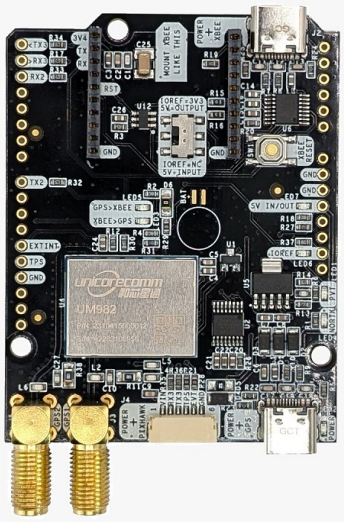
simpleRTK3B Compass

Easy to use Unicore UM982 dual antenna GPS board with centimeter precision. Calculate accurate position and non-magnetometer based heading thanks to the dual GNSS antenna.



More info about the product!

simpleRTK3B Compass SKU is: AS-RTK3B-UM982-L125-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

simpleRTK3B Compass is a standalone board that allows to evaluate triple band RTK GNSS technology including centimeter level accurate position and sub degree heading. It's based on **Unicorecomm UM982** 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 where dual antenna mount is possible on the roof but user wants to know the position on vehicle's ground contact. Another interesting use case if for static or low speed heading (compass) calculation.
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 a standard GNSS antenna, requires a L1/L2/E5b antenna.
- This board is recommended if you want to test **Unicorecomm Communications UM982** performance.
- The onboard XBee socket can be used to expand functionality with Plugin accessories (MR/LR/XLR radios, Bluetooth, WiFi, Dataloggers, Ethernet, 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.
- This product is an alternative to Holybro H-RTK Unicore UM982 (Dual Antenna Heading), just add 2x Lightweight helical GNSS Tripleband + L-band antenna (IP67) and plastic case if you want boxed solution.

Includes:
– 1 simpleRTK3B Compass board (UM982)

Specifications

Interfaces:

