simpleRTK3B Micro Unicore

Includes:
– 1 simpleRTK3B Micro board with assembled Unicore module

More info about the product!

simpleRTK3B Micro Unicore has several different configurations to provide you with flexibility:

SKU	Variation Name
AS-RTK3B-MICRO-UM980-SMATH-00	UM980 / SMA
AS-RTK3B-MICRO-UM980-UFLTH-00	UM980 / uFL
AS-RTK3B-MICRO-UM981-SMATH-00	UM981 / SMA
AS-RTK3B-MICRO-UM981-UFLTH-00	UM981 / uFL
AS-RTK3B-MICRO-UM982-SMATH-00	UM982 / SMA
AS-RTK3B-MICRO-UM982-UFLTH-00	UM982 / uFL

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 Micro Unicore accelerates your RTK project thanks to its easy to integrate footprint, integrated RF connector & high availability. With Unicorecomm UM980, UM981 and UM982 modules. We take care of the RF design and complex module integration so you can focus on your PCB design and the application.

- Smallest Form Factor
- Many Unicore pins available
- Re-usable: if you do a new PCB you can un-mount from your previous version the expensive GPS!
- Smaller PCB area needed: you can use the space below the module to place other components!
- Easy to solder by hand or machine
- No RF knowledge required, because all RF components are already inside: simply uFL for pigtail connection or long SMA for direct panel mount
- Bulk pricing starting 50 units

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

UM981 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
- Sensor fusion
    - Tilt: 10 mm + 0.7 mm/°tilt (accuracy < 2.5 cm within 30°)
    - INS only: < 5 % of the distance travelled without GNSS signals
    - IMU RAW data: 100Hz
- 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

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
- Dual antenna
    - Heading accuracy: 0.14deg with 1 meter baseline
    - 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

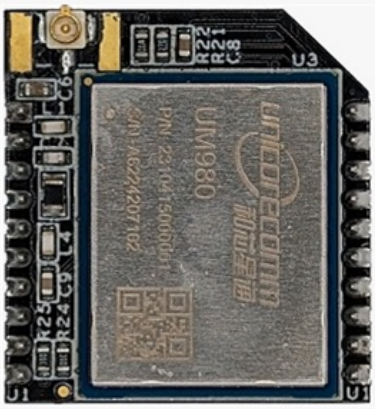
    - BeiDou: B1I B2I B3I
    - QZSS: L1C/A L2C L5
    - Navic: L5
    - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM (L1)
- Start-up times:
    - Cold start: <35s
    - Warm start: <10s
    - Re-acquisition: 1s
- Protocols
    - Unicore Format
    - NMEA 0183
    - RTCM v3
- Base and Rover functionality
- Operating temperature Range: -40 to +85deg
- Certification: CE
- Documentation: RED, RoHS

Image Gallery

Pinout

TOP VIEW

Description	Name	#	#	Name	Description
3.3-3.6V 200mA max	VCC	1	20	N/C	
Data out VCC level	TX1	2	19	EXTINT	EXTINT INPUT VCC level
Data in VCC level	RX1	3	18	RTKSTAT	RTK STAT output VCC level
	N/C	4	17	N/C	
Leave open for always ON	RESET	5	16	RX2	Data in VCC level
5V to enable USB	V_USB	6	15	N/C	
USB via COM3	USB+	7	14	V_BKCP	V_BCKP
USB via COM3	USB-	8	13	TPS	Timepulse output VCC level
	N/C	9	12	TX2	Data out VCC level
Must connect to GND	GND	10	11	GND	Must connect to GND



Documentation

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

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