Iridium GMDSS

Maritime Academy Training Pack
Module Three: Maritime Safety Services on Iridium

V1.0
Updated September 2023

Legal Disclosures

Statements made in this Presentation are not warranties, and Iridium expressly disclaims all warranties, warranties of merchantability and warranties of fitness for a particular purpose, except as expressly set forth in the relevant Iridium Limited Warranty and the Iridium Product Sales Terms and Conditions.

The views and opinions expressed in this Presentation are solely those of the presenter and do not necessarily represent those of Iridium which makes no warranty as to accuracy or completeness of the information provided or the views or opinions presented. The information in this Presentation is subject to change without notice.

Read and understand the Iridium User Manual and the safety warnings and information contained in that Manual before using any Iridium product.

Iridium® is a registered mark of Iridium Satellite LLC and its affiliates. All other registered marks, trademarks, service marks and logos are property of their respective holders. Information is subject to change without notice.

Training Overview & Usage Guide

- Adoption of Iridium® GMDSS is rapidly increasing among Safety of Life at Sea (SOLAS) class vessels
- This training pack is designed to deliver a complete overview of Iridium GMDSS & Iridium Certus® services to maritime colleges and schools
- Instructors are encouraged to integrate the text and media of this training pack into their respective course material
- Integration of this training pack into a maritime course will ensure that the next generation of seafarers have knowledge of Iridium GMDSS services

Module Three: Maritime Security Services on Iridium

- Maritime Security Services
  - LRIT: Long Range Identification & Tracking
  - SSAS: Ship Security Alert System
  - Next-Generation Anti-Piracy (Citadel) Solutions

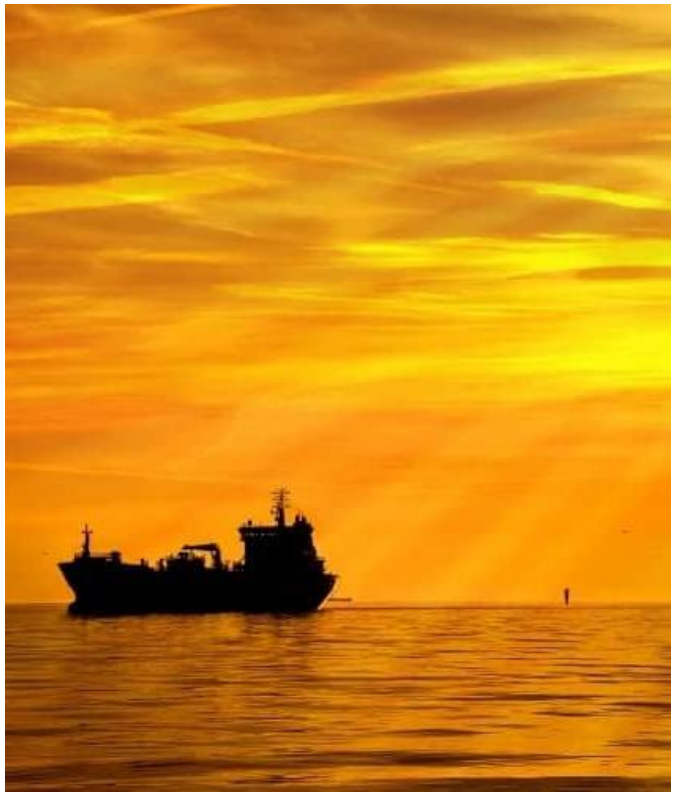
LRIT – Long Range Identification & Tracking

LRIT: Long Range Identification & Tracking

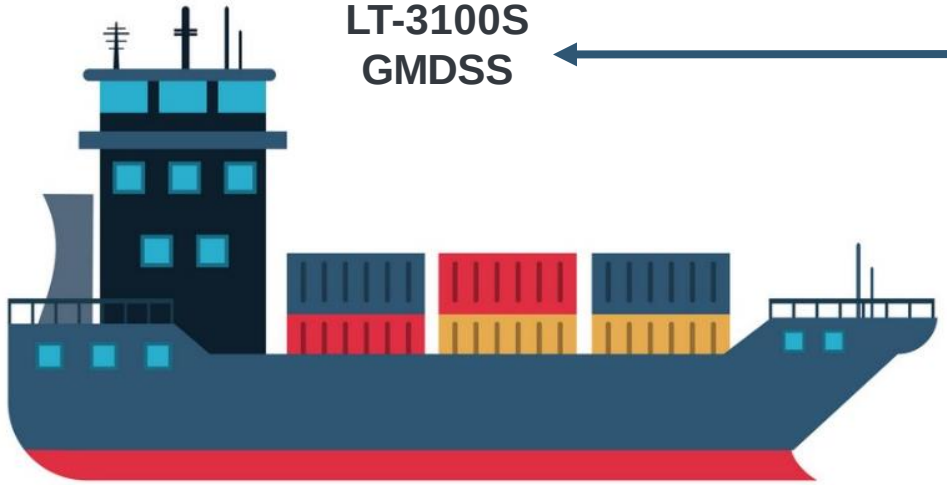
Long Range Identification & Tracking (LRIT) is an international tracking and identification system incorporated by the IMO under its SOLAS convention to ensure a thorough tracking system for ships around the world.

