

# CamSight© HD(+)

*High definition low SWaP infrared camera  
(high sensitivity)*

## Key features

- ❖ Low Size, Weight and Power (SWaP)
- ❖ HD ATTO LYNRED sensor: 1280 x 1024 @ 12µm
- ❖ Freeze-free image delivery for an unmatched fluidity
- ❖ Shutterless, no requirements for maintenance and calibration in operation
- ❖ Designed and manufactured in France with French sensors



Image taken with a F60mm CamSight HD

**CamSight© HD is Bertin Photonics' Original Equipment Manufacturer (OEM) digital core camera ideal for embedding into complex optronic devices.**

Equipped with LYNRED ATTO infrared sensor, CamSight© HD represents the best in Bertin's high-performance uncooled thermal imaging technology within a small, lightweight, and low-power package.

Setting a new standard for size, weight and power (SWaP) with no reduction in performance, CamSight© HD has you covered for any demanding applications such as ground or airborne intelligence, surveillance and reconnaissance. Packed with unmatched set of features, CamSight© HD allows for real time, freeze-free image delivery over a wide range of light level conditions.

The CamSight© HD OEM camera also exists in a Plug & Play version to meet any mission's or end user's requirements. Both versions are available with multiple lens configurations, adding flexibility to integrators and manufacturers.

The camera is available in two different versions, CamSight HD+ (NETD < 40 mK @ F#/1.0 and CamSight HD (NETD < 50 mK @ F#/1.0

## SENSOR

	CamSight HD+	CamSight HD
<b>Model</b>	Lynred Atto 1280 (+)	
<b>Type</b>	Uncooled shutterless microbolometer	
<b>Resolution, Pixel size</b>	1280 x 1024 pixels (SXVGA), 12µm	
<b>Spectral band</b>	8µm – 12µm (LWIR)	
<b>NETD</b>	< 40mK @ f 1/1.0	< 50mK @ f 1/1.0



CamSight IR HD OEM module

# CamSight© HD(+)

## PHYSICAL CHARACTERISTICS

	OEM version	Quick connect version (with connectors)
<b>Weight</b>	83 gr	128 gr
<b>Dimensions</b>	31,5 x 40 x 40 mm	58,3 x 40 x 40 mm

## INTERFACES

<b>Video</b>	Parallel 14 bits / HD-SDI 1280x1024 / GigE Vision
<b>Frequency</b>	Video stream : 25 Hz Option : 9Hz or 50Hz on demand, (>9Hz requires a license delivered by the French government)
<b>Communication</b>	RS-232, 3.3VTTL

## ELECTRICAL CHARACTERISTICS

	OEM version	Quick connect version
<b>Input voltage</b>		4,5 – 5,1 VDC
<b>Consumption</b>		2,8 W
<b>Time to image</b>		3 sec (from on to off)
<b>Connectors</b>	Samtec MMCX7-J-P-GF-ST-TH1 for video, Molex 53398-0271 for power, Molex 53398-0371 for RS com.	Amphenol 034-1018 for video, Hirose HR10A-7R-6P for power and RS com

## OPERATION & CONTROL

<b>Calibration</b>	Shutterless (single factory calibration / no periodic control needed)
<b>Camera Control</b>	Gamma correction Algorithm selection CLHE / CLAHE LUT Region of interest for CLHE Histogram equalization Sharpening algorithm Image polarity inversion Zoom moveable center Column Noise Correction Flatening Filter
<b>Tools</b>	SDK (MAVLINK) GUI (Companion)

## ENVIRONMENTAL CHARACTERISTICS

<b>Operating temp</b>	-40°C / +70°C
<b>Storage temp</b>	-40°C / +85°C
<b>Shock</b>	Pre compliance to MIL STD 883 K
<b>Humidity</b>	5-95% noncondensing
<b>Environment</b>	CE, RoHS, REACH

# CamSight© HD(+)

## CAMSIGHT HD PHOTOS



Camera composition  
(left to right):

Lens with mechanical support + core  
+ quick connect



OEM version



Quick connect  
version with 60mm  
lens

## QUALIFIED LENSES



**8.5mm & F/1.0**  
**FoV: 95°x76°**  
DRI (V): 950/320/160  
DRI (S): 490/170/80  
Size:  $\varnothing$  45 x 65  
Weight: 135g



**12mm & F/1.0**  
**FoV: 74°x59°**  
DRI (V): 1580/530/290  
DRI (S): 680/230/120  
Size:  $\varnothing$  42 x 53  
Weight: 110g



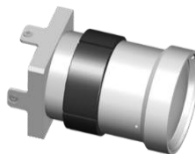
**12.8mm & F/1.4**  
**FoV: 74°x59°**  
DRI (V): 1210/420/210  
DRI (S): 510/170/90  
Size:  $\varnothing$  39 x 35  
Weight: 79g



**15mm & F/1.1**  
**FoV: 56°x45°**  
DRI (V): 1740/610/310  
DRI (S): 740/250/130  
Size:  $\varnothing$  46 x 65  
Weight: 135g



**19mm & F/1.05**  
**FoV: 46°x37°**  
DRI (V): 2380/830/450  
DRI (S): 1010/360/180  
Size:  $\varnothing$  75 x 67  
Weight: 150g



**32mm & F/1.05**  
**FoV: 28°x22°**  
DRI (V): 3600/1330/670  
DRI (S): 1610/550/280  
Size:  $\varnothing$  45 x 56  
Weight: 150g



**35mm & F/1.05**  
**FoV: 25°x20°**  
DRI (V): 3850/1450/740  
DRI (S): 1750/600/300  
Size:  $\varnothing$  37 x 41  
Weight: 38g



**60mm & F/0,95**  
**FoV: 15°x12°**  
DRI (V): 6460/2630/1390  
DRI (S): 3220/1130/570  
Size:  $\varnothing$  61 x 59  
Weight: 211g

This list does not represent all compatible lenses. It is therefore possible to add lenses according to your needs.

*DRIs were calculate with TRM4. DRI (V) = DRI vehicle. DRI (S) = DRI soldier with NATO standard. Unity : meter.*

*To calculate the overall weight of the CamSight HD with the lens, a mechanical interface (lens - core) must be added. Its weight depends on the lens and is about 30 grams.*