## Features:

- On board low noise 3.3 V voltage regulator
- **USB C** connector
- SMA antenna connector
- u-center GPS evaluation software
- Extensive visualization and evaluation features
- Time pulse LED, Power LED, RTK LED
- Backup supercapacitor
- Dimensions: Ø45x12 mm without SMA
- Weight 18 gram
- Additional magnet mount
- Waterproof 3M double sided tape for mounting

**Reference: ELT0156**

### GNSS FEATURES

| | |
|---|---|
| Receiver type | 184-channel u-blox F9 engine Beidou, Galileo, GLONASS, GPS/QZSS |
| GNSS platform | Concurrent GNSS |
| GNSS bands | L1C/A, L1OF, E1-B/C, B1I, L2C, L2OF, E5b, B2I |
| Oscillators | TCXO |

### PERFORMANCE

| | |
|---|---|
| Horizontal pos. accuracy | |
| PVT | 1.5 m CEP |
| SBAS | 1.0 m CEP |
| RTK | 0.01 m + 1 ppm CEP |
| SPARTN | < 0.06 m CEP (GPS+GLO+GAL) |
| CLAS | 0.04 m CEP (GPS+GLO+GAL) |
| Vertical pos. accuracy | |
| PVT | 2.0 m R50 |
| SBAS | 1.5 m R50 |
| RTK | 0.01 m + 1 ppm R50 |
| SPARTN | < 0.12 m R50 |
| CLAS | 0.08 m R50 |
| Convergence time | |
| RTK | < 10 s |
| SPARTN | < 45 s |
| CLAS | < 70 s |

| | | | Nav. update rate | | |
|---|---|---|---|---|---|
| Acquisition | Cold start | Hot/Aided start | RTK | PVT | RAW |
| GPS+GLO+GAL+BDS | 25 s | 2 s | 7 Hz | 9 Hz | 15 Hz |
| GPS+BDS+GAL | 25 s | 2 s | 10 Hz | 10 Hz | 18 Hz |
| GPS+GAL | 30 s | 2 s | 15 Hz | 20 Hz | 25 Hz |
| GPS+GLO | 25 s | 2 s | 14 Hz | 20 Hz | 25 Hz |
| GPS+BDS | 30 s | 2 s | 13 Hz | 16 Hz | 25 Hz |
| GPS | 30 s | 2 s | 20 Hz | 25 Hz | 25 Hz |

| | |
|---|---|
| Velocity accuracy | 0.05 m/s |
| Dynamic heading accuracy | 0.3 deg |
| Sensitivity: | |
| Tracking and Navigation | -167 dBm |
| Reacquisition | -160 dBm |
| Cold start | -148 dBm |
| Hot start | -157 dBm |

### OTHER FEATURES

| | |
|---|---|
| Anti-jamming | Active CW detection and removal Dual onboard band pass filter |
| Anti-spoofing | Advanced anti-spoofing algorithms |
| Security | Secure boot Secure firmware update |
| Memory | Flash |
| RAW data support | Carrier phase, code phase and pseudo-range, Doppler on all signals |
| Operating temperature | 0 °C to +50 °C |
| Supply voltage | 4.5 V to 5.5 V |
| Supply current | <130 mA (without external antenna) |
| External antenna requirements | Supply voltage 3.0 V Consumption current <50 mA |