

Architecture

The MDM 500 consists of one Server and several Clients. In addition several tools are available, among them the Report Manager which is used to extract data from the database and making reports out of it.

The Server controls the logging of the data from all the Clients. It monitors all data received and decides how to store them in the database. Instruments can be grouped together making a logical set of data, i.e. GPS locations can be stored together with CTD data to keep track of where the CTD was made.

The Client has one or more instruments attached. Data from each instrument can be displayed on the Client PC, or on a Client on a different PC without any instruments attached.

Data from each instrument is also available on the network in real time, allowing anyone to pick it up and do real time data processing on the data.

Note that the data is still logged in the database.

- Runs on Windows 7 (R)
- Microsoft SQL Server database
- Instruments connect to PC through RS232 or Ethernet
- Alarms can be displayed on any PC in the network where the MDM 500 Watchdog application is installed.
- Remote monitoring of any instrument.

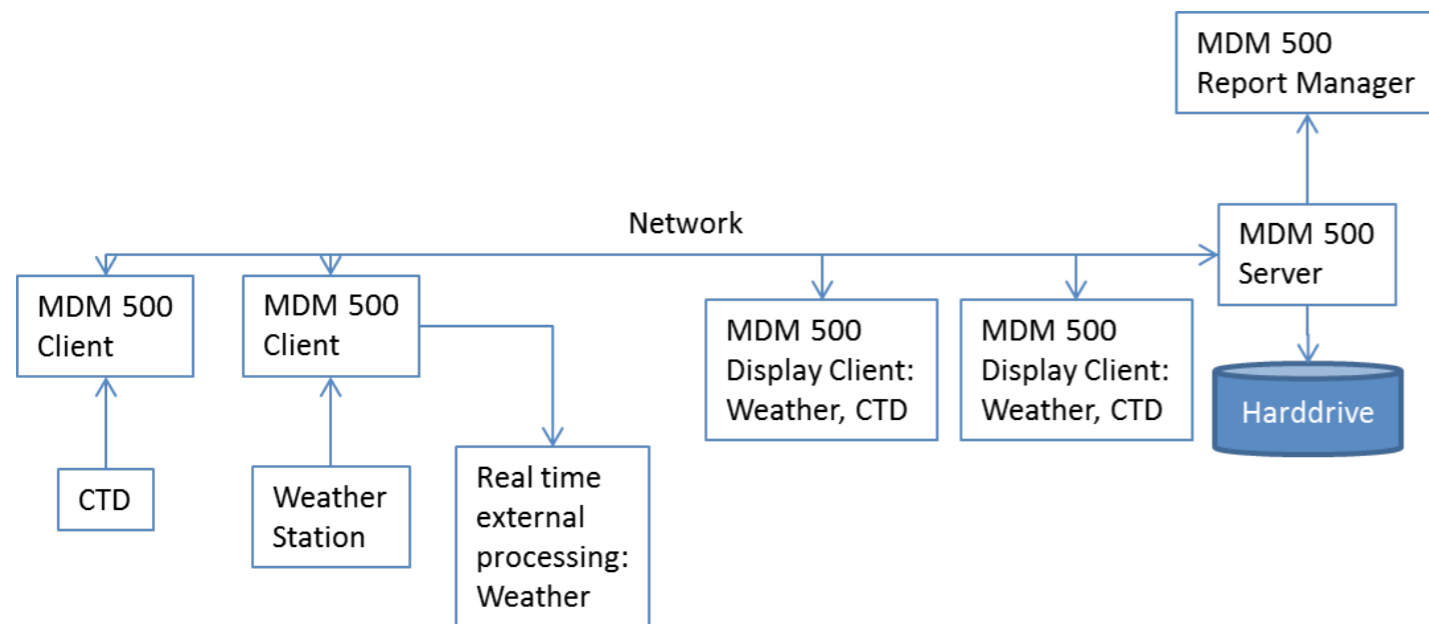
Installation

Installation of the MDM 500 is very easy.

Only the MDM 500 Server application needs to be installed from a media (DVD or file), and the operator simply chooses where the SQL Server shall store its files.

Installing the MDM 500 Client is done by simply typing in the network address to the MDM 500 Server into a webbrowser and follow the instructions on the web-page.

Then configuring the connection to the instrument is done through a simple user interface where baud rate etc. is defined.



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MDM 500 Marine Data Management



Overview

The MDM 500 is the third generation of Kongsberg's general purpose logging system.

The main purpose for the MDM 500 is to be installed on a survey vessel and provide a centralized storage system for many different types of sensor on board, such as CTD, weather stations, magnetometer, thermo-saliniograph etc.

