



## Optical Fiber Strapdown Inertial/Satellite Integrated Navigation System

Model: FS100



### Product Features

FS100 fiber optic integrated navigation system is composed of high-precision closed-loop fiber-optic gyroscope, quartz

flexible accelerometer and high-end GNSS receiving board, through multi-sensor fusion and guidance

Realization of aerial calculation algorithm, providing high-precision navigation attitude, speed and position information to the outside world information to meet high-precision measurement and control requirements.

### Product Features

- 0.8nmile/h navigation grade accuracy
- Multi-mode selection, vehicle mode/airplane mode
- Static initial alignment 3min / shaking base initial alignment 8min
- Fault self-check
- Rich interfaces, support RS232, RS422, CAN and other standard interfaces
- High reliability

### Application scenarios

- Intelligent excavation system in mining area
- Baseline inertial navigation for large UAVs
- marine compass
- self-propelled gun orientation

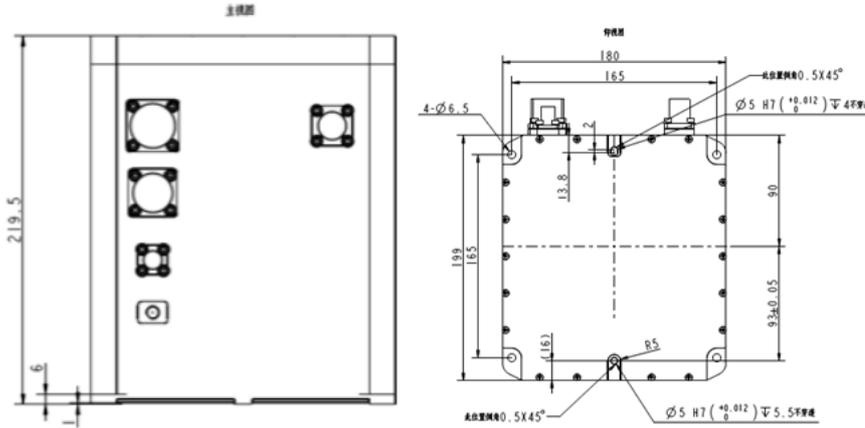


- Vehicle positioning and orientation
- High precision mobile measurement
- High precision and stable platform

## Electrical Characteristics

- Power supply: 24~36V DC (typ.)
- Rated power: 30W (max)

## Mechanical Dimensions



## Technical parameter:

Attributes	Parameter	Index
Position hold	Odometer Combo	0.001D (D is mileage)
	GNSS combination	1.2m
	Pure inertia	0.8mmile/h
Attitude accuracy	Initial alignment	0.003°
	Attitude hold (GNSS disabled, pure inertia)	0.002°/10min (RMS)
	Transient power	≤100W (<3s)
Heading accuracy	self-seeking north	0.05°×sec(Lati), where Lati means latitude (RMS)
	Heading hold (GNSS disabled, pure inertia)	0.003°/10min (RMS)
Speed accuracy	Speed hold (GNSS disabled, pure inertia)	0.3m/s/10min (RMS)
Optical fiber Gyro	Measuring range	±400°/s
	Zero bias stability	≤0.01°/h
Quartz Flexible Accelerometer	Measuring range	±20g
	Zero bias stability	≤20μg(10s average)
Communication Interface	RS232	1 channel (baud rate 9.6kbps~921.6kbps, default 115.2kbps Frequency up to 1000Hz, default 200Hz)
	RS422	6 channels (Baud rate 9.6kbps~921.6kbps, default



		115.2Kbps Frequency up to 1000Hz, default 200Hz)
Structural properties	Size	199 mm × 180 mm × 219.5 mm (L×W×H)
	Weight	A single set of inertial navigation is not more than 8.0kg (optional for aviation applications is not more than 6.5kg)
Use environment	Storage temperature	-40°C~65°C
	Relative humidity	≤80%

## Application example

