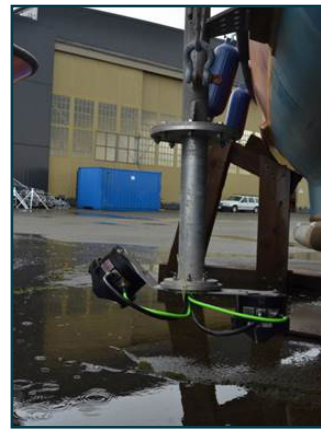
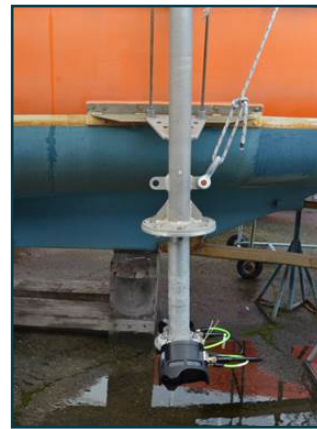


## INSTALLATION

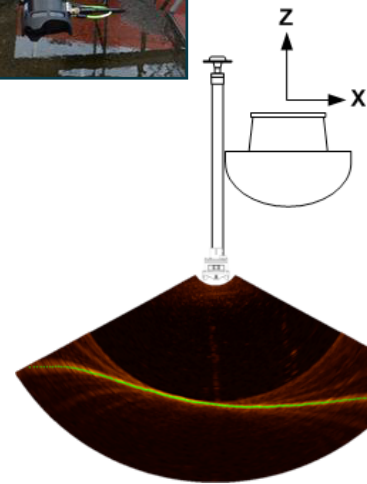
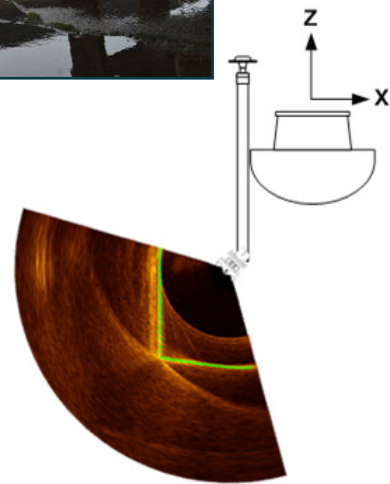
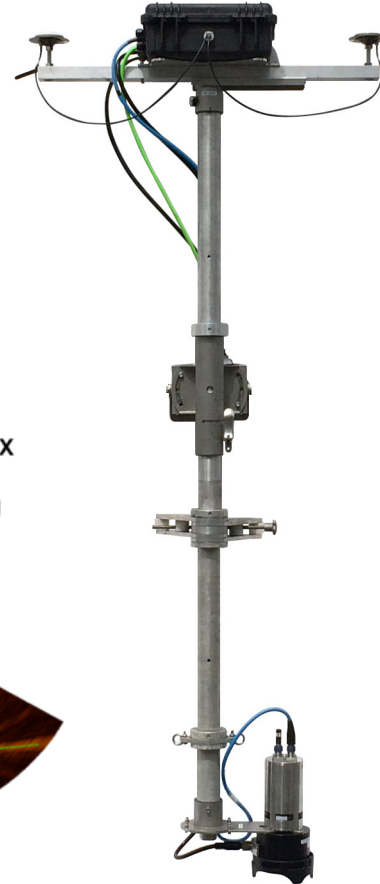
### Structure Survey