It came into existence on May 19, 2006, and was incorporated formally beginning in January 2008. Based on these lines, those ships which were built on or following December 31, 2008, were required to have this system of vessel identification.

- LRIT services on Inmarsat C **require a separate terminal to be installed**
- LRIT services on Iridium GMDSS **do not need a separate terminal**
  - LRIT services on Iridium GMDSS are provided by CLS, Fulcrum and Polestar
    - Other LRIT providers will be added in the future



LRIT on Iridium GMDSS



LT-3100S GMDSS

iridium
Communication Service Provider (CSP)

CLS
POLE STAR
Application Service Provider (ASP)

LRIT Data Centers (DC)

LRIT Data Exchange (IDE)

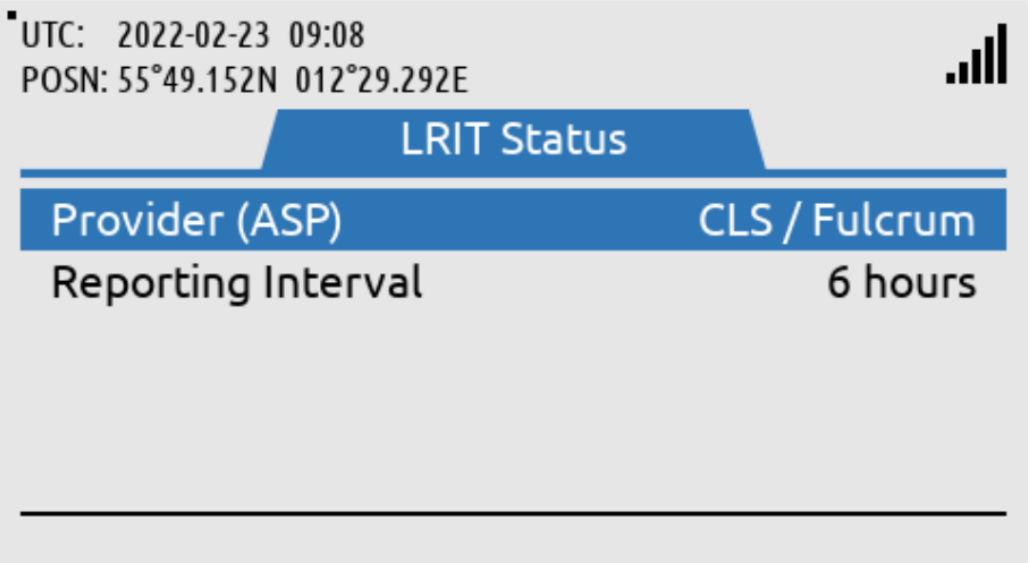
LRIT Data Distribution Plan (DDP)

Flag States | Port States | Coastal States | SAR Ops

- Iridium LRIT services do not require a separate terminal
- GMDSS, LRIT & SSAS on the LT-3100S
- Easier conformance tests due to LEO network architecture

