VOYAGE DATA RECORDING

KONGSBERG

KEY POINTS

- Solid state architecture minimises service costs.
- Fixed capsule made from A316-grade stainless steel.
- Scalable installation.
- Most reliable float-free capsule on the market.
- Underwater locator beacon emits pulse for 90 days.

DESIGNED FOR THE MARITIME ENVIRONMENT

Kongsberg MBB-to-VDR-MK3 Refit Kit

The Kongsberg MBB-to-VDR-MK3 Refit Kit provides a simple upgrade path for the Kongsberg Maritime Black Box (MBB). It delivers the new Kongsberg VDR MK3 – which complies fully with IMO MSC.333(90) – while re-using almost all of the vessel's currently installed VDR infrastructure:

- VDR MK3 core components installed in existing MBB cabinet.
- VDR MK3 components re-use existing MBB cabling (except that a Cat 7 STP cable must be drawn to meet the new requirement in MSC.333(90) for a float-free capsule).
- Regulations now require images to be stored from S-band as well as X-band radar, and from backup as well as primary ECDIS . VDR MK3 receives these images over the LAN – so no new cabling is required.
- VDR MK3 makes extensive use of PoE (Power over Ethernet). Therefore, no new power cabling is required.
- 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.

SYSTEM CONFIGURATION

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
- Power converter for microphones

Figure 1. VDR MK3 Refit Kit re-uses existing Kongsberg MBB cabinet

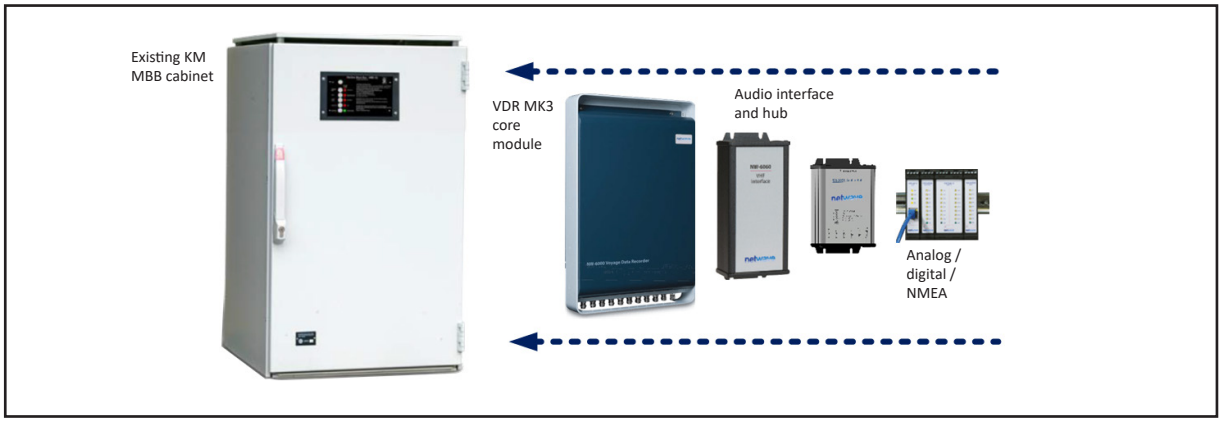
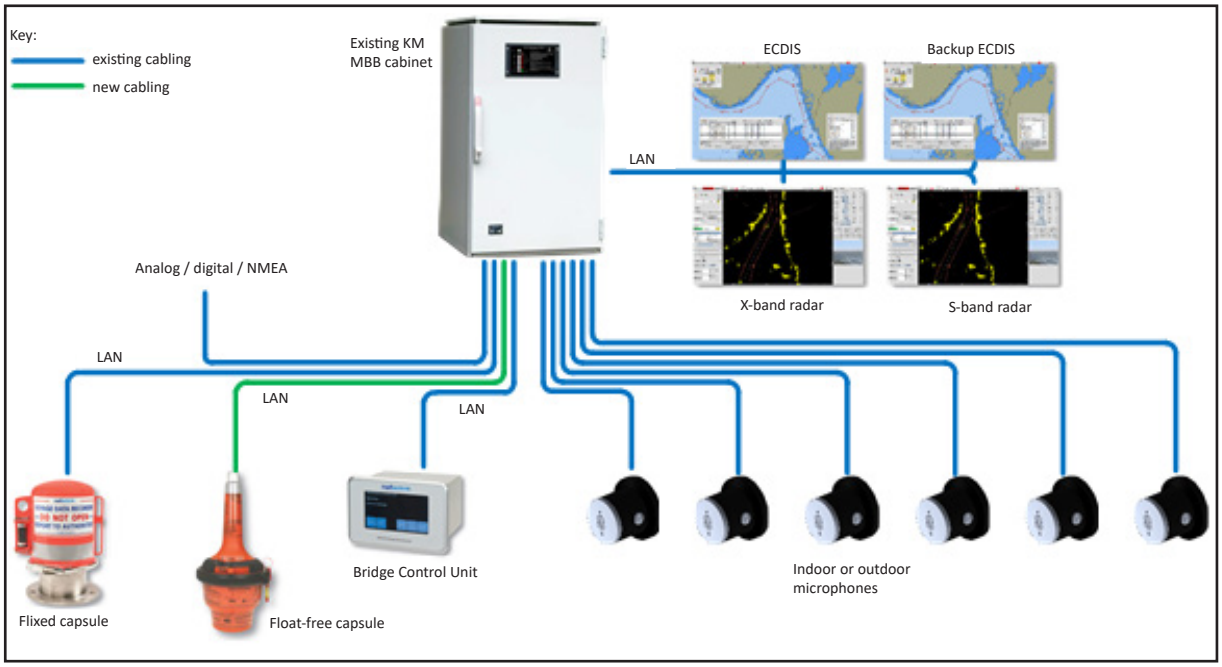


