

Citadel Quattuor II

Driver Vision Enhancer and situational awareness camera

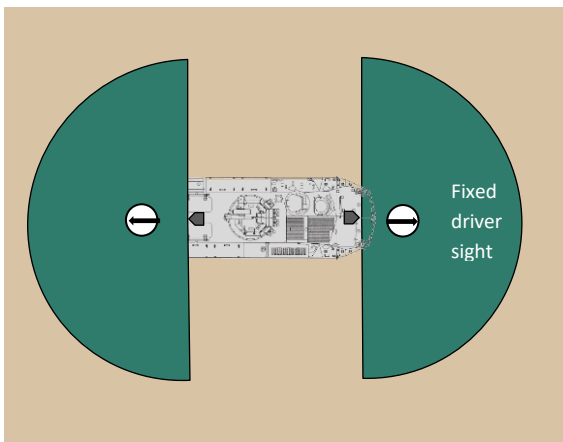


Features

- 57° Front and side FOV
- Visible & Infrared image merging
- 24V operating voltage (15 – 36V)
- Washer function
- Graphical insertion
- IP 67
- Mechanical aligned 3 channel output

Description

Providing increased safety for the entire vehicle crew of armoured vehicles is of prime importance in the battlefield. With the Citadel Quattuor II you get 6 cameras in one, 3 channels with both thermal and visual cameras built into one unit where the 3 channels of thermal and visual cameras are merged providing an optimized 57° front facing drivers sight and 57° side view that in total gives approximately 170° fully merged infrared and visible orientation capability.



Rugged design

The Citadel Quattuor II is encased in a rugged IP 67 housing, designed to withstand vibration in accordance with MIL STD 810G. It provides high-performance images, even under the harshest conditions, in temperatures ranging from -40°C to +60°C. All electrical connections go through a MIL-compliant 38999/23 connector. The integrated mounting bracket allows precise alignment of the camera.

Features

Graphical insertion allows configuration of several graphic overlays e.g. in the form of distance markers and text strings.

Fog penetration in the daylight cameras. The fog penetration function is designed to automatically increase visibility under conditions such as fog, haze and fire smoke. The camera continuously analyses the picture and once it detects a low-contrast condition, it will automatically enhance the contrast.

White / Black hotspot change on thermal camera.

Merging function. The Citadel Quattuor II offer the driver/operator to adjust the blending between the centre Daylight and Thermal camera to ensure the maximum information for driving as well as situational awareness.

Combined sensor technology

The combined sensor technology gives 24/7 operation and provides combat support and service vehicle operators with increased driver's vision capability, survivability, and mobility during day, night and in adverse weather conditions such as dust, smoke, and haze.

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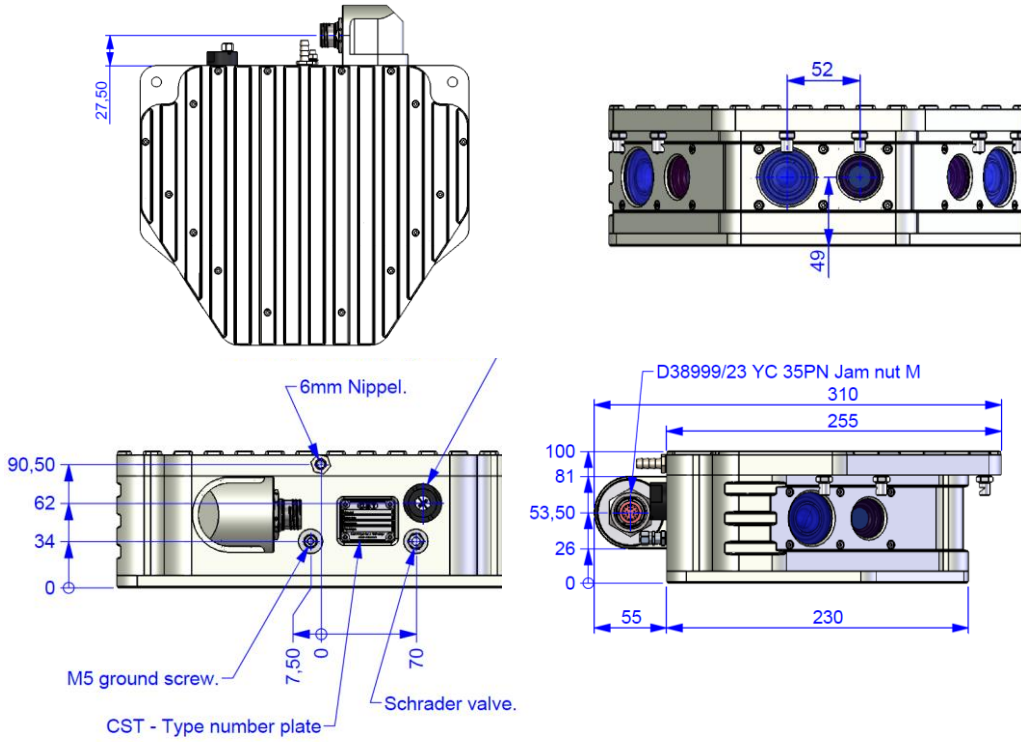
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Mechanical outline and dimensions



