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 to get a quote.

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Description

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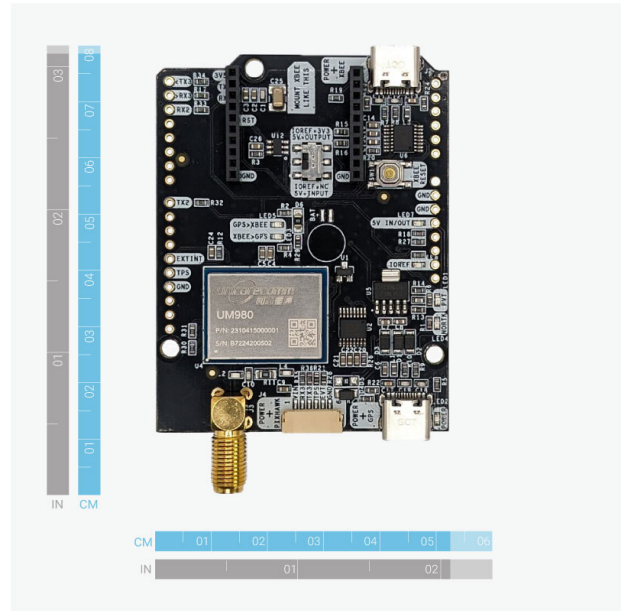
Check out simpleRTK3B page to learn more.

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 **Unicore 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.

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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

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Pinout

TOP VIEW

Description	Name
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	EXTINT
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 swithch
IOREF	1.8-5V, defines voltage of TX/RX
	Can also be 3.3V output via switch

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Documentation

User Guide	https://www.ardusimple.com/user-guide-simplertk3b-budget/
how to configure Unicore modules	https://www.ardusimple.com/how-to-configure-unicore-um980-um981-um982/

simpleRTK3B Budget includes free basic technical support. Contact info@ardusimple.com for more information.

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