### Bottom Survey

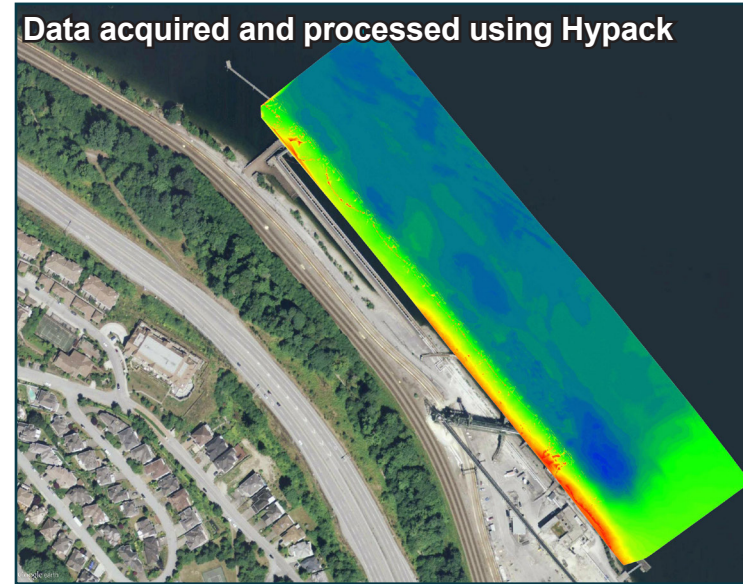


### M3 Bath System

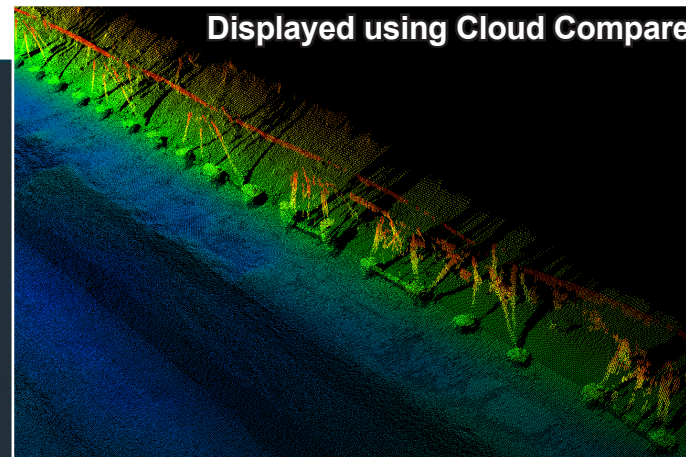


## DATA EXAMPLE: DREDGE SURVEY / BERTH CLEARANCE

### Data acquired and processed using Hypack



### Displayed using Cloud Compare



Specifications subject to change without any further notice.

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KONGSBERG

## APPLICATION NOTE

# M3 BATHY



KONGSBERG

## M3 BATHY SHALLOW-WATER BATHYMETRIC SURVEY SYSTEM

### High Performance at Low Cost

The M3 Bathy Shallow-water Bathymetric Survey System is a powerful, affordable, entry-level turn-key survey system. M3 Bathy features an incredibly small sonar head and convenient topside with no need for an additional processing unit, just a commercial laptop. Special rack mounts are not required. M3 Bathy delivers excellent quality bathymetric data at very low cost of ownership. It is designed for rapid installation, operation and removal using vessels of opportunity.

### Fast, Easy Plug-and-Play Set-Up and Take-Down

The M3 Bathy is a complete plug-and-play system that is supplied in rugged, re-usable equipment cases. The M3 Bathy includes all required sensors for deployment. It can be set up by 2 people in under an hour using the Quick Start Guide. Experienced users can set up and deploy the system in 15 minutes.

### Preconfigured Survey Acquisition and Processing Software

The M3 Bathy provides excellent survey data at very low cost. All sensors are input to a lap-top computer that is preconfigured with the user's specified Survey Acquisition and Processing Software and the M3 Software. The M3 Bathy operates seamlessly with HYPACK, EIVA, and QINSy Survey Acquisition and Processing Software (included in the system price)\*. Optional mosaicking software to create real-time mosaics of imaging data is also available.

### Proven M3 Series MultiMode Multibeam Sonar

The core of the M3 Bathy is Kongsberg Mesotech's proven M3 Series MultiMode Multibeam Sonar. The M3 Sonar is the only instrument in its price point that produces high-quality imaging records and 3-D bathymetric datasets using the same sonar head. Bathymetric multibeam sonars have different requirements than imaging sonars. Bathymetric multibeam sonar needs a wide opening angle across track, and narrow beam along track angle. A forward-looking imaging sonar needs a wide beam across track and wide beam along track. This is why it's impossible for a conventional bathymetric sonar to function well as a forward-look-

ing imaging sonar. The M3's innovative design solves this technical challenge by using 2 sets of complementary transducers in the same head. The M3 generates both imaging and swath data in the same head. Point it down for bathymetric measurement; point it forward with a slight downward tilt for seafloor imaging; point it forward for obstacle avoidance, point it sideways for structural inspection or vessel hull inspection.

### Pitch, Roll, Heave Correction

The M3 Bathy takes pitch, roll and heave correction inputs from Kongsberg Seatex's MRU-3. User can also select the optional MRU-H for increased performance.

