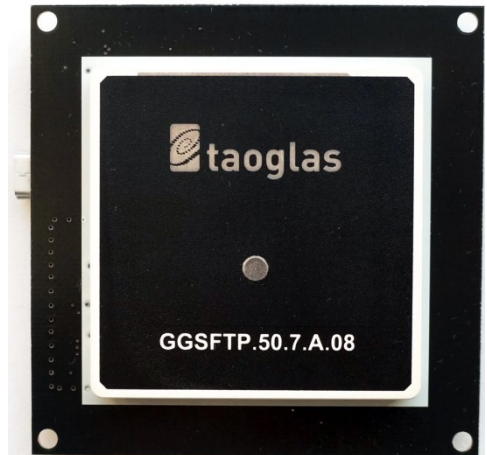


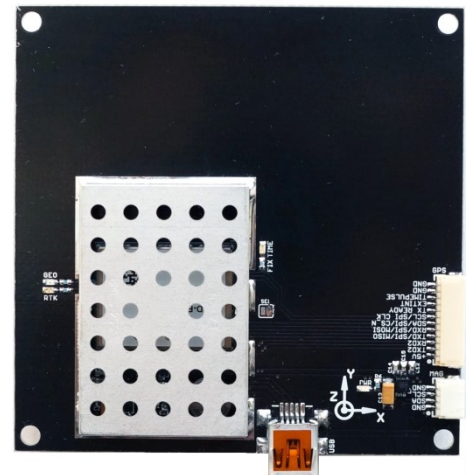
Features:

- On board Ultra low noise 3.3 V voltage regulator with noise 2 nV/ $\sqrt{\text{Hz}}$
- **USB, I2C** (SDA, SCL), **SPI** and two **UART** (Tx, Rx) interfaces
- **Mini USB** connector
- **LIS3MDL** I2C magnetometer
- 12 pin JST SH connector and 4 pin JST SH for LIS3MDL magnetometer
- MultiBand L1, L2 antenna
- u-center GPS evaluation software
- Extensive visualization and evaluation features
- Time pulse LED, GEO LED, RTK LED
- Backup supercapacitor
- EMI protection
- Dimensions: **70x70 mm**

Reference: ELT0089



- Weight: **56 gr.**



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				
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 band onboard 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