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WEOM HD THERMAL CORE (1280 × 1024)

WHC1280-N-P-H34-30



- HD thermal detail for better decisions: 1280 × 1024 LWIR resolution and sensitivity below 50 mK support clearer detection, recognition and analysis in challenging conditions.
- Integration-ready connectivity: Real-time HDMI output and straightforward USB C connection speed up evaluation, prototyping and productization.
- IP67-rated aluminum housing for dependable long-term deployment
- Export-friendly European supply: ITAR free design and manufacture in Europe

PRODUCT DESCRIPTION

WEOM HD Thermal Core is a next-generation, high-resolution LWIR module built for OEMs who need maximum thermal detail in a compact, low-power package. With a 1280 × 1024 uncooled detector, advanced on-board FPGA image processing and fast start-up, it helps you deliver premium thermal products faster—without compromising reliability in the field.

Three USPs

- **HD thermal detail for better decisions:** 1280 × 1024 LWIR resolution and sensitivity below 50 mK support clearer detection, recognition and analysis in challenging conditions.
- **Integration-ready connectivity:** Real-time HDMI output and straightforward USB-C connection speed up evaluation, prototyping and productization.
- **Rugged, export-friendly European supply:** ITAR-free design and manufacture in Europe with IP67-rated aluminum housing for dependable long-term deployment.

Key features at a glance

- **Detector:** uncooled LWIR, 1280 × 1024 px
- **Image processing:** advanced FPGA processing with AGC plus spatial/temporal filtering
- **Optics:** wide selection of fixed lenses; lens-less option for custom optics
- **User experience:** multiple colour palettes; fast start-up (under 5 seconds)
- **Mechanical:** compact, lightweight module (under 85 g)
- **Power:** low consumption (approx. 2.9 W)
- **Environmental:** IP67-rated aluminium housing; operating range -32°C to +70°C

Typical applications

- UAV/UGV payloads requiring maximum thermal detail
- Handheld thermal cameras and professional inspection tools
- Fixed security and perimeter surveillance systems
- Industrial monitoring in harsh environments
- Transportation and mobile sensing platforms

Talk to us: Tell us your target use case, lens choice and interface requirements. We'll help you select the right WEOM HD configuration and accelerate your path from evaluation to deployment.Vision@OEM.co.uk

TECHNICAL DATA

12101_Pixel size	12 µm
12580_Detector type	Okyld LWIR-mikrobolometer
12581_Spectral Band	8–14 µm
12582_Resolution (sensor)	1 280 × 1 024 px
12583_Thermal sensitivity (NETD)	< 50 mK
12584_Temperature range – High Gain	−50 °C till +160 °C

12585_Temperaturområde – Low Gain	-50 °C till +600 °C
12586_Focus (lens)	Fast (M34-gänga), levereras utan lins
12587_Objective selectable	25 mm (34°×27°), 35 mm (24°×19°), 50 mm (17°×13°), 83 mm (10°×8°)
12588_Image rotation – Invert	Yes
12589_Image rotation – Mirror	Yes
12590_AGC	Yes
12590_Spatial image filter	Ja (Median, full frame 30 Hz)
12592_MGC	Yes
12594_USB plugin	P-WHC-H-UVC
12595_GigE plugin	P-WHC-H-ETH
12596_Micro-HDMI plugin	P-WHC-H-HDMI
12597_Video outputs	Micro-HDMI (digital), USB-C UVC, RTSP/H.264 via Ethernet
12598_Dead Pixel Correction	Yes
12599_Dimensions (without lens)	43 (h) × 42 (b) × 51 (l) mm
12600_Weight (without lens)	85 g
Certificate	RoHS
Current consumption	2,9 W
Frame Rate	30 Hz
IP class	IP67
Material of body	Aluminium
Operating temperature	-32 °C to +70 °C
Power supply	USB-C, PoE or 2-pin
Rated voltage	5 V DC
Start-up time	< 5 s
Storage temperature	-50 °C to +90 °C