

Leica PAV80

Gyro-stabilized Sensor Mount



The Leica PAV80 Gyro-stabilized Sensor Mount provides angular motion compensation, perfectly vertical photography and automatic drift control for a wide range of airborne sensors. It is the successor of the well known Leica PAV30. The Leica PAV80 utilizes the latest stabilization technology providing very fast and smooth angular compensation in any flight condition. Plus, the Leica PAV80 has an extended stabilization range in pitch and roll. The universal mechanical sensor interface enables straightforward adaptation for sensors with different dimensions. Selectable control loops – optimized for different sensor weights – ensure perfect stabilization.

Leica PAV80 Key Benefits

Cost savings

- More efficient photo flights
- Less stress on the flight crew
- Fewer flight lines due to perfect drift compensation and accurate side lap

Best Stabilization

- Automatic correction for angular motion
- Perfect vertical photography

- Superior image quality
- Automatic drift setting
- Wide stabilization range

Any System

- Leica ADS80
- Leica ALS70 with Leica RCD30
- Leica RCD30 standalone
- Leica ALS50-II LS50 with RCD105 or RCD30 or Leica ALS60 LS60 with RCD105 or RCD30
- Z/I DMC II
- Film frame cameras
- Digital frame cameras like UltraCam
- Line scanners
- Hyperspectral scanners
- Airborne thermal imager
- LIDAR sensors
- Any other airborne sensor

Any Flight Condition

- Fast, wide-range angular motion compensation as required during turbulent flights
- High-accuracy stabilization to stabilize during smooth flights
- Operates in a wide environmental range

- when it has to be **right**

Leica
Geosystems

Leica PAV80

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Leica PAV80 Features

- Angular motion compensation
- Automatic perfectly vertical photography
- Fully automated operation
- Automatic drift setting
- Automatic initialization and system test during startup
- Remotely controlled operation via FCMS (Leica Flight & Sensor Control Management System) or command interface to 3rd party FMS
- PAV80 Control Software for simple initial setup and diagnosis
- Outputs gimbal data at high data rates
- Intelligent high-speed bifurcated control loop provides best stabilization
- Reliable, high-quality hardware conforming to ISO 7137, RTCA DO-160F, EUROCAE-14E, FAR§23.561 and FAR§27.561
- Direct interchange with Leica PAV30 installations
- Fully integrated in the Leica Geosystems Airborne Sensor workflow, including IPAS20 (Leica Inertial Position & Attitude System) operation
- Proven gimbal suspension design with high torque motors
- Flexible mechanical interfaces support various sensor types
- Adaptable to sensor weight from 5 kg up to 100 kg **without the need for mass compensators**
- Gimbal suspension design and motors with high torque to stabilize even unbalanced sensors
- Interfaces to 3rd party GNSS/IMU Systems and 3rd party Flight Management Systems



Leica PAV80 Product Specifications		standard	low height	
Operational	Stabilization range in roll	- 7° to +7°	- 5° to +5°	
	Stabilization range in pitch	- 8° to +6°	- 5° to +5°	
	Stabilization range in drift	- 30° to +30°		
	Sensor weight	PAV80	5 kg to 75 kg	
		PAV80 heavy load	65 kg to 100 kg	
		PAV80 low load	5 kg to 35 kg	
	Typical residual deviation from vertical*	< 0.02° RMS		
Typical residual deviation from drift*	< 0.02° RMS, depends on GNSS/IMU			
Interfaces	Command interface	RS232 for 3rd party FMS		
	GNSS/IMU System	Leica IPAS20 or 3rd party like POS AV		
Electrical	Voltage input	22.0 to 30.3 VDC		
	Power Consumption at 28 VDC	Average ** 30 W, Peak 250 W		
	Pre-fuse rating	Min 10 A, Max 15 A		
Mechanical	Mechanical sensor interfaces	SH81, SH82, SH91, SH92, RCD30, DMC II, ALS50/60/70 with RCD105 or RCD30, UltraCam, Generic		
	Sensor hole dimension	410 mm		
	Dimension PAV80	673 mm x 532 mm x 168 mm		
	Weight excluding sensor adapters	36.9 kg		
Environmental	Operating Temperature	- 20 °C to + 55 °C		
	Storage Temperature	- 40 °C to + 85 °C		
	Pressure	ICAO 50,000 ft		
	Humidity	0% to 95% RH according to ISO 7137		
Applied Standards	General	ISO 7137, RTCA DO-160-F, EUROCAE-14E		
	Emergency Landing	FAR§23.561, FAR§27.561		
Conformity to National Regulations		CE, FCC Part 15		

* For photo flight situations, i.e. aircraft angular motion < 10°/s and with typical aircraft photo flight frequency spectrum

** For balanced weight

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