

PHOTONIC SENSORS

L2+ Silicon Photonic IMU

Six-axis inertial measurement unit pairing the L2 gyroscope with ± 30 g accelerometers.



Key Features

- Six degrees of freedom in a single unit
- Solid-state optical gyroscopes — no moving parts
- Gyroscope range $\pm 800^\circ/\text{s}$, accelerometer range ± 30 g
- Scale factor nonlinearity ≤ 100 ppm gyro, ≤ 300 ppm accelerometer
- Common time base across all six axes

Applications

- GNSS-denied inertial navigation
- Autonomous vehicle and UAV attitude and heading reference
- Stabilized platforms and camera gimbals
- Survey and mapping payloads

Overview

The L2+ adds three-axis acceleration to the L2 gyroscope, giving a complete six-degree-of-freedom inertial measurement unit in one package. Rate and acceleration are sampled against a common time base, which is what a navigation filter needs to produce a stable solution.

Gyroscope performance matches the standalone L2: $\pm 800^\circ/\text{s}$ range with scale factor nonlinearity within 100 ppm. Accelerometers cover ± 30 g with nonlinearity within 300 ppm.

Specifications

Gyroscope

PARAMETER	VALUE	UNIT	CONDITIONS
Measurement Range	-800 to $+800$	$^\circ/\text{s}$	
Scale Factor Nonlinearity	≤ 100	ppm	1σ

Accelerometer

PARAMETER	VALUE	UNIT	CONDITIONS
Measurement Range	± 30	g	
Scale Factor Nonlinearity	≤ 300	ppm	1 σ

Order or request a quote
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