

# simpleRTK2B mPCIe

Includes:

- 1 simpleRTK2B mPCIe board



More info about the product!



simpleRTK2B mPCIe has several different configurations to provide you with flexibility:

SKU	Variation Name
AS-RTK2B-MPCIE-L1L2-F9P-01	ZED-F9P
AS-RTK2B-MPCIE-L1L2-F9R-01	ZED-F9R
AS-RTK2B-MPCIE-L1L2-F9T-01	ZED-F9T

Get a discounted bulk price on this product for orders of 50 units or more. Contact us at [info@ardusimple.com](mailto:info@ardusimple.com) to get a quote.

## Description

Bring low cost high precision RTK GNSS positioning to your Mini PCI Express platforms thanks to ZED-F9 and this board fully compatible with MiniPCIe half-size and full-size sockets.

Good to know:

- The board by default is compatible with full size Mini PCI Express sockets, and it's pre-cut so you can convert it yourself to Half Size Mini PCI Express size.
- You will need a uFL to SMA pigtail to connect it to our Multiband GPS/GNSS antennas.
- ZED-F9T variant has an extra uFL connector for timepulse output.
- Bulk pricing starting 50 units

## Specifications

### ZED-F9P features

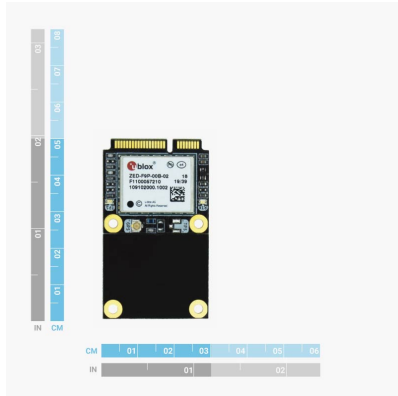
- Centimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <4cm with SSR corrections
  - <1.5m in standalone mode
  - <0.9m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 10Hz
  - With reduced performance: up to 20Hz
- Multi band: L1, L2 and E5b support
- Multifrequency and Multiconstellation:
  - GPS: L1C/A L2C
  - GLONASS: L1OF L2OF
  - Galileo: E1-B/C E5b
  - BeiDou: B1I B2I
  - QZSS: L1C/A L2C
  - SBAS: WAAS, EGNOS, MSAS, GAGAN and SouthPAN
- Start-up times:
  - First position fix: 25 seconds (cold), 2 seconds (hot)
  - First RTK fix: 35 seconds (cold)
- RAW data output in UBX format
- Base and Rover functionality
- Operating temperature Range: -40 to +85deg
- Documentation: RED, RoHS

### ZED-F9R features

- Centimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <4cm with SSR corrections
  - <1.5m in standalone mode
  - <0.9m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - Maximum GNSS update rate: 4Hz
  - Maximum fusion update rate: 30Hz
- Multi band: L1, L2 and E5b support
- Multifrequency and Multiconstellation:

- GPS: L1C/A L2C
- GLONASS: L1OF L2OF
- Galileo: E1-B/C E5b
- BeiDou: B1I B2I
- QZSS: L1C/A L2C
- SBAS: WAAS, EGNOS, MSAS, GAGAN and SouthPAN
- Start-up times:
  - First position fix: 25 seconds (cold), 2 seconds (hot)
  - First RTK fix: 35 seconds (cold)
- Dynamic models: ground vehicle, slow-moving service robots and electric scooters (drones, boats and pedestrians not supported)
- RAW data output in UBX format
- No Base Station function, only RTK Rover
- Operating temperature Range: -40 to +85deg
- 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		
		12	13		
		14	15	GND	
		16	17		
	GND	18	19		
Feature disabled	W_DISABLE	20	21	GND	
Feature disabled	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		
		46	47		
		48	49		
	GND	50	51		
	VIN_3V3	52			

## Documentation

User Guide	<a href="https://www.ardusimple.com/user-guide-simplertk2b-mpcie/">https://www.ardusimple.com/user-guide-simplertk2b-mpcie/</a>
Configuration files	<a href="https://www.ardusimple.com/how-to-configure-ublox-zed-f9p/">https://www.ardusimple.com/how-to-configure-ublox-zed-f9p/</a>
Footprint	<a href="https://www.snapeda.com/search/?q=ardusimple">https://www.snapeda.com/search/?q=ardusimple</a>
Download CAD models	<a href="https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK2B-MPCIE-L1L2-F9P-00-R00-fullsize.STEP">https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK2B-MPCIE-L1L2-F9P-00-R00-fullsize.STEP</a> <a href="https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK2B-MPCIE-L1L2-F9P-00-R00-halfsize.STEP">https://www.ardusimple.com/wp-content/uploads/3D_CAD/AS-RTK2B-MPCIE-L1L2-F9P-00-R00-halfsize.STEP</a>

simpleRTK2B mPCIe includes free basic technical support. Contact [info@ardusimple.com](mailto:info@ardusimple.com) for more information.

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