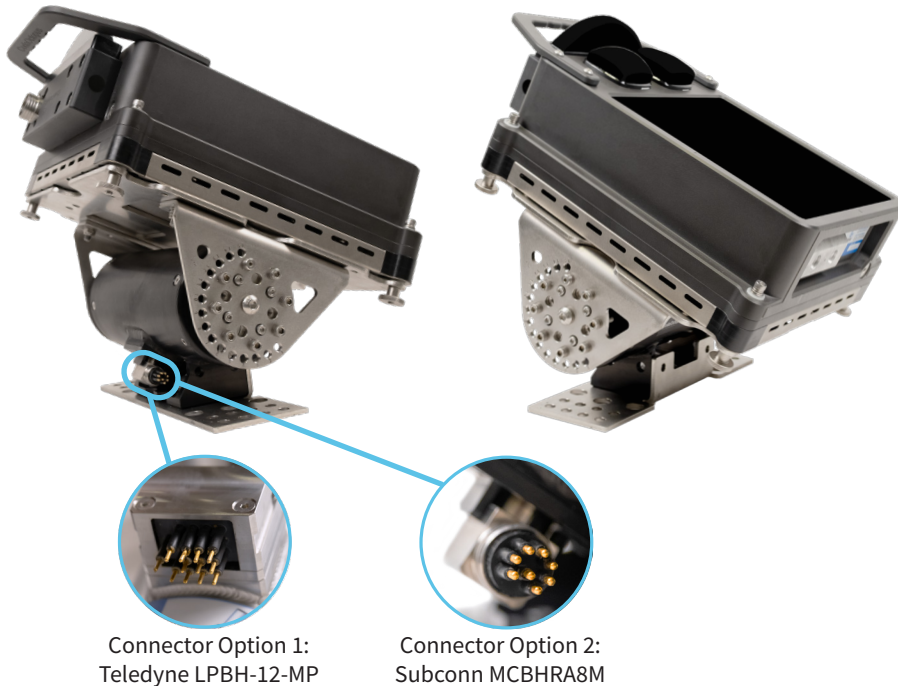


### Benefits

- 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
- Lightweight and compact design
- Increased angular range coverage
- Small-profile circular wet mate connector option



## Compact and Lightweight 3D Integrated Single Axis Rotator (“ISAR”) with Increased Angular Range Coverage

Integrated Single Axis Rotator (“ISAR”) 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 ISAR 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 ISAR units are capable of station holding real-time 3D sonars in hydrodynamic environments, delivering a maximum torque of 94 Nm. Enclosed in rugged aluminum (ISAR-30) or stainless steel (ISAR-500/3000) housings, the units are designed for operation at depths of either 30m, 500m or 3,000m.

The ISAR 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 ISAR 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

- 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 ISAR 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 ISAR**



**Echoscope PIPE® C500  
Mounted on ISAR**



**Echoscope PIPE® C500 CIVS  
Mounted on ISAR**



**Echoscope PIPE® Surface  
Mounted on ISAR**



Technical Specifications			
Performance (by Model)	4G ISAR-30	4G ISAR-500	4G ISAR-3000
Depth Rating	30m (98ft)	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	90-270°		
*High Accuracy Gearbox on request			
Software			
	4G USE® / CodaOctopus® CMS / CodaOctopus® USE / CodaOctopus® USE PIPE CORE		
Data Interfaces			
Control Interface	Ethernet 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)	180mA (at brakehold position) at 24V DC		
Physical			
<u>Dimensions (w x h / diameter)</u> <u>(includes brackets, fixings, and connectors)</u>	300mm x 171mm / 112mm (11.8” x 6.7” / 4.4”)		329mm x 171mm / 112mm (12.9” x 6.7” / 4.4”)
Weight in Air	Aluminum: 9.21 kg (20.30 lb) Stainless Steel: 13.98 kg (30.82 lb)		Stainless Steel: 15.72 kg (34.66 lb)
Connector	LPBH-12-MP (Serial and Ethernet) also available with Subconn MCBHRA8M (Serial only)		
Output Shaft	316 stainless steel with mounted interface plate		

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