WÄRTSILÄ

VDR 4360

Voyage Data Recorder

SAM Electronics

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As a leading systems integrator, SAM Electronics is constantly striving for improvements to the safety of navigation. The new **VDR 4360** emphasises such expertise through integration of an integrated navigation system with VDR combined with the requirements of the new VDR Performance Standard MSC. 333(90). Especially designed for the current navigation system NACOS Platinum family 1x00 and NACOS xx-5, the VDR 4360 also offers backwards compatibility to the former generation's of navigation systems NACOS xx-4/5.

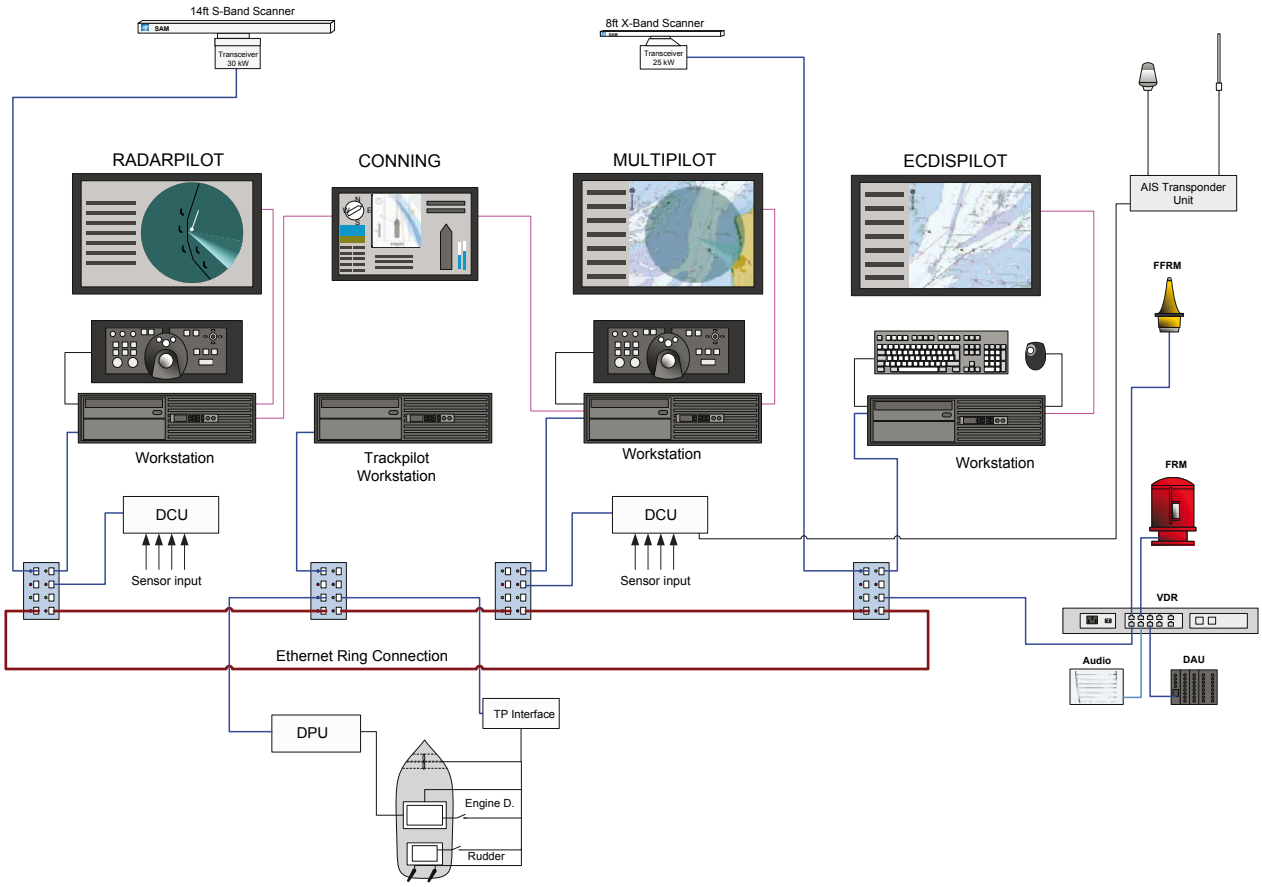
Up until now, the VDR functioned as an additional black box with separate interfaces to each required sub-system. The **VDR 4360** changes this approach and offers the benefits from true integration of the VDR into the complete navigation system.

Essential **VDR 4360** functions are operated via the RADARPILOT, thus combining user-friendly operation with improved situational awareness all in a cost effective, tailor-made state-of-the art solution. The VDR comes as a scalable solution at a competitive price suitable to all kinds of newbuildings and retrofits over the complete market range.

