

M-G550-PR

IMU (Inertial Measurement Unit) RS422 INTERFACE

■ GENERAL DESCRIPTION

The M-G550-PR is a small form-factor inertial measurement unit (IMU) with 6 degrees of freedom: triaxial angular rates and linear accelerations, and provides high-stability and high-precision measurement capabilities with the use of high-precision compensation technology. A variety of calibration parameters are stored in a memory of the IMU, and are automatically reflected in the measurement data being sent to the application after the power of the IMU is turned on. With a RS-422 interface supported for host communication, the M-G550-PR reduces technical barriers for users to introduce inertial measurement and minimizes design resources to implement inertial movement analysis and control applications. This unit is packaged in a water-proof and dust-proof metallic case. It is suitable to use for industrial and heavy duty applications.

The features of the IMU such as high stability, high precision, and small size make it easy to create and differentiate applications in various fields of industrial systems.

■ FEATURES

Item	Specification	Note
Sensor		
Integrated sensor	SEIKO EPSON inertial measurement sensor (M-G350-PD11) Low-Noise, High-stability Gyro Bias Instability: 6 deg/hr Angular Random Walk : 0.2 deg/√hr Initial Bias Error : 0.5 deg/s (1σ) 6 Degree Of Freedom Triple Gyroscope : ±300 deg/s Tri-Axis Accelerometer : ±3 G 16bit data resolution Calibrated Stability (Bias, Scale Factor, Axial alignment)	
Sampling rate	1000sps (Max)	Selectable
Interface		
Protocol	RS-422 (TX/RX Pair, Duplex transmission)	
Bit rate	460.8Kbps	
Cable Length	250m Max.	(Target Value)
Terminator	Included (100 ohms typ.)	
General specification		
Voltage supply	9 to 30 V	
Power consumption	TBD mA (Typ. Vin = 12V)	
Operating temperature range	-25 to +70°C	

External dimension		
Outer packaging	Overall metallic shield case	
Size	52 x 52 x 26mm (Not including projection.)	
Weight	85g	
Interface connector	M12, 8pin-male, water-proof	
Water-proof, Dust-proof:	Corresponds with IP67	
Regulation		
EU	CE marking (EN61326/RoHS Directive)	
USA	FCC part15B	

