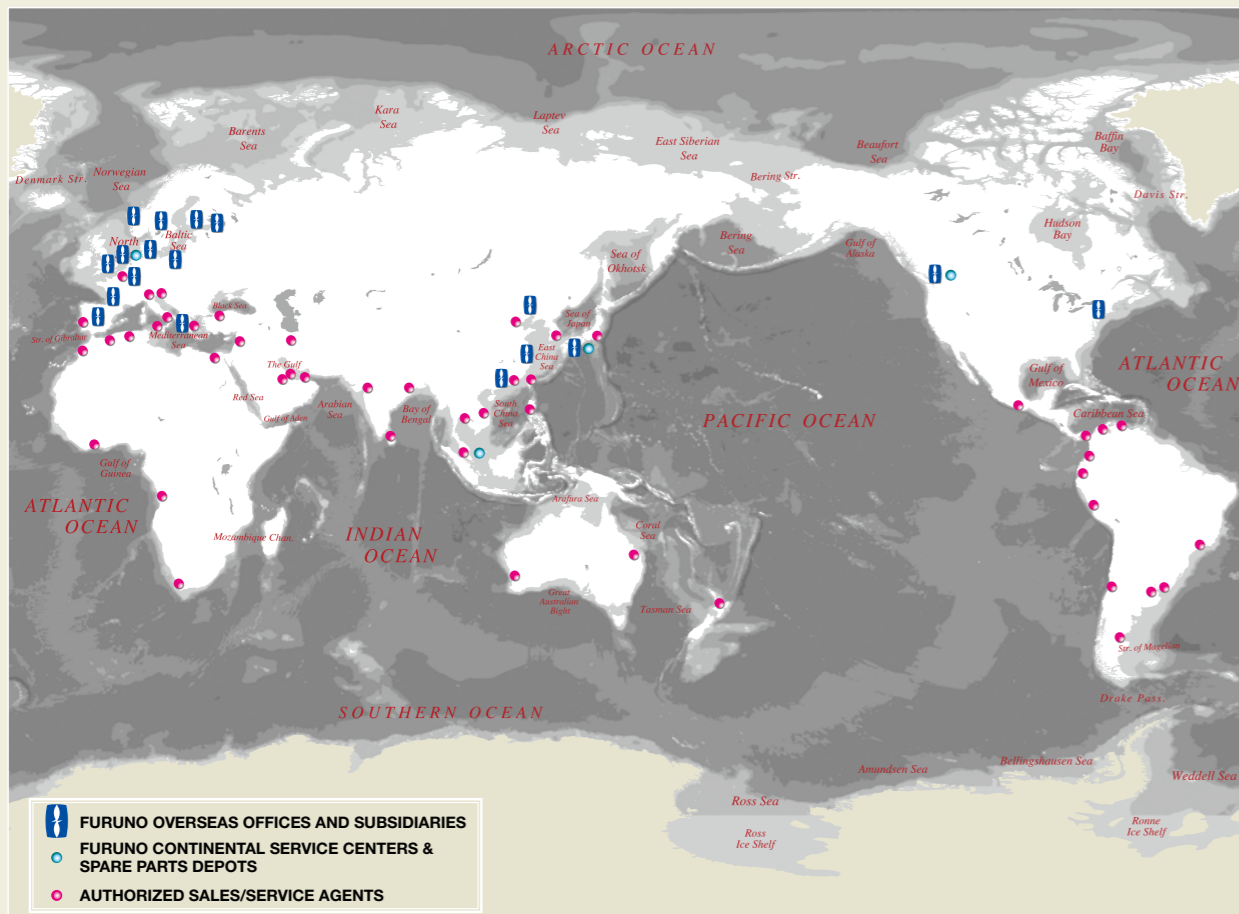
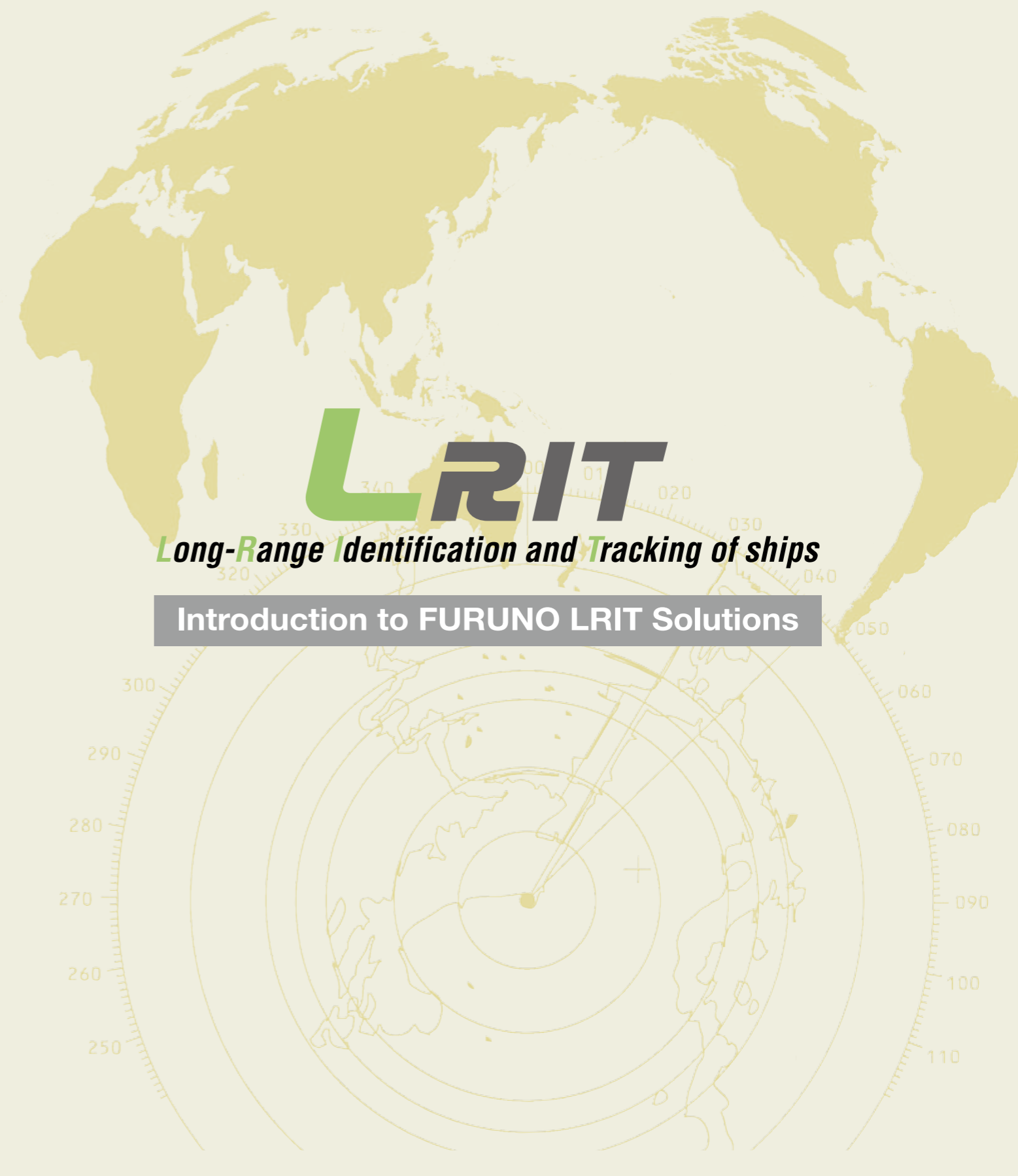


