

simpleRTK3B mPCIe

Mini PCI Express card with Septentrio Mosaic-X5. Geodetic RTK position for your embedded computer with mPCIe socket.



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

Includes:

- 1 simpleRTK3B mPCIe board

Specifications

Mosaic-H features

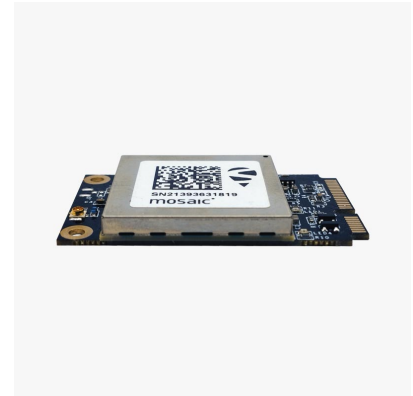
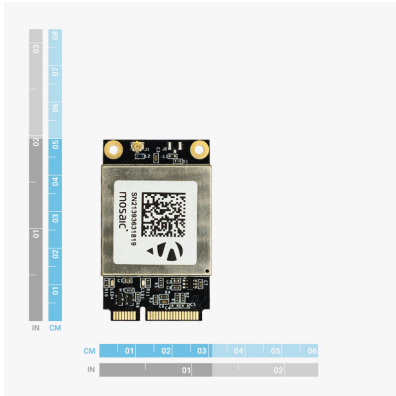
- Millimeter level precision
 - <1cm with a base station up to 35km
 - <1cm with NTRIP up to 35km
 - <1.2m in standalone mode
 - <0.6m standalone with SBAS coverage
- GNSS attitude accuracy
 - 1m antenna separation: 0.15deg heading, 0.25deg pitch/roll
 - 5m antenna separation: 0.03deg heading, 0.05deg pitch/roll
- Update rate
 - Default: 1Hz
 - Standalone, SBAS, GPS + 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 +85degC

- 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)
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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

how to configure Septentrio mosaic-X5/H boards <https://www.ardusimple.com/how-to-configure-septentrio-mosaic-x5-and-mosaic-h/>

Footprint <https://www.snapeda.com/search/?q=ardusimple>

simpleRTK3B mPCIe 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.