Figure 2. VDR MK3 Refit Kit re-uses existing MBB cabling (except to meet new requirement for float-free capsule)



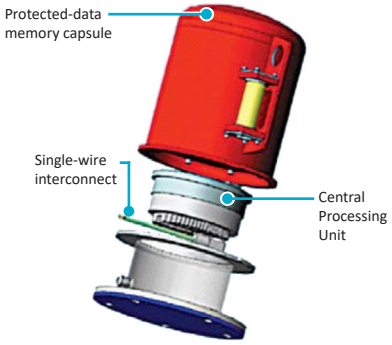
FIXED, ARMOURED CAPSULE

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

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), 411 mm (H), 45 mm (D).
Weight: 27,5 kg
KM part number: 454299



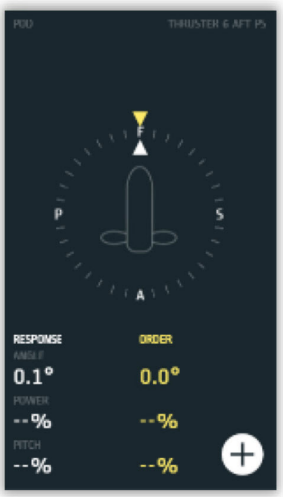
FLOAT-FREE CAPSULE

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), 533 mm (H), 218 mm (D)
Weight: 5.4 kg
KM part number: 454301

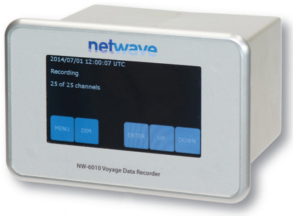
PLAYBACK APPLICATION

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

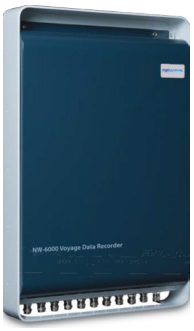
This is a console-mounted touch-screen display and control unit that provides alerts, instant playback, and remote system diagnostics.



Touch screen
Power received over Ethernet from core module (PoE)
Instant playback
Full color 4.3” graphic TFT screen
Dimensions: 150 mm (W), 99 mm (H), 134 mm (D). 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), 484 mm (H), 45 mm (D)
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), 182 mm (H), 232 mm (D)
Weight: 4.8 kg
KM part number: 454308

INDOOR / OUTDOOR MICROPHONES

The VDR MK3’s microphones can be PoE-based, which allows them to be daisy-chained (for example, in the wheelhouse ceiling). However, for refits, we recommend re-use of existing power cables.

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

Dimensions: 84 mm (W), 114 mm (H), 57 mm (D)
Weight: 0.5 kg
KM part number: 468829

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