LT-3100S LRIT Configuration

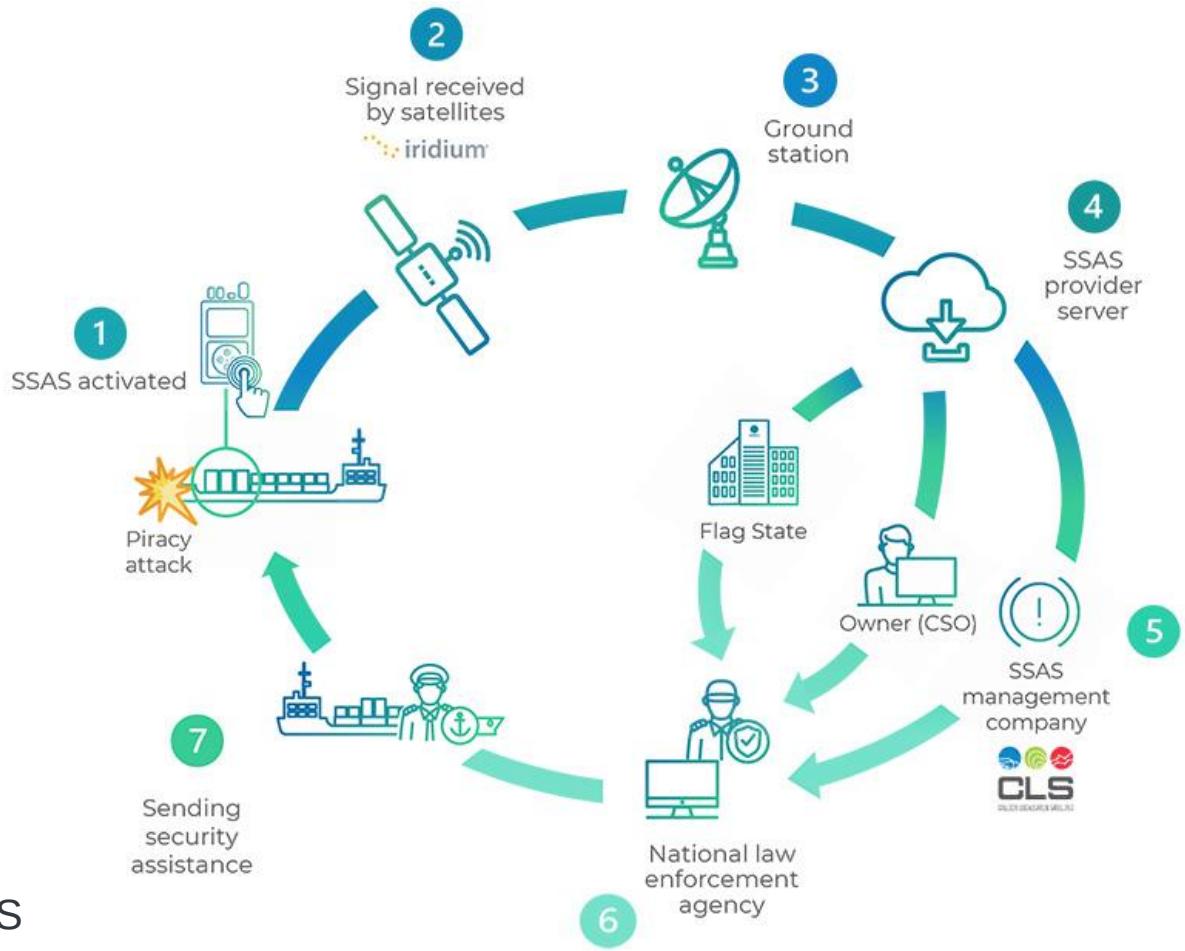
- LRIT services are activated remotely for the LT-3100S GMDSS system by the Application Service Provider (ASP)
- Enabling the LRIT service requires that the LT-3100S GMDSS System has an active SMS subscription
- The LT-3140S Interface Unit is not required for the LRIT service
- When the LRIT service is activated, the name of the ASP and associated reporting frequency are displayed via MENU -> System -> LRIT Status
- The ASP can remotely change the reporting period of the terminal
- In exceptional circumstances, a vessel's master can amend the reporting period through the LT-3100S web menu