WORLDWIDE SERVICE NETWORK

FURUNO's Worldwide Service Network provides spare parts and professional technical support/ service to DEEPSEA vessels. The Service Network is composed of four Continental Service Centers located in Germany, the US, Singapore and Japan together with over 40 national agents. These agents are in charge of coordination and arrangement of service for FURUNO equipment onboard vessels at DEEPSEA ports in their territory.



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LRIT Long-Range Identification and Tracking of ships

Enhanced maritime awareness by utilizing Long-Range Identification and Tracking (LRIT) of ships with aid of Inmarsat C/MINI-C position polling

- Meets SOLAS amendment by MSC. 202 (81), adopted on the 19th of May 2006
- Full compliance with IMO MSC.263(84), revised performance standards and functional requirements for the Long-Range Identification and Tracking of ships

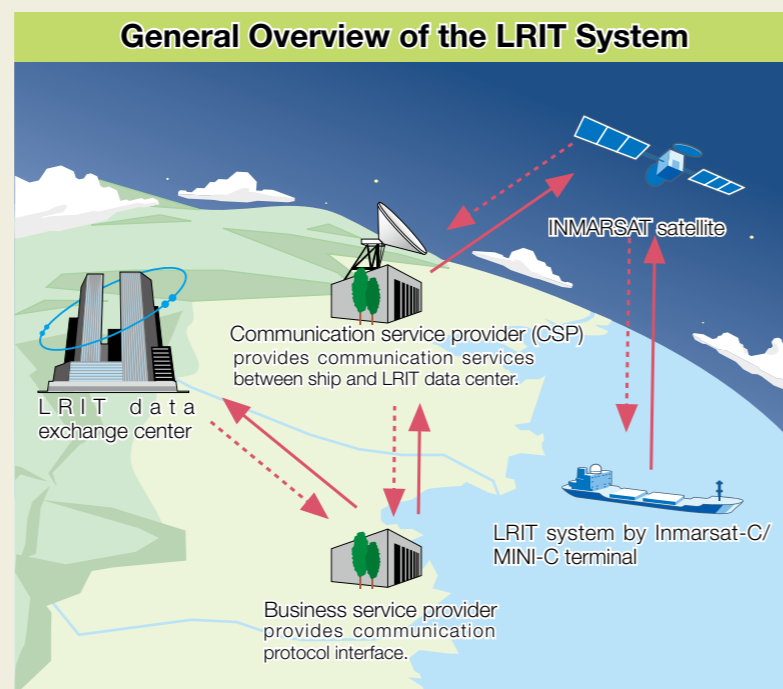
For more than a decade, there has been an increasing demand for secure shore-based marine security that focuses on improvements to vessel traffic and tracking services in ports and waterways. There is also a need for an environmental monitoring system with a global reach. LRIT (Long Range Identification and Tracking) is the answer to these issues and it becomes compulsory at the beginning of July 2009. Once put into use, LRIT will enhance security and safety at sea, streamline search and rescue procedures, as well as, aid in pollution response measures in the wake of maritime incidents.