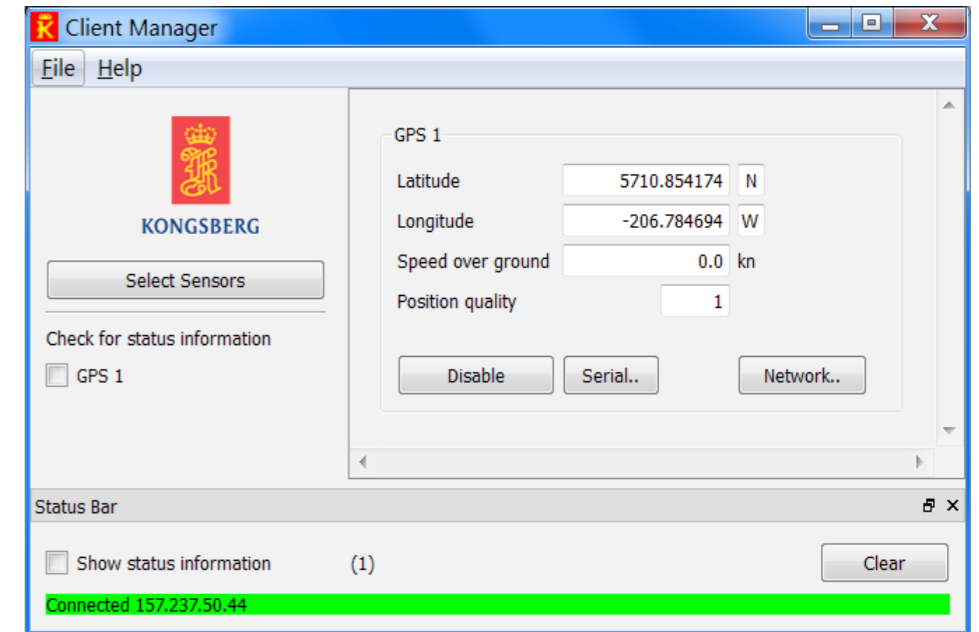
Each sensor can be attached to a PC either using RS232 serial line or Ethernet connection. This PC can be located anywhere on the boat as long as it is connected to the ship's network. The MDM 500 Client Manager will then provide the operator with a nice user interface to configure the connection to the instrument.

Data from the instrument is displayed on the PC it is connected to, and also on any other PC in the network where the MDM 500 Client Display is installed.

The Survey Manager contains a Microsoft SQL Database Server where it stores all the data from all instruments attached to all Clients. This makes data handling easy as all data can be transferred from ship to shore simply by moving the database as one single item.

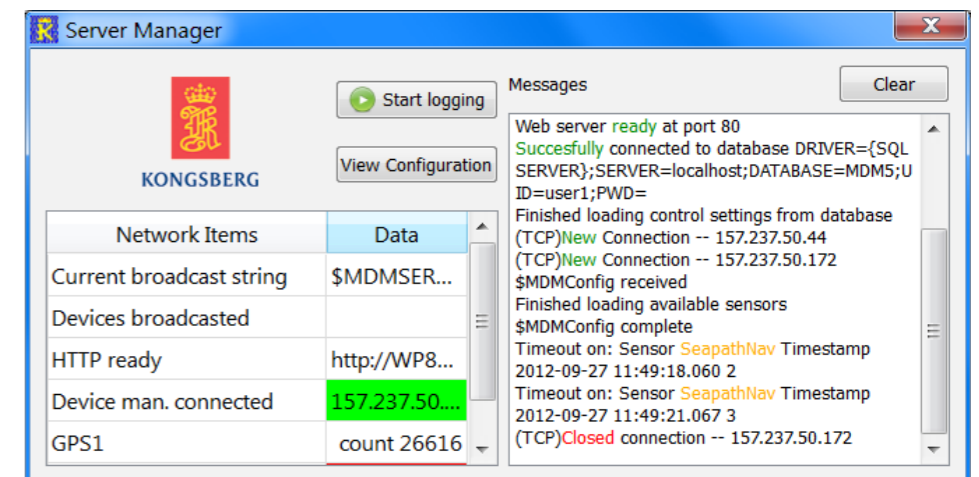
When updating the MDM 500 system with new functionality or new instrument drivers, only the Server Manager needs to be updated. The Clients are automatically updated over the network.

Data from each instrument is also available on the network in near real time, so any scientist can use the data while it is still being properly stored in the database.



Features

- Centralized storage for all attached sensors.
- Easy data handling.
- Distributed display of sensor data.
- Distribution of sensor data on the network allows for real time data processing while the data is being logged.
- Microsoft © SQL Server used for data storage which allows the operator to use Microsoft © tools for data handling.
- Alarm systems monitor the instruments, and alarms can be displayed on remote computers.
- Report Manager provides the operator with a tool to extract data from the database and make a report out of it.
- Very easy installation. Only the MDM 500 server requires a CD/DVD/file, then the MDM 500 Client Manager is installed on any client PC by using the Internet Explorer ©.



Centralized storing

All sensor data logged by MDM 500 ends up in one centralized database making it easy to maintain the data.

All data can be moved from ship to shore as one database item by making use of the tools provided by the SQL Server. Backup procedures can also utilize the tools that come with Microsoft SQL Database Server.

All data samples are timestamped to facilitate grouping of data from different sensors.

Data distribution

Sensor data interfaced by the MDM drivers can easily be redistributed to other systems, either in the native format or in a common MDM 500 format.

