



# TinyPOS 800

**All-in-One  
GNSS/INS NAVIGATOR SYSTEM**

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## All-in-One GNSS/INS NAVIGATOR SYSTEM

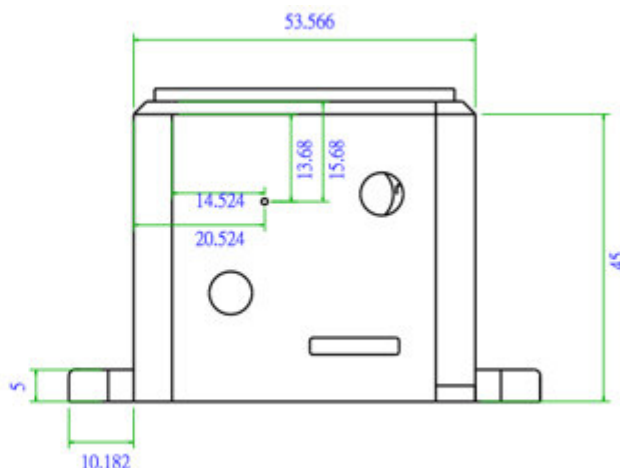
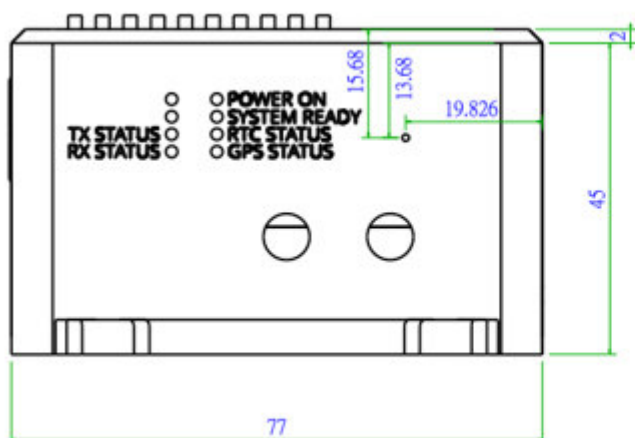
The NAV series all-in-one GNSS/INS navigator system is a small, lightweight, built-in high-speed storage device that can ensure self-contained operation. All-attitude inertial/GNSS navigator, suitable for precision, even without GNSS signals, position and attitude navigation data can be continuously output.



NAV series All-in-One GNSS/INS Navigator system contains leading-edge IMU and built-in dual-antenna 4G LTE function for real-time remote monitor, also provides a powerful multi-frequency, multi-constellation GNSS/RTK capability. XIANG-CHENG's integration expertise blends the IMU and GNSS data to provide accurate, robust navigation services to your product and application with all the functionalities that you need. NAV series All-in-One GNSS/INS Navigator system output data includes UTC time, GPS time-stamped position, velocity, angular rate, linear acceleration, roll, pitch, pressure and heading information.

### KEY ADVANTAGES

- Functional configuration flexibility. Only purchase the features you need.
- Accurate attitude performance that provides better quality navigation trajectories.
- After long-term reliability test conditions.
- Accurate GPS time synchronization.



## TYPICAL KEY CHARACTERISTICS

Gyroscope In-Run Bias Stability	0.8 °h / 1.2 °h / 6.0 °h (options)
Gyroscope Angular Random Walk	0.06° deg/ $\sqrt{hr}$ / 0.08° deg/ $\sqrt{hr}$ / 0.20° deg/ $\sqrt{hr}$
Bias over T. (Initial Error) <small>(1<math>\sigma</math>, -40°C ≤ TA ≤ +85°C)</small>	0.1~0.2 °/s (1 $\sigma$ ) / 2~3mG (1 $\sigma$ )
Triple Gyroscopes	±450 °/s
Tri-Axis Accelerometer	±10 G
Data Output Rate	2000 Hz
GNSS Capability	GNSS and RTK mode (options) Single or Dual Antenna Capable
GNSS Signals	GPS L1C/A, L2C GLONASS L1OF, L2OF, Galileo E1-B/C, E5b, BeiDou B1I, B2I
Time to First Fix	Cold Start: < 60 Seconds: Hot Start: < 30 Seconds
Supply Voltage / Power Consumption	+9VDC to +16VDC / 2.8Watts
Weight / Volume	288g / (L):77mm x (W):73.93mm (H):47mm
Temperature Operating	-40°C to +85°C
Barometric Range	10-1200 mbar 0.012 mbar High resolution
Compass Heading	0.21°
4G LTE (CAT1/CAT4)	UpLink: 5Mbps/50Mbps DownLink: 10Mbps/150Mbps
Communication Ports	USB-TTL/UART

### For More Information

[www.robotlab.com.tw](http://www.robotlab.com.tw)

