simpleRTK3B mPCIe

Includes:
- 1 simpleRTK3B mPCIe board

More info about the product!

simpleRTK3B mPCIe has several different configurations to provide you with flexibility:

SKU	Variation Name
AS-RTK3B-MPCIE-L1L2-MH-00	Mosaic-H
AS-RTK3B-MPCIE-L125-MX5-00	Mosaic-X5

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

Bring low cost high precision RTK GNSS positioning to your Mini PCI Express platforms thanks to Septentrio Mosaic and this board fully compatible with MiniPCIe full-size sockets.

Good to know:
- You will need a uFL to SMA pigtail to connect it to our Multiband GPS/GNSS antennas.
- Bulk pricing starting 50 units

Specifications

Mosaic-H features

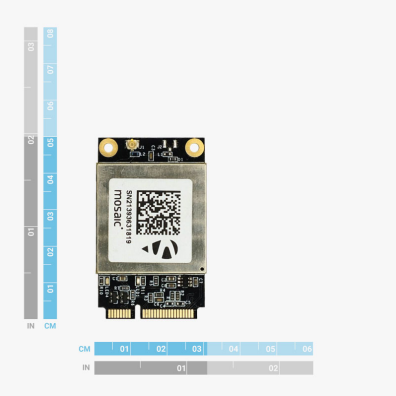
- Millimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <1.2m in standalone mode
  - <0.6m standalone with SBAS coverage
- GNSS attitude accuracy
  - 1m antenna separation: 0.15deg heading, 0.25deg pitch/roll
  - 5m antenna separation: 0.03deg heading, 0.05deg pitch/roll
- Update rate
  - Default: 1Hz
  - Measurements only: up to 100Hz
  - Standalone, SBAS, DGPS + 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 +85deg
- Certification: CE, WEEE, ISO 9001-2015
- Documentation: RED, RoHS

Mosaic-X5 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 100Hz
- Multi band: L1, L2 and L5 support, 448 hardware channels
- Multifrequency and Multiconstellation:
  - GPS: L1C/A L1PY L2C L2P L5
  - GLONASS: L1CA L2CA L2P L3 CDMA
  - Galileo: E1 E5a E5b E5 AltBloc E6
  - BeiDou: B1I B1C B2a B2I B3
  - QZSS: L1C/A L2C L5
  - Navic: L5
  - SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM (L1 L5)
- 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 +85deg
- Certification: CE, WEEE, ISO 9001-2015
- Documentation: RED, RoHS

Image Gallery



Pinout

Description	Function	Pin		Function	Description
			1		
	VIN_3V3	2	3		
	GND	4	5		
		6	7		
		8	9	GND	
		10	11	COM2_RX	
		12	13	COM2_TX	
		14	15	GND	
		16	17	EXTINT	
	GND	18	19	TIMEPULSE	
Feature disabled	W_DISABLE	20	21	GND	
	RESET	22	23		
	VIN_3V3	24	25		
	GND	26	27	GND	
		28	29	GND	
		30	31		
		32	33		
	GND	34	35	GND	
	USB_DN	36	37	GND	
	USB_DP	38	39	VIN_3V3	
	GND	40	41	VIN_3V3	
		42	43	GND	
		44	45	COM3_RX	
		46	47	COM3_TX	
		48	49	COM1_RX	
	GND	50	51	COM1_TX	
	VIN_3V3	52			

Documentation

User Guide	https://www.ardusimple.com/user-guide-simplertk3b-mpcie/
Footprint	https://www.snapeda.com/search/?q=ardusimple

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