



Mobile Digital Camera HVT 1000

Description:

HVT 1000 is a digital camera, which has been specially developed for the field-of-view extension and process monitoring in mobile machines.

The camera combines a very compact and rugged design with a very high variety of available fields of view, making it suitable for a wide range of applications.

Featuring a latest generation image sensor with a resolution of 1.3 megapixels (1280 x 960 pixels), the camera provides high-quality images, even under demanding light conditions (such as dawn or scenery with backlight).

The camera can be easily integrated into modern machine architectures via its Fast Ethernet interface (100Base-TX). The camera can be connected to a 12 V or 24 V on-board power supply.

A software library is available for the camera configuration. The HVT 1000 is compatible with most current generation Displays and HMIs with Ethernet and / or BroadR-Reach interface.

Fields of application:

- Agricultural machines
- Construction machines
- Municipal vehicles

Special features:

- Cutting-edge sensor technology
- Meets the highest quality and reliability demands using automotive components (image sensor and image processor)
- Wide range of camera lenses, suitable for the application
- Integration of customised or application-specific overlays into the picture
- High robustness
- Customised adaptations, i.e. plugs, mounting brackets, etc. can be provided

Technical data

Field of view and image display	
Opening angle (horizontal)	30°, 60°, 90°, 120°, 180°, (further digital adaptations possible)
Image sensor	Automotive CMOS colour sensor AEC-Q100 Grade2 3,0 µm Back-Side-Illuminated Pixel Rolling-Shutter (RS) Integrated image processor qualified for automotive applications
Resolution	Max. 1.2 MP (1280 x 960) at 30 fps Resolution digitally configurable
Band width	Band width configurable between 10 – 80 Mbit/s
Dynamic range	HDR (depending on mode up to 120 dB)
Image pre-processing	Automatically for contrast enhancement Automatic white balance Automatic exposure control and
Additional functions	Distortion correction in the camera Mode for LED Flicker suppression Application-specific and customised overlays Unicast, Multicast and Broadcast Mode Heating
Interface	
Transmission standard	100Base-TX (Fast-Ethernet, 100Mb/s)
Protocol for video transmission	UDP/RTP / or IEEE1722 (AVB)
Configuration standard	According to ISO 17215 (VCIC/ SOME/IP) Among others: IP address Streaming ports resolution / image rate
Image compression	Choice between MJPEG or h.264
Supply voltage +U _b	7 to 32 V
Plug connector	2 x M12, separate for data and power supply (further variants on request)
Dimensions and weight	
Housing dimensions	Basic variant (incl. plug connector): 49 x 49 x 63 mm
Weight	approx. 150 g
Power consumption	
During operation (typ.)	< 1 W
With activated heating	~ 5 W
Environmental Conditions	
Operating temperature	- 40 °C .. + 85 °C
Protection type	IP67 and IP6K9K
Shock resistance acc. to DIN EN 60068-2-27	30 g / 18 ms
Vibration resistance acc. to ISO 16750-3	58.5 m/s ² r.m.s.
UV resistance acc. to ISO 4892-2, Method A	
Corrosion-resistant acc. to IEC 60068-2-52	
Fulfils the following standards	
CE mark	Compliant with 2014/30/EU REACH, RoHS, others

Model Code

HVT 1 1 X A - F 5 X - 2 - 6 D 6 A - 000

Resolution

1 = 1.3 MP

Horizontal field of view

C = 30°
F = 60°
I = 90°
L = 120°
R = 180°

Technical characteristics of the lens

A = Standard

Interface Variant

F5 = Ethernet-based

Ethernet Physical Layer

2 = Standard Ethernet (TX/T)
3 = BroadR Reach (T1)

Band width as exponent

2 = $10^2 = 100$ Mbit/s

Connector for data transfer

6 = M12 x1, 4 pole
D = D coding

Connector for power supply

6 = M12 x1, 4 pole
A = A coding

Modification number

000 = Standard

Note

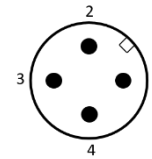
Before using instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

Equipment

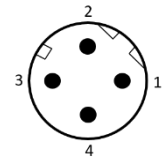
Appropriate accessories, such as cables and connection devices, can be found in the accessories brochure.

Pin connections

M12x1, 4 pole
A coded



D coded



Pin	A coded	D coded
1	+U _b	Tx+
2	n.c.	Rx+
3	GND-	Tx-
4	n.c.	Rx-

Note

The information in this brochure relates to the operating conditions and applications described. For applications and/or operating conditions not described please contact the relevant technical department. Subject to technical modifications and corrections.

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Dimensions

