



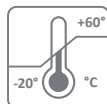
iIPSC-PT-003



Robust aluminum-body, two-axes pan-tilt platform.
The reliable solution for antennas, cameras and custom specific payloads.

iIPSC-PT-003 is part of the iMAR family of high-performance, two-axes pan-tilt platforms (azimuth & elevation) for optics, sensors, and various payload types. It is used in surveillance, border control, communication tasks, and other applications.

Robust and precise, the iIPSC-PT series offers multiple configurations for payload mounting, slip rings, and gyro stabilization. Made from aluminum, it combines low weight and high dynamics with maximum durability and is available in multiple versions.



APPLICATIONS

- Radar
- Radio Link
- Surveillance
- Target Tracking

KEY FEATURES

- Field proven & extreme robust
- High angular acceleration
- High angular accuracy (robustness)
- Compact design

PERFORMANCE

- Payload: up to 50 kg
- Rotation rate: up to 360 °/s
- Acceleration: up to 300 °/s²
- Torque: at least 100 Nm



iPSC-PT-003

TECHNICAL DATA

■ PERFORMANCE

Payload (max., at low dynamics)	50 kg
Payload (max., at full dynamics)	1 ... 8 kg (up to 5 g acceleration)
Torque	100 Nm
Rotation rate (max.)	± 360 °/s (power supply dependent)
Angular acceleration (max.)	± 300 °/s ² (depends on payload's mass moment of inertia)
Azimuth range	± 160° or acc. to requirements
Elevation range	- 30° ... +110° or acc. to requirements & payload shape
Angular resolution	< 0.000'35° (< 0.021 arcmin)
Angular repeatability	< 0.001°
Angular accuracy	not calibrated < 0.06° (< 3.6 arcmin), calibrated < 0.007° (< 0.42 arcmin)
Gearbox type	backlash-free gearbox
Gearbox stiffness	< 0.000'25°/ Nm

■ OPTIONS

Gyro compassing (true north reference)	optional (solutions available across all performance classes)
Position & Heading	optional (solutions available across all performance classes)
Slip ring (slip rings for signals and power)	beginning with iPSC-PT-030
Gyro stabilization	see iPSC-PT-005
Accessories	Tripod, control center, GUI (HMI), joystick panel, video tracking, counterweights

■ INTERFACES

Connectors	MIL-C-38999-III, TNC or according to requirements
Interfaces	Ethernet (TCP/UDP) / UART (RS422 / RS232) / CAN (optional)

■ ENVIRONMENTAL

Temperature range (operational)	-20 ... +60 °C (extended temperature range on request)
Temperature range (storage)	-20 ... +60 °C (extended temperature range on request)
Wind resistance (operational)	up to 150 km/h (example: @ flat surface antenna, 50 x 50 cm, CW = 1.11)
Wind resistance (survival)	up to 250 km/h (example: @ flat surface antenna, 50 x 50 cm, CW = 1.11)
IP-Rating	IP66
MTBF	up to 35'000 hours (depending on application)
Qualification	MIL-STD-461, MIL-STD-810 or according to requirements

■ MECHANICAL & ELECTRICAL DATA

Color & coating	Powder-coating RAL 9010, RAL 7001, RAL 6031 (F9) or custom specific
Power supply	24 ... 48 V DC / < 500 W
Setup time	2 ... 10 minutes (pre-assembled)
Mass	21 kg (w/o payload)
Dimensions (H x W x D)	42 cm x 22 cm x 16 cm (w/o payload)

Each individual iPSC-PT-003 undergoes rigorous calibration and verification testing at iMAR's calibration laboratory. Performance specifications are derived from field testing and real-world data and are routinely validated to ensure continued compliance with these specifications.





iIPSC-PT FAMILY

FEATURES AND PERFORMANCES

iIPSC-	POSITION	PERFORMANCE					M/E DATA			COST
		[kg] Payload	[Nm] Torque	[°/s] Velocity	[°] Azimuth *)	[°] Elevation *)	[kg] Mass	[mm] Height	[W] Power	
PT-003	★★★★☆	50	100	360	± 160	-30...110	21	420	< 500	€€€€€
PT-005	★★★★☆	50	100	360	± 160	-30...110	27	580	< 500	€€€€€
PT-006	★★★☆☆	20	100	360	± 160	-30...110	15	580	< 300	€€€€€
PT-008	★★★☆☆	30	100	360	± 160	-30...110	25	580	< 300	€€€€€
PT-010	★★★★☆	80	100	360	± 160	-90...90	32	580	< 700	€€€€€
PT-030	★★★★☆	120	100/200	360	± 160/∞	-90...90	35	580 (680)	< 700	€€€€€
Option	all devices (with exception of iIPSC-PT-003) also available with inertial gyro stabilization and localization									
Angular accuracy (calibrated): < 0.42 arcmin Angular resolution: 0.021 arcmin *) other ranges available										



iIPSC-PT-003 base model



e. g. iIPSC-PT-003 with grid antenna



iIPSC-PT-005 base model



e. g. iIPSC-PT-010 with optical sensors



iIPSC-PT-030 with customized payload frame



iIPSC-PT-Family



iIPSC-PT-010



iIPSC-PT-30



iIPSC-PT-150



iIPSC-ANTRAD-LITE



iIPSC-MSG-60



iIPSC-MSG-C

