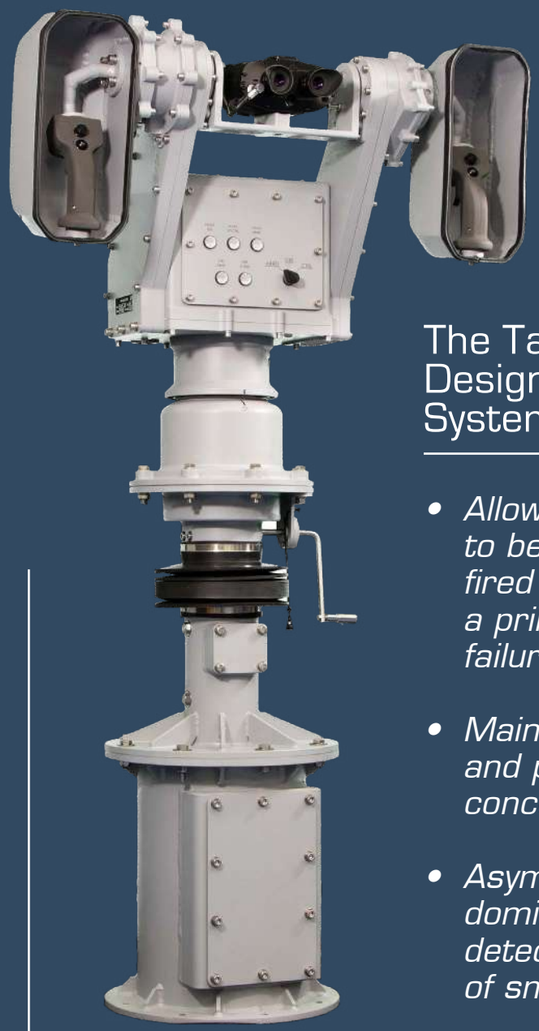
SALES FOLDER

ABOUT

Designed by GTD Defense & Security Solutions, a Spanish company with more tan 30 years of experience developing turnkey solutions for the demanding defense sector.