LRIT requires international trading passenger ships, cargo ships of 300 GT and upward, and off-shore drilling units to transmit the required LRIT information automatically at six-hour intervals. The information transmitted contains their identity and real-time position anywhere in the world, or if the information is requested by the authorities, it includes: the flag states, port states, coastal states and search and rescue services.

The cost of the system falls on the SOLAS contracting party requesting such information, except when the request is made to help search and rescue services.

The task of verifying the legitimacy of requests for LRIT information, and subsequently to route the requested data to legitimate parties, is the responsibility of the LRIT data exchange center, which is an absolutely critical element of the LRIT system.

LRIT promises to provide a much clearer picture of merchant shipping activities to key stakeholders, increasing safety and security at sea.



- LRIT information should be acquired by data users within 30 minutes after the request is lodged.
- LRIT information should be acquired by data user within 15 minutes after it is transmitted from the ship.

Existing FURUNO Inmarsat C/MINI-C terminals may be used for LRIT system*

*Please consult with your local distributors for further details.

FELCOM 11 (LCD) and FELCOM 12:

- Software change may be required depending on the software version (see below table for details)
- No additional hardware installation required
- Statutory inspection and conformance test on the ship is required

FELCOM 15 & FELCOM 16:

- No software changes required
- No additional hardware installation required
- FELCOM 15 and 16 have been type-approved by Telefication BV (Notified Body of MED, the Netherlands) according to IMO MSC.263(84)
- Statutory inspection and conformance test on the ship required

List of FURUNO Inmarsat C/MINI-C Equipment and its compatibility with LRIT Performance Standard

Model	Terminal	Applicable Version	Notes
	IC-511	NOT Applicable	It is recommended that the equipment be replaced by FELCOM 15 or FELCOM 16.
FELCOM 11	IB-581	Terminal: Software version 17 or later Communication unit (IC-211): CPU2 program version 05 or later	Equipment with older software version can be used for LRIT by updating the software.
	IB-582	Applicable	
FELCOM 12	IB-581	Terminal: Software version 06 or later Communication unit (IC-212): CPU2 program version 07 or later	Equipment with older software version can be used for LRIT by updating the software.
	IB-582	Applicable	
FELCOM 15	IC-215	Applicable	
FELCOM 16	NA	Applicable	

LRIT information that is transmitted from the shipborne equipment*:

- Shipborne equipment identifier (MMSI)
- GNSS position data based on the WGS84 datum
- The date and time associated with the GNSS position

*LRIT information will be available only to the recipients that are entitled to receive such information, such as SOLAS Contracting Governments and Search-and-Rescue services.

Implementation Schedule of LRIT

Operating in sea area A1, as defined in regulation IV/2.1.12

Operating in sea area A2, as defined in regulation IV/2.1.13

Operating in sea area A3, as defined in regulation IV/2.1.14

Operating in sea area A4, as defined by regulation IV/2.1.15

Implementation schedule of ships constructed on and after 31st of December 2008

Ships should be fitted with a system at the first survey of the radio installation

Ships fitted with AIS are not required to comply with the LRIT regulation

Implementation schedule of ships constructed before 31st of December 2008

No later than the first survey of the radio installation after 31st of December 2008

No later than the first survey of the radio installation after 1st of July 2009

Ships fitted with AIS are not required to comply with the LRIT regulation

Note: At the 85th session of the Maritime Safety Committee, having taken into the consideration that the provision of the LRIT system is still in progress around the world, it has been concluded that the transitional period is set from 31st of December 2008 to 30th of June 2009 during which transmission of the LRIT information is not deemed mandatory. However, installation schedule for the LRIT facility onboard remains as stated on SOLAS V/19-1 (refer to the above table for details).