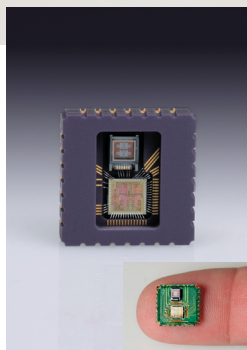
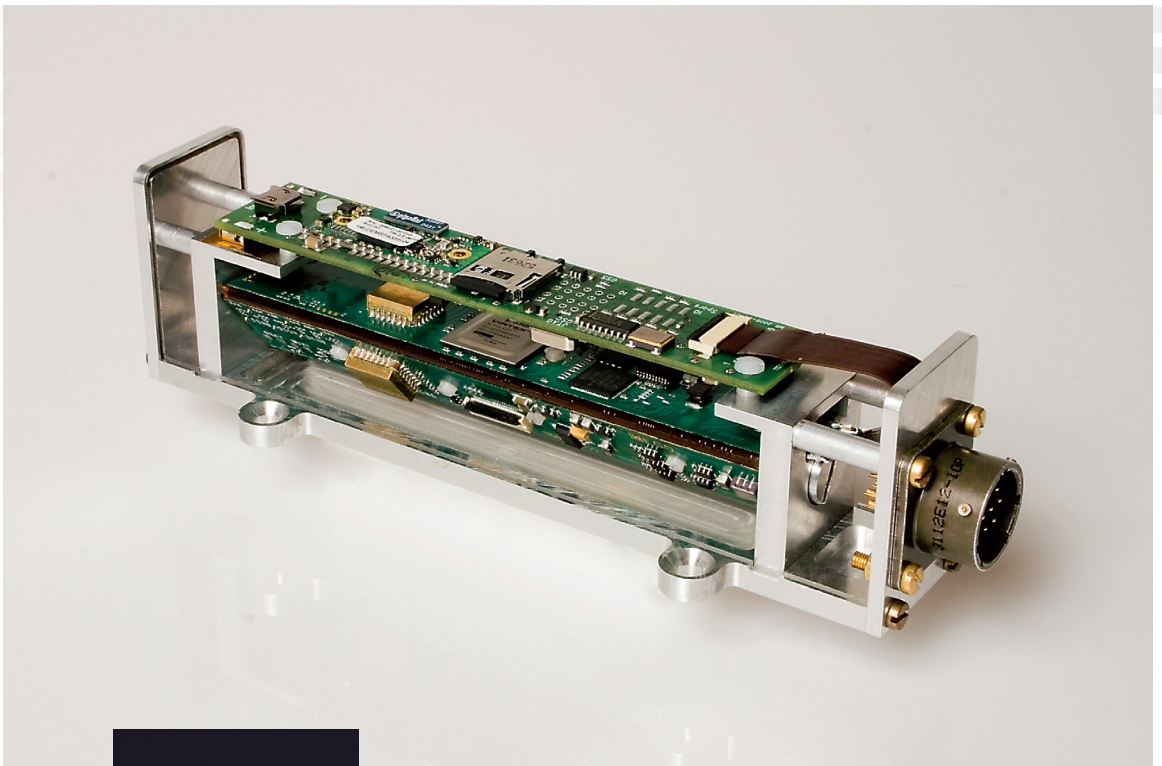


IMT30

Engineering prototype IMU platform



Digital Butterfly Gyroscope

IMT30 is built around the Imego digital Butterfly Gyroscope, the IBG20. The gyro consists of a sensor chip and a mixed-signal ASIC assembled in a non-magnetic package. These two components work together to yield a world-class digital micro-gyro in a standard LCC28 footprint.

IMT30 is an IMU (Inertial Measurement Unit) completely based on MEMS components, which results in its small size, makes it rugged, shock tolerant and cost effective. Electronics are mounted on an aluminium frame, with a lid made of either aluminium or plexi-glass. It measures acceleration, angular rate and magnetic field in all six degrees of freedom.

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Sensor Specifications typical raw data values

Parameter	Angular rate	Acceleration	Inclination	Magnetic Field
Dimensions	3 axes	3 axes	3 axes	3 axes
Range	± 600 °/s	± 50 g	± 2 g	± 6 G
Linearity [% FS]	0,3 %	< 1,0 %	0,3 %	0,1 % [±1G]
Temp. stability	0.05 °/s/°C	80 mg/°C	800 µg/°C	200 µG/°C
Sensitivity	N/A	25 mV/g	1 V/g, 0.5V/g	1 V/G
Noise Density	0,004 °/s/√Hz	50 µg/√Hz	200 µg/√Hz	20 µG/√Hz
Alignment Error	± 1,0 °	± 1,0 °	± 0,5 °	± 6 °
Bandwidth	100 Hz	450 Hz	17 Hz	40 Hz
Max sample rate	976 Hz	976 Hz	122 Hz	122 Hz

Typical Allan variance gyro stability 4° /h at 20 s.

Physical specifications

Digital interface	UART 3,3V/ Bluetooth 2.0
Built in memory	512 MB
Operating voltage	7,4 V
Power consumption	300 mA
Dimensions	Length 173 mm, Width 50, Height 46 mm
Weight	200 g
Temperature rating	TBD °C

IMT30 can be tuned with respect to range, bandwidth and sample rate which make it an affordable development board to evaluate the Imego IMU concept. After evaluation the system can be tailored to best fit your needs with respect to size and performance. Imego has the capability to do the new design for you and if desired also produce the final system.

For further information please contact:

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