



GM465-E1 Specifications



Version: Draft3

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Technical Specifications

Parameters	Value
Technical principle	Active stereo
Illumination	2 x infrared laser ($\lambda = 940 \text{ nm}$)
Frame rate ¹ @ resolution (Depth)	Standard Accuracy: 10 fps @ 1280 x 960 10 fps @ 640 x 480 10 fps @ 320 x 240 Standard Fast: 12 fps @ 1280 x 960 30 fps @ 640 x 480 30 fps @ 320 x 240
Frame rate ¹ @ resolution @ image format (RGB)	33 fps @ 1280 x 960 @ JPEG 33 fps @ 640 x 480 @ JPEG 33 fps @ 320 x 240 @ JPEG
RGB-D alignment	√
Output data	Depth, RGB, IR, point cloud images

[1] **Frame rate of depth/RGB images:** The number of depth/RGB images received by the host computer per second from the camera. This is when the camera is working in continuous capture mode.

Measurement Performance

Measurement Range & FOV

Parameters	Value
Working distance	Recommended: 300 mm ~ 3000 mm Max: 150 mm ~ 5000 mm
Near field of view	400 mm x 339 mm @ 300 mm ($H/V \approx 67^\circ/59^\circ$)
Far field of view	4521 mm x 3394 mm @ 3000 mm ($H/V \approx 74^\circ/59^\circ$)

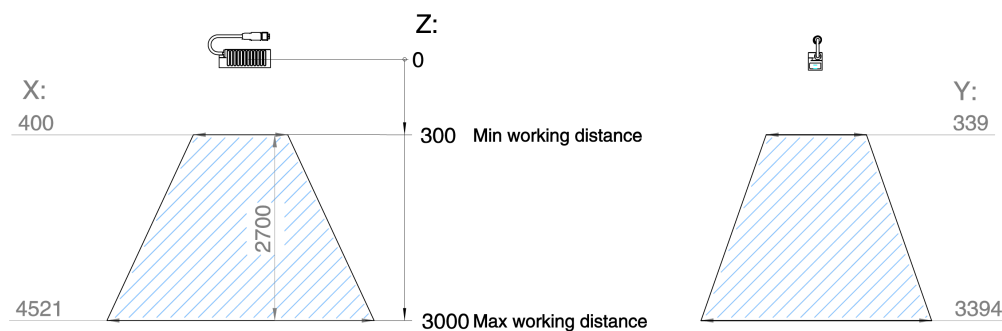
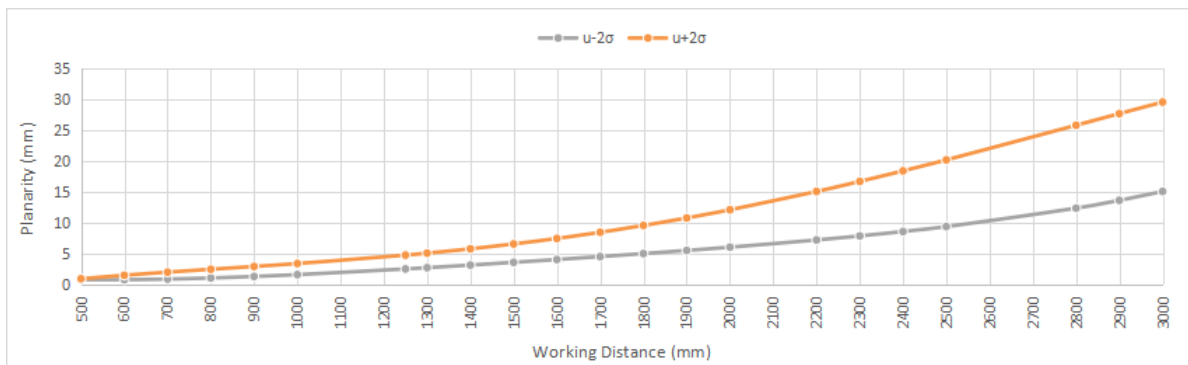
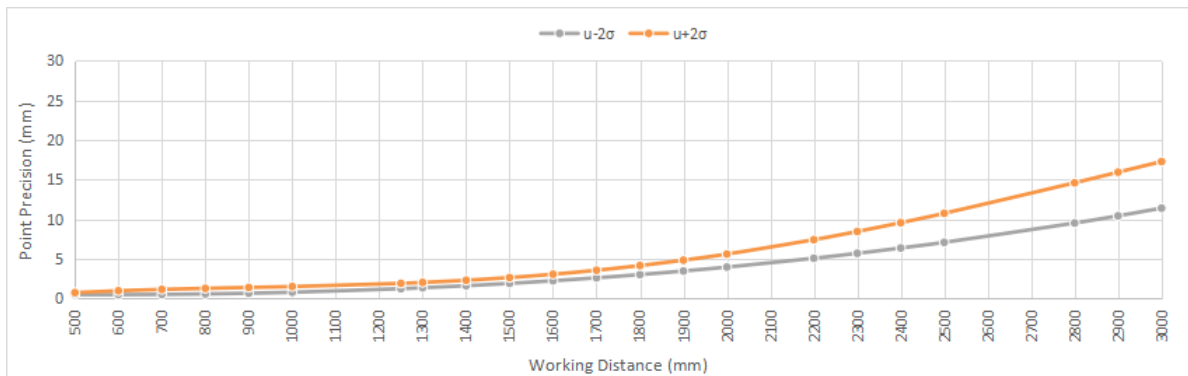
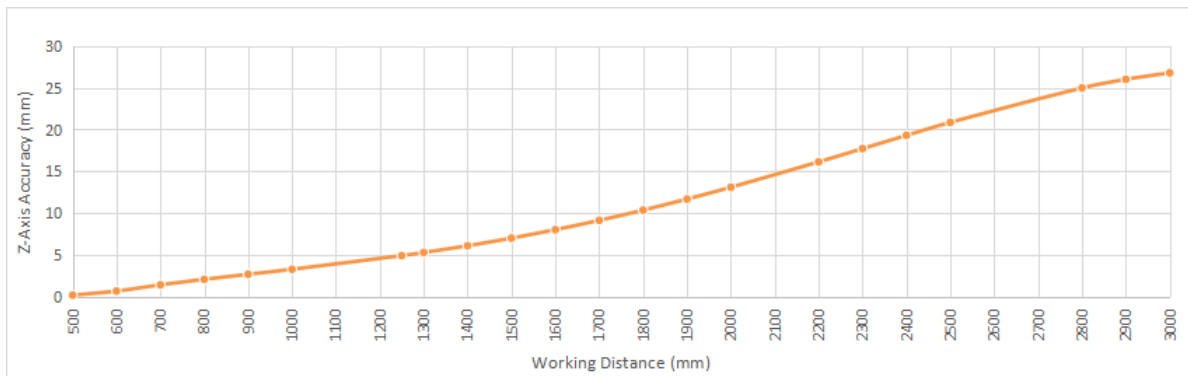