WHEN ALL ELSE FAILS, KEEP FIGTHING BACK



The Target Designation System **Apollo TDS**

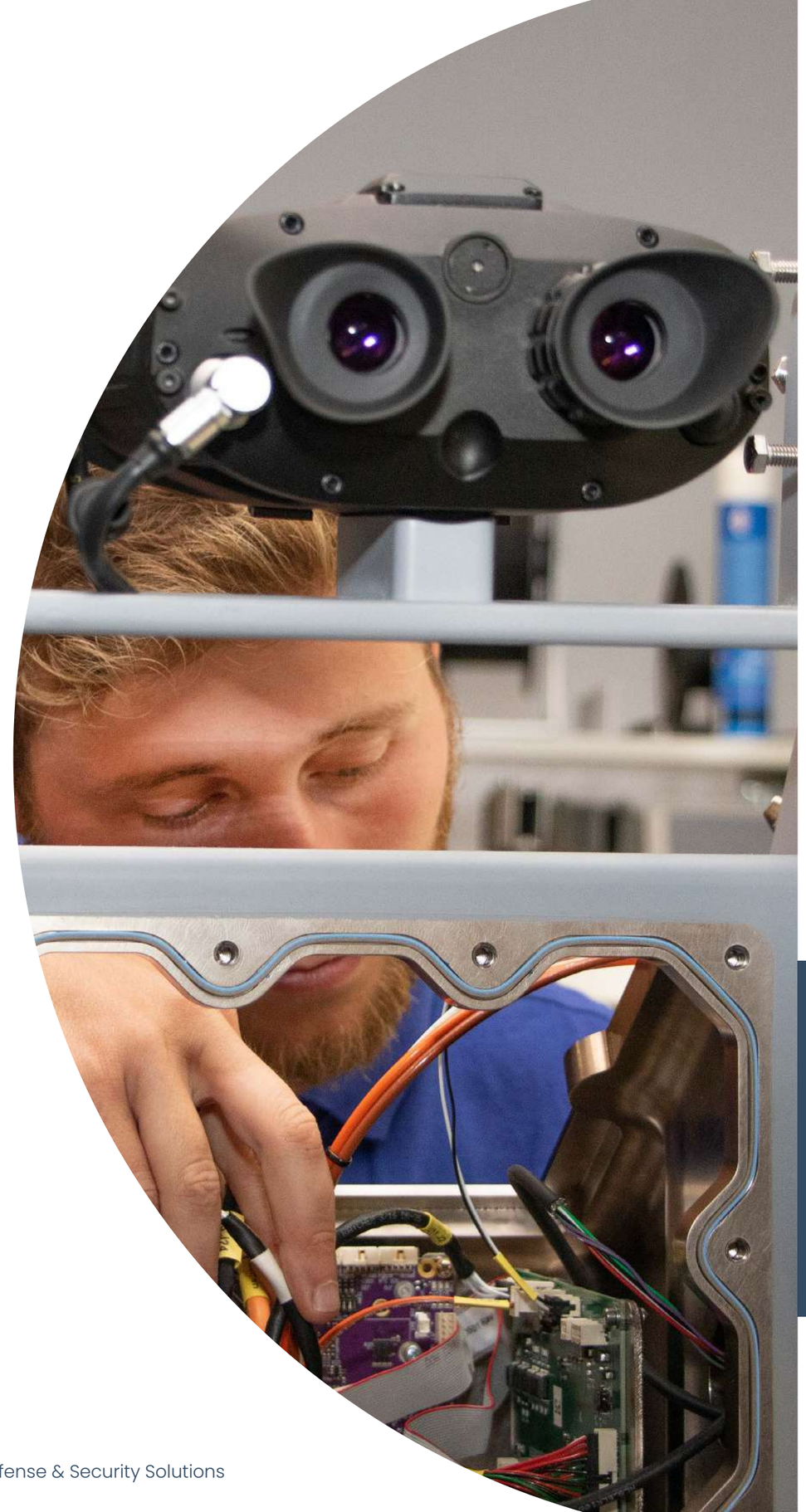
- *Allows the weapon to be aimed and fired in the event of a primary system failure.*
- *Maintains radio silence and preserves tactical concealment.*
- *Asymetric warefare dominance, optimizing detection and tracking of small threats.*

THE NEW GENERATION OF **BACKUP MANUAL CONTROL SYSTEM** FOR VESSELS NAVAL GUN

The Apollo TDS is installed on the deck of the vessel and its system is based on a binocular mounted on a support column which is adjustable in elevation.

The observation binoculars include day and night vision, as well as a laser range finder, ideal for short-range targets, that can be controled from the Apollo TDS grips.

The operator shall aim manually to the target, and the system will output its relative coordinates. When authorized, the operator can also control and fire the weapon directly from the Apollo TDS.



WE DO HIGH TECHNOLOGY

GTD specializes in developing and integrating advanced systems to secure people, territories, and critical infrastructures.
Our expertise includes tactical communications, surveillance, safety, and C4i solutions for civil and military platforms.

The objective of GTD is to satisfy our customers, society and our team

Alberto **Rodríguez**
TDS PROJECT ENGINEER

THE DIFFERENCE

Having a backup system for component as vital as the fire control system can be the difference between success and failure. This is where the Apollo TDS really makes a difference.

CUSTOMER ORIENTATION

The strong customer orientation at GTD allows us to customize the equipment to meet the specific needs of each project.

THE NEED FOR AUTONOMOUS DEFENSE

A vessel can be rendered defenseless due to its reliance on complex electronic systems - primarily through the destruction of its main sensors or the collapse of its combat system. Additionally, for ships lacking electro-optical systems, radar neutralization via electronic warfare can leave them inoperative.

TOTAL FLEET DEFENSE: ENSURING OPERATIONAL SURVIVAL WHEN NOTHING ELSE RESPONDS

Redundancy is essential, as is maintaining an armed response capability that operates independently from primary systems.

Its day and night vision and laser rangefinder allow for detection and tracking of close targets even with electronic interference or loss of main sensors.