This makes it possible to use the data from any instrument anywhere on the network in near realtime, while the data from the same instrument is still being stored in the database.

External data access

The data stored in the SQL Server database can be accessed by 3rd party applications that use ODBC or ADO. This makes it possible to make your own reporting tools by simply defining you own SQL statements using SQL tools.

Expandable

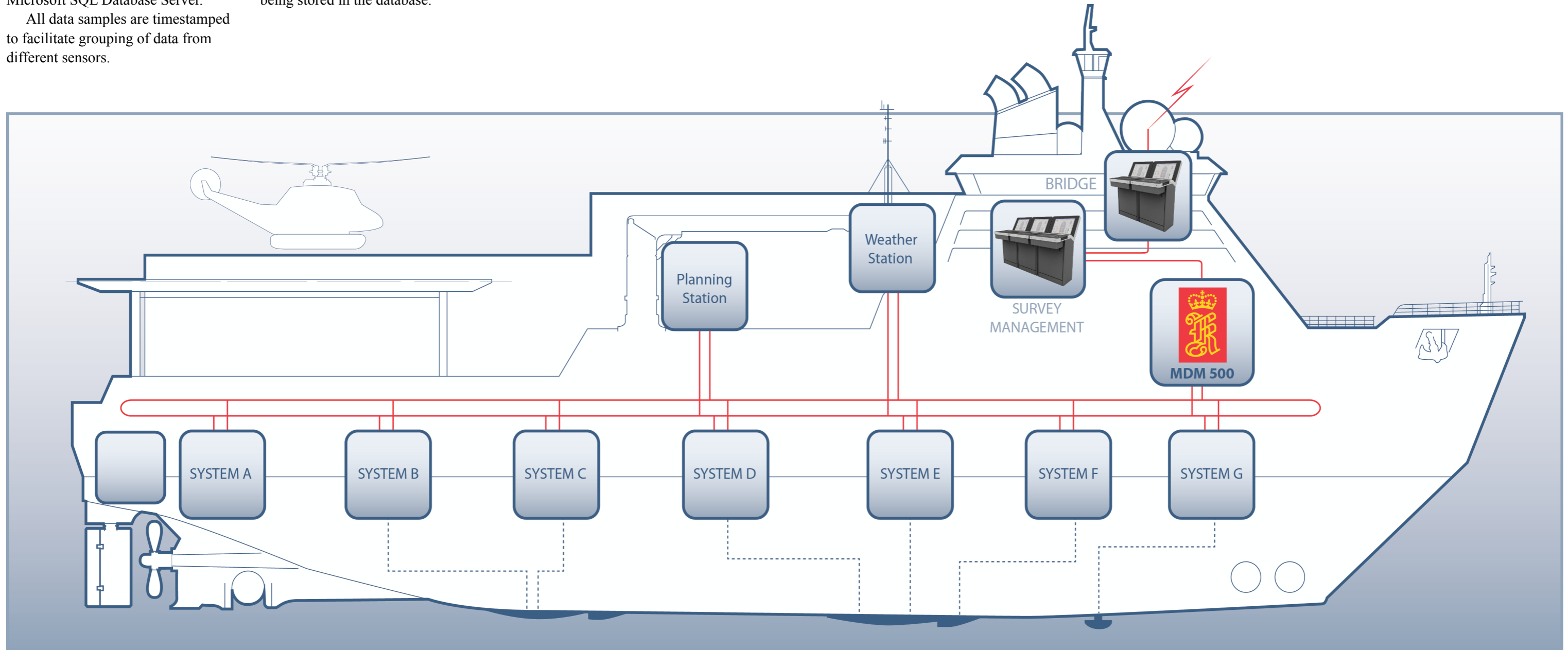
With MDM 500, it is easy to expand your data logging system. You may start with only a few sensor interfaces and add more when needed without needing to reconfigure the system.

Modular system

The software consists of several separate modules that can be installed on different PCs. You can for example install a Client manager on a PC located close to the sensor(s).

Reporting tools

MDM 500 comes with several reporting tools. MDM Report Manager comes with ready made queries and reports that makes it easy to access data from any sensor. MDM CrossReport is a tool that gives you a tabular overview of the data. The output can be opened in Excel for further evaluation.



GPS

The GPS-driver is usually the backbone of any logging system as it provides time and position. The location of any other sensor can then be found easily. The MDM 500 has two GPS drivers allowing the logging of two separate positioning systems.

AIS

The AIS driver logs the data from the AIS system and displays the MMSI number, position, heading, speed and status from nearby traffic.

WeatherPak

This driver logs and displays weather information such as wind speed and direction, temperature, humidity, barometric pressure and water temperature.

ADCP

The ADCP driver logs depth, heading, water speed and ground speed in two directions.

Generic Driver

The MDM 500 has a Generic Driver for NMEA-like output from instruments. This allows the operator to configure how the data shall be logged and displayed without having to develop a specific driver for it.

Your driver here

The MDM 500 has an option where the customer can get a tailor-made driver for an instrument, should it not already be in the list of available drivers. This development is normally done at a fixed price provided format descriptions are available.