

CamSight® WE

Low SWaP wireless encoded thermal camera module

Key features

- Low Size, Weight and Power (SWaP)
- Lynred ATTO sensor 640 x 480 @ 12µm
- Multicast H264 / H265 / MPEG encoded video on Ethernet
- RJ45 and WiFi connection
- Web Embedded GUI with commands and direct stream flow on rtsp
- Compatible ONVIF for Pan&Tilt control
- NVS and CCTV compatibility
- Fully shutterless patented technology
- Designed and manufactured in France with French thermal sensor



Image captured by CamSight® WE
with a 13.6mm lens @ F/1.0

CamSight® WE (Wireless Encoded) is an Original Equipment Manufacturer (OEM) digital camera developed by Bertin Winlight.

To meet users' requirements, the camera was designed for easy integration into complex optronic systems that require low SWaP and encoded lossless video flow to conserve power during radio transmissions (e.g., ground or aerial vehicles). CamSight® WE features an uncooled LYNRED ATTO thermal sensor designed for challenging applications.

Lightweight, compact and low-consuming, CamSight® WE can be implemented in very constrained environments. Indeed, thanks to its ergonomic design and high-performance, the camera fulfills most night and day surveillance, observation and infantry missions.

CamSight® WE also exists in a Plug & Play version dedicated to end-users.

The camera is available in two different versions: CamSight® WE+ (NETD < 40mK F#/1.0) and CamSight® WE (NETD < 50mK F#/1.0).



CamSight® WE with a 13.6mm lens

www.bertin-technologies.com

CamSight® WE

SENSOR

	CamSight® WE+	CamSight® WE
Model	LYNRED ATTO640D-02 (+)	LYNRED ATTO640D-02
Type	Uncooled micro-bolometer	Uncooled micro-bolometer
Resolution, pitch	640 x 480 (VGA) @ 12µm	640 x 480 (VGA) @ 12µm
Spectral band	8µm – 12µm (LWIR)	8µm – 12µm (LWIR)
NETD (25Hz, 25°C)	< 40mK @ F1/1.0	< 50mK @ F1/1.0

PHYSICAL CHARACTERISTICS (*without lens*)

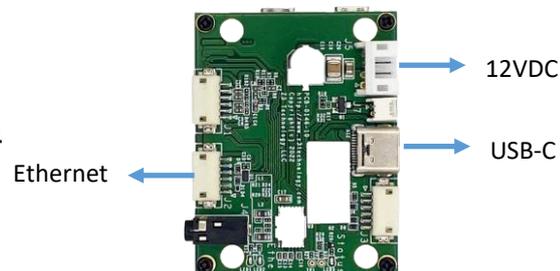
	Camera (without lens)	Encoder board (without cables)	FFC (example)
Weight	13g	90g	5g
Dimensions	22 x 22 x 22mm	50 x 40 x 38mm	15mm

INTERFACES

Electrical support	Ethernet / RJ45 - WiFi
Video format	H264 / H265 / MPEG
Frequency	Video stream: 25Hz – <i>Option: 9Hz</i> , (>9Hz requires a license delivered by the French government)
Communication	Serial on Ethernet Protocole MAVLINK

ELECTRICAL CHARACTERISTICS

Connectors	4pin 12VDC or USB-C
Input voltage	12VDC
Consumption	< 5W* *25°C @ 25Hz with H264



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
Environnement	CE, RoHS, REACH

CamSight® WE

OPERATION & CONTROL

Calibration	Shutterless (single factory calibration / no periodic maintenance needed)
Camera Control on Web GUI	Gamma correction Algorithm selection CLHE / CLAHE Sharpening algorithm / Contouring Filter Image polarity inversion Continuous zoom 1x to 8x relocatable
Other Camera Control via passthrough	Histogram equalization LUT Region of interest for CLHE Column Noise Correction Flattening Filter False colours LUT selection
Tools	SDK (MAVLINK) on passthrough GUI (Companion) on passthrough Embedded GUI

QUALIFIED LENSES



4,3mm @ F/1.2
FoV: 112° x 84°
 DRI (V): 420/140/70
 DRI (S): 200/70/30
 Size: ∅ 20 x 15
 Weight: 12g



5,5mm @ F/1.2
FoV: 86° x 64°
 DRI (V): 600/210/100
 DRI (S): 250/80/40
 Size: ∅ 20 x 16
 Weight: 13g



7,5mm @ F/1.2
FoV: 61° x 46°
 DRI (V): 820/290/150
 DRI (S): 360/120/60
 Size: ∅ 25 x 19
 Weight: 25g



9,2mm @ F/1.0
FoV: 50° x 38°
 DRI (V): 1140/410/210
 DRI (S): 500/170/80
 Size: ∅ 20 x 18
 Weight: 13g



13,6mm @ F/1.0
FoV: 32° x 24°
 DRI (V): 1820/660/330
 DRI (S): 800/270/140
 Size: ∅ 21 x 18
 Weight: 13g



24mm @ F/1.0
FoV: 18° x 14°
 DRI (V): 3100/1140/580
 DRI (S): 1350/480/240
 Size: ∅ 34 x 29
 Weight: 37g



40mm @ F/1.0
FoV: 11° x 8°
 DRI (V): 3550/1260/640
 DRI (S): 1520/530/270
 Size: ∅ 45 x 35
 Weight: 108g



55mm @ F/1.0
FoV: 8° x 6°
 DRI (V): 3550/1260/640
 DRI (S): 1520/530/270
 Size: ∅ 68 x 67
 Weight: 177g

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 LS with the lens, a mechanical interface (lens - core) must be added. Its weight depends on the lens and is about 10 grams.