The Apollo TDS includes a status panel that allows the operator to monitor the current state of the Apollo TDS, Combat System (CS), and Weapon System (WS), including whether the Apollo TDS has gun control and is ready to fire.

Apollo TDS thus provides a **resilient and redundant combat capability.**

The ergonomics and ease of use ensure rapid and effective operation in combat situations. **The Apollo TDS system incorporates an automatic electromagnetic brake actuator for azimuth,** which immobilizes the platform when inactive or unpowered. This feature mitigates the risk of damage or injury caused by movement due to maritime dynamics.

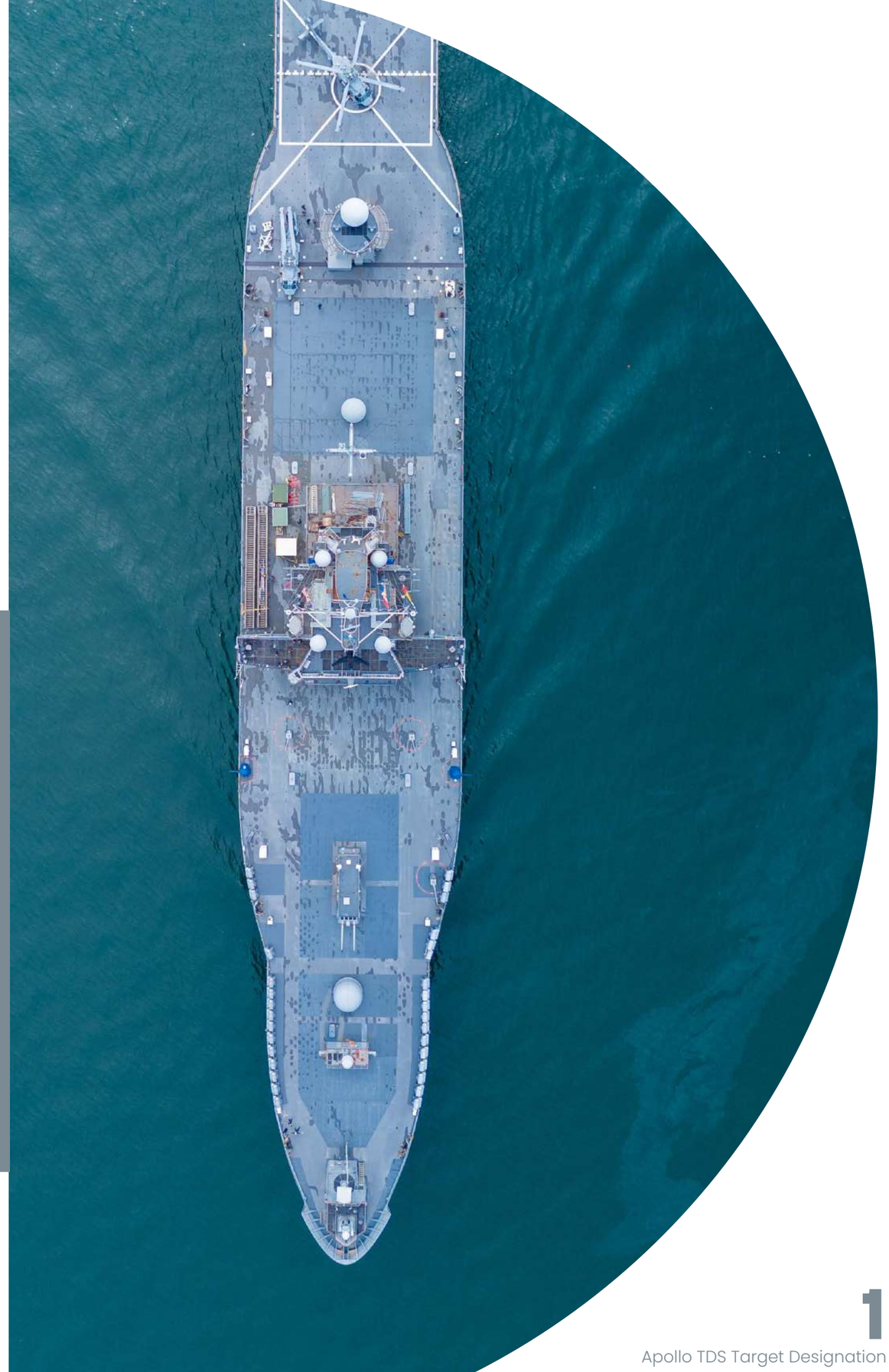
APOLLO TDS: GUARANTEED COMBAT CAPABILITY

