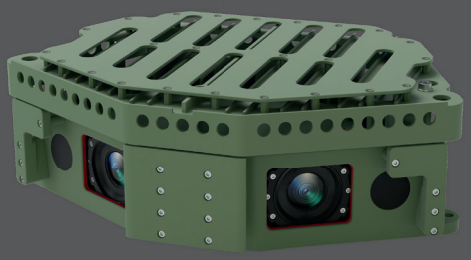
HENSOLDT **SETAS**

See Through Armour System

SETAS is a day and night high performance local area observation system for any type of armoured vehicle.

Main Benefits

- The user can stay in safety within the vehicle but with a high degree of situational awareness
- The visual sensor is capable of the recognition of a person at a distance of more than 300 m
- Using a head-mounted display as HMI, a crew member inside can virtually “see through” the armour
- Individual and independent view (scalable) for up to 8 crew members – this allows each crew member to observe its important region of interest



Capabilities

- 360° close area observation under hatch by day and night
- Threat identification and tracking
- Data exchange with other vehicle sytems

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HENSOLDT
Detect and Protect.

HENSOLDT SETAS

This high resolution electro optical vision system gives each crew member the possibility to stay secure under hatch without losing full visual situational awareness, 360° around the vehicle. Threats like snipers or RPGs can be detected within their operating range. The high vertical field of view makes the system superior for environments like the urban canyon and for threats from above. The modular system accommodates two powerful sensor systems: very high resolution colour daylight cameras and uncooled thermal imagers. The mission-approved uncooled thermal imager is already mounted on several military vehicles worldwide.

Applications	Key Features
• 24/7 close area observation 360° around vehicle under armour with real-time image stitching of all the surrounding cameras • Threat identification and tracking • Data exchange with other vehicle sytems • Individual and independent view for up to 8 operators each with their own area of interest	• Very high resolution • Intuitive HMI • Modular system configuration • Open architecture (NGVA HW ready) • Ruggedized according MIL-STDs • Low latency <100 ms

Preliminary Performance Data*	
System Data	
Field of view	360° / 77° (daylight) and 48° (thermal) (+ option hemispherical camera)
Thermal camera	
Wavelength	LWIR (8 to 14 µm)
Field of view	64° (h) / 48° (v)
Daylight camera	
Detector	Colour CMOS
Field of view	95° (h) / 77° (v)

Options
• Cleaning systems • Ballistic protection cover • Moving Target Indication (MTI) • Object tracking • Control and display unit • Digital image stabilisation • Hemispherical camera to cover the area above the vehicle • Augmented Reality, also with external data (e.g. data annotation) • Integration of existing vehicle cameras • Handover of data to existing sight systems • Automatic alert broadcast into the vehicle network • Image fusion (thermal and visual)

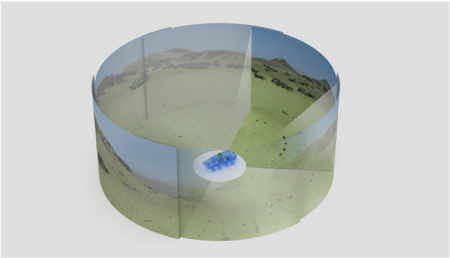
Electrical Data*		Environmental Conditions*	
Power supply	24V DC nominal	Operating temperature	according MIL-STD-810 E
Interface	NGVA HW ready; Ethernet; 3G-SDI, ...	Environmental tests	according MIL-STD-810 G

Over all dimensions*	ICM for Forward and Backward View	ICM for Left and Right View	CIPU	2 x PSU
Dimensions in mm (W x H x D)	preliminary 414 x 160 x 304	preliminary 480 x 160 x 314 mm	preliminary 426 x 280 x 490	preliminary 300 x 110 x 260
Weight	approx. 11 kg	approx. 12 kg	approx. 35 kg	approx. each 11 kg

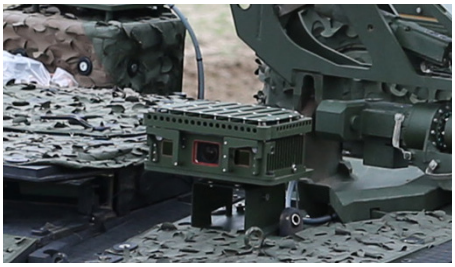
Range Performance*/**		
Sensor	**Thermal**	**Daylight**
Person detection	450 m	900 m
Person recognition	150 m	300 m
Person identification	80 m	150 m

*subject to technical modifications; data based on current development level
** MRC (Minimum resolvable contrast) Methode

Theoretical Overall System	
Power Consumption	Typical: 400 W (PRELIMINARY) Max: 1 kW (Peak Load, PRELIMINARY)
IP class of the housing/connectors	IP68 / IP66K (ICMs) IP54 (CIPU)



Seamless 360° Situational Awareness



Integrated Camera Module

Integration of Threat-Sense by Pearson Engineering is possible – using Artificial Intelligence to identify ordnance

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