

# simpleRTK2B SBC - Development Kit

Includes:

- 1 simpleRTK2B-SBC board
- **Free PointPerfect RTK-SSR corrections until 2024**
- 1 Power + canbus Cable
- 1 USB-C Cable
- 1 Ethernet cable
- 1 dual RS232 cable
- 1 I/O 14pin Cable assembly

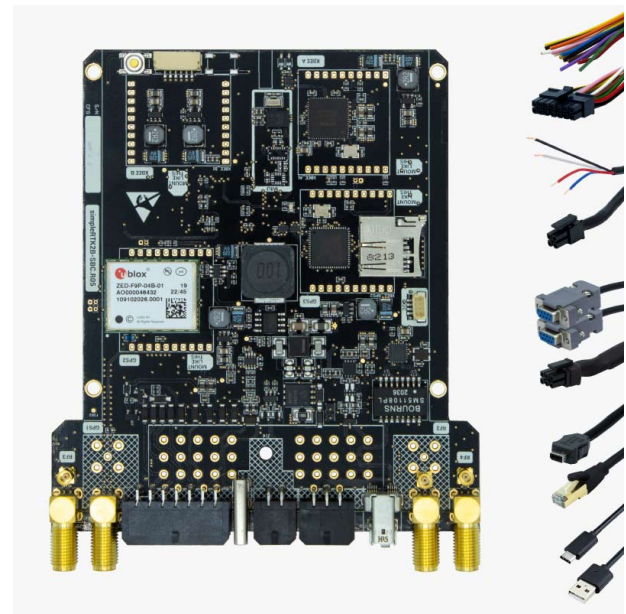


More info about the product!

simpleRTK2B SBC - Development Kit has several different configurations to provide you with flexibility:

SKU	Variation Name
AS-SBC-L1L2-PXX-LPHP-WW-04	1x ZED-F9P
AS-SBC-L1L2-PPX-2HP-WW-04	2x ZED-F9P
AS-SBC-L1L2-PPP-2HP-WW-04	3x ZED-F9P

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

simpleRTK2B-SBC is a customizable and programmable dual band GPS/GNSS RTK Single Board Computer thanks to its onboard STM32 microprocessor. It's based on u-blox ZED-F9 modules and allows you to reach centimeter level accuracy in a matter of seconds.

Thanks to the onboard IMU, it can be used in INS/sensor fusion applications.

But no worries, you don't need to program anything, if you prefer we can do it for you. Just send us your specification!

simpleRTK2B-SBC includes up to 3x GPS units so you can try and develop based on all possible configuration:

- 1x ZED-F9P for RTK position
- 2x ZED-F9P for RTK position + RTK heading
- 3x ZED-F9P for full AHRS (Attitude and Heading Reference System), a.k.a roll, pitch, yaw.

The product has 3x XBee sockets so you can connect any of our compatible accessories: BT, WiFi, MR, LR, XLR, 4G (none of this accesories are included in the kit, need to be purchased separately).

Start integration with our [quick User Guide](#) and learn all the details with the [SBC advanced documentation](#) page.

Good to know:

- This product comes without GNSS antennas, you will have to order them separately.
- Compatible with u-blox PointPerfect augmentation service
- This product has free RTK-SSR corrections until 31/12/2024. Later if you want you can get a subscription starting at only \$3.90 for 60 hours.
- If you are looking for Septentrio Mosaic option, just contact us at [info@ardusimple.com](mailto:info@ardusimple.com) for a quote.
- Bulk pricing starting 10 units

## Specifications

### ZED-F9P features

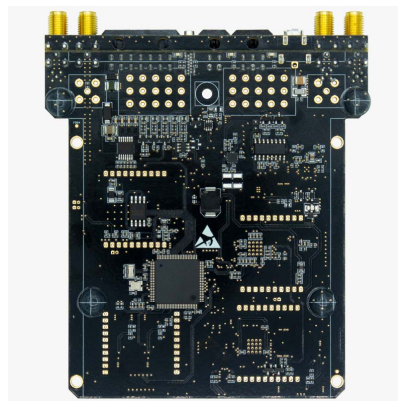
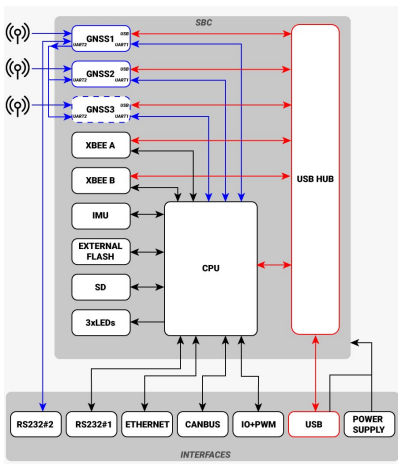
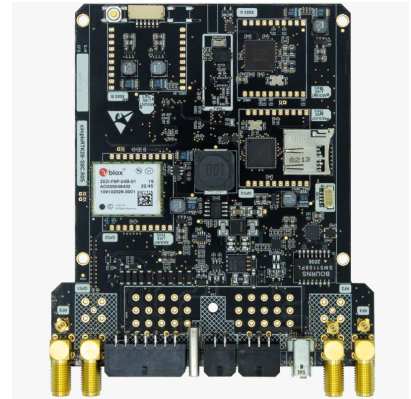
- Centimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <4cm with SSR corrections
  - <1.5m in standalone mode
  - <0.9m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 10Hz
  - With reduced performance: 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

