

iIPSC-ANTRAD-102D

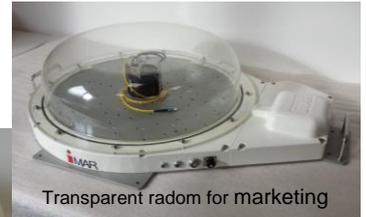
Azimuth Axis Antenna Stabilizer and Positioner

The [iIPSC-ANTRAD-102D](#) is part of a family of single axis and two-axes stabilizers for antennas being used on naval and surface vessels.

- Open frame design for easy implementation of customer's antennas (e.g. phased-array)
- gyro stabilized
- high angular resolution
- medium dynamic capability
- standard vehicle power supply
- standard or customized FORJ and NF slip rings
- control via CAN or Ethernet or RS232/422

The antenna is protected against the environment by a radom, which can be adapted by its transmission behavior to the antenna operating frequencies. The system is delivered with excentric mounted servo motor and electronics to achieve a very low height setup, stabilization gyro or IMU (inertial measurement unit), integrated GPS, integrated iSCU stabilization & control unit and algorithms for stabilization and pointing to moving or static targets (satellites, vehicles), capability for

conical scan and RF signal feedback for improved pointing performance. As an option the unit also can be delivered with external vibration absorbers.



All signals are fed via robust connectors to the user.

The system is also available as two-axes antenna stabilizer for surface and naval vessels.

Standard designs as well as customized designs are provided.

Technical Data iIPSC-ANTRAD-102D:

Angular Positioning Rate:	± 50 °/s with 10 kg payload
Angular Acceleration:	> 50 °/s ² with 10 kg payload
Linearity / Scale factor error:	< 0.003 % (position)
Accuracy in Position:	< 5 arcsec; resolution < 1 arcsec
Size:	table-top 500 mm diameter; < 800 mm system diameter, height of table top 55 mm; total height customer specific (depends on radom design)
Antenna Payload Weight:	15 kg or TBD (customer's antenna and amplifier electronics)
Angular freedom:	rotation angle unlimited (1 axis)
Drive System:	Excentric located direct drive with belt (to achieve very low height of system)
Slip Rings:	DC sliprings, 20 ways, 2 A / line FORJ 1 channel single mode (Ethernet – fiber optic rotary joint) as option.
Radom:	Ka Band suitable; 19.5 – 20.5 GHz / < 0.4 dB and 29.5 – 30.5 GHz / < 0.7 dB
Interfaces:	Ethernet / CAN / RS232/422 for command and read-out of stabilization and control
Inertial sensors / IMS:	iNAT-M200/SLC-STAB or TBD option: georeferencing system of type iNAT-FSSG-1 or iNAT-FSLG-01 or TBD as option to aid the IMS on surface vehicles
Odometer input:	
Connector:	MIL-C-38999-III, TNC
Temperature:	$-10...+50$ °C (operating) or TBD
Environment / MTBF/ MTTR:	IP54 at radom site / 30.000 hrs (estimated) / 10 minutes
Weight:	25 kg (without payload)
Power:	24 V DC ; 360 W (max at full dynamics; at standard tracking < 120 W)

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