VOYAGE DATA RECORDING

KONGSBERG

DESIGNED FOR THE MARITIME ENVIRONMENT

Kongsberg VDR MK3

The Kongsberg VDR MK3 is specifically designed to provide rugged and robust performance, overcoming service issues that are otherwise typical in maritime conditions.

The system is installed in a 19" rack or legacy cabinet.

Because of its Power-Over-Ethernet (PoE) design, cabling for the VDR MK3 is reduced to a minimum. This results in faster (and more economical) installation and easier servicing.

The system's special architecture and design make it ideal for any type of new-build installation or as a simple (swap-out) replacement for a legacy VDR solution.

VDR MK3 benefits from remote support and maintenance, including remote testing that reduces on-board APT (Annual Performance Test) times, if Kongsberg Remote Support platform installed.

KEY POINTS

- PoE-based design reduces cabling costs (typically by 50%).
- Solid state architecture minimises service costs.
- Fixed capsule made from A316-grade stainless steel.
- Scalable installation suitable for retrofits.
- Most reliable float-free capsule on the market.
- Underwater locator beacon emits pulse for 90 days.
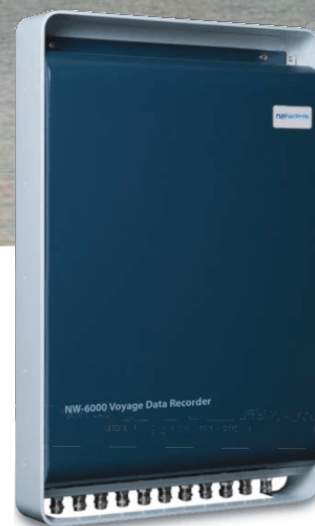
SYSTEM CONFIGURATION

Unlike most VDR systems on the market, the Kongsberg VDR MK3 has its different components around the ship interconnected by a single Ethernet cable. Both power and data are carried by this single cable. This eliminates the need for extensive, complex – and therefore costly – cabling. Compared to other VDR systems, cabling costs are typically reduced by 50%.

A standard Kongsberg VDR MK3 system is comprised of the following components:

- Core module
- Fixed capsule
- Float-free capsule
- Bridge control unit
- Data acquisition module
- 6 x microphones
- VHF interface
- Audio hub for microphones
- Video module (optional)
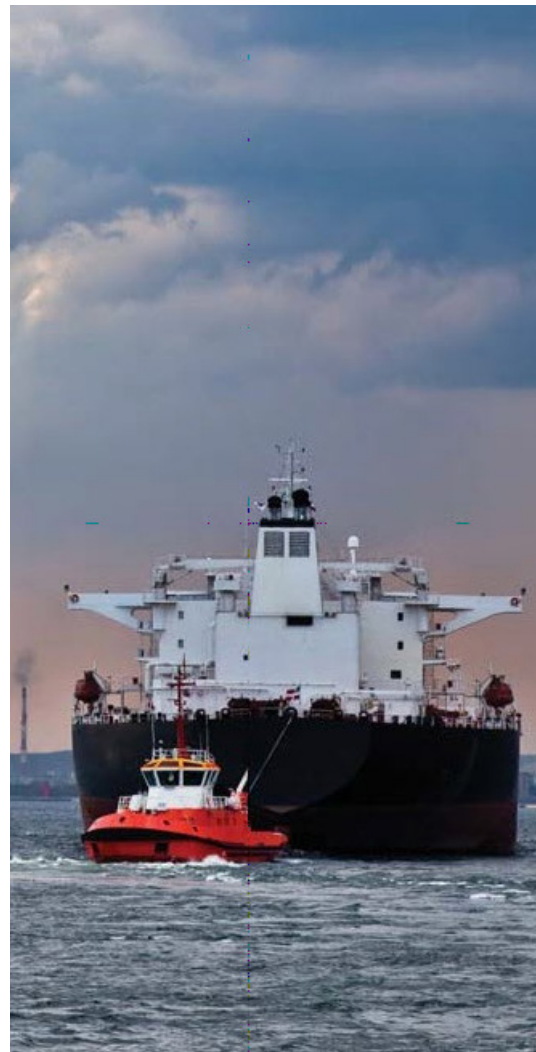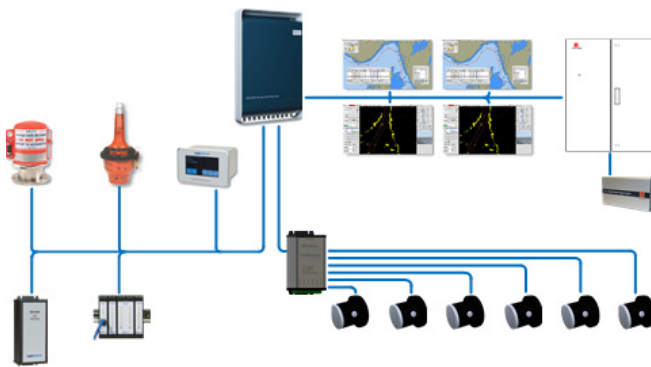
IEC61162-450 Lightweight Ethernet infrastructure (including video capture capability)
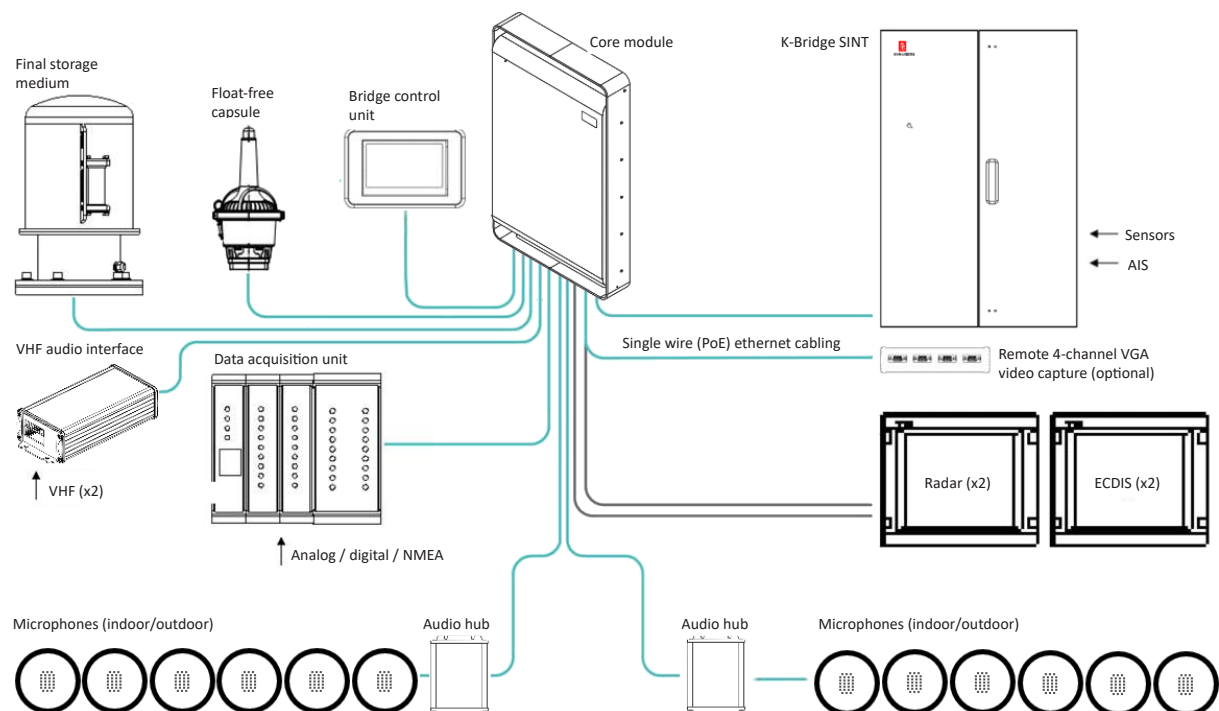
FIXED, ARMOURED CAPSULE

The Final Recording Medium (FRM) for the Kongsberg VDR MK3 is housed in a fixed, armoured capsule made from A316-grade stainless steel.

The capsule is compliant with the following standards:

- SAE8045AS
- IMO resolution MSC 333(90)
- IEC 61996
- IEC 60945
- ED 56/112

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| Deck-mounted, A316-grade stainless-steel capsule |
| Power received over Ethernet from core module (PoE) |
| 25 m CAT-6 cable (included) |
| Underwater locator beacon (emits pulse for 90 days) |
| Memory: 32/64/128 GB (protected); storage for min. 48 hours |
| Fire resistance: up to 1100 °C (for 1 hour), 260 °C (for 10 hours) |
| Pressure resistance: 20.000 PSI / 600 Bar / 6000 m depth |
| Colour: RAL 3026 (fluor red) for SOLAS-compliance (other colours avail.) |
| Solid State: no disk drives or other moving parts |
| Protection: IP68 |
| Dimensions: 311 mm (W), 45 mm (D), 411 mm (H) |
| Weight: 27,5 kg |
| KM part number: 454299 |
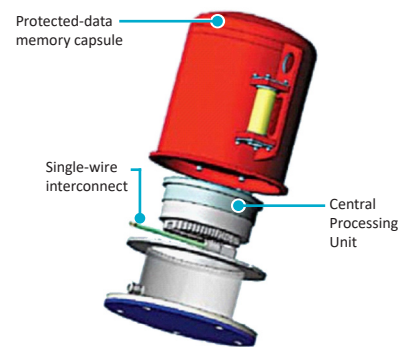
FLOAT-FREE CAPSULE

The most reliable float-free capsule on the market.