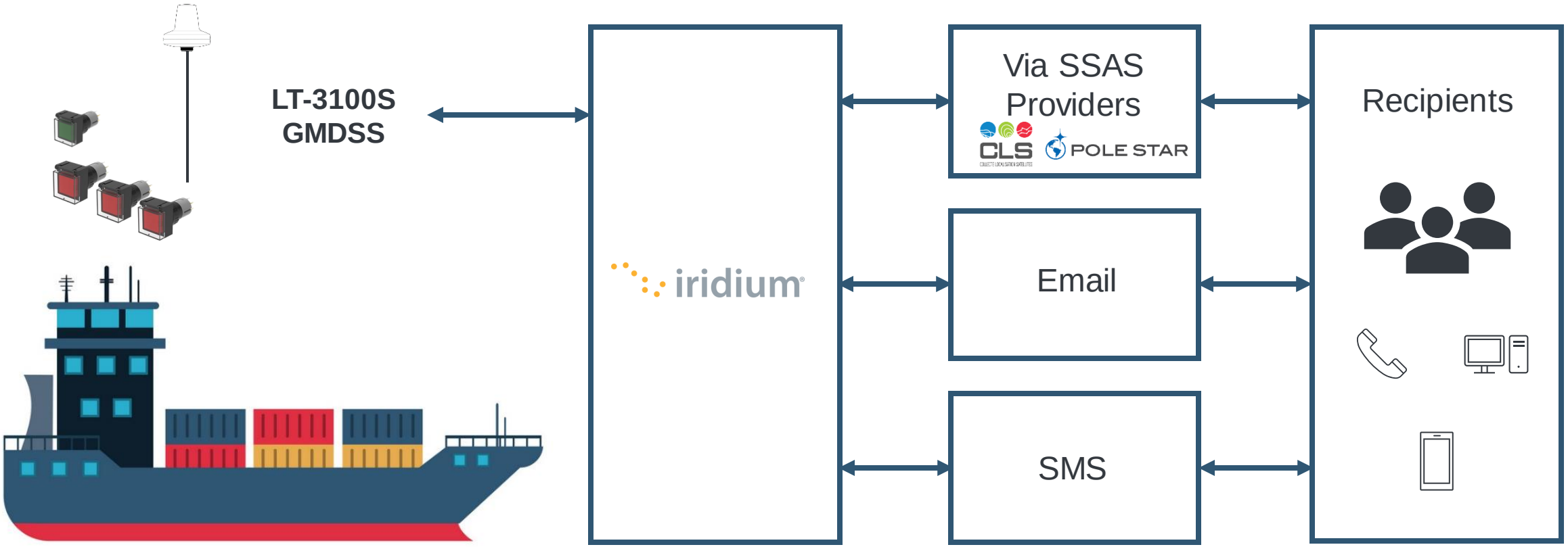
SSAS – Ship Security Alert System

SSAS: Ship Security Alert System (SSAS)

- The Ship Security Alert System (SSAS) is a safety measure for strengthening ship's security and subduing acts of piracy and/or terrorism against shipping
- SSAS alerts are manually activated by crew during an incident
  - When maritime security staff comprehends probable danger from assailants, an SSAS alert is triggered
  - The beacon silently transmits a specific security alert with important details about the ship and its location to the administration and to the owner, or to appointed professional SSAS management and monitoring services
  - Once received, the administration will notify the nearest national authorities, who will dispatch appropriate military or law-enforcement forces to assist
- The Lars Thrane LT-3100S can provide GMDSS, LRIT and SSAS services from the same terminal



SSAS Services on Iridium GMDSS



LT-3100S SSAS Configuration

- Configuration of SSAS services must be completed via the LT-3100S web interface
- Up to six (6) recipients can be configured; either provider, email or SMS
- The LT-3110S Control Unit must contain an activated GMDSS SIM card
- The LT-3100S GMDSS system must be registered on the Iridium network
- Regular testing of the SSAS service is recommended
- Testing or activation of SSAS services generates chargeable SMS messages

Next-Generation Anti-Piracy (Citadel) Solutions

Citadels (Safe Rooms)

- A designated, preplanned area purposefully built into the ship where all crew will seek protection to avert the assailants' objective

- Global communications are critical within a Citadel

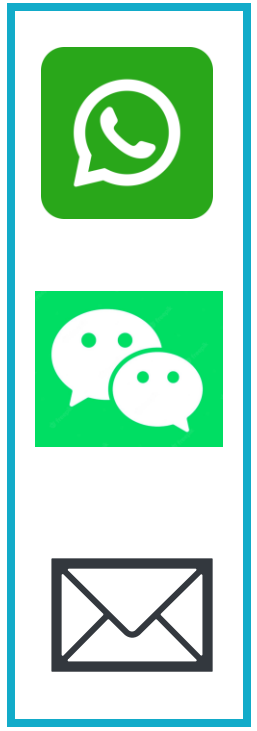
- Iridium Certus provides a new dimension in Citadel communications:
  - Multi-line voice calling
  - Independent vessel tracking
  - Data services permitting network integration and video calling
  - Long cable runs allow antennas to be installed in discrete locations