Figure 1 FOV (unit: mm)

Performance Evaluation Metrics

Parameters	Descriptions
Z-axis accuracy	The average deviation between measured distance values and true distance values in the Z-direction.
Point precision	The degree of oscillation of depth values for all pixel points in the central region of the field of view over time.
Planarity	The degree of deviation of all pixel points in the central region of the field of view from an ideal plane.

The line charts below illustrate the measured distribution ranges of Z-Axis Accuracy, Point Precision, and Planarity for GM465-E1, with User Set at default (0.Standard Accuracy). The horizontal axis represents the distance values, with the unit in millimeters (mm).



Software Specifications

Parameters	Value
OS	Linux/Windows/ROS
SDK	Percipio Camport SDK 4; Supported programming language: C/C++. See PercipioDC documentation for more SDK tutorials.

Hardware Specifications

Parameters	Value
Dimension (excl. cable)	90 mm x 25 mm x 32 mm
Weight (incl. cable)	135 g
Data connector	M12 A-Code, 8-pin, female connector. For details, refer to Connector .
Data Transmission	100M Ethernet
Power supply	DC 24V $\pm$ 20%
Power consumption	<3.5 W
Housing material	Aluminum alloy
Ingress protection	IP65
Thermal dissipation	Passive
Temperature	Operating: 0 °C ~ 45 °C Storage: -10 °C ~ 55 °C

Connector

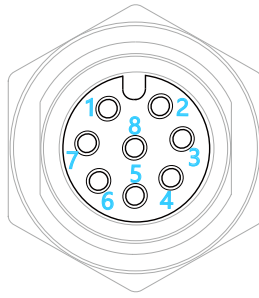
