

Inertial Measurement Unit (IMU-200Series)

3G3A3M-900-D : Optimum solution for different dynamic motion tracking

IMU200-90 (3G3A3M-900-D)

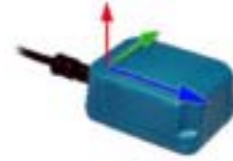
IMU 200 은 디지털 관성.항법 측정장치로 3 차원의 각속도, 가속도 및 자기장영역을 측정하며 RS 232 및 RS 485 가 제공가능하다.

IMU200 소프트웨어를 사용하여 동시 데이터를 제공하며

디지털전송으로 3 차원의 각방향 데이터를 높은 정확도로 제공한다.

쉽게사용 가능한 소프트웨어 개발키트는 사용자의 소프트웨어로 변환할

수 있도록 제공될 수 있으며 MATLAB 이나 LABVIEW 와 같은 선호데이터 분석용에 적용가능하다

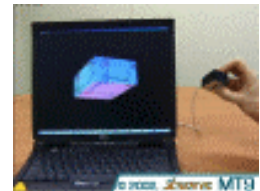


IMU200-60 (3G3A-900-D)

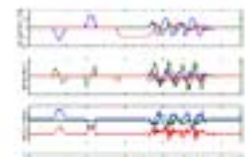
IMU200 는 디지털 관성측정 장치로 3 차원의 각속도, 가속도를 측정하며 RS 232 나 RS 485 통신 인터페이스로 제공된다. 즉 마그네토미터가 없으며 기타 MT9 과 동일함. 또한 가속도센서는 2g(20m/sec2) 와 10g 두가지로 제공될 수 있으며 기본사양은 2g .

특징 및 장점

IMU200 은 소프트웨어와 함께 3D 동작데이터를 Euler angle 과 Quaternion 의 형태로 250 Hz 의 주파수 및 1 도이상의 고정확도를 실현 하는데 적합하다. 그 크기로서도 최소형이며 정확하고 실시간으로 절대 각도 데이터를 3D 로 제공하며 동적구현의 오차(drift)가 없으며 인간동작을 구현하고자 하는분야에 특히 최상의 솔루션을 제공한다.



- Temperature compensation in pc software
- no drift / no line of sight constraints
- quick, real-time response
- compact, portable, unlimited operating range
- specifically designed to track human motion
- digital sensor/easily integrated in any system/application; Development kit



적용 및 응용분야



Human Motion

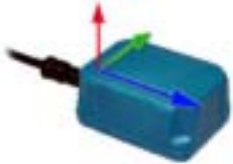
- **Rehabilitation** : Gait monitoring for Functional Electro Stimulation (FES) products for dropped foot patients or gait analysis research
- **Ergonomics** : Posture registration and load monitoring of workers in construction and assembly industry
- **Exercise & sports** : Monitoring of athletes' style and performance
- **Virtual Reality and Augmented Reality** : Real-time body posture and viewing direction measurement for cave or head-mounted display (HMD) visualization
- **ICT** : 2D or 3D motion input device for PDA or PC

Machine Motion

- **Aerospace**: Control & inertial navigation of lightweight unmanned aerial vehicles
- **Automotive**: Vehicle dynamics analysis and dead-reckoning of (D)GPS information of cars and motorbikes

- **Marine industry:** Vessel & boat navigation and attitude/heading measurement
- **Bore industry :** Borehole measurement for oil and telecom industry
- **Robotics :** Navigation and dead-reckoning of (D)GPS information of mobile robots

IMU200 의 사양

Orientation Software						
Platform :	Windows 2000 / XP					
Output :	3D Orientation Quaternion/Matrix / Euler Angles					
	3D Rate of turn					
	3D Acceleration					
	3D Magnetic field strength					
	Temperature					
Developer's Tools :	Available on request					
Orientation Performance						
Dynamic range :	All angles in 3D					
Angular resolution :	0.05° RMS					
Static Accuracy :	<1°					
Dynamic Accuracy :	3° RMS					
Turn on time :	50ms					
Sample frequency:	User selectable ; 25 ~ 512Hz					
Sensor Performance						
Description	Units	Rate of turn	acceleration	Magnetic field	Temperature	
Units	-	deg/s	m/s ²	mGauss	.	
Solution dimension	-	3	3	3	-	
Full scale	(Units)	±900	± 20	± 750	-55 +125	
Linearity	(% of FS)	0.1	0.2	1	<1	
Bias stability; Compensated	(Units 1σ)	5	0.02	0.5	-	
Uncompensated	(Units /.)	1	0.02	-	-	
Scale factor stability ; Compensated	(% 1σ) (% per .)	-	0.05	0.5	-	
Uncompensated		0.2	0.03	0.5	-	
Noise	(units RMS)	0.7	0.01	4.5	0.0625	
Bandwidth	(Hz)	50	30	10	-	
Physical Specifications						
Interface :	Serial digital (RS 232 / RS 485)					
Operating voltage :	5.5V (adapter included)					
Supply current :	40mA					
Operating Temperature Range :	0 °C ~ 55 °C					
Outline dimensions :	39 x 54 x 28 mm (W X L X H)					
Weight :	35 g					
Absolute maximum ratings						
Shock(any axis) :	5000m/s ² (500g) powered,10000m/s ² (1000g) unpowered					
Supply voltage :	0.3V 12V					
Operating/storage temperature :	-5 °C ~ 60°C					

* 상기사양은 당사의 사정에 의하여 예고없이 변경될 수 있습니다.