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Specifications

Channel	Color / Visual	Thermal
Image system		
Sensor	High sensitivity 3 Gen 1/3" colour CCD	Uncooled VOx or A-si Micro bolometer
Lens FOV.	57° HFOV	57° HFOV
Effective pixels (H x V), per camera	PAL-976 x 582 (4:3 image format), NTSC-976 x 494 (4:3 image format)	640 x 480 (4:3 image format)
Detector pitch	5 µm x 6,25 µm	17 µm
Electrical specifications and functions		
Video output	PAL or NTSC, Composite VBS, 1 Vpp, 75 ohm	
Sensitivity in real time	0.007 lx, 25% video @ f/1.6, AGC on	50 mK
Sensitivity in extended night mode	0.001 lx, 25% video @ f/1.6, AGC on	
Spectral response	400-700nm	8 -14 µm
Dynamic Range Enhancement	XDR-function	
Picture inversion	Pos/neg	
Fog penetration	Image contrast enhancement	
Image Mirroring	Horizontal and Vertical image flip	
Configuration, serial interface	RS-422, CST protocol (CAN-BUS is optional)	
Mechanical		
Overall dimensions (W x H x L)	300 x 100 x 310 mm (Not incl. connectors)	
Net weight	App. 6 kg	
Housing material	Aluminium with corrosion protection coating	
Protective housing integrity	IP-67, pressurized and purged with dry air	
Camera window	Front window with multi-layer AR, ITO coating and heater for de-icing	Germanium front window
Connector	D 38999 / 23YC35PN	
Environmental		
Operating voltage	15 – 36 V DC (Galvanic separation from housing)	
Over voltage protection	MIL-STD-1275-D	
Current consumption	Max. 35 W (incl. Active heater in window)	
Operating temperature	-40°C to +60°C (including solar load)	
Storage temperature	-40°C to +70°C	
Shock / Vibration	MIL STD 810G (Track vehicle profile 6,25 Grms)	
EMC	MIL STD 461F RS103 and RE102	
MTBF	30 000 hours GB	
Start-up time for full operation	15 sec to driver mode	

About Us

CST - Copenhagen Sensor Technology A/S is a privately held Danish company specialising in the design and manufacture of high-performance electro-optical solutions for demanding battlefield and surveillance applications.

Founded in 2001, CST has rapidly grown to a mature organisation, capable of serving a global customer base. In modern facilities on the outskirts of Copenhagen, Denmark, CST houses R&D, production, QA and sales and marketing functions. With a collective experience in C-MOS camera, optics, electronics and software development, the highly skilled staff at CST is committed to creating rugged, durable and innovative electro-optical solutions.

CST is certified to ISO 9001:2015, which applies to the whole process flow of design, development, manufacturing and testing. Furthermore, ISO 10007:2003 configuration management standards are used as a guideline for design and development activities. CST products are not restricted by ITAR.

Customer and OEM solutions

CST has a long tradition of working closely with its customers, identifying unmet needs and creating solutions with sustainable value for the users.

With a strong R&D base at the headquarters in Denmark, CST is able to provide mechanical, optical, software and hardware customisations while meeting the toughest requirements for military, homeland security and high-end surveillance applications.

Whether the need calls for a ruggedized high-precision zoom lens or a highly sensitive C-MOS camera, or a complete system comprising of lens, camera and advanced video processing, CST can offer a fast-track design process. Contact us to discuss your specific requirements. Together we can create high performance solutions that provide a significant benefit to both customer and end user.

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