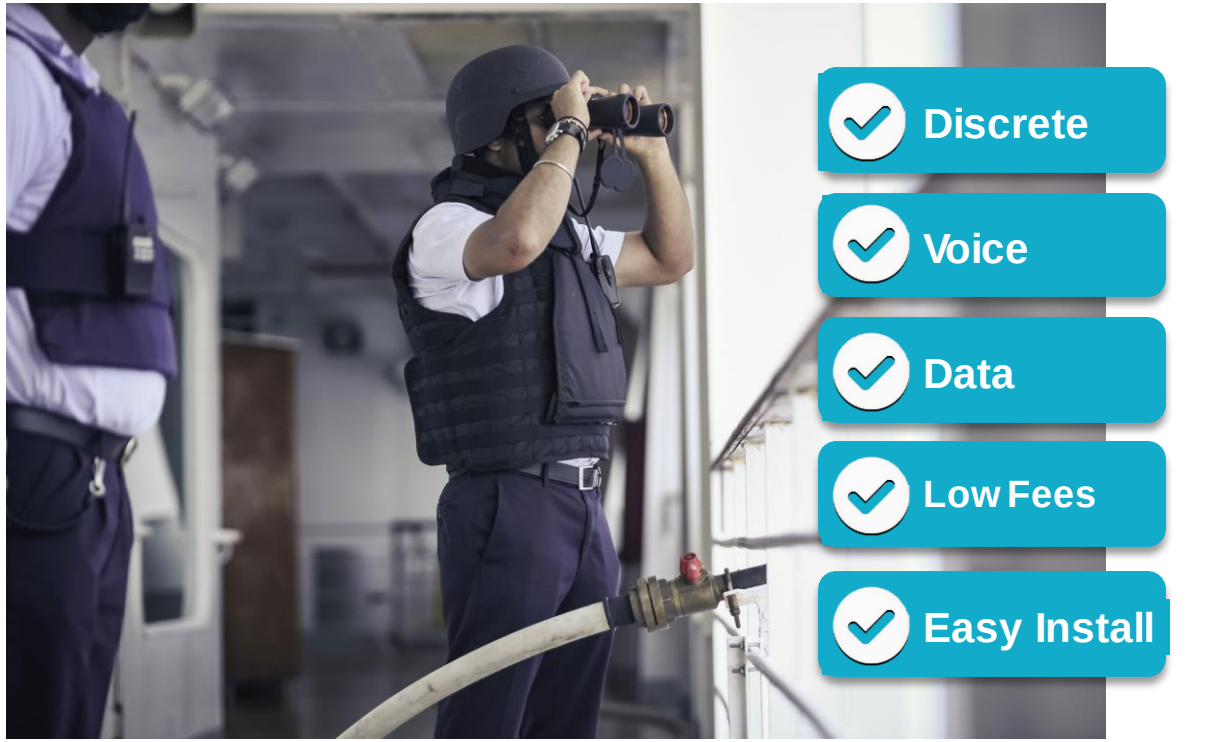
Iridium Certus Maritime Midband Solution for Citadel

