

## Features:

- Fanless setup, passive cooling
- Build-in RF splitter for direct connection in multi-receiver setup
- Raspberry-PI RPI Zero 2 W
- RP3A0 SoC, ARM Cortex-A53@1GHz
- WiFi 2.4 GHz 802.11n
- ELT\_RtkBase full-featured software
- ELT\_RTKBase User Guide
- microSD card 32GB with pre-installed software and documentation
- GNSS antenna input with SMA connector
- USB C receiver port, USB C power in port
- Power LED, GNSS LED, Internet LED and NTRIP LED
- Backup supercapacitor
- Dimensions: 100x100x22.5 mm
- Weight: 140 gr.
- Fully assembled and ready to use

## MODULE FEATURES

Based on the new generation GNSS SoC - NebulasIV, which integrates RF, baseband, and high precision algorithm

17.0 x 22.0 x 2.6 mm LGA package

Supports on-chip RTK positioning calculation on all systems and multiple frequencies

Supports GPS L1C/A/L1C/L2P(Y)/L2C/L5, BDS

B11/B21/B31/B1C/B2a/B2b, GLONASS G1/G2/G3, Galileo E1/E5a/E5b/E6, QZSS L1C/A/L1C/L2C/L5, NavIC L5 and SBAS L1C/A

All-system multi-frequency RTK engine and advanced RTK technology

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Independent tracking of different frequencies and 60dB narrowband anti-jamming technology

## PERFORMANCE

Channels: 1408 channels, based on NebulasIV

Frequency: GPS L1C/A/L1C/L2P(Y)/L2C/L5  
BDS B11/B21/B31/B1C/B2a/B2b  
GLONASS G1/G2/G3  
Galileo E1/E5a/E5b/E6  
QZSS L1C/A/L1C/L2C/L5/L6\*  
NavIC L5  
SBAS L1C/A

Single point positioning (RMS): Horizontal: 1.5 m  
Time Accuracy (RMS) - 20 ns  
Vertical: 2.5 m  
Velocity Accuracy (RMS) - 0.03 m/s

DGPS (RMS): Horizontal: 0.4 m  
Cold start < 12 s  
Vertical: 0.8 m  
Initialization Time < 5 s (typical)

RTK (RMS): Horizontal: 0.8 cm + 1 ppm  
Initialization Reliability > 99.9%  
Vertical: 1.5cm + 1 ppm  
Data Update Rate 50 Hz\* Positioning  
Differential Data - RTCM V3.X  
Data Format - NMEA-0183, Unicore

Observation accuracy (RMS)	BDS	GPS	GLONASS	Galileo
B11/L1 C/A/G1/E1 Code	10 cm	10 cm	10 cm	10 cm
B11/L1C/A/G1/E1 Carrier Phase	1 mm	1 mm	1 mm	1 mm
B21/L5/E5a/E5b Code	10 cm	10 cm	10 cm	10 cm
B21/L5/E5a/E5b Carrier Phase	1 mm	1 mm	1 mm	1 mm
B31/L2P(Y)/L2C/G2 Code	10 cm	10 cm	10 cm	10 cm
B31/L2P(Y)/L2C/G2 Carrier Phase	1 mm	1 mm	1 mm	1 mm

## Reference: ELT0233



## OTHER FEATURES

Physical Characteristics: Packaging: 54 pin LGA  
Dimension: 17.0 × 22.0 × 2.6 mm  
Weight: 1.88 ± 0.03 g

Environmental Specifications: Working temperature: -40 °C ~ +85 °C  
Storage temperature: -55 °C ~ +95 °C  
Humidity: 95% No condensation  
Vibration: MIL-STD-810F  
Shock: MIL-STD-810F

Communication Interfaces: 3 × UART (LVTTTL)  
1 × I2C\*  
1 × SPI\* (slave)  
1 × CAN\* (shared with UART3)