

# simpleRTK2B SBC - Development Kit

Includes:

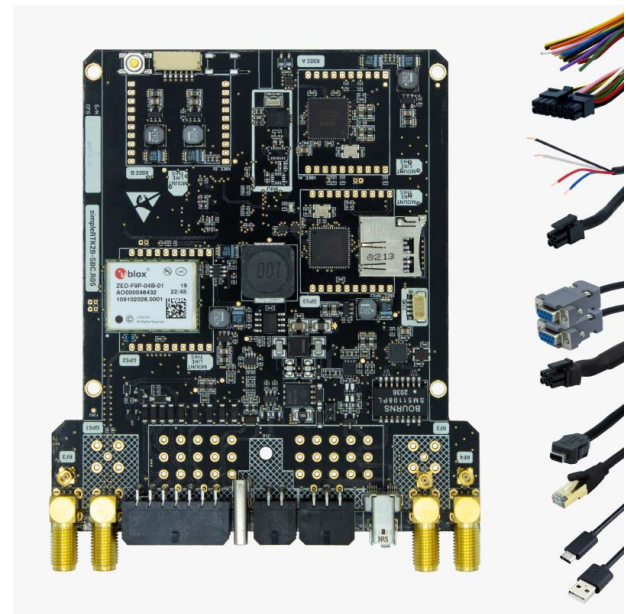
- 1 simpleRTK2B-SBC board
- **Free PointPerfect RTK-SSR corrections until 2024**
- 1 Power + canbus Cable
- 1 USB-C Cable
- 1 Ethernet cable
- 1 dual RS232 cable
- 1 I/O 14pin Cable assembly



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



## 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

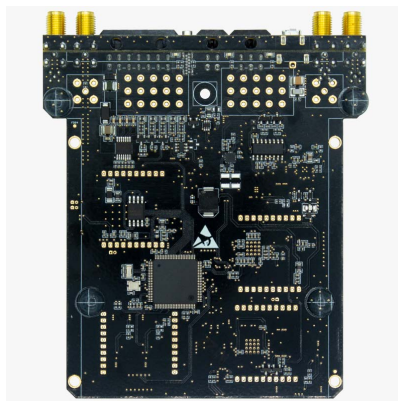
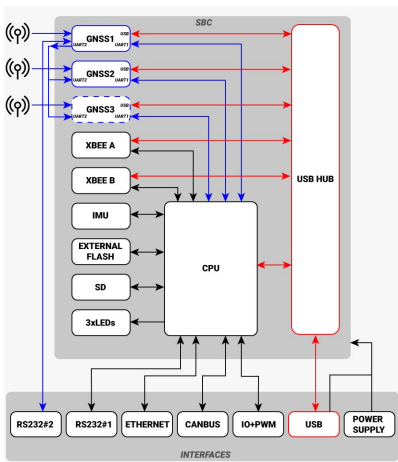
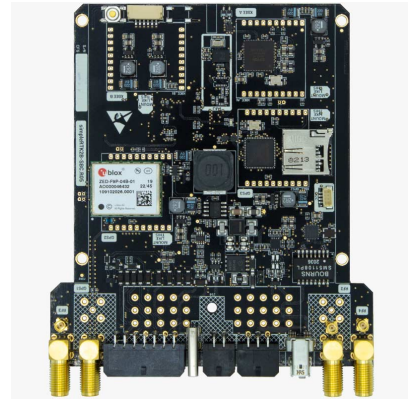
- Centimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <4cm with SSR corrections
  - <1.5m in standalone mode
  - <0.9m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 10Hz
  - With reduced performance: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