Bulkhead-mounted in a protected cover
Power received over Ethernet from core module (PoE)
2 m CAT-6 cable (included)
Memory; storage for min. 48 hours
Protection: IP67
Dimensions: 240 mm (W), 218 mm (D), 533 mm (H)
Weight: 5.4 kg
KM part number: 454301

PLAYBACK APPLICATION

The playback software displays all critical data for the playback period – heading, depth, speed, rudder, ROT, position, time, and propulsion – on a single page. Other pages play video from the Radar, ECDIS, and CCTV cameras, and audio from the microphones. Others still show alarms, data for the watertight doors, or a user-specified custom presentation.
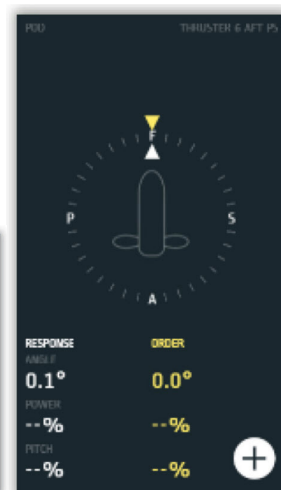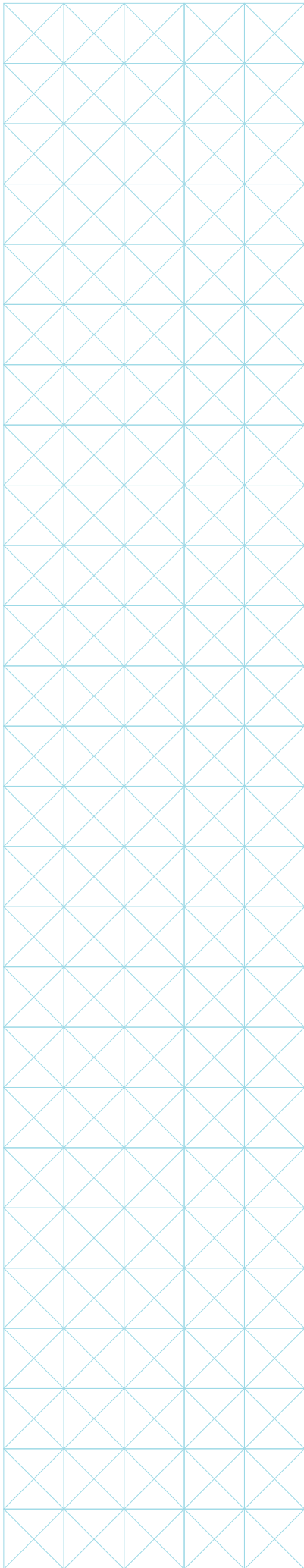
BRIDGE CONTROL UNIT

This is a console-mounted touch-screen display and control unit that provides alerts, instant playback, and remote system diagnostics.

Touch screen
Power received over Ethernet from core module (PoE)
Instant playback
Full color 4.3" graphic TFT screen
Dimensions: 150 mm (W), 134 mm (D), 99 mm (H)
Weight: 1.8 kg
KM part number: 454303

CORE MODULE

The Kongsberg VDR MK3's core module is an efficient, uninterruptible power supply and network switch in a slimline housing.

Storage for min. 30 days' recording
110–220V AC (nominal) at 3 Amps
12 Ethernet ports (1/10 Gb bandwidth)
PoE on 8 of 12 ports
Gateway (FBB, VSAT) capabilities (no additional interface requirements)
Fail-over, bypass, non-intrusive network device
Integrated UPS
Mounted in a 19" rack or cabinet
Dimensions: 450 mm (W), 45 mm (D), 484 mm (H)
Weight: 16,5 kg (incl. batteries)
KM part number: 454298
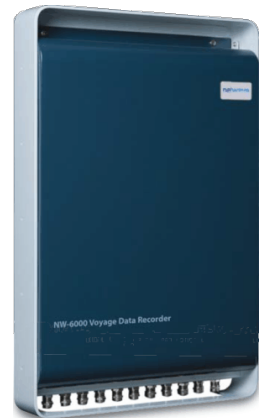
DATA ACQUISITION UNIT

The data acquisition unit receives NMEA, digital and/or analog input (as required) from the field and transmits it to the core module over Ethernet. The unit is optionally housed in a dedicated cabinet.

Power received over Ethernet from core module (PoE)
4-, 8-, 8-channel analog/digital/NMEA modules optionally available
Dimensions: 436 mm (W), 232 mm (D), 182 mm (H)
Weight: 4.8 kg
KM part number: 454308

INDOOR / OUTDOOR MICROPHONES

The VDR MK3's microphones are PoE-based.

The VDR MK3 meets and exceeds applicable regulatory requirements (MSC.333(90)), because it uses a separate recording channel for each microphone or line-in interface.

Power received over Ethernet from core module (PoE) via audio hub
Dimensions: 70 mm (W), 83 mm (D), 70 mm (H)
Weight: 0.5 kg
KM part number: 468829