

simpleRTK3B Micro Septentrio

Includes:

- 1 simpleRTK3B Micro board with assembled Septentrio module



More info about the product!



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

SKU	Variation Name
AS-RTK3B-MICRO-MH-L1L2SMASSTD-00	Mosaic-H / SMA / No
AS-RTK3B-MICRO-MH-L1L2SMAEXT-00	Mosaic-H / SMA / ETH+SD+COM3+GP1
AS-RTK3B-MICRO-MH-L1L2UFLSTD-00	Mosaic-H / uFL / No
AS-RTK3B-MICRO-MH-L1L2UFLEXT-00	Mosaic-H / uFL / ETH+SD+COM3+GP1
AS-RTK3B-MICRO-MX-L125SMASSTD-00	Mosaic-X5 / SMA / No
AS-RTK3B-MICRO-MX-L125SMAEXT-00	Mosaic-X5 / SMA / ETH+SD+COM3+GP1

SKU	Variation Name
AS-RTK3B-MICRO-MX-L125UFLSTD-00	Mosaic-X5 / uFL / No
AS-RTK3B-MICRO-MX-L125UFLEXT-00	Mosaic-X5 / uFL / ETH+SD+COM3+GP1

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 Septentrio accelerates your RTK project thanks to its easy to integrate footprint, integrated RF connector & high availability. With Septentrio Mosaic-X5 and Mosaic-H 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 Mosaic 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

Mosaic-H features

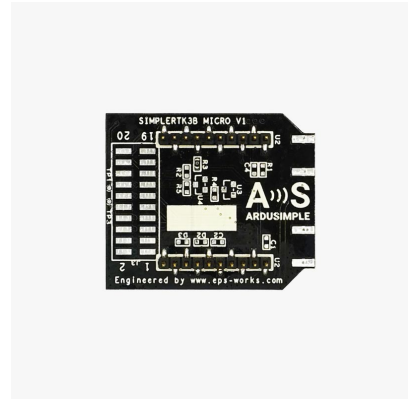
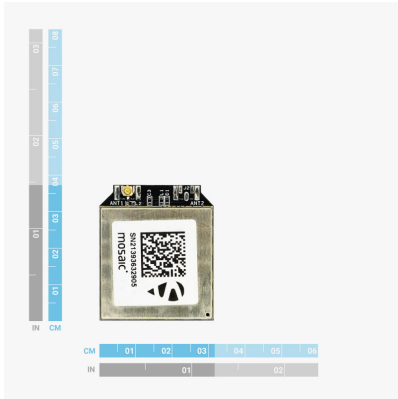
- Millimeter level precision
 - <1cm with a base station up to 35km
 - <1cm with NTRIP up to 35km
 - <1.2m in standalone mode
 - <0.6m standalone with SBAS coverage
- GNSS attitude accuracy
 - 1m antenna separation: 0.15deg heading, 0.25deg pitch/roll
 - 5m antenna separation: 0.03deg heading, 0.05deg 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)
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 - RTCM v2.x, v3.x (MSM included)
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Image Gallery



Pinout

TOP VIEW



Description	Name	#	#	Name	Description
3.3-3.6V 400mA max	VCC	1	20	N/C	Don't connect
Data out VCC level	TX1	2	19	EXTINT	EXTINT INPUT VCC level
Data in VCC level	RX1	3	18	GPLED	Configurable GPLED out VCC level
Don't connect	N/C	4	17	N/C	Don't connect
Leave open for always ON	RESET	5	16	RX2	Data in VCC level
5V to enable USB	V_USB	6	15	N/C	Don't connect
	USB+	7	14	V_BKCP	V_BCKP
	USB-	8	13	TPS	Timepulse output VCC level
Don't connect	N/C	9	12	TX2	Data out VCC level
Must connect to GND	GND	10	11	GND	Must connect to GND

TOP VIEW (Optional secondary connector)

Description	Name	#	#	Name	Description
Configurable GP1 out VCC level	GP1	2	1	RMII_CLK	LAN PHY Clock
SD card CMD line	SD_CMD	4	3	MDIO	LAN PHY control data
SD card CLK line	SD_CLK	6	5	MDC	LAN PHY control clock
SD card DAT0 line	SD_DAT0	8	7	RMII_RXD1	LAN PHY receive data 1
Must connect to GND	GND	10	9	RMII_RXD0	LAN PHY receive data 0
	TX3	12	11	RMII_CRSDV	LAN PHY CRS
	RX3	14	13	RMII_RXER	LAN PHY RX error
	LOGLED	16	15	RMII_TXEN	LAN PHY transmit enable
Log on/off or mount/unmount SD	LOGBUTTON	18	17	RMII_TXD0	LAN PHY transmit data 0
LAN reset (low to reset the PHY)	nRST_LAN	20	19	RMII_TXD1	LAN PHY transmit data 1

Documentation

User Guide	https://www.ardusimple.com/user-manual-simplertk3b-micro/
how to configure Septentrio Mosaic boards	https://www.ardusimple.com/how-to-configure-septentrio-mosaic-x5-and-mosaic-h/
Footprint	https://www.snapeda.com/search/?q=ardusimple
Download CAD models	https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MX-L125SMASD-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MX-L125SMAEXT-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MX-L125UFLSTD-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MX-L125UFLEXT-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MH-L1L2SMASD-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MH-L1L2SMAEXT-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MH-L1L2UFLSTD-00.STEP https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK3B-MICRO-MH-L1L2UFLEXT-00.STEP

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

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