

Attitude angle & true north detector gyro unit
Northfinder™

GCAH-21



○ Description

- Real-time attitude and heading angles are output without GPS
- Calculating the attitude angle (roll/pitch angle) and azimuth angle (yaw angle) with high accuracy
- Initial alignment is easy, just send a command
- Performances can be improved with velocity input
- By applying MEMS technology, GCAH-21 is smaller, tougher, and less expensive than traditional AHRS using RLGs or FOGs

○ Application

Autonomous control for
Railway, Automotive and
Civil Construction

Inertial Navigation
System for Aerospace and
Maritime vehicle

UAV

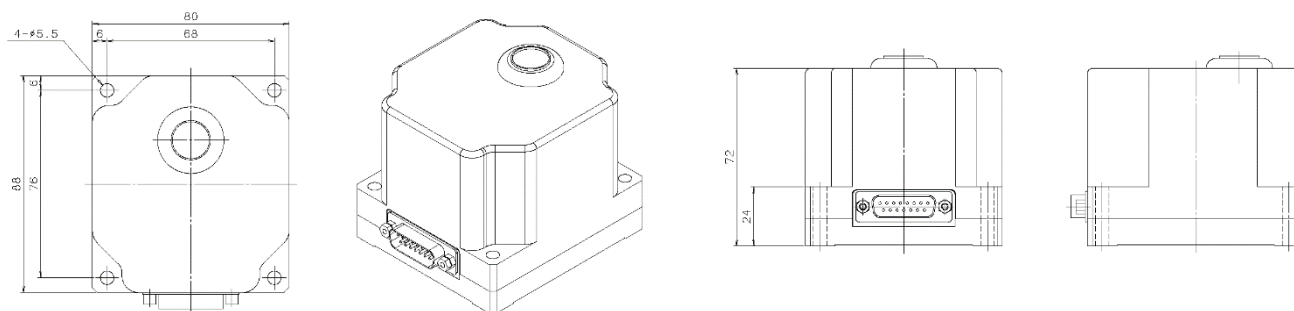
Down Hole Surveying and
Mapping

Etc.

Technical Data

	Item	Value
Mechanical Characteristics	Size [mm]	88×80
	Weight [gram]	<700 (TBD)
	Electrical interface	D-Sub15
Electrical Characteristics	Power supply [V]	7.5~30(Typ.12)
	Power consumption [W]	<1.5
Operating Conditions	Temperature range (operation/storage) [°C]	-25~65
	Temperature range (performance) [°C]	-10~50
	Humidity environment [%RH] (No condensation)	<85
	Vibration · Shock	IEC 61373
Communication specification	Communication protocol	CAN/RS422 (Switchable)
	Data output cycle [Hz]	200/100* (Switchable)
	CAN baud rate [bbs]	Typ.1,000,000
	RS422 baud rate [bps]	Typ.460,800
	Speed pulse input format	RS422
Measuring range	Roll [°]	<±180
	Pitch [°]	<±90
	Yaw [°]	<±180
Static angular accuracy	Roll [°rms]	<±0.1
	Pitch [°rms]	<±0.1
	Yaw [°rms]	<±1%FS
Dynamic angular accuracy	Roll [°]	<0.5
	Pitch [°]	<0.5
	Yaw [°]	<0.5
Angular velocity	Measuring range [°/S] (Roll/Pitch/Yaw)	±200
	Scale Factor Error [ppm] (Roll/Pitch/Yaw)	<±500
	Bias [°/h rms] (X/Y/Z)	<±1(TBD)
Acceleration	Measuring range [g] (X/Y/Z)	±10
	Scale Factor Error [ppm] (X/Y/Z)	<±500
	Bias [mg] (X/Y/Z)	±1.5

* When the output frequency is 100Hz, the noise performance of the gyro output will deteriorate



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Specification subject to change without notice. Issue Sep./2023