The modular and ethernet based solution (incl. power over ethernet) requires minimum space and wiring and allows fast and effective installations. The replay system is based on standard PC hardware and offers fast and easy access to downloaded data. Once the VDR is connected to a SATCOM system online replay as well as remote maintenance of the VDR is available. The **VDR 4360** meets all requirements of the new VDR performance and test standards MSC.333(90) and IEC 61996-1.

Features

- Navigation sensor data and digital radar and ECDIS image via Ethernet
- Remote operating (alarm handling) by means of SAM Radar (1x00, Platinum and future products)
- Harmonized user interface
- Available as cabinet mounted solution
- Replay system online / offline (onboard as well as onshore)
- Remote maintenance and online replay
- VHF Interface prepared for two channels



System Description

The **VDR 4360** consists of a core module, a variable number of microphones, NMEA and process modules, a Fixed Recording Medium as well as Float Free Recording Medium. The Radar and Ecdis image recording is performed via ethernet. The Radar acts as the operating and alarm unit. Optional communications and / or replay systems can be connected.

Core Module

The Core Module includes all key components necessary for data acquisition and processing incl. main computer, Power over Ethernet switch long term recording medium and UPS.

Audio System

The Audio System consists of a VHF interface as well as a number of microphones. Both PoE-based modules are capable of converting bridge audio, VHF radio and telephone communication into a digital audio stream. They are daisy chainable and supersede the regulations by recording through separate recording channels for each microphone or line-in interface.

External Data Acquisition

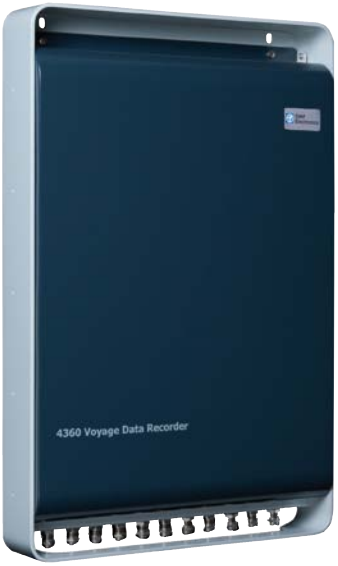
Scalable on request digital, analogue and serial interfaces can be installed outside the Core Module where required. They are rail mounted and can be placed in an existing console or in a separate housing (Interface Extension Box).

Fixed Final Recording Medium

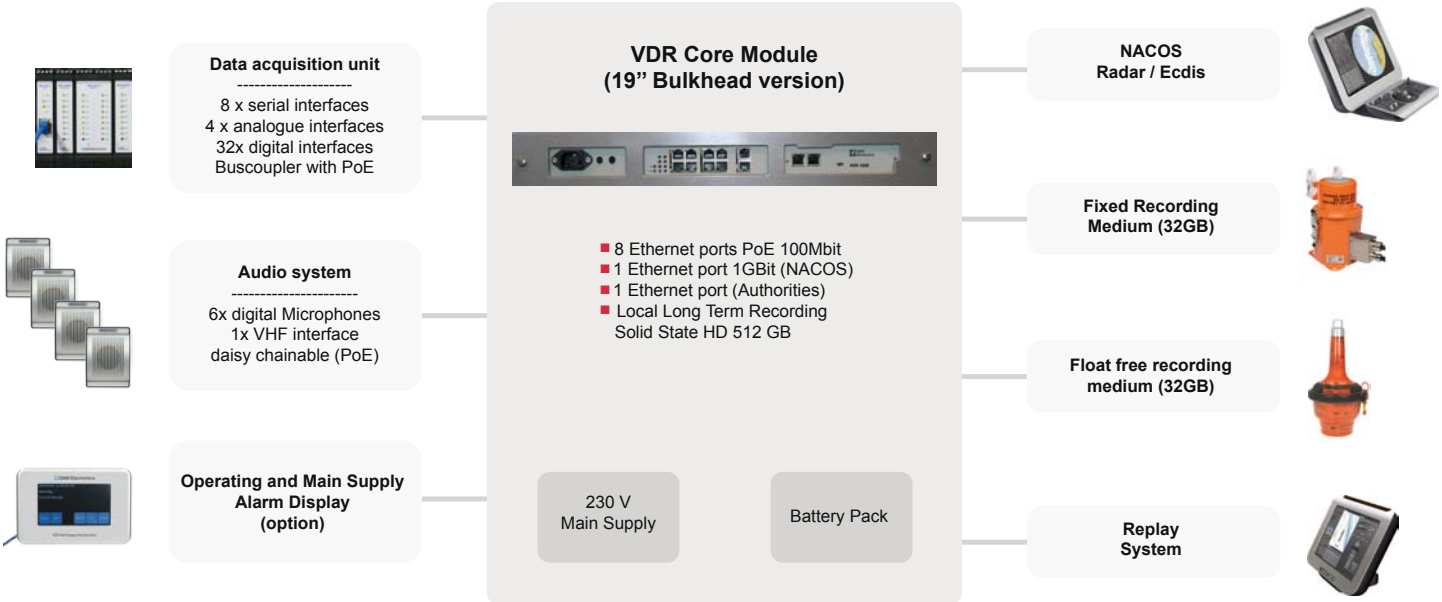
The Final Recording Medium is a fire resistant and pressure tight storage medium to store recorded data as required by the IMO. The Fixed Final Recording has a very slim and compact construction and includes the protected memory capsule with 32 GB flash memory for 48 hours recording time.