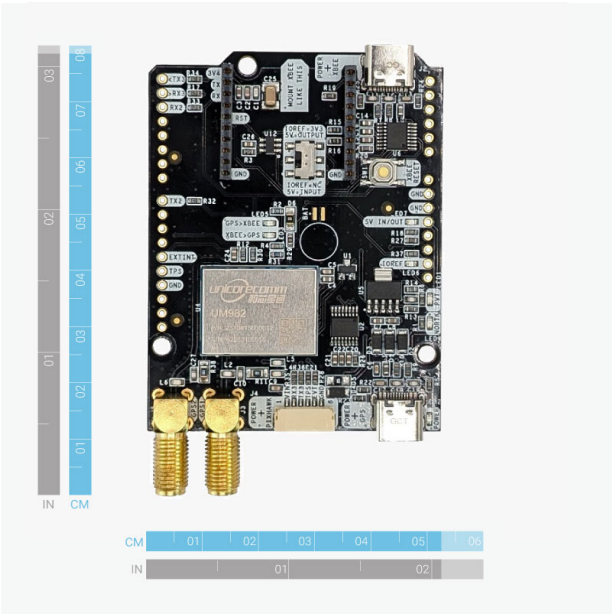
- USB
- UART
- XBee
- Timepulse
- Event

UM982 features

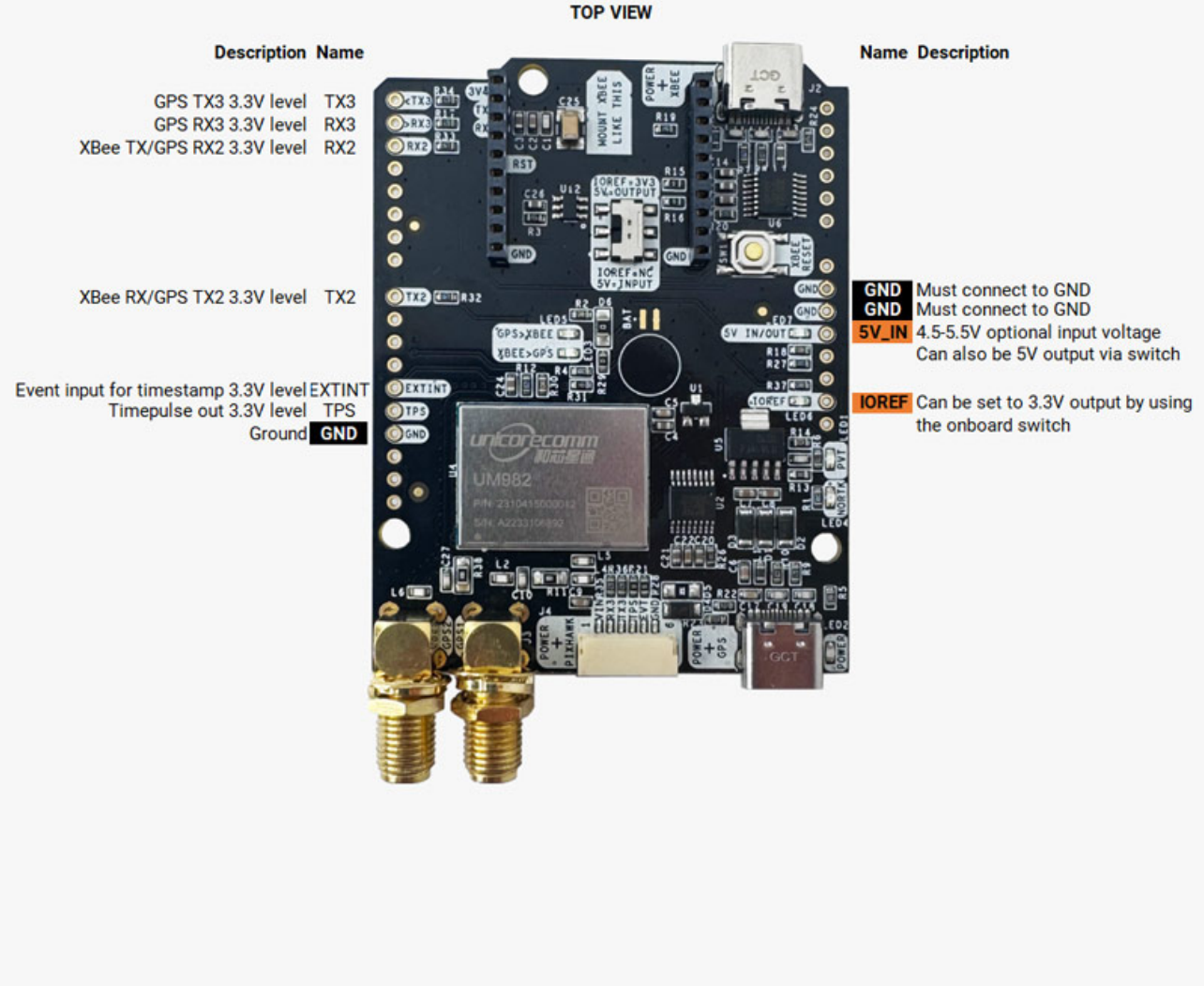
- Millimeter level precision:
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <1.2m in standalone mode
  - <0.6m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 20Hz
- GNSS attitude accuracy:
  - 1m antenna separation: 0.14deg heading, 0.23deg 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, 1408 hardware channels
- Multifrequency and Multiconstellation:
  - GPS: L1C/A L1PY L2C L2PY L5
  - GLONASS: L1CA L2CA L2P L3 CDMA
  - Galileo: E1 E5a E5b E5 E6 HAS
  - BeiDou: B1I B2I B3I
  - QZSS: L1C/A L2C L5
  - Navic: L5
  - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM (L1)
- Start-up times:
  - Cold start: <35s
  - Warm start: <10s
  - Re-acquisition: 1s
- Protocols
  - Unicore Format
  - NMEA 0183
  - RTCM v3

- Base and Rover functionality
- Operating temperature Range: -40 to +85 deg C
- Certification: CE
- Documentation: RED, RoHS

Image Gallery



Pinout



Documentation

how to configure Unicore modules	https://www.ardusimple.com/how-to-configure-unicore-um980-um981-um982/

simpleRTK3B Compass 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.