Inertial Labs

Attitude is Everything

PRODUCTS CATALOGUE

	**Tactical-grade Inertial Measurement Units IMU-P "Tactical"**	Applications Electro-Optical Systems (EOC/IR), Motion Control, Gimbal Monitoring, Anti-Roll Systems	Gyroscopes Bias in-run stability	deg/hr	1
			Gyroscopes Angular Random Walk (ARW)	deg/√hr	0.2 (Standard A)
			Gyroscopes Angular Random Walk (ARW)	deg/√hr	0.08 (Stabilization S)
			Accelerometers Bias instability in temp range	mg	0.5
			Accelerometers Velocity Random Walk (VRW)	m/sec/√hr	0.015
	**Industrial-grade Inertial Measurement Units IMU-P "Industrial"**	Applications 3D Optical Image Stabilization, Computer Pointing Devices	Gyroscopes Bias in-run stability	deg/hr	3
			Gyroscopes Angular Random Walk (ARW)	deg/√hr	0.3
			Accelerometers Bias instability in temp range	mg	0.7
			Accelerometers Velocity Random Walk (VRW)	m/sec/√hr	0.018
	**GPS Aided Inertial Navigation Systems GPS-INS**	Applications UGV, Land Vehicle Navigation, AGV, GPS-Denied Navigation, UAS, Fixed-Wing Aerial	Position accuracy (GPS/SBAS/DGPS/RTK/PPK)	meters	1.2/0.6/0.4/0.01/0.005
			Heading accuracy (real time / post processing)	deg	0.08/0.03
			Pitch and Roll accuracy (real time / post processing)	deg	0.05/0.006
			Gyroscopes in-run stability	deg/hr	1
			Velocity accuracy	meters/sec	0.03
	**Ruggedized GPS Aided Inertial Navigation Systems INS-DM**	Applications UGV, Land Vehicle Navigation, AGV, GPS-Denied Navigation, Fixed-Wing Aerial	Position accuracy (GPS/SBAS/DGPS/RTK/PPK)	meters	1.2/0.4/0.6/0.4/0.005
			Heading accuracy (real time / post processing)	deg	0.08/0.01
			Pitch and Roll accuracy (real time / post processing)	deg	0.01/0.002
			Gyroscopes in-run stability	deg/hr	1
			Velocity accuracy	meters/sec	0.03
	**Optically Enhanced Attitude and Heading Reference Systems OptoAHRS-II**	Applications Training for Indirect Fire Control, Stable Heading Compensation,Precise North Finder and Keeper	Heading, static accuracy	deg	0.2
			Heading, dynamic accuracy	deg	0.35
			Pitch and Roll, static accuracy	deg	0.05
			Pitch and Roll, dynamic accuracy	deg	0.08
	**Attitude and Heading Reference Systems AHRS-10B / AHRS-P Basic/Professional**	Applications Pointing and Aiming, North Finding and Keeping	Heading, static accuracy	deg	0.8 / 0.3
			Heading, dynamic accuracy	deg	1 / 0.6
			Pitch and Roll, static accuracy	deg	0.2 / 0.05
			Pitch and Roll, dynamic accuracy	deg	0.5 / 0.08
	**Attitude and Heading Reference Systems AHRS-II-P Professional**	Applications Secondary Flight Control Inst., Navigation Aiding, Filtering Solution, Dynamic Motion Control	Heading, static accuracy	deg	0.3
			Heading, dynamic accuracy	deg	0.6
			Pitch and Roll, static accuracy	deg	0.05
			Pitch and Roll, dynamic accuracy	deg	0.08
	**Miniature Attitude and Heading Reference System miniAHRS**	Applications Miniature platforms UAV, AGV, UGV, Heading, Pitch and Roll Measurements	Heading, static accuracy	deg	0.3
			Heading, dynamic accuracy	deg	0.6
			Pitch and Roll, static accuracy	deg	0.1
			Pitch and Roll, dynamic accuracy	deg	0.2
	**Railway Motion Control Unit RMCU**	Applications Railway Monitoring, Navigation Safety, EN 45545, EN 50155, EN 50011	Heading, static accuracy	deg	0.3
			Heading, dynamic accuracy	deg	0.6
			Pitch and Roll, static accuracy	deg	0.1
			Pitch and Roll, dynamic accuracy	deg	0.2
	**Weapon Orientation Modules WOM/OptoWOM-II**	Applications Indirect Fire Control, Weapons Aiming, Stabilization for RWS	Heading, static accuracy	mils	3
			Pitch and Roll, static accuracy	mils	1.7
			Gyroscopes in-run Bias stability	deg/hr	1
			Accelerometers in-run Bias stability	mg	0.005
	**Motion Reference Units MRU-B/MRU-E/MRU-P Basic/Enhanced/Pro**	Applications Dynamic Positioning, Active Heave Compensation, Hydrography, Bathymetry, Helideck Monitoring	Position accuracy (GPS/SBAS/DGPS/RTK) (MRU-P)	meters	1.2/0.6/0.4/0.01
			Heading accuracy (real time) (MRU-E/MRU-P)	deg	0.6/0.05
			Heave accuracy (All)	cm / %	5 / 5
			Surge / Sway accuracy (All)	cm / %	10 / 10
			Pitch and Roll dynamic accuracy (All)	deg	0.02
			Output data format (All)		SEATEX, SMC, TSS1, NMEA
	**Wave Sensor WS-E and WS-PD Enhanced/Dual Pro**	Applications Research Buoy, Wave Direction and Energy Analysis, Surge Tracking	Position accuracy (GPS/SBAS/DGPS/RTK) (WS-PD)	meters	1.2/0.6/0.4/0.01
			Wave Direction accuracy (WS-E/WS-PD)	deg	1/0.5
			Heave accuracy (All)	cm / %	5 / 5
			Surge / Sway accuracy (All)	cm / %	10 / 10
			Pitch and Roll dynamic accuracy (All)	deg	0.02
			Output data format (All)		SEATEX, SMC, TSS1, NMEA

