

# simpleRTK3B Budget

Includes:

- 1 simpleRTK3B Budget board (UM980)



More info about the product!



simpleRTK3B Budget SKU is: AS-RTK3B-UM980-L125-NH-00

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

## Description

simpleRTK3B Budget is a standalone board that allows to evaluate triple band centimeter RTK GNSS positioning technology. It's based on **Ublox UM980** module and is fully compatible with Arduino, Raspberry Pi, Nvidia Jetson Nano and STM32 Nucleo platforms, as a shield.

Check out [simpleRTK3B](#) page to learn more.

Good to know:

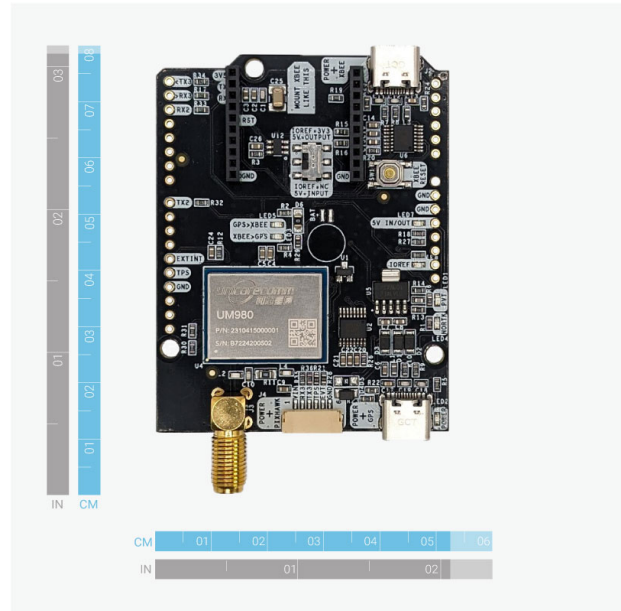
- This product supports Galileo HAS. Note that Galileo HAS service is still under testing and quality of service is not yet guaranteed. Accuracies in the decimeter level are to be expected.
- This product is compatible but doesn't include a multiband GNSS antenna, which is necessary to use the product.
- The module will not give good performance with a standard GNSS antenna, requires a multiband one. Best performance is achieved with a triple band antenna.
- This product is compatible but doesn't include radio, which is necessary to connect to another base.
- This board is recommended if you want to test **Ublox Communications UM980** performance.
- Compatible with all ArduSimple XBee socket accessories (4G modem, MR/LR/XLR radios, Bluetooth, WiFi, Ethernet, Dataloggers, RS232)
- Compatible with ArduSimple plastic case
- Ardupilot compatible via JST-GH standard connector
- Timepulse output and Event input
- We had a printing problem in production and the labels "TX2 and RX2" are not visible, we apologize for that. Will be fixed in the next production batch.

## Specifications

### UM980 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 50Hz
- 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 B1C B2a B2b 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 +85deg
- Certification: CE
- Documentation: RED, RoHS

## Image Gallery



# Pinout

TOP VIEW

Description	Name	Description
GPS TX3 IOREF level	TX3	
GPS RX3 IOREF level	RX3	
Xbee RX/GPS RX2 IOREF level	RX2	
Xbee TX/GPS TX2 IOREF level	TX2	
Event Input for timestamp 3.3V level	EXTINT1	
Inverted timepulse out 3.3V level	TPS	
Ground	<b>GND</b>	
	<b>GND</b>	Must connect to GND
	<b>GND</b>	Must connect to GND
	<b>5V_IN</b>	4.5-5.5V optional input voltage Can also be output via switch
	<b>IOREF</b>	1.8-5V, defines voltage of TX/RX Can also be 3.3V output via switch

## Documentation

User Guide	<a href="https://www.ardusimple.com/user-guide-simplertk3b-budget/">https://www.ardusimple.com/user-guide-simplertk3b-budget/</a>
how to configure Unicore modules	<a href="https://www.ardusimple.com/how-to-configure-unicore-um980-um981-um982/">https://www.ardusimple.com/how-to-configure-unicore-um980-um981-um982/</a>

simpleRTK3B Budget includes free basic technical support. Contact [info@ardusimple.com](mailto:info@ardusimple.com) for more information.

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