### Mosaic-X5 features

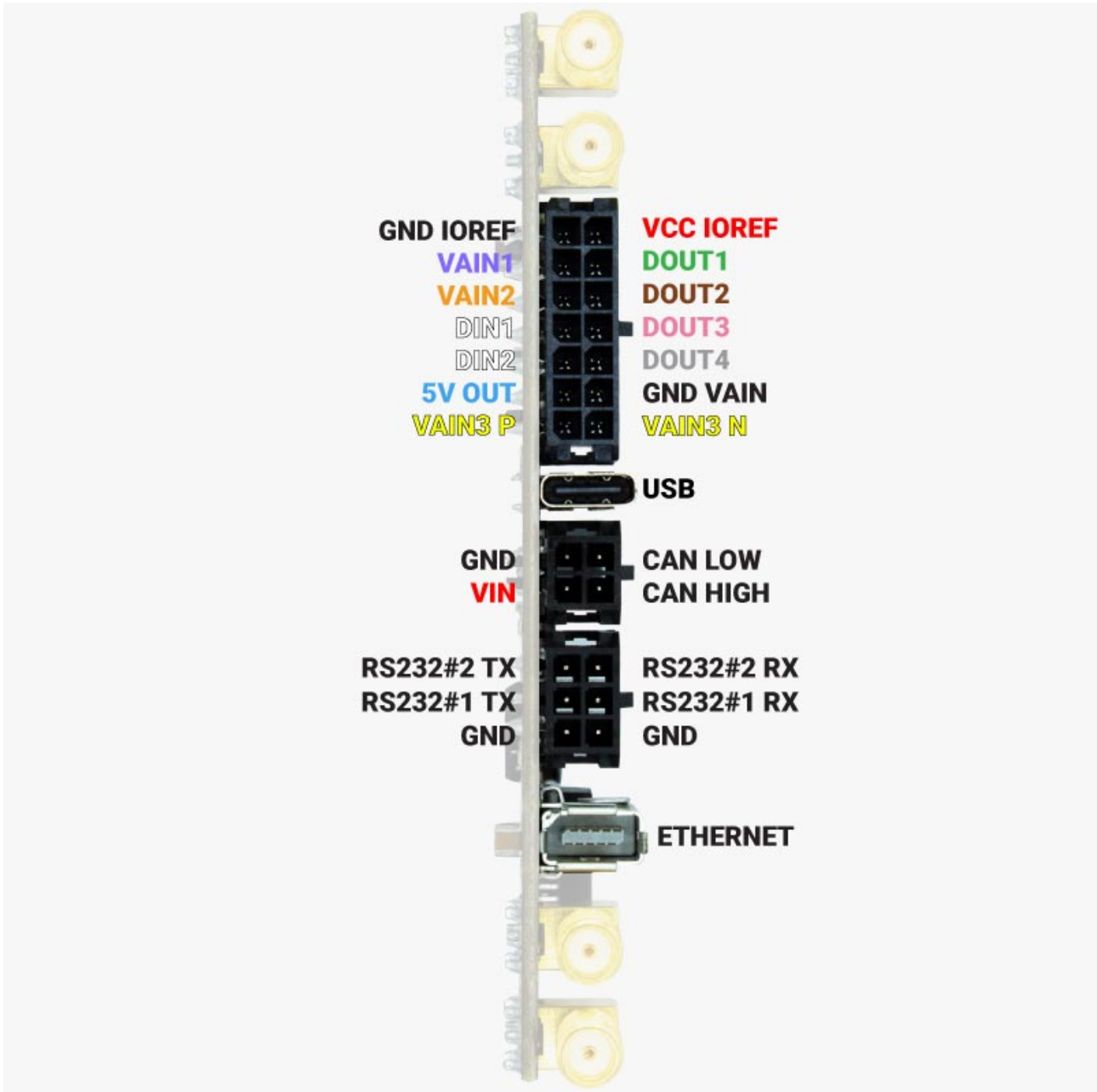
- Millimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <1.2m in standalone mode
  - <0.6m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 100Hz
- Multi band: L1, L2 and L5 support, 448 hardware channels
- 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



## Documentation

User Guide	<a href="https://www.ardusimple.com/simplertk2b-sbc-hookup-guide/">https://www.ardusimple.com/simplertk2b-sbc-hookup-guide/</a>
SBC Advanced Documentation (API, wiring diagrams, ...)	<a href="https://sbc.ardusimple.com/">https://sbc.ardusimple.com/</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>
Download CAD model	<a href="https://www.ardusimple.com/wp-content/uploads/2024/07/simpleRTK-SBC-R04.step">https://www.ardusimple.com/wp-content/uploads/2024/07/simpleRTK-SBC-R04.step</a>

simpleRTK2B SBC - Development Kit includes free basic technical support. Contact [info@ardusimple.com](mailto: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.