

Features:

- Fanless setup, passive cooling
- Build-in RF splitter for direct connection in multi-receiver setup
- Raspberry-PI RPI4-MODBP-2GB
- BCM2711 SOC, ARM Cortex-A72@1.5GHz
- WiFi 2.4 and 5GHz 802.11 b/g/n/ac, Bluetooth 5.0 BLE
- 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 port with OTG option
- Gigabit Ethernet port with optional PoE support
- Time pulse LED, Ethernet LED
- Backup supercapacitor
- Dimensions 110x95x30 mm
- Weight: 245/265 gr.
- Fully assembled and ready to use

Reference: ELT0231



GNSS 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 B1I/B2I/B3I/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 B1I/B2I/B3I/B1C/B2a/B2b
 GLONASS G1/G2/G3
 Galileo E1/E5a/E5b/E6
 QZSS L1C/A/L1C/L2C/L5
 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
B1I/L1 C/A/G1/E1 Code	10 cm	10 cm	10 cm	10 cm
B1I/L1C/A/G1/E1 Carrier Phase	1 mm	1 mm	1 mm	1 mm
B2I/L5/E5a/E5b Code	10 cm	10 cm	10 cm	10 cm
B2I/L5/E5a/E5b Carrier Phase	1 mm	1 mm	1 mm	1 mm
B3I/L2P(Y)/L2C/G2 Code	10 cm	10 cm	10 cm	10 cm
B3I/L2P(Y)/L2C/G2 Carrier Phase	1 mm	1 mm	1 mm	1 mm

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)