	**Miniature High Precision Digital Tilt Sensors** Kernel-**110**	Applications: Digital Tilt Monitoring, Robotics, Construction Site Safety	Size	mm	28.38 x 19.5 x 10.5
			Weight	gram	10
			Accelerometer Measurement Range	gs	±8
			Gyro Bias in-run Stability	deg/hr	2
	**Miniature High Precision Digital Tilt Sensors Kernel-120**	Applications: Digital Tilt Monitoring, Robotics, Construction Site Safety	Size	mm	28.38 x 19.5 x 10.5
			Weight	gram	10
			Accelerometer Measurement Range	gs	±40 and ±90
			Gyro Bias in-run Stability	deg/hr	2
	**Miniature High Precision Digital Tilt Sensors Kernel-210**	Applications: Digital Tilt Monitoring, Robotics, Construction Site Safety	Size	mm	28.38 x 19.5 x 10.5
			Weight	gram	10
			Accelerometer Measurement Range	gs	±8
			Gyro Bias in-run Stability	deg/hr	1
	**Miniature High Precision Digital Tilt Sensors Kernel-220**	Applications: Digital Tilt Monitoring, Robotics, Construction Site Safety	Size	mm	28.38 x 19.5 x 10.5
			Weight	gram	10
			Accelerometer Measurement Range	gs	±40 and ±90
			Gyro Bias in-run Stability	deg/hr	1
	**RESEPI - Remote Sensing Payload Instrument LIVOX AVIA LiDAR**	Applications: Remote Sensing with LiDAR, Scanning and Mapping, Utility Inspections	Weight*	g	1250
			Max Range**	m	190m @ 10% 320m @ 80%
			Cloud Thickness**	cm, 50mAGL @ 5m/s	3-5
			Cloud Density**	m2, 50m AGL@5m/s	2,045
	**RESEPI - Remote Sensing Payload Instrument Ouster OS2-32 LiDAR**	Applications: Remote Sensing with LiDAR, Scanning and Mapping, Utility Inspections	Weight*	g	1300
			Max Range**	m	80m @ 10% 210m @ 80%
			Cloud Thickness**	cm, 50mAGL @ 5m/s	3-5
			Cloud Density**	m2, 50m AGL@5m/s	328
	**RESEPI - Remote Sensing Payload Instrument Quanergy M8-Plus LiDAR**	Applications: Remote Sensing with LiDAR, Scanning and Mapping, Utility Inspections	Weight*	g	1520
			Max Range**	m	35m @ 10% 150m @ 80%
			Cloud Thickness**	cm, 50mAGL @ 5m/s	3-5
			Cloud Density**	m2, 50m AGL@5m/s	645
	**RESEPI - Remote Sensing Payload Instrument HESAI XT32 LiDAR**	Applications: Remote Sensing with LiDAR, Scanning and Mapping, Utility Inspections	Weight*	g	1850
			Max Range**	m	80m @ 10%
			Cloud Thickness**	cm, 50mAGL @ 5m/s	3-5
			Cloud Density**	m2, 50m AGL@5m/s	640
	**RESEPI - Remote Sensing Payload Instrument Velodyne VLP-32C LiDAR**	Applications: Remote Sensing with LiDAR, Scanning and Mapping, Utility Inspections	Weight*	g	1450
			Max Range**	m	Up to 200m
			Cloud Thickness**	cm, 50mAGL @ 5m/s	3-5
			Cloud Density**	m2, 50m AGL@5m/s	600

*Weights of unit may vary depending on configuration of camera, INS, and LiDAR.
**Specifications listed reflect operating in ideal conditions.