iridium® connected

LT-4100

SkyLink Citadel



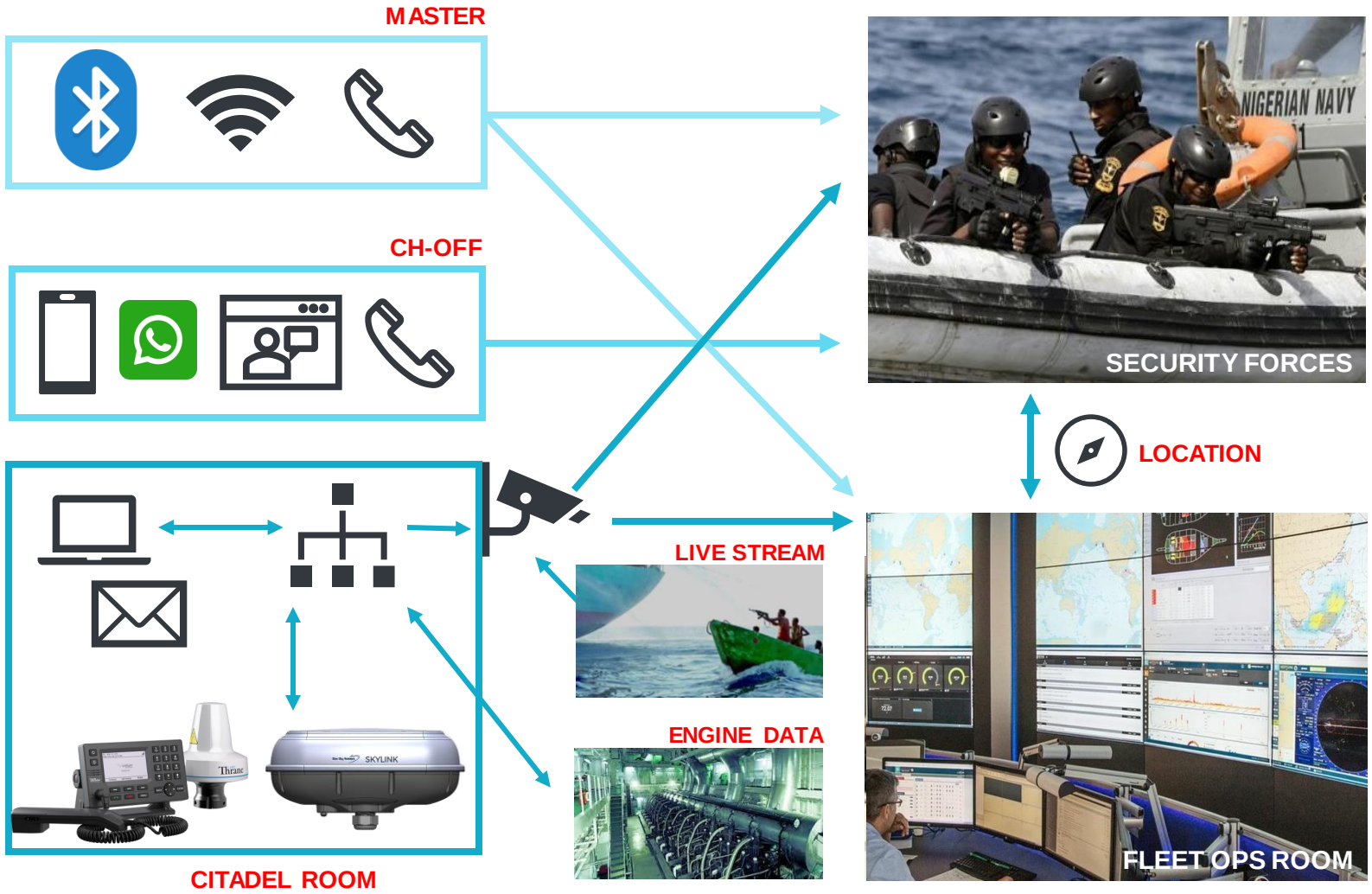


- Discrete
- Voice
- Data
- Low Fees
- Easy Install

"Iridium Certus 100 gives the captain access to data in the Citadel. Being able to send real-time pictures and messages to the shore-based security team creates a new level of situational awareness for us." - Support Systems Manager, major container fleet

Iridium Certus Midband Provides Critical Voice + Data Communications at a Low TCO

Iridium Certus 100 for Citadel: Advantages



Features	Legacy	Iridium Certus 100
Cable Distance	<100m	<500m*
IP Data Speed	Low	Mid
Emails with Attachments	N	Y
Multiple Voice Lines	N	Y
Bluetooth/Wi-Fi Interface	N	Y*
Integration to Ship's Network	N	Y
Integration to Ship's CCTV Network	N	Y
Integration to Ship's Engine Data	N	Y
Vessel Tracking	Y	Y
Covert Antenna Available	Y	Y
Emergency Alerting	Y	Y

**Iridium Certus 100 Model Dependent*

SkyLink Citadel: The Next-Generation Anti-Piracy Solution

Leveraging the Iridium Certus 100 service, SkyLink Citadel offers two high-quality voice lines and the ability to send and receive messages, files, and emails via onboard computers.

Easy to install and operate, SkyLink Citadel provides voice and data connectivity to the outside world when needed most.

