CLIP-2 Specifications

Performance

- Specific flexibility with on-demand customization of measurement ranges across all axes.
- Cost to effective solution.

Key features

- Withstands extreme physical shocks and harsh environmental conditions
- Dynamic Stabilization High-bandwidth line-of sight payload control

Key apps

- Missile guidance and artificial horizon reference
- Flight control for UAVs, drones, and aircraft
- Dynamic platform and payload stabilization

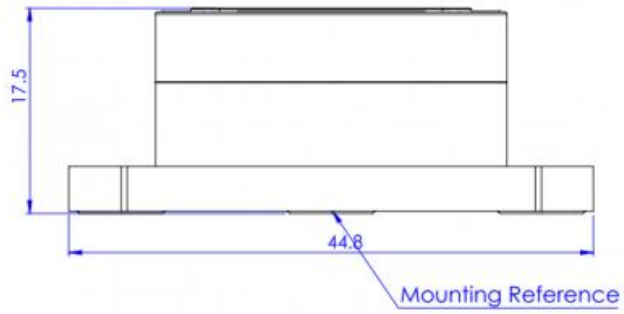
System Overview

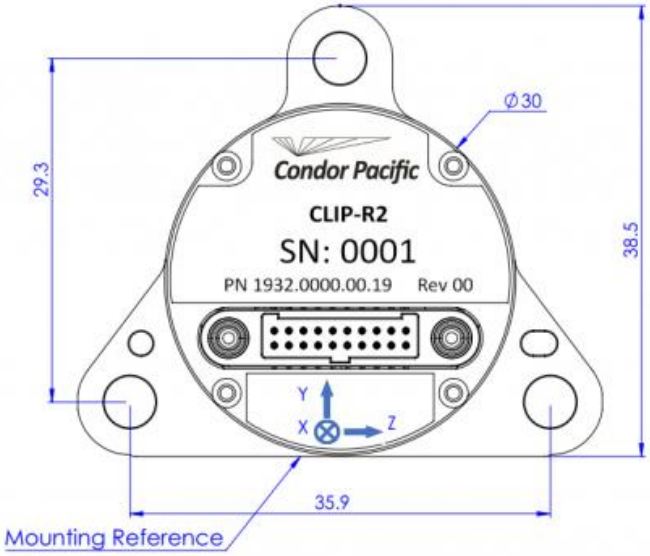
Condor Pacific's CLIP-2 IMU is a field proven versatile MEMS IMU with a configurable digital output. Designed to work under high shock and vibration, CLIP-2 incorporates 6 MEMS gyroscopes and 6 MEMS accelerometers, all fully isolated and temperature calibrated.

System & Operating Parameters

Optimized for minimal payload impact, the CLIP-2 features an ultra-compact footprint and a low-power (at 3.3–5V). It ensures immediate system readiness with a rapid start-up time of just 0.3 seconds.

To accommodate diverse host systems, it offers highly flexible integration through a configurable UART RS422 interface (SPI opt.) , easily supporting high-speed baud rates up to 1.25 MHz and data sampling up to 4 KHz.





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CLIP-A Specifications

Inertial Measurement Unit (IMU) Sensor Outputs			
Parameter	**Gyroscope**	**Accelerometer**	**Note**
Range	±300 °/sec	±90 g	Optional
Resolution	2e-12 °/sec	2e-15 g	Optional
Bias Over Temperature (OTR)	0.05 °/sec	1 mg	(1σ)
Random Walk	0.16 °/√Hr	0.05 (m/s)/√h	(1σ)
In Run Bias Stability	9 °/Hr max	0.03 mg	(1σ)
Scale Factor Error (OTR)	150 ppm	150 ppm	(1σ)
G-Sensitivity	4 °/ Hr /g	--	(1σ)
Vibration Rectification	1 °/Hr/g2	0.01mg/g2	(1σ)
Axis Misalignment	1 mrad	1 mrad	Max
Bandwidth	200 Hz	400 Hz	-3dB

Environments Tests		
Parameter	**Values**	**Standard**
High Operating Temperature	+80°C	MIL-STD-810H, METHOD 501.7
High Non – Operating Temperature	+85°C	MIL-STD-810H, METHOD 501.7
Low Operating Temperature	-40°C	MIL-STD-810H, METHOD 502.7
Low Non – Operating Temperature	-55°C	MIL-STD-810H, METHOD 502.7
Transportation	4.4 g RMS	MIL-STD-810H, method 514.8
Vibration random	15 g RMS	MIL-STD-810H, method 514.8
Linear Acceleration all axis	60 g±	MIL-STD-810H, METHOD 513.8 Procedure II (centrifuge)
Shock	1000 g SRS	MIL-STD-810H, METHOD 516.8
Mechanical shock	60 g	MIL-STD-810H, METHOD 516.8
Altitude	105Kft, 131Kft, 184Kft @-30°C & +60°C	MIL-STD-810H, METHOD 500.6
Acoustic Noise	Up to 20 kHz	Full damping
Humidity	95% @ +30 to 50°C	MIL-STD-810H, METHOD 507.6
He sensitivity	Non	
EMI	200 V/m	RS 103 (MIL-STD 461 G, 12M-18G Hz)
	Aircraft external	RE 102 (MIL-STD 461 G, 12M-18G Hz)

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