### Wide Shallow-Survey Swath at 9.5 kts

In bathymetric mode, the M3 Bathy is designed to operate in water depths up to 75m under ideal conditions, with a full 120 degree swath. In imaging mode, the M3 Bathy ranges from 0.2m to 150m, with a range resolution of 1 cm. The M3 Bathy is pressure depth rated to 500m. The M3 Bathy has been operated with stable pole mount deployment at speeds up to 9.5 kts.

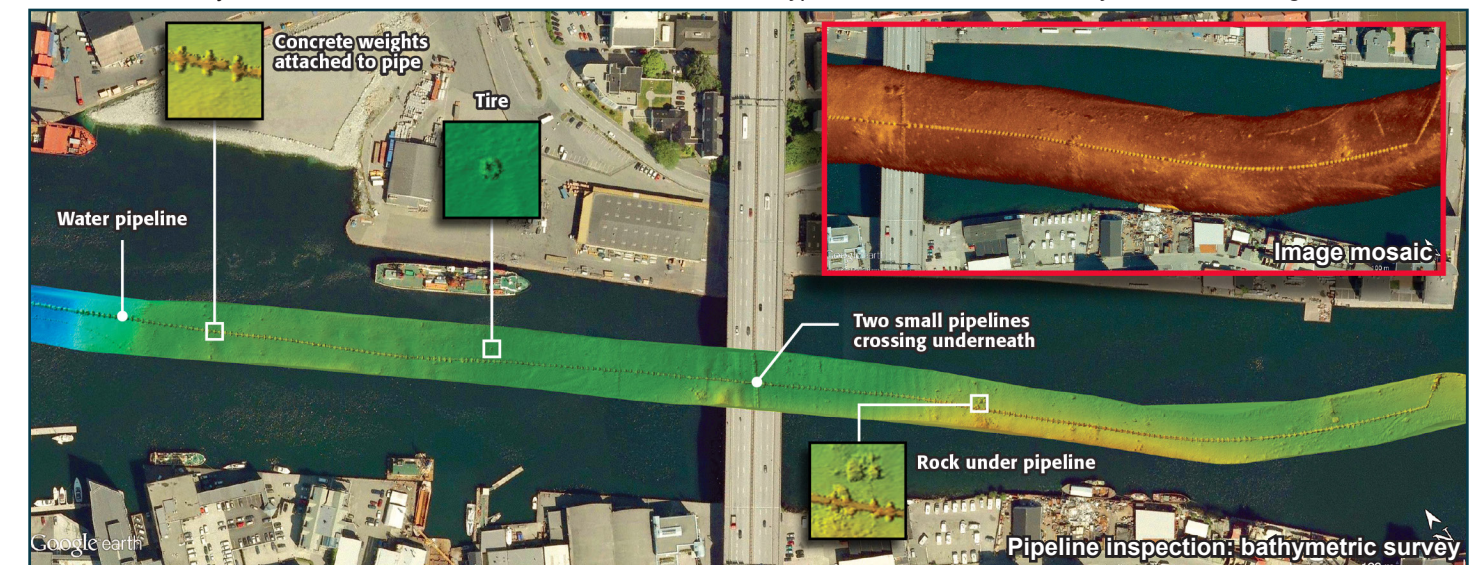
### Global Support – Kongsberg Reliability and Quality

The M3 Bathy is supported globally by Kongsberg's network of Service Centres. This makes the M3 Bathy Shallow-water Bathymetric Survey System the best choice for a rugged, reliable, easy-to-operate, affordable instrument for shallow survey and inspection needs.

