

# TECH IMU CV.4

Small, compact and powerful.

The heart of Technaid inertial Motion Capture System.



## 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:			
<b>GYROSCOPES</b>	Measurement range	± 2000 ±34.9	°/s rad/s
	Resolution	0.06	°/S
<b>ACCELEROMETERS</b>	Measurement range	± 4, 8, 16 ± 39.22 – 156.88	g m/s <sup>2</sup>
	Resolution	0.122	mg
<b>MAGNETOMETERS</b>	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.			
<b>Measured variables:</b>		<b>Output:</b>	
<ul style="list-style-type: none"> <li>• 3D Angular Speed (rad/s)</li> <li>• 3D Acceleration (m/s<sup>2</sup>)</li> <li>• 3D Magnetic Field (μT)</li> <li>• Temperature (°C)</li> </ul>		<ul style="list-style-type: none"> <li>• <b>Digital:</b> Digitalized signal values at 16 bits.</li> <li>• <b>Physical:</b> Physical signal values on the corresponding unit of measurement.</li> <li>• <b>Orientation:</b> Direction Cosine Matrix (DCM) or Quaternions.</li> </ul> <p><b>Note:</b> Physical and Orientation data can be sent at the same time.</p>	