Integrating Apollo TDS on vessels significantly enhances defense and survivability by providing an autonomous and reliable secondary aiming system.

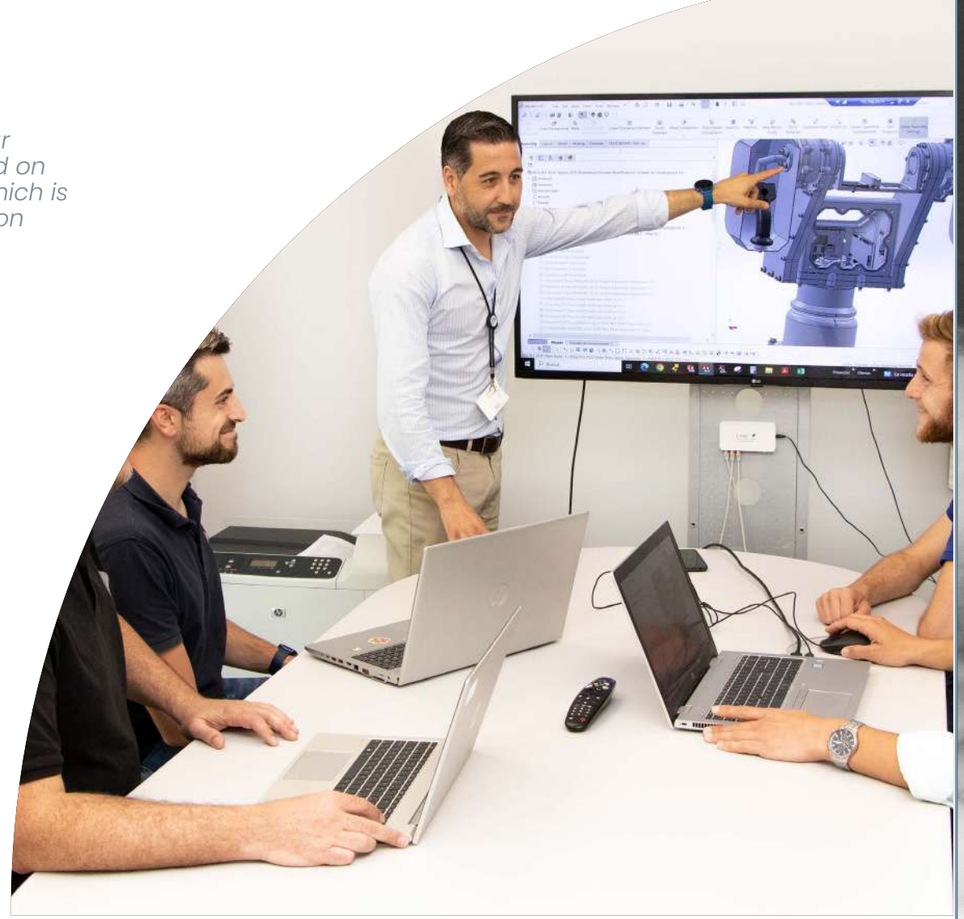
It boosts combat capability by ensuring a response option in case of primary failures, contributing to crew protection in critical situations.

Its operational autonomy and rapid activation guarantee immediate threat response.

The ease of use and simplified maintenance optimize operability and reduce logistical burden, resulting in greater vessel efficiency and availability.



The Apollo TDS is based on a binocular multisensor mounted on a support column which is adjustable in elevation



APOLLO TDS: TAILORED TO YOUR SHIP, SUPPORTED EVERY STEP OF THE WAY

The acquisition of Apollo TDS encompasses a comprehensive service that goes beyond the system itself.

