Maritime / Offshore LAN
DNV certified LAN
for vessel and offshore constructions

To support a variety of IT, Telecommunication and control services

- Vessel management Systems (VMS) [Fire IEC 60332-3-24]
- Entertainment systems
- Phones and VoIP systems
- L.A.N. (Local Area Network)
- Process control and/or vendor packages [Fire IEC 60332-3-24]
- Telecommunication equipment
- Remote/onshore monitoring
- Real time data acquisition

Further qualities in open or restricted areas

**Lifetime**
Ships and offshore constructions typically have a long lifetime. The LAN shall deliver consistent performance over a full refurbishment cycle (typically 15 to 20 years).

**Open technology**
Gains in efficiency and profitability are often obtained through upgrades and the deployments of new technologies. The LAN shall give enough headroom to support foreseeable innovation Technology will upgrades.

**Reliability**
The LAN shall perform under the offshore conditions: vibrations, cable transits, EMC, etc.

Extra constraints ...

**Installation rules**
The various components shall be robust enough to be installed according to the appropriate rules: Grounding when entering/exiting EMC zone, routing through fire stops and watertight blocks, mounting in vibration proof structural hardware, etc.

**Repairs and maintenance**
Maintenance shall be possible in offshore and remote areas by the embarked staff without specific tooling.

**Installation in yards**
Installation conditions in shipyards are not always optimal. The LAN shall support rough handling.
**LANmark-7 Maritime** solution for embarked LAN complies with and exceeds the expectations and requirement of the offshore industry. It includes cables, connectors and the appropriate structural hardware. It has superior mechanical and transmission performance and has demonstrated its reliability over several vessels and platforms. Individual components as well as complete links are compliant to International standards. LANmark-7 Maritime holds independent and marine certification (DNV E-8001).

<table>
<thead>
<tr>
<th>Standard LAN</th>
<th>LANmark Maritime LAN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transmission performance</strong></td>
<td></td>
</tr>
<tr>
<td>Full EMC screening</td>
<td>●</td>
</tr>
<tr>
<td>Multimedia support</td>
<td>●</td>
</tr>
<tr>
<td>Support 1Gbase-T</td>
<td>●</td>
</tr>
<tr>
<td>Support 10Gbase-T</td>
<td>●</td>
</tr>
<tr>
<td>Support Industrial Ethernet</td>
<td>●</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>250MHz</td>
</tr>
<tr>
<td><strong>Support Cat.5, Cat.6 and Cat.7</strong></td>
<td>●</td>
</tr>
<tr>
<td><strong>Fire performance</strong></td>
<td></td>
</tr>
<tr>
<td>Fire tested IEC 60332-1</td>
<td>●</td>
</tr>
<tr>
<td><strong>Fire tested to IEC 60332-3-24</strong></td>
<td>●</td>
</tr>
<tr>
<td>Marine /offshore material</td>
<td>●</td>
</tr>
<tr>
<td>Oil resistant</td>
<td>●</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td></td>
</tr>
<tr>
<td>Components independently tested</td>
<td>●</td>
</tr>
<tr>
<td>Fire certificates available</td>
<td>●</td>
</tr>
<tr>
<td><strong>Marine certification (DNV E-8001)</strong></td>
<td>●</td>
</tr>
<tr>
<td>Full certification cable+connectors</td>
<td>●</td>
</tr>
<tr>
<td><strong>Installation and maintenance</strong></td>
<td></td>
</tr>
<tr>
<td>Maintainable at sea</td>
<td>●</td>
</tr>
<tr>
<td>Accept RJ45 and GG45 patchcords</td>
<td>●</td>
</tr>
<tr>
<td>Suitable for DIN Rail mount in cabinets</td>
<td>●</td>
</tr>
<tr>
<td>IP67 outlets available</td>
<td>●</td>
</tr>
<tr>
<td>Vibration proofed hardware available</td>
<td>●</td>
</tr>
<tr>
<td>Support grounding in EMC zones</td>
<td>●</td>
</tr>
<tr>
<td><strong>Tested with cable transits</strong></td>
<td>●</td>
</tr>
</tbody>
</table>

● : No  
● : Under conditions  
● : Yes
Cabling Products

Cables

LANmark-7 Maritime

- SHF1
- LSHFFR
- 1000 MHz
- Category 7+
- DNV Certification

N10m.002

Connectors

LANmark-7 GG45 Marine

- RJ45/GG45
- Multimedia
- Category 7+
- Standardised
- DNV Certification

N42m.730

Outlets

DIN-Rail Mount

- LANmark-7 RJ45/GG45 connector
- For DIN-Rail 35 mm
- Installation in technical cabinets

N20i.001

Heavy duty outlet

- IP67
- LANmark-6 RJ45 connector
- Rough areas - Outdoor
- Standardised

N42i.001

Metallic outlet

- For 2 LANmark-7 RJ45/GG45 connector
- Indoor installation
- Metallic body

N423.660N
Cabling Products

**Patch Panels**

**Vibration proof patch panel**

- For 24 copper connectors
- Heavy duty
- Stainless steel
- Strong Metal Construction

**Patchcords**

**Copper Patchcords**

- LANmark-7 RJ45/GG45 connector
- IP20/IP67
- Various length
- For Multimedia
- Please contact us for details

**Training Centres**

The deployment of high performance data networks requires skills and knowledge.

Installers must be trained before installing and testing of LANmark Maritime Cat. 7 data networks.

Please contact one of our training centres.

**Nexans Cabling Solutions NV**
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+47 55 31 27 00
per@sohome.no
www.sohome.no

Cable pulling, termination of connectors, installation through cable transits and acceptance testing will be looked at during the training.

* Please note that a Nexans trainer can come on site upon agreement with Nexans or SOhome.

* Please note that our trainers remain at your disposal during and after installation for your questions and support.
Maritime LAN - Ships
Sea moveable construction

IP67 standardised connectivity for outdoor connections

Outdoor Cabling

Bridge deck

Accommodation deck 1

Standard Cabling
LANmark-7 Maritime SHF1
High performance Category 7 compliant Suitable for 10GBase-T

Office Type Cabling

Accommodation deck 2

Multimedia Cabling
LANmark-7 SHF1
Multimedia adapter for all services Telecommunication Ethernet CATV

Standard cabling
High density

Pre-wired cabins connected to main network (CP) when fitted on the vessel

Pre-wired cabins reduced cabling (1 cable only per cabin) for all services

Lower deck

Industrial area
IP67 connections

Pre-terminated 50/125 OM2 Laser certified fibre backbone

Outdoor Cabling

Office Type Cabling

Standard cabling
High density

Pre-wired cabins connected to main network (CP) when fitted on the vessel

Pre-wired cabins reduced cabling (1 cable only per cabin) for all services

IP67 standardised connectivity
DIN-RAIL mount (35mm) for connection inside technical cabinets