

## Digital UHF – the communication tool for modern merchant vessels



Owners and operators face communication challenges when trying to simultaneously transmit important messages to entire crews spread across large vessels. In response to this issue, Wärtsilä offers a Digital UHF solution. The system is based on the latest digital radio technology that allows crew members to have real-time communication with each other when located in different areas of modern merchant vessels, which are often several hundred metres in length.

As modern merchant vessels become longer, traditional analogue systems (with their relatively short operating ranges) can make communication with crews a big challenge. For ship owners and partners looking for an answer to this communication issue, a solution is now available.

As an owner or operator of a successful merchant vessel, you can rest assured that Wärtsilä's Digital UHF solution will provide reliable voice and data communi-

cations to reach every part of your vessel. The Wärtsilä Digital UHF solution is an extremely reliable two-way radio service with all the necessary features to connect all your operating environments. Wärtsilä's high-performance Digital UHF solution also works extremely well in land-based applications, such as factories, industrial plants or other similar large areas requiring a reliable communication system.

### KEY BENEFITS

- 100% communication coverage on a vessel or a large land-based application.
- Fulfils the class requirement for vessel-wide communication in firefighting situations.
- Exceptionally clear voice communication.
- Utilisation of repeaters on an IP-network, which reduces the size and length of coaxial cables.
- Failsafe
- Easy and affordable set up.
- Uses subscription-free frequencies





## DIGITAL VS. ANALOGUE

Most walkie-talkie systems still use analogue technology. Although analogue systems are fairly affordable, they are not designed for long-range communication, especially on modern merchant vessels which have lengths exceeding 300 metres. In such environments, the insufficiency of the analogue system becomes a communication challenge.

To ensure that the Captain's orders reach the entire crew, crew members would have to be placed about 50m apart from one another just to make certain that the order was repeated and transmitted to everyone. Not only is this highly inefficient, it also puts a strain on the crew members, who should be concentrating on more critical duties. Another solution would be to use an antenna coupled with coaxial cables, but this is very complex and costly to set up.

Safety, efficiency, productivity and getting the job done depend on whether the entire crew can communicate clearly and reliably with each other in real-time. A disadvantage with using short-range analogue radios is that they easily pick up ambient noise together with the actual audio message, often making communication impossible.

Wärtsilä's digital-radio technology solution surpasses the capabilities of analogue in multiple ways. Noise-prevention accessories ensure that the message gets through loud and clear the first time, even in noisy environments. The radio volume automatically adjusts to compensate for background noise.

Wärtsilä's Digital UHF solution is based on a walkie-talkie system operating in an IP-network, where several repeaters can be connected, thus reducing the size and length of the coaxial cables. It is a long-range communication system, reaching every part of any size vessel in real-time. This is important when the radio system is used in firefighting; in such cases, it is also a class requirement that the system enables ship-wide communication.

Wärtsilä's Digital UHF coverage has been tested and validated to have 100% vessel coverage (150 testing

points were used for system validation). Furthermore, the technology uses the free frequencies available for maritime communication (no subscription required).

## REMASTER YOUR WORKPLACE

The Wärtsilä Digital UHF system improves necessary radio coverage using digital radio technology. Wärtsilä Digital UHF is a direct solution to customer needs arising from increased vessel sizes. It is also a class requirement to have a system that covers the entire ship. With digital error correction, you are provided with clear voice quality, even in the most challenging conditions.

Wärtsilä's Digital UHF solution has been tested, improved and validated during a 10-day trip on two different merchant vessels. It is failsafe and complies with globally recognised standards. It is designed to offer round-the-clock reliable operation. Since it is space-efficient and has a low thermal footprint, it also provides you with a very low cost of ownership. In addition, it is easy to maintain and service is always close at hand.

## USED IN MORE THAN 60 VESSELS

Today, thanks to Digital UHF, the communication on board is affordable and easy, regardless of the vessel size. Consequently, the efficiency and the safety of the crew is also greatly improved.

Most similar products using digital radio technology are for the terrestrial domain. Wärtsilä's vast experience within the marine industry, in combination with new digital radio technology, has been a real asset in developing Digital UHF for the marine market. Today, more than 60 vessels are equipped with our solution.