

Features:

- On board low noise 3.3 V voltage regulator
- USB interface with type A connector
- SMA antenna connector
- SMA time pulse connector
- u-center GPS evaluation software
- Extensive visualization and evaluation features
- Time pulse LED, Power LED
- Backup supercapacitor

Reference: **ELT0147**



GNSS FEATURES

Receiver type	184-channel u-blox F9 engine Beidou, Galileo, GLONASS, GPS/QZSS, NavIC
GNSS platform	Concurrent GNSS
GNSS bands	L1C/A, L1OF, E1-B/C, B1I, B1C, L5, E5a, B2a, SPS-L5
Oscillators	TCXO

PERFORMANCE

Accuracy of time pulse signal	Absolute timing mode	5 ns
	Differential timing mode	2.5 ns
Frequency of time pulse	0.25 Hz to 25 MHz configurable	
Time pulse jitter	±4 ns	
Time mark resolution	8 ns	
Velocity accuracy	0.05 m/s	
Dynamic heading accuracy	0.3 deg	

Acquisition	Navigation			update rate
	Cold start	Hot start	Aided start	
GPS+GLO+GAL+BDS	24 s	2 s	2 s	8 Hz
GPS+BDS+GAL	25 s	2 s	2 s	10 Hz
GPS+GAL	29 s	2 s	2 s	15 Hz
GPS+GLO	26 s	2 s	2 s	15 Hz
GPS+BDS	28 s	2 s	2 s	12 Hz
GPS	29 s	2 s	2 s	20 Hz

Horizontal position accuracy 1.5 m CEP

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