

iPEGASUS

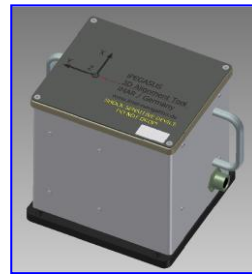
Spatial Surveying and Alignment of Missile Attack Warning Systems, Antennas and Fire Control Systems. Autonomous Determination of 3D Differential Angles in Space

With increasing accuracy requirements for the alignment of observation sensors used around the aircraft alignment with missile attack warning systems, aligning has gotten of significant importance during the last couple of years in aircraft manufacturing. Therefore, iMAR developed the iPEGASUS, a patented highly precise inertial measurement



system, which provides a three dimensional attitude/heading information relative to a reference orientation with an accuracy up to 0.001° . The system works without external aid and is easy to handle for everybody, where only one

single employee is necessary for operation. Thus the measurement time for aligning or surveying is reduced dramatically compared to traditional laser or camera supported systems. iPEGASUS is



a handy tool which generates up to 300 measurements per second, shows results on screen and plots a protocol designed for your application. Using two

iPEGASUS in differential mode allows furthermore the alignment of fire-control systems and guns even on moving naval vessels.

Technical Data of iPEGASUS models *Economy Precision / High Precision / Ultra High Precision / [FHP]:*

Measured data	:	$\varphi_x, \varphi_y, \varphi_z$	(angles around space coordinate axes)
Measuring range	:	± 360 deg	(any rotations in space)
Resolution	:	300 μ deg , [30 μ deg]	
Linearity error	:	< 0.001 [0.003] %	(incertainty due to rotation, 1 σ)
Measuring incertainty	:	< 0.02 / 0.001 / 0.0005 / [0.001] deg	over 1 minute of measuring
		< 0.04 / 0.002 / 0.001 / [0.002] deg	over 5 minutes of measuring
		< 0.05 / 0.003 / 0.002 / [0.003] deg	over 10 minutes of measuring
Random walk / Q	:	< 0.05 / 0.003 / 0.0018 / [0.001] deg/sqrt(hr)	
Random constant	:	< 0.1 / 0.003 / 0.002 / [0.01] deg/hr	
Data rate	:	1 ... 100 Hz via RS232 (internally 1000 Hz)	
Size	:	approx. 260 x 200 x 205 mm ³	
Mass	:	5.8 kg , [6.5 kg]	
Output	:	in real-time, on file, as plot, LCD output on request (roll, pitch, yaw, time)	
Power supply	:	11...34 V	
Self testing	:	automatically	

The iPEGASUS is in operation worldwide at weapon manufactureres and helicopter manufacturers like Rheinmetall, Oerlikon Contraves, Westland Augusta, Cassidian, BAe Systems, UK MoD, German MoD (Naval Weapons), Turkish ArmedForces etc..

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