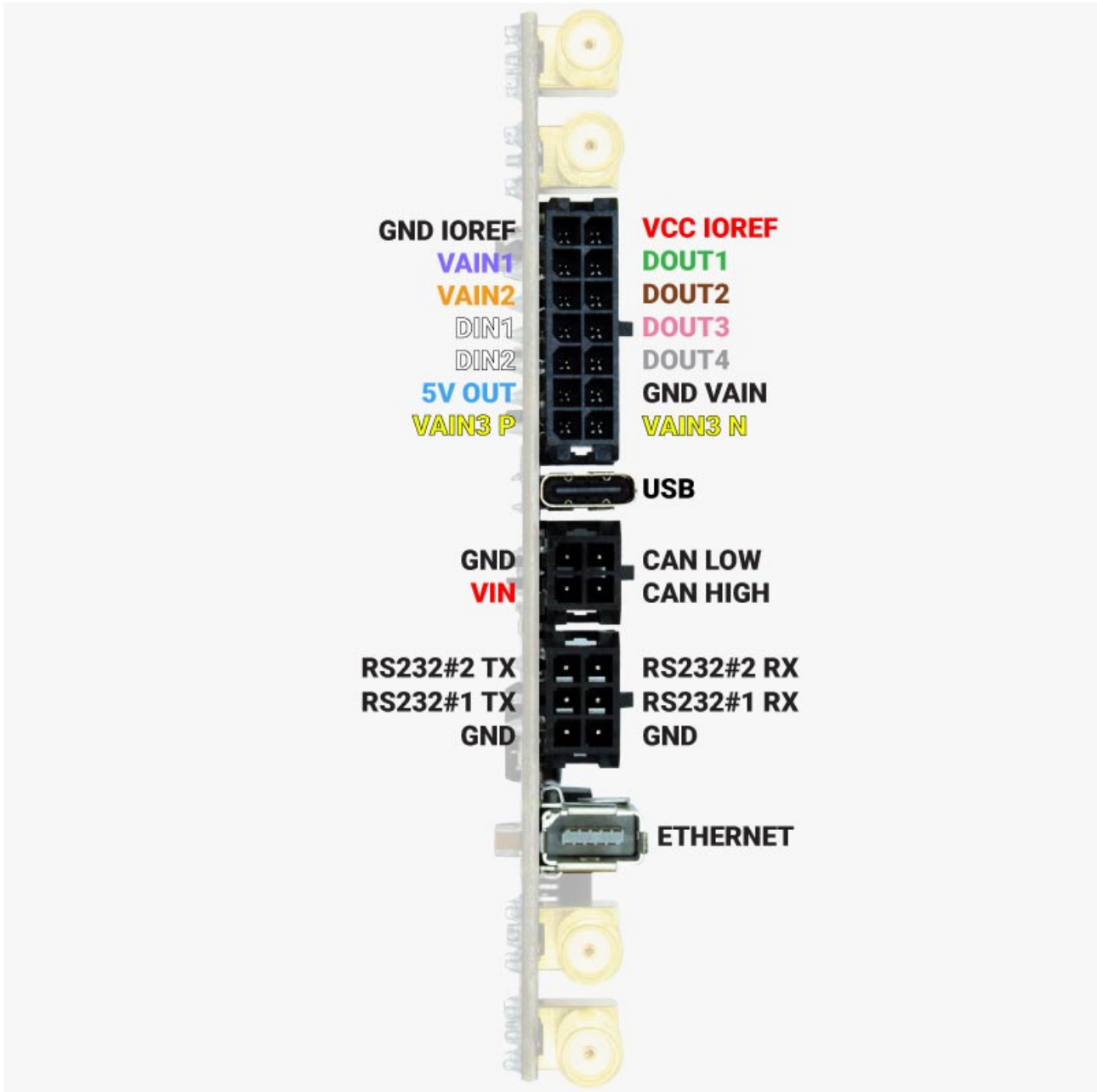
- Millimeter level precision
  - <1cm with a base station up to 35km
  - <1cm with NTRIP up to 35km
  - <1.2m in standalone mode
  - <0.6m standalone with SBAS coverage
- Update rate
  - Default: 1Hz
  - With maximum performance: up to 100Hz
- Multi band: L1, L2 and L5 support, 448 hardware channels
- 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/configuration-files/">https://www.ardusimple.com/configuration-files/</a>
3D CAD STEP Files	<a href="https://www.ardusimple.com/3d-cad-step-files/">https://www.ardusimple.com/3d-cad-step-files/</a>

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

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