Float Free Final Recording Medium

The Float Free Recording Medium is an alternative storage medium which will float free after sinking and has means for indicating the position. It includes a protected memory of 32GB which allows to store recorded data as required by the IMO for 48 hours recording time.



VDR cabinet



Standard System configuration

VDR 4360
Scope of Supply

Standard Configuration

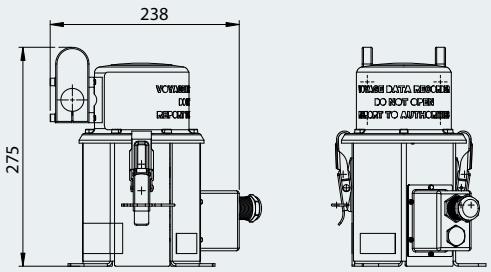
Core module with

- Solid State HD 512 GB for internal and Long Term Recording
- Built in 8 port Ethernet switch, 100 MB PoE based
- 2nd network with 1 GB port
- Built-in UPS

Audio System

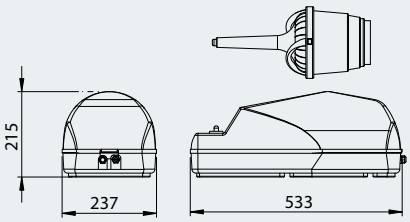
- Each microphone or audio source provides his own data stream
- Audio streams can be recorded independently or merged
- Daisy chain Power over Ethernet connection to core module
- VHF Interface prepared for two channels
- Standard supply 4x interior, 2x exterior micro-phones and 1x VHF Interface

Fixed Final Recording Medium



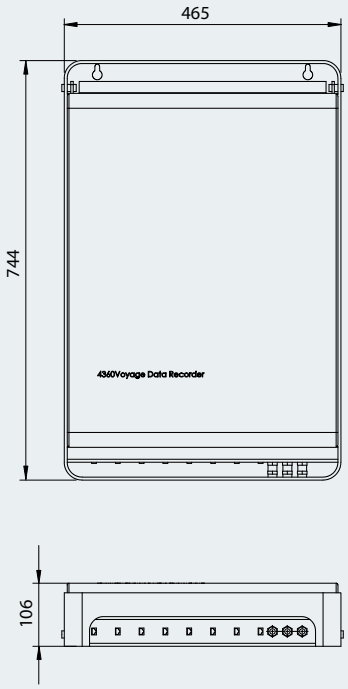
Weight: 6.4 kg
Power Supply: 24 V DC

Float Free Final Recording Medium



Weight: 1.9 kg
Power Supply: PoE

Core Module



Weight: appr. 40 kg
Power Supply: 110/230 V AC

Technical and installation data

Process Data Acquisition Unit

- 8 serial NMEA interfaces
- 4 analogue inputs (free configurable)
- 32 digital inputs
- Power over Ethernet connection to core module
- Free extendable

Fixed Final Recording Medium

- Fixed Final Recording Medium

Float Free Final Recording Medium

- 1 x floating capsule with 32GB flash memory

Options

- Additional process interfaces
- Remote Online Replay via SATCOM
- Remote Maintenance via SATCOM
- Extended storage capacity for Long Term Recording
- Project specific replay software
- Replay PC

Planning Data

Prior to the system delivery, technical details such as connected subsystems, number and type of interfaces and data telegrams require clarification.

Quotations

Binding quotations can only be issued after at least the general planning data are available, such as the number and type of sensors to be interfaced and the format of the used data telegrams. As long as these data are not available please use the **VDR 4360** standard configuration for a budgetary quotation.

Delivery Time

The delivery time of the system will be typically 60 days after clarification of all technical details.

SAM Electronics GmbH
Automation, Navigation, Communication
Behringstrasse 120
22763 Hamburg · Germany

Phone: +49 (0)40 - 88 25 - 28 41
Fax +49 (0)40 - 88 25 - 41 16
ANC@sam-electronics.de
www.sam-electronics.de