

Benefits

- Lighter, smaller, and more robust than the previous version
- Integrated real-time 3D solution with Coda Octopus sonars
 - High-resolution angular measurement
 - Dynamic patch value offset adjustment
 - Absolute encoder on the driven output shaft
 - Zero-power, static brake for position holding
- Robust design for demanding subsea applications
 - Time-synchronized output capability



The 4th generation of the 3D Integrated Pan and Tilt Unit

Integrated Pan and Tilt (IPT) is a high-performance unit designed to meet the demanding requirements of accurate orientation and position control for real-time 3D Coda Octopus sonar products.

The IPT operates as an integrated solution with all CodaOctopus® software applications. Its seamless integration with Echoscope® real-time 3D sonar eliminates the need for multiple patch testing during mapping and inspection tasks. All angular and positional offsets are dynamically calculated within the software, ensuring accurate, efficient, and simple operation.

Incorporating high-torque motors, low-backlash gearboxes, and high-precision encoders as standard, the IPT units are capable of station holding real-time 3D sonars in hydrodynamic environments, delivering a maximum torque of 94 Nm. Enclosed in rugged stainless steel housings, the units are designed for operation at depths of either 30m, 500m, or 3000m.

The IPT is supplied with either a Surface Vessel Pack, which includes a Deck Power Supply Unit, a 20m Cable, and a Mounting Bracket, or as a USV/ROV/AUV Pack, equipped with a 5m Whip Cable, a Deck Test Cable, and a Mounting Bracket.

Additionally, the IPT can be supplied with a stand-alone application for controlling the unit outside of Coda Octopus software. Its data output messaging allows for user-defined update rates when moving for angular position, and the data command protocol and message output format are very simple, supporting integration with different software packages via serial or Ethernet connections.

Features

- ±90° tilt and ±180° pan motion Includes rugged interface plate to simplify mounting on pole or ROV
- Includes a rugged interface plate to simplify mounting on a pole or ROV
- Hard stop index on each axis simplifies the configuration of angular range of movement
- Orientation option for sonar mount in portrait and landscape mode
- Interfaces with heading data to report true heading for the pan axis
- Integrated software modules for all CodaOctopus® software
- Point-and-click positioning of IPT in the 2D control window
- User-defined step values for indexed movement
- User-defined GOTO controls for commonly used project viewpoints
- Compatible with the ISC (Integrated Service Cable) for the operation of the ISAR and Coda Octopus sonar product on a single tether
- Time-synchronized output capability to prevent latency issues

Full Mounting Compatibility with All Echoscope® Sonars



Echoscope PIPE®
Mounted on IPT



Echoscope PIPE® C500
Mounted on IPT

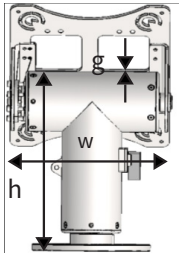
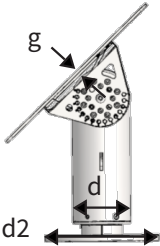
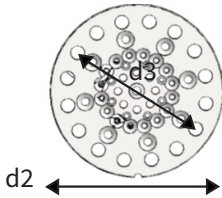


Echoscope PIPE® CIVS
Mounted on IPT



Echoscope PIPE® Surface
Mounted on IPT



Technical Specifications			
Performance (by Model)	IPT-30	IPT-500	IPT-3000
Depth Rating	30m (99ft)	500m (1650ft)	3000m (9900ft)
Peak Torque	94 Nm		
Operational Torque	61 Nm		
Resolution (Absolute Encoder)	+/-0.025°		
Harmonic Gear Backlash	0.5° Standard Accuracy Gearbox*		
Speed Typical	10° per second		
Angular Range (Pan)	0-359°		
Angular Range (Tilt)	0-180°		
*High Accuracy / Low Backlash (0.05°) Gearbox available on request			
Software			
	4G USE® / CodaOctopus® CMS / CodaOctopus® USE / CodaOctopus® USE PIPE CORE		
Data Interfaces			
Control Interface	Ethernet (available on request for standalone applications) or Serial (RS-232 Standard)		Serial (RS-232 Standard)
Time Synchronization	Via 3G Connect 5G / 3D PS5G / 3D PSU 5G / 3D Time Lock PSU		
Power			
Supply Voltage	24-30V DC		
Power Consumption (Dynamic)	Up to 2.0A per axis at 24V DC		
Power Consumption (Static)	200 mA (at brakehold position) at 24V DC		
Physical			
	<div><div><p><u>IPT-30 & IPT-500</u> w: 310mm (12.2") h: 335mm (13.2") d: 112mm (4.4") g: 9mm (0.35")</p></div><div><p><u>Pan Plate</u> d2: 222mm (8.75") d3: 180mm (7.08") 16 x 18mm holes</p></div><div><p><u>IPT-3000</u> w: 340mm (13.4") (Other dimensions same as IPT-30/500)</p></div></div>		
Weight in Air	Stainless Steel Construction = 23.1kg (50.93lbs) *All weights inclusive of flange interface plate and sonar mounting plate		
Connector	LPBH-12-MP (Serial and Ethernet) also available with Subconn MCBHRA8M (Serial only)		
Construction	Welded "T", 316/A4 marine grade stainless steel.		
Output Shaft	35mm diameter, Nitronic 60 steel, splined interface with pre-installed interface plate		

Publication Date: 05.24
Version: 1.6.05.24