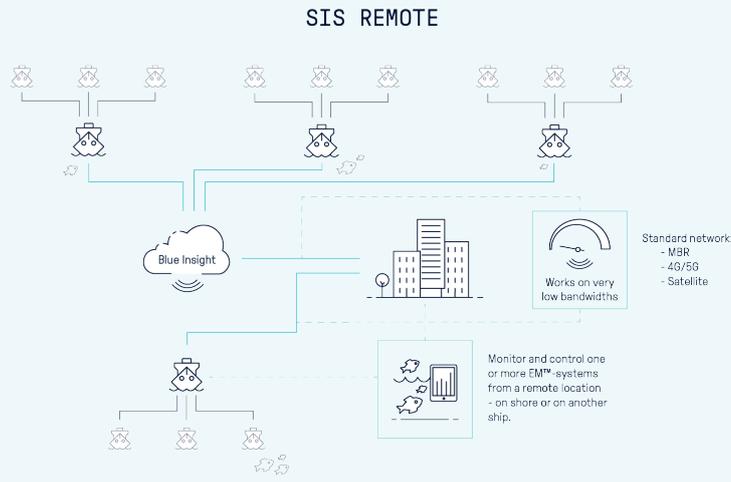


SIS REMOTE



KONGSBERG

KONGSBERG SYSTEMS

Remote Operation of EM[®]-systems

With SIS Remote you can operate the KONGSBERG EM-systems from any device connected to the Internet.

Operators used to SIS 5 can also operate SIS Remote, no extra training is necessary. The Installation- and Runtime-parameters, Sound Speed Profile handling, the Digital Terrain Model in the Geographical Window are all the same.

SIS Remote can use the Customer's existing private network for communication ship-to-shore. The security configuration already in place will then be used for SIS Remote as well.

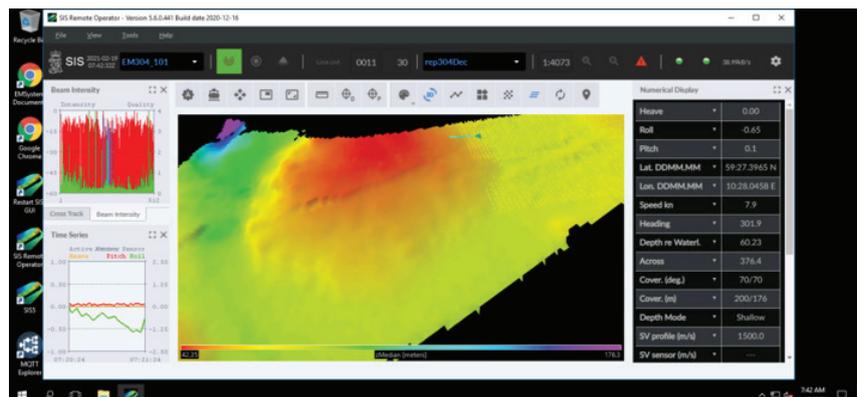
KONGSBERG can also provide ship-to-cloud communication through a secured network, Global Secure Network, and then the operator can access SIS Remote through any web-browser by secure login to a Virtual Machine (Windows PC) in KONGSBERG's cloud solution Blue Insight.

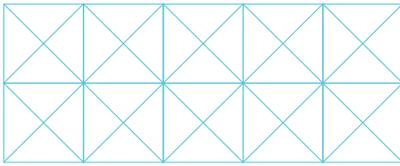
SIS Remote can also be set up in a ship-to-ship configuration. The surveyor on the mothership can control one or more survey launches with EM[®] and SIS 5.

The standard version of SIS 5 has already SIS Remote enabled. Through a feature in the license dongle SIS 5 can be turned into SIS Remote. No extra installation is required.

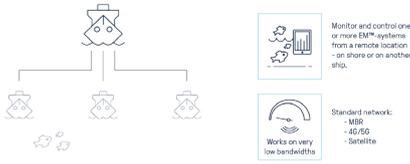
BENEFITS

- Complete control of the EM-systems from anywhere in the network
- Installation and runtime parameters fully supported
- Sound Speed Profile management
- Adjustable bandwidth, controlled from remote location: Choose how much data to transmit from ship-to-shore
- Needs as little as 5kB/sec to do reliable quality control
- Digital Terrain Model in full detail always transmitted ship-to-shore





SIS REMOTE
Ship-To-Ship



Ship-to-ship using SIS Remote

SIS REMOTE
Ship-To-Shore



Ship-to-shore using SIS Remote

SIS REMOTE
Ship-To-Shore Cloud Solution



Ship-to-cloud using SIS Remote and Blue Insight

SIS Remote

SIS Remote can handle several EM®-systems at the same time. Each EM® connects to the same server and transmit data over the Internet, and SIS Remote will combine the DTMs from all connected systems and display them in the same Geographical view. The SIS Remote Operator will then get a complete view of all DTMs from all survey launches.

Each EM® will still be able to operate independently. This is useful when the EM® is being used in an autonomous vehicle: just let the AUV do the job and log in to SIS Remote every now and then to monitor progress, make adjustments, plan new lines etc. The full DTM from each boat will be uploaded from ship-to-shore when SIS Remote connects.

The size of the DTM, even at highest Level of Detail, is typically less than 1% of the survey data (kmall-files).

The DTM in highest LoD will allow the Operator to see alignment issues in the configuration, sound speed profile problems, “holes” in the dataset etc. The full 3D view of SIS is also available in SIS Remote Geographical window, allowing the operator to inspect the dataset in close detail.

The Planning module in SIS is also available in SIS Remote. Lines can be planned in SIS Remote and transferred to the one of the connected survey launches.

The Internet connection between from ship-to-shore can be any carrier available: 4G/5G mobile network, WiFi, satellite, or KONGSBERG’s Maritime Broadband Radio, the MBR.

SIS REMOTE

Bandwidth SIS 5 can make do with as little as 5kB/sec. This allows the Digital Terrain Model, DTM, to be transferred in highest Level of Detail.

However, 30kB/sec will give a better user experience as more quality information can be transferred in real time.

Security SIS Remote needs an Internet connection to work. This connection can either be secured using the existing setup on the ship, or by using KONGSBERG’s Global Secure Network, GSN, which is a combination of HW and SW to secure the communication from ship-to-shore.