Features:

- 2x voice lines
- Dual-mode connectivity
- SOS emergency notification
- Geo-location (w/ GNSS)
- Battery backup (up to 96 hours)
- Discreet above/below deck unit installation
- Iridium Messaging Transport® capable
- CCTV datalink capable

What's included:

Above Deck Unit:

- 100 m cable

Below Deck Unit:

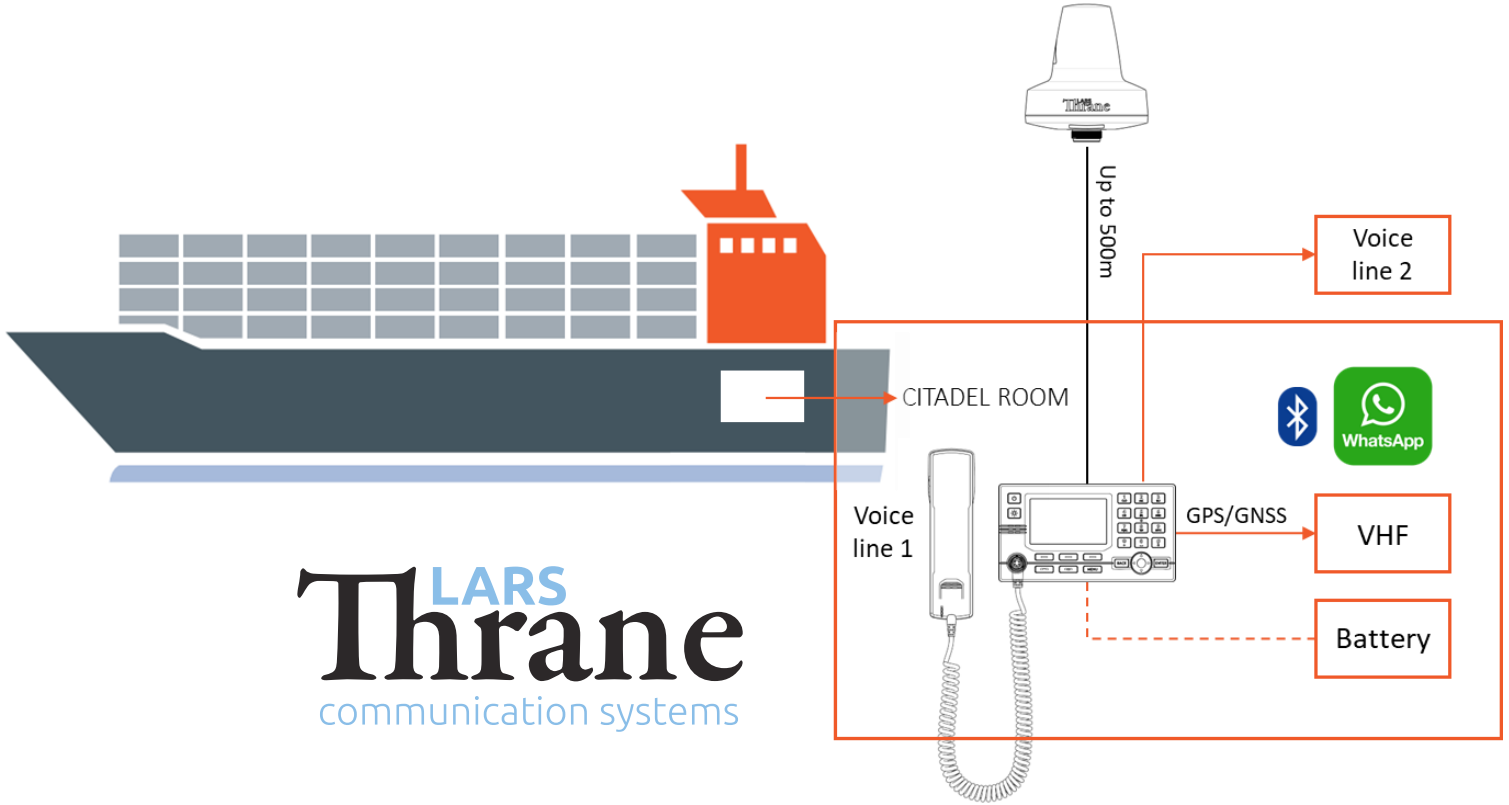
- SOS button
- Junction box
- Battery pack
- Phone cabinet

iridium

LT-4100 Anti-Piracy

Citadel Solution

- Robust terminal for safe rooms
- Up to 500m coaxial cable distance between terminal and antenna
- IP data: 22/88 Kbps (up/down)
- Bluetooth data interface with a mobile phone (WhatsApp, etc.)
- 2 x individual voice lines
- Option for covert antennas



Thank You!

Iridium GMDSS Saves Lives

@IridiumComm @MyIridium @Iridium @IridiumComm

iridium