Interfaces **(check user guide to verify which are available)**:
  - USB
  - UART
  - XBee
  - Timepulse
  - Event
- Base and Rover functionality
- Operating temperature Range: -40 to +85degC
- Certification: CE, WEEE, ISO 9001-2015

- Documentation: RED, RoHS

Image Gallery



Pinout



Documentation

how to configure Septentrio mosaic-X5/H boards	https://www.ardusimple.com/how-to-configure-septentrio-mosaic-x5-and-mosaic-h/

simpleRTK3B 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.