Pulse-80

Inertial Measurement Unit

MADE IN FRANCE

TACTICAL GRADE
0.1°/h | 6µg

Best in class MEMS IMU for applications requiring highest accuracy

No Export Restriction

2-year Warranty

NAVIGATION

POINTING & STABILIZATION

Pulse-80 is a premium tactical-grade MEMS IMU, engineered for applications demanding compact size and minimal weight without any compromise on performance.

- **Low run-to-run bias**
- **Low noise**
- **High data rate (2kHz)**
- **RS422 communication**
- **OEM variant for SWAP constrained integrations**
- **Continuous built-in tests**

SBG SYSTEMS | Motion & Navigation you can trust

ISO 9001 BUREAU VERITAS Certification

Specifications

Preliminary

1-sigma after 1 year accelerated aging over full temperature range [-40 to 71 °C]

GYROSCOPES & ACCELEROMETERS

Parameter	Accelerometer	Gyroscope
Measurement range	± 40 g	± 400°/s
Scale Factor error	300 ppm	150 ppm
Non-linearity (ppm of FS)	25 ppm	40 ppm
Long-term bias repeatability	< 1000 µg	20°/h
In-run bias instability	6 µg	0.1°/h
Randow Walk	0.02 m/s/√h	0.012°/√h
Noise Spectral density	40 µg/√Hz	0.7 (°/h/√Hz)
Misalignment	0.34 mrad	0.34 mrad
Orthogonality	0.07 mrad	0.07 mrad
Vibration Rectification Coefficient	0.03 mg/g²	0.08°/h/g² rms
Acceleration sensitivity	-	0.22°/h/g
Bandwidth (-3dB point)	100 Hz	100 Hz

MECHANICAL & ENVIRONMENTAL

Parameter	Boxed version	OEM version
Size	56 x 56 x 50.5mm	52 x 52 x 36 mm
Weight	260 g	150 g
Operating Temperature range	-40 to 71°C	-40 to 71°C
Non operating Temperature range	-40 to 71°C	-40 to 71°C
Ingress Protection	IP4x	None (OEM)

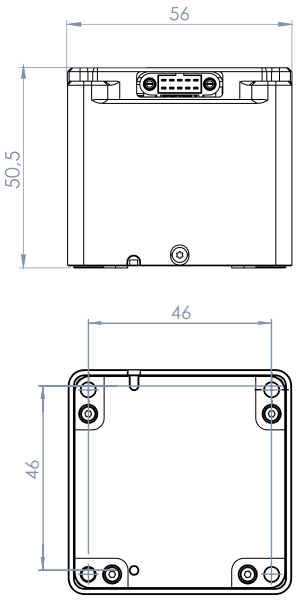
ELECTRICAL

Parameter	Boxed version	OEM version
Nominal Input Voltage	5 – 36 V	5 – 12 V
Power consumption	< 1.8 W	< 1.3 W

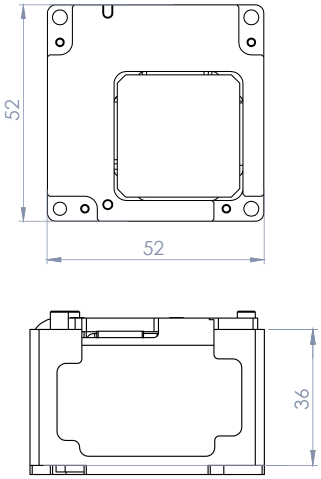
COMMUNICATION & INTERFACES

Parameter	Boxed version	OEM version
Connector	Board to Board Board to Wire	Board to Board
Digital interfaces	Serial : RS422 Sync in/out : RS422	UART: LvTTL Sync in/out: LvTLL
Output baud rate	Up to 4 Mbps	Up to 4Mbps
Output data rate	Up to 2 kHz Configurable with API	Up to 2 kHz Configurable with API

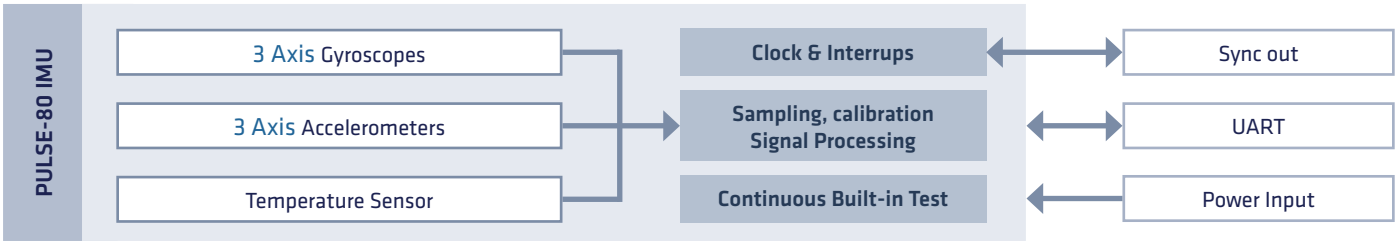
PULSE-80 BOXED



PULSE-80 OEM



FUNCTIONAL BLOCK DIAGRAM



Free Technical Support | Unlimited Firmware Updates | 2-year Warranty

SBG SYSTEMS

www.sbg-systems.com

SBG 367

MK062EN V2.0 2025.08 – All rights reserved © 2025 SBG Systems - Specifications subject to change without notice.