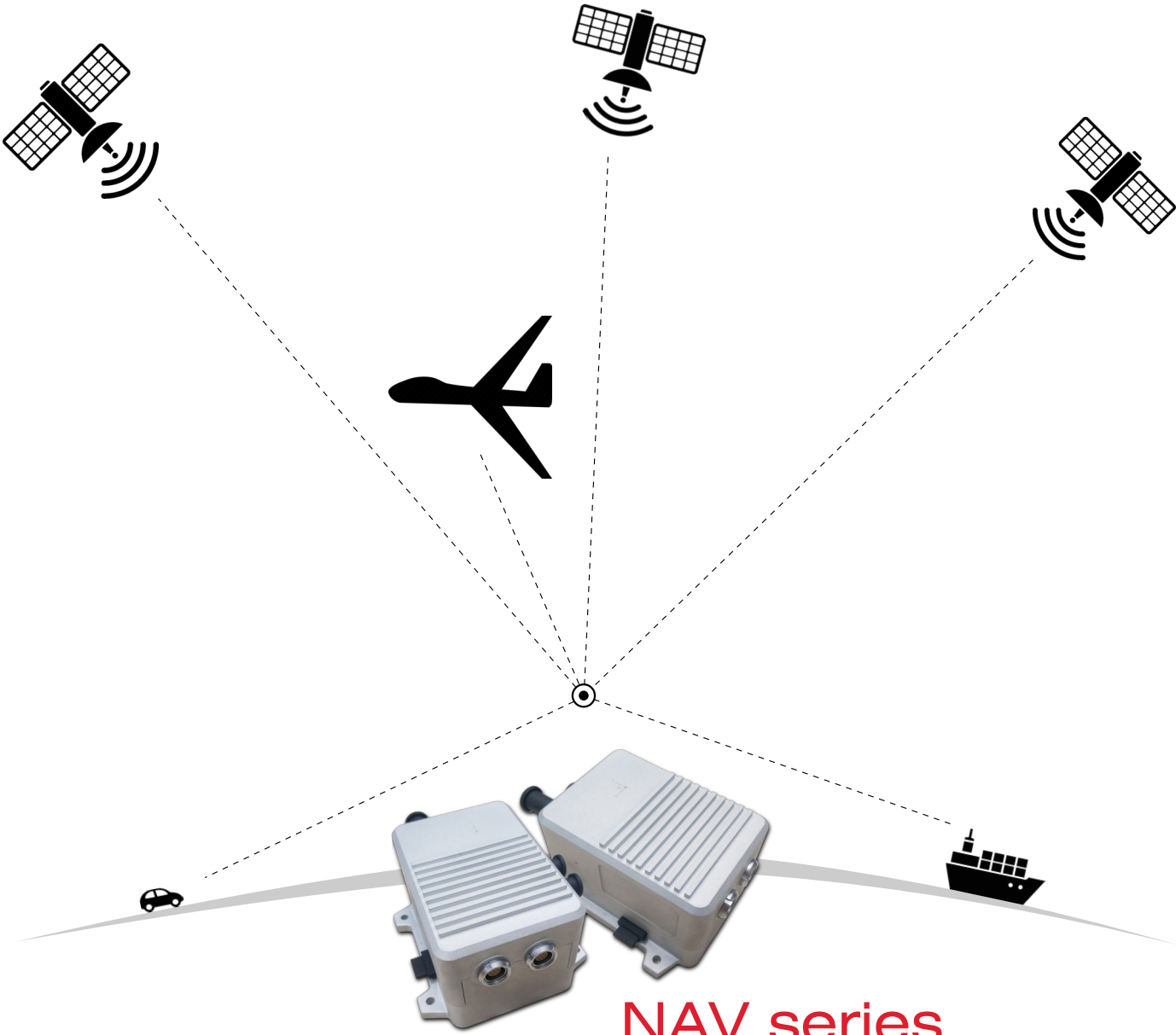
XIANG CHENG ELECTRONIC

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# STANDARD CONFIGURATIONS

Part Number	Application Domain	Gyroscope In-Run Bias Stability	Triple Gyroscopes	Tri-Axis Accelerometer	Positioning Services	Constellations	Heading	Barometric	LTE	LF/RF
NAV-0111	Vehicle / UAV	1.2 °h	±450 °/s	±10 G	GNSS	GPS/GLO/GAL/BD	○	○	LTE CAT.1	-
NAV-0221	Vehicle / UAV	0.8 °h	±450 °/s	±10 G	GNSS	GPS/GLO/GAL/BD	○	○	LTE CAT.4	-
NAV-0222	Vehicle / UAV	0.8 °h	±450 °/s	±10 G	RTK	GPS/GLO/GAL/BD	○	○	LTE CAT.4	-
NAV-2100	UnderWater Robot	1.2 °h	±450 °/s	±10 G	-	-	○	○	-	-
NAV-3011	Human	1.2 °h	±450 °/s	±10 G	GNSS	GPS/GLO/GAL/BD	○	○	LTE CAT.1	-
NAV-3142	Human	6.0 °h	±450 °/s	±10 G	RTK	GPS/GLO/GAL/BD	○	○	LTE CAT.1	○



## NAV series

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For More Information  
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