TECH IMU CV.4

Small, compact and powerful.

The heart of Technaid inertial Motion Capture System.

TECHNAID

Technical Specifications

General:			
Characteristic		**Value**	**Unit**
Supply voltage		3.3 – 4.0	VDC
Current consumption		70	mA
Dimensions: Height x Width x Length		8x26x36	mm
Weight		14	g
Specific:			
GYROSCOPES	Measurement range	± 2000 ±34.9	°/s rad/s
	Resolution	0.06	°/S
ACCELEROMETERS	Measurement range	± 4, 8, 16 ± 39.22 – 156.88	g m/s^2
	Resolution	0.122	mg
MAGNETOMETERS	Measurement range	± 8.1 ± 810	gauss µT
	Resolution	0.092	µT

Special:	
Built-in calibration to eliminate axes misalignment, adjust sensitivity and compensate the measurements due to external temperature changes.	Built in a compact solid body for waterproof applications.
Kalman filter to estimate absolute 3D orientation.	Robust algorithm against external magnetic fields.
Sampling frequency: 1kHz Output frequency: Up to 500 Hz	Static accuracy: 0.7 degrees RMS Dynamic accuracy: 1.0 degrees RMS
Types of communication: CAN.	

Measured variables:

- 3D Angular Speed (rad/s)
- 3D Acceleration (m/s^2)
- 3D Magnetic Field (µT)
- Temperature (°C)

Output:

- **Digital**: Digitalized signal values at 16 bits.
- **Physical**: Physical signal values on the corresponding unit of measurement.
- **Orientation**: Direction Cosine Matrix (DCM) or Quaternions.

Note: Physical and Orientation data can be sent at the same time.

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