

# 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 < 40mK @ F#/1.0 and CamSight® HD (NETD < 50mK @ 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)
Weight	83gr	128gr
Dimensions	31.5 x 40 x 40mm	58.3 x 40 x 40mm

## INTERFACES

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

## ELECTRICAL CHARACTERISTICS

	OEM version	Quick connect version
Input voltage		4.5 – 5,1VDC
Consumption		2.8W
Time to image		3sec (from on to off)
Connectors	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

Calibration	Shutterless (single factory calibration / no periodic control needed)
Camera Control	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 Flattening Filter
Tools	SDK (MAVLINK) GUI (Companion)

## ENVIRONMENTAL CHARACTERISTICS

Operating temp	-40°C / +70°C
Storage temp	-40°C / +85°C
Shock	Pre compliance to MIL STD 883K
Humidity	5-95% non-condensing
Environment	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

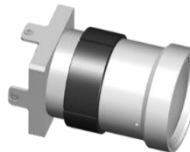
**FoV: 46°x37°**

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.

*DRI*s 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.