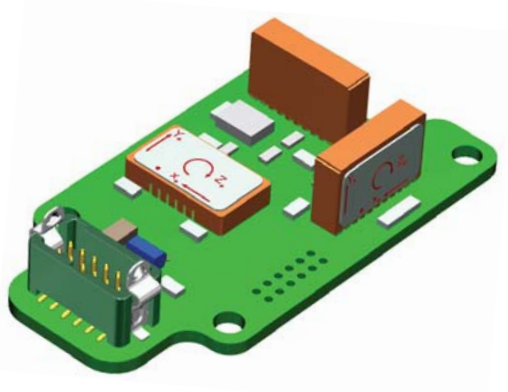


Coming
Soon

DMU10

Six Degrees of Freedom
Dynamic Measurement Unit

DMU10-01
Unpackaged



DMU10-02
Packaged



Key features

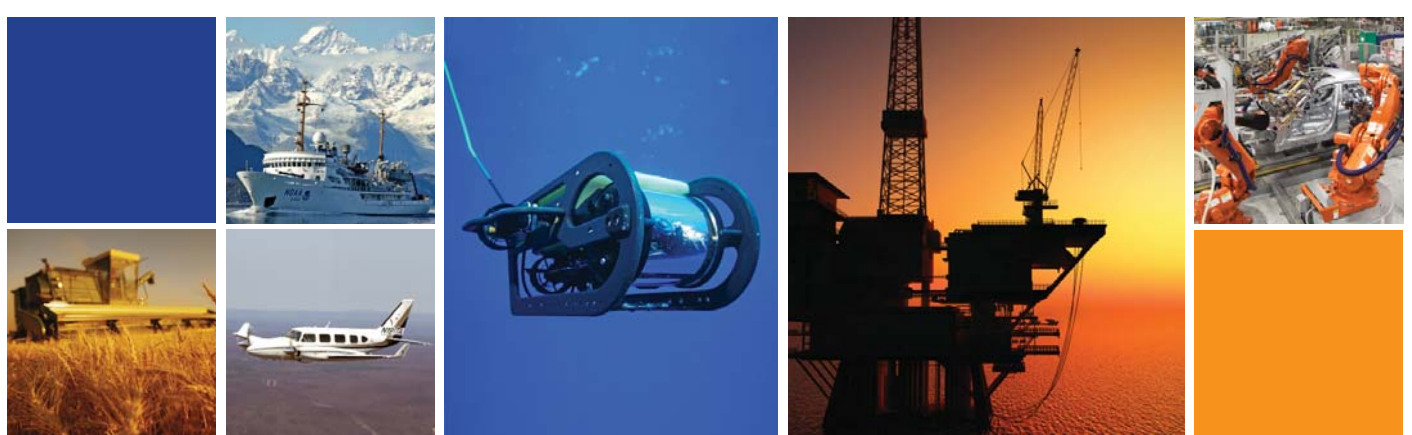
- 8 sensor measurements
 - Angular rate (3x)
 - Linear acceleration (3x)
 - Temperature (2x)
- Angular rate to $\pm 300^\circ/\text{s}$
- Acceleration to $\pm 10g$
- Small size, 41 x 22 x 10.2mm (unpackaged)
45 x 26 x 15.25mm (packaged)
- Low power, <90mA
- RS422 digital output

Typical applications

- Antenna and platform stabilisation
- Precision Agriculture
- Autonomous vehicles and ROVs
- Attitude measurement systems
- Personal navigation
- GPS aiding

Options

- Without calibration
- Room temperature calibration
- Over temperature calibration
- IMU unpackaged and packaged
- Other interfaces: SPI®



DMU10

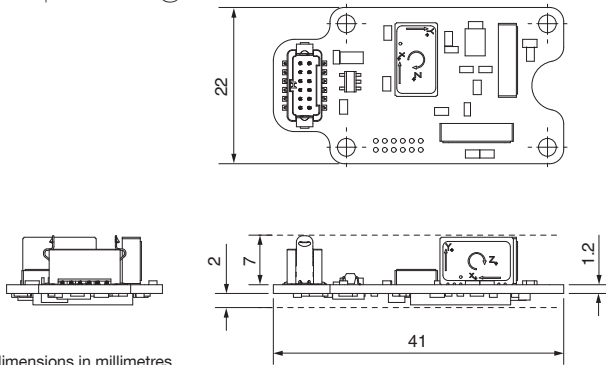
Six Degrees of Freedom Dynamic Measurement Unit

For full technical datasheets please visit:
www.siliconsensing.com



DMU10-01

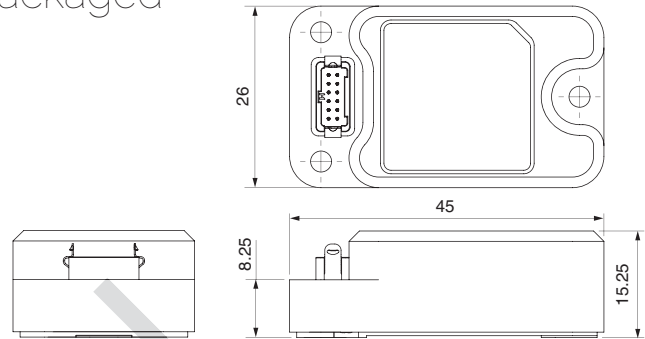
Unpackaged



All dimensions in millimetres

DMU10-02

Packaged



All dimensions in millimetres

Typical Data

Parameter	Without Calibration	Room Temperature Calibration	Thermal Calibration	Remarks
Gyroscope Properties				
Dynamic range (Q, P, R)	±300°/s	±300°/s	±300°/s	–
Scale factor over temp	±1.5%	±1%	±0.1%	–
SF non-linearity	±0.3°/s	±0.2°/s	±0.15°/s	–
Bias over temp	±1.5°/s	±1.0°/s	±0.25°/s	–
Noise	0.1°/s	0.1°/s	0.1°/s	RMS to 45Hz
Accelerometer Properties				
Dynamic range	±10g	±10g	±10g	–
Scale factor over temp	±1.0%	±1.0%	±0.1%	–
SF non-linearity (±8g)	±0.5%	±0.5%	±0.25%	–
Bias over temp	±100mg	±50mg	±10mg	–
Noise	1mg	1mg	1mg	RMS to 45Hz
Misalignment				
At room temperature	3%	0.4%	0.2%	–
Over temperature	5%	1%	0.2%	–
Temperature Sensor Properties				
Range	-55 to +100°C	-55 to +100°C	-55 to +100°C	–
Accuracy at RT	±2.5°C	±2.5°C	±2.5°C	–
Accuracy at OT	±2.5°C	±2.5°C	±2.5°C	–
IMU Properties				
Operating temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	–
Start-up time	< 0.5s	< 0.5s	< 0.5s	–
Current	90mA	90mA	90mA	–
Supply voltage	3.20 to 5.25V	3.20 to 5.25V	3.20 to 5.25V	–

Pin Connections

Pin	
1	GND
2	5V
3	Rx Lo
4	Rx Hi
5	Reset
6	Run Mode
7	Aux
8	Sync
9	Tx Lo
10	Tx Hi
11	Spare
12	Factory Use

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