

Features:

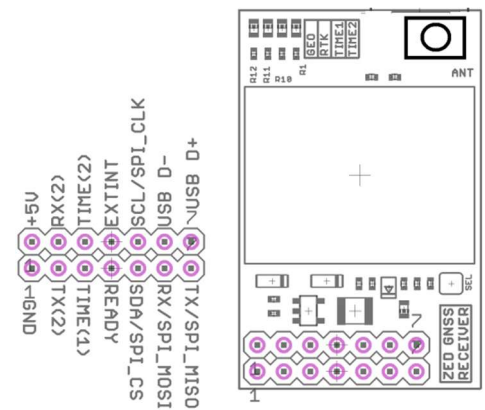
- On board low noise 3.3 V voltage regulator
- **USB, I2C** (SDA,SCL), **SPI** and two **UART** (Tx,Rx) interfaces
- U.FL (IPEX) edge antenna connector
- 14 pin holes connector, pitch 2.54 mm
- L1/L2 or L1/L5 options
- u-center GPS evaluation software
- Extensive visualization and evaluation features
- Two time pulse LED, GEO LED, RTK LED
- Backup supercapacitor
- Dimensions: 35x23 mm
- Weight 4 gram

Reference: ELT0128



GNSS FEATURES	
Receiver type	184-channel u-blox F9 engine Beidou, Galileo, GLONASS, GPS/QZSS
GNSS platform	Concurrent GNSS
GNSS bands	GPS L1C/A, GLO L1OF, GAL E1B/C, BDS B1I, QZSS L1C/A L1S L5, SBAS L1C/A ZED-F9P-0xB : GPS L2C, GLO L2OF, GAL E5b, BDS B2I, QZSS L2C ZED-F9P-1xB : GPS L5, GAL E5a, BDS B2a, NavIC L5
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
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