



# SEAVISION

The SeaVision is a stabilized electro-optical sensor platform with automatic target recognition (ATR) and multi-target tracking features, especially designed for naval applications. The sensor system can be used either gun mounted or ship mounted. The outstanding stabilization, accuracy and resolution out of an integrated high-precision gyro assembly enables the use even on small boats and ships.

The SeaVision supports the full spectrum of naval operations from surveillance through detection, threat evaluation, target designation and fire control up to battle damage assessment. The consequent use of light weight material like carbon fiber results in an overall weight, which allows easy installation – even in the ships mast.

The SeaVision comprises a sensor configuration designed for long range detection and identification and generation of accurate 3D target track-data via:

- Infrared camera
- HD colour TV daylight camera
- 2x laser range finders using different technologies

The SeaVision complies with DIN EN 61508 safety regulation for remote weapon stations. Consequently, the generated 3D target-data can be used for direct gun fire control applications.

The design of the SeaVision strictly followed the goal to achieve a very high availability rate, thus ensuring safe use of the system even in critical operational conditions.

This concept leads to the integration of COTS/MOTS components in the sensor-system where possible, combined with measures to reduce complexity to increase availability.

The SeaVision comprises an infrared camera of cooled technology. The specific design of the IR-optics combined with the use of long-life-cooler-technology and state-of-the-art detector technology leads to a high video-resolution and high availability even under rough environmental conditions. The SeaVision comprises a fix-optics HD colour TV-camera with smart-zoom functionality. The HD colour TV-camera integrates 3 cameras in a single unit. This leads to an accurate alignment at all zoom-levels, which is required for precise direct gun-fire control. Furthermore, waiving of zoom-optics increases the reliability and increases the switch-over times between different FoV's.

The SeaVision comprises two different laser range finders. Combining the advantages of both technologies, the twin-laser configuration offers:

- Automatic internal range verification
- Confident laser measurement
- In-operation redundancy to support availability even in critical operational conditions

## STATUS

Available in 2020

3x DAYLIGHT CAMERAS	
Spectral band	Visible
CMOS sensor	2,064 x 1,544 pixel
OCU display	1,024 x 768 pixel
Camera 1: FoV1 Digital zoom	1.40°
Camera 1: FoV2 Fixed optic	2.80°
Camera 2: FoV3 Digital zoom	6.67°
Camera 2: FoV4 Fixed optic	13.34°
Camera 3: FoV5 Digital zoom	16.00°
Camera 3: FoV6 Fixed optic	32.00°

2x LASER RANGE FINDER	
Laser 1/Type	1.5-micrometer diode laser
Range	≥10,000 m
Wavelength	~1.55 μm
Pulse rate	25 Hz
Classification (IEC 60825-1 2014)	1
Laser 2/Type	Diode pumped Er: Glass laser
Range	≥40,000 m
Wavelength	1,535 nm
Pulse rate	10 Hz
Classification (IEC 60825-1 2014)	1 M (eye-safe)

COOLED IR SENSOR/THERMAL IMAGER	
Type	SAPHIR/Long-life
Spectral band	MWIR 3 – 5 microns
Detector	1,024 x 768 pixel
OCU display	1,024 x 768 pixel
FoV1 Fixed optic	1.40°
FoV2 Fixed optic	6.67°

The example configuration shown can be individually adapted on request due to the system modularity.

The scope of supply, appearance, performances, dimensions and weights of the system correspond to the knowledge available at the time of printing. Deviations from the illustrations in color and form, errors and misprints as well as changes are reserved.