### Applications

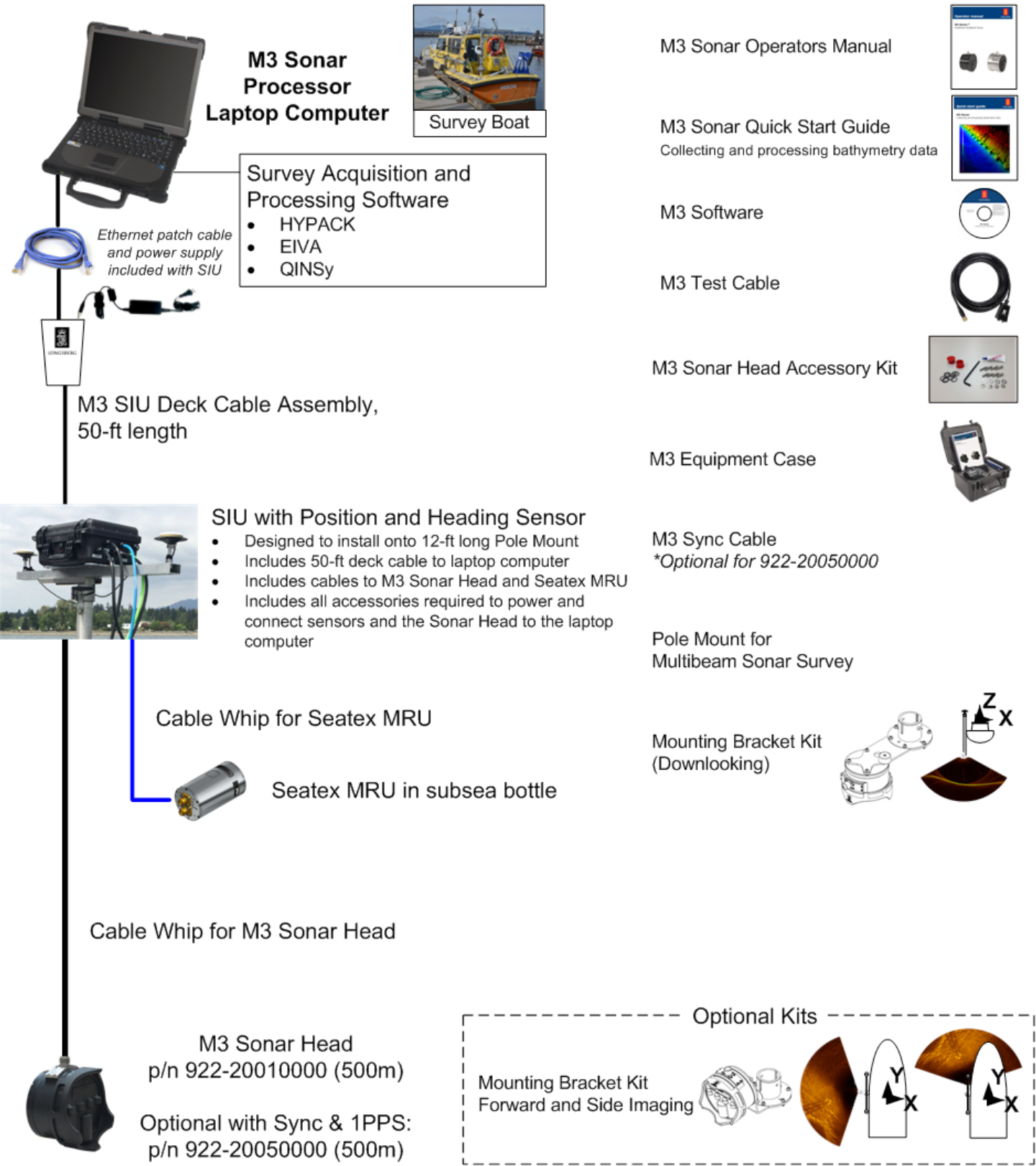
- Pipeline profiling survey
- Dredging monitoring and verification
- Engineering inspection of small ports and harbours infrastructure
- Shallow water survey
- Dam, bridge pier, outflow and cooling water intake inspections

\*Hypack is available now; QINSy and EIVA coming soon





SYSTEM CONFIGURATION



DESIGN

**Rugged Pole-Mount Design Protects Cabling**  
Wet-end cabling passes through the pole mount, protecting the cables in operation. Cabling is protected from insulation chafing due to vibration at all critical points of contact. The straight cable connectors allow use of the minimum possible pole diameter, thus minimizing pole weight, hydrodynamic drag and turbulent flow, and simplifying handling during assembly and take-down.

**Convenient Integrated SIU Cable Management**  
The Surface Interface Unit (SIU) is designed for fast, convenient operator set-up. All cabling is pre-installed in the SIU with water-proof cable glands. The SIU is delivered in an equipment case sized for the SIU and all coiled cabling. This provides for secure shipping, organized cable management, and rapid set-up and take-down during and after surveys.



DATA EXAMPLE: STRUCTURE INSPECTION AND SURVEY

