DATASHEET

PeriSight® HD

High Performance Situation Awareness System (SAS) for Land Vehicles

Key features

- Compact optronic modules for night and day vision enhancement, even in harsh conditions
- Modular & scalable solution
- Compliant with military standards
- Thermal sensor LYNRED ATTO : 1280x1024 @ 12µm
- Patented « shutterless » technology
- Small pixel size reduces lens size
- Full HD visible sensor : 1920x1080 @ 3µm
- Fusion 1080p @ 25 Hz
- Low latency
- Designed and manufactured in France

Thermal image taken with the PeriSight® HD thermal mode equipped with a 12.8mm lens

PeriSight HD is a 360° situation awareness system designed for land vehicles, based on high performance optronic modules. Providing a panoramic view of the vehicle's surroundings, this equipment assists drivers in executing complex maneuvres, avoiding obstacles on the road, and improving the safety of the crew.

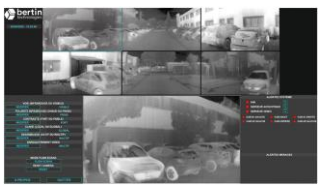
With a compact design, this embedded system can easily be integrated into any armored vehicle. Based on a scalable architecture, this versatile solution comprises 4 to 6 optronic modules strategically placed throughout the vehicle. The number of modules varies depending on the vehicle type and specific application, such as driver vision enhancement, perimeter surveillance and threat detection (i.e military personnel, vehicles or unmanned systems).

PeriSight HD complies with military standards, operates in constrained environments, and provides multiple viewing modes such as visible, thermal and fused, delivering both or panoramic and ROI views.

Bertin Technologies offers full integration services. Videos are displayed on a screen, that also serves as the control interface for operating PeriSight HD.

*PeriSight® **HD** camera module wide field of view (95°/75°)*

*PeriSight® **HD** video server module 360° panorama reconstruction Full resolution ROI selection*



*PeriSight® **HD** HMI System configuration Threat alert*

BERTIN TECHNOLOGIES
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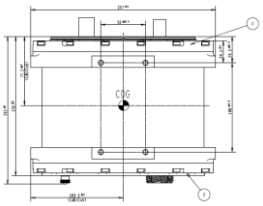
SENSORS

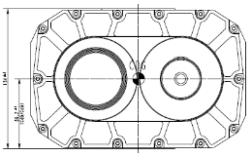
	Visible channel	Thermal channel
Model	Full HD	LYNRED ATTO1280D-02 (+)
Type	CMOS Global Shutter	Uncooled microbolometer
Resolution, pixel size	1920 x 1080, 3µm	1280 x 1024 Pixels (HD), 12µm
Spectral band	400nm – 700nm	8µm – 12µm (LWIR)

PHYSICAL CARACTERISTICS

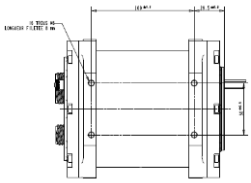
	Weight (kg)	Dimensions (h x L x l) cm	Military standards
Camera module	3,8	21 x 14 x 16	MIL-STD-810-G STANAG 4370 IP68
Video server module	6	28 x 28 x 11	



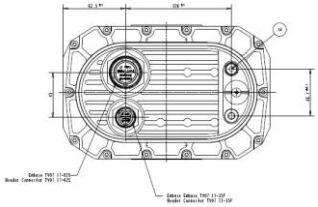
Side view



Front view



Below view



Rear view

INTERFACES

Video	HD-SDI and/or GigE vision and/or IP video H265
Frequency	Up to 25Hz (Low latency) (>9Hz requires a dual-use license delivered by the French government)
Communication	Ethernet

ELECTRICAL CARACTERISTICS

	Camera module	Video Serveur module
Tension	7-28V DC	7-28V DC
Consomption	18 W	35 W
Display time	30 s (from power off to on)	1 min (from power off to on)
EMC	Standard AECTP 500 edition E V1	Standard AECTP 500 edition E V1

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OPERATION & CONTROL

Calibration Shutterless (factory calibration / no periodic maintenance required)

Camera control

Global :
Channel selection display
Relocatable zoom x1 à x8
Zoom method
Image horizontal flip

Thermal :
Gamma correction
Image polarity inversion
Contrast enhancement algorithm
LUT Regions of Interest for CLHE
Histogram equalization
Temporal histogram filter
Sharpening algorithm
Edge enhancement filter
Column filter
Flattening filter
Image state output

Visible :
Gamma
Brightness

ENVIRONMENTAL CARACTERISTICS

Operating temperature	- 40°C / + 60°C
Storage temperature	- 40°C / + 85° C
Military standards	MIL-STD-810-G / STANAG 4370
Shock resistance	Pre-compliance with the standard STANAG 4370 AECTP400 Ed3
Humidity	IP68
Environment	CE, RoHS, REACH

QUALIFIED LENSES

	Thermal	Visible
Foc. @ F#	12,8mm@f/1.4	4,5mm@f/2.8
FoV Camera module	75° x 59°	70° x 43°
FoV PeriSight	360° x 59°	360° x 43°
DRI V	1380/470/230	2400/830/420
DRI I	640/170/50	1070/400/140

	Thermal	Visible
Foc. @ F#	12,8mm@f/1.4	3mm@f/2
FoV Camera module	115° x 89°	115° x 64°
FoV PeriSight	360° x 89°	360° x 64°
DRI V	1080/370/180	1390/480/240
DRI I	510/140/40	610/230/80

The DRIs were calculated using TRM4.
DRI (V) = DRI vehicle to NATO standard. DRI (I) = DRI infantry.
Unit: meter

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