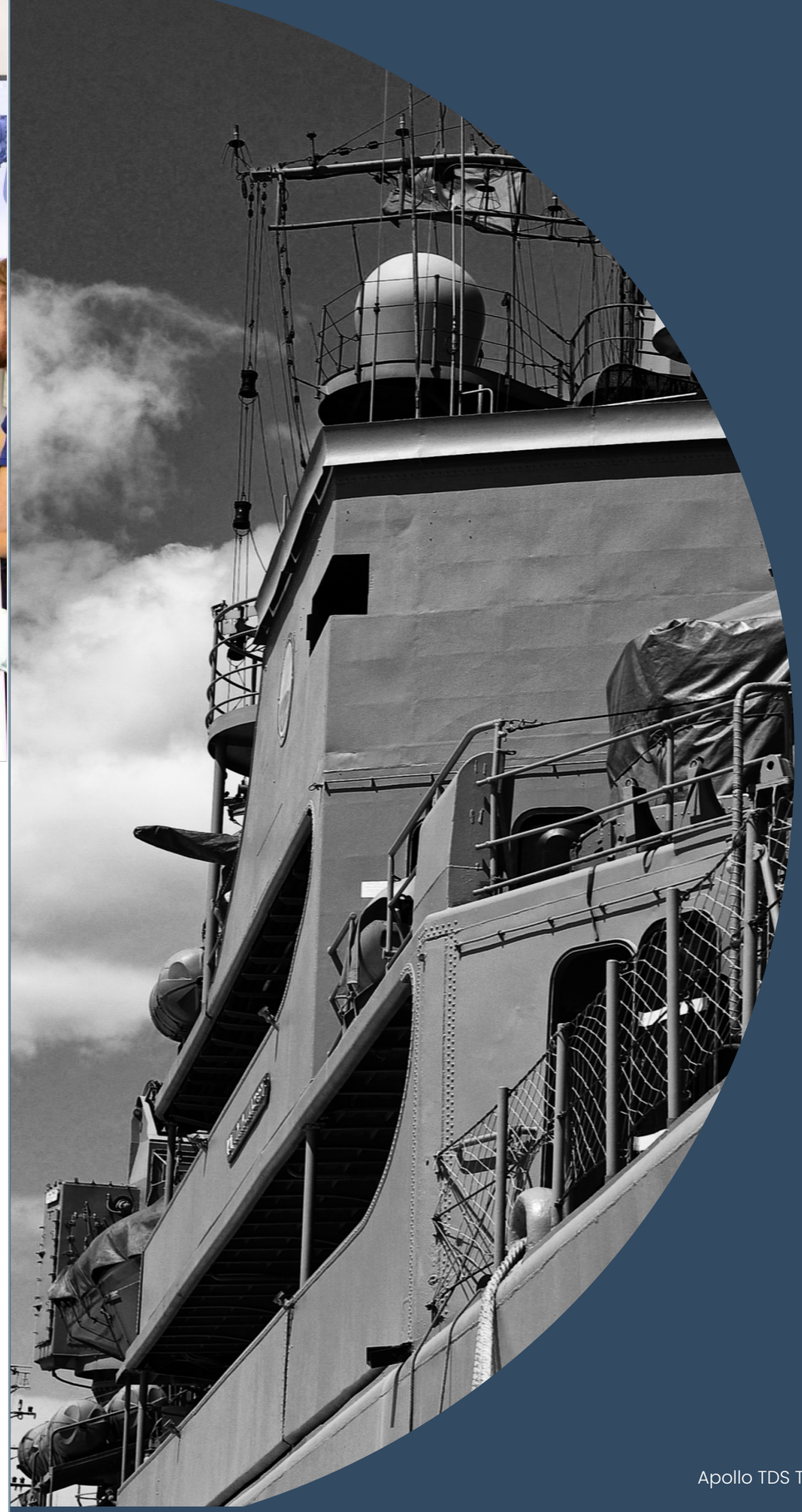
Adaptability and customization is offered to suit the specific needs of each vessel.

Specialized training ensures that the crew can operate and maintain the system effectively.

Mounting advice is provided for optimal integration into the ship platform.

Post – Sales Support

Ensures continuous support. Upgrades and technical assistance.



TECHNICAL DESCRIPTION

Apollo TDS allows the operator to have a working range of ±180° in azimuth and -30° to +60° in elevation.

Based on that, the number of Apollo TDS to be used per platform shall be determined depending on the program requirements.

Regarding the hardware, the Apollo TDS may be welded or screwed to the ship's deck, with its electrical connections available on the bottom side via MIL-STD connectors.

On the other hand, in terms of software, the Apollo TDS provides three ethernet interfaces and discrete lines that allow the control and monitoring of the system.

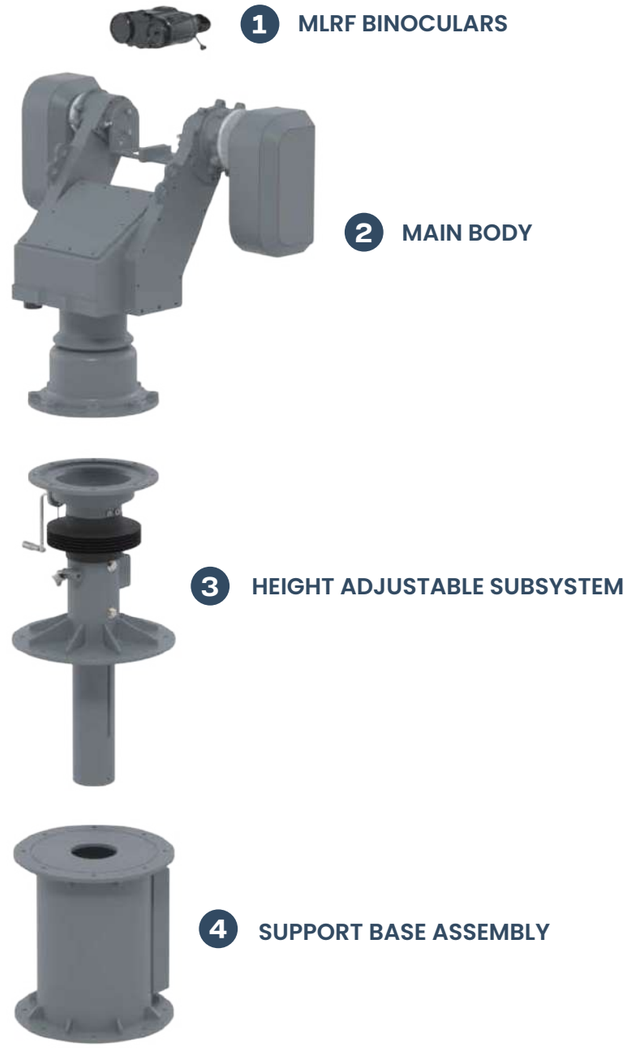
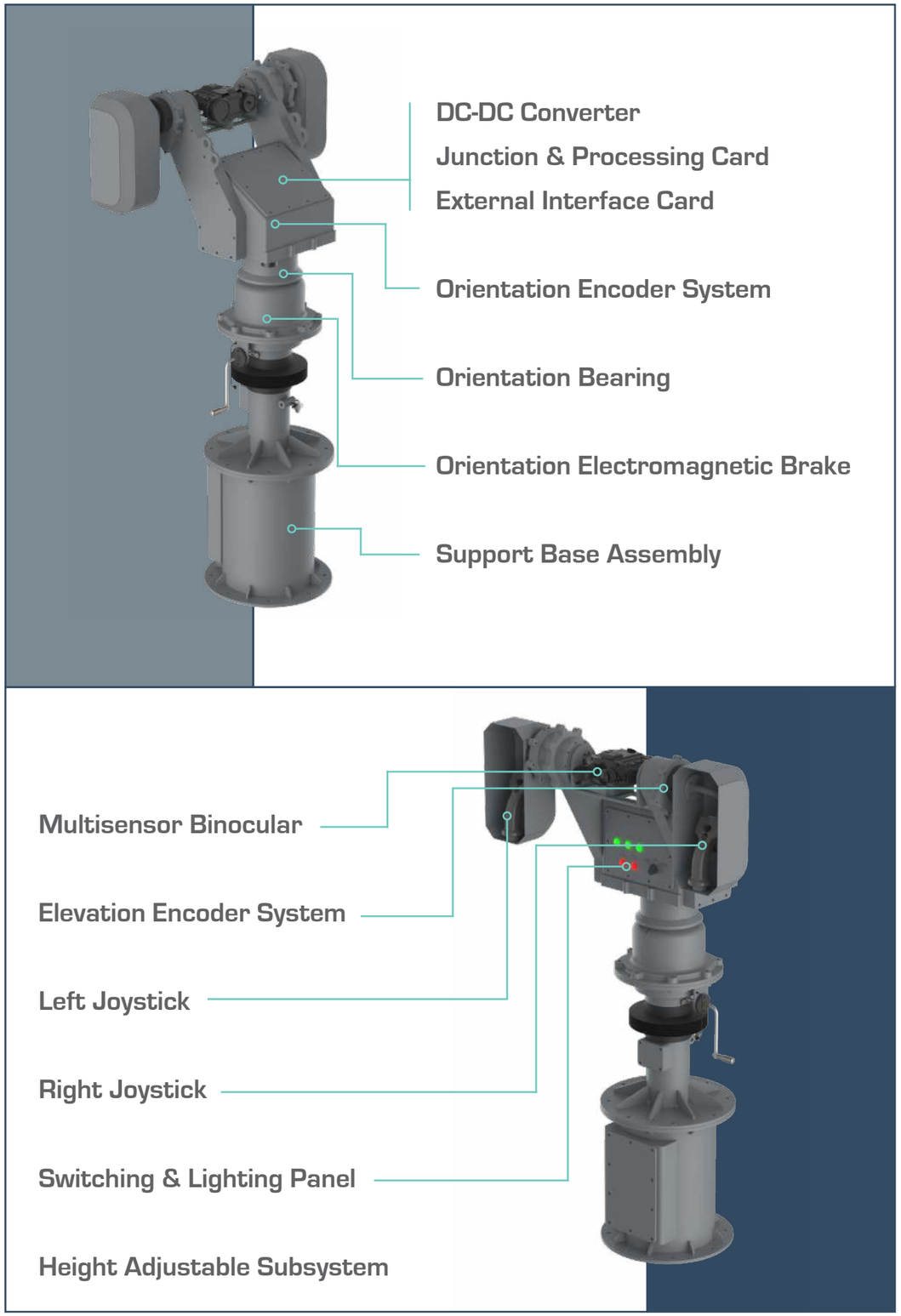


Figure above shows an exploded view of the Apollo TDS where it can be seen that the system is composed of 4 different



The main characteristics of the Apollo TDS are presented in the table below:

PARAMETER	VALUE
Thermal vision	
Resolution	640 x 512 pixels
Field of View	8.8° x 7.0°
Detection/Recognition of Fast Attack Craft	6.3/1.6 km
Detection/Recognition of Combat Swimmer	2.3/0.6 km
Digital zoom	1-4x
Day channel	
Resolution	1280 x 720 pixels
Field of View	12.4° x 7.0°
Digital Zoom	1-4x
LRF	
Laser Type	Class 1, eye-safe
Detection range	20 – 5000 m
Ranging accuracy	± 2 m
Physical	
Line of sight height	1420 – 1720 mm
Dimensions	Depth: 507 mm Width:819 mm Height: 1645 ± 150 mm
Weight	≈ 130 kg
Environmental	MIL-STD-810
EMI/EMC	MIL-STD-461
Power	28VDC (300W max.)

CONTACT

APOLLO TDS

TARGET DESIGNATION SYSTEM

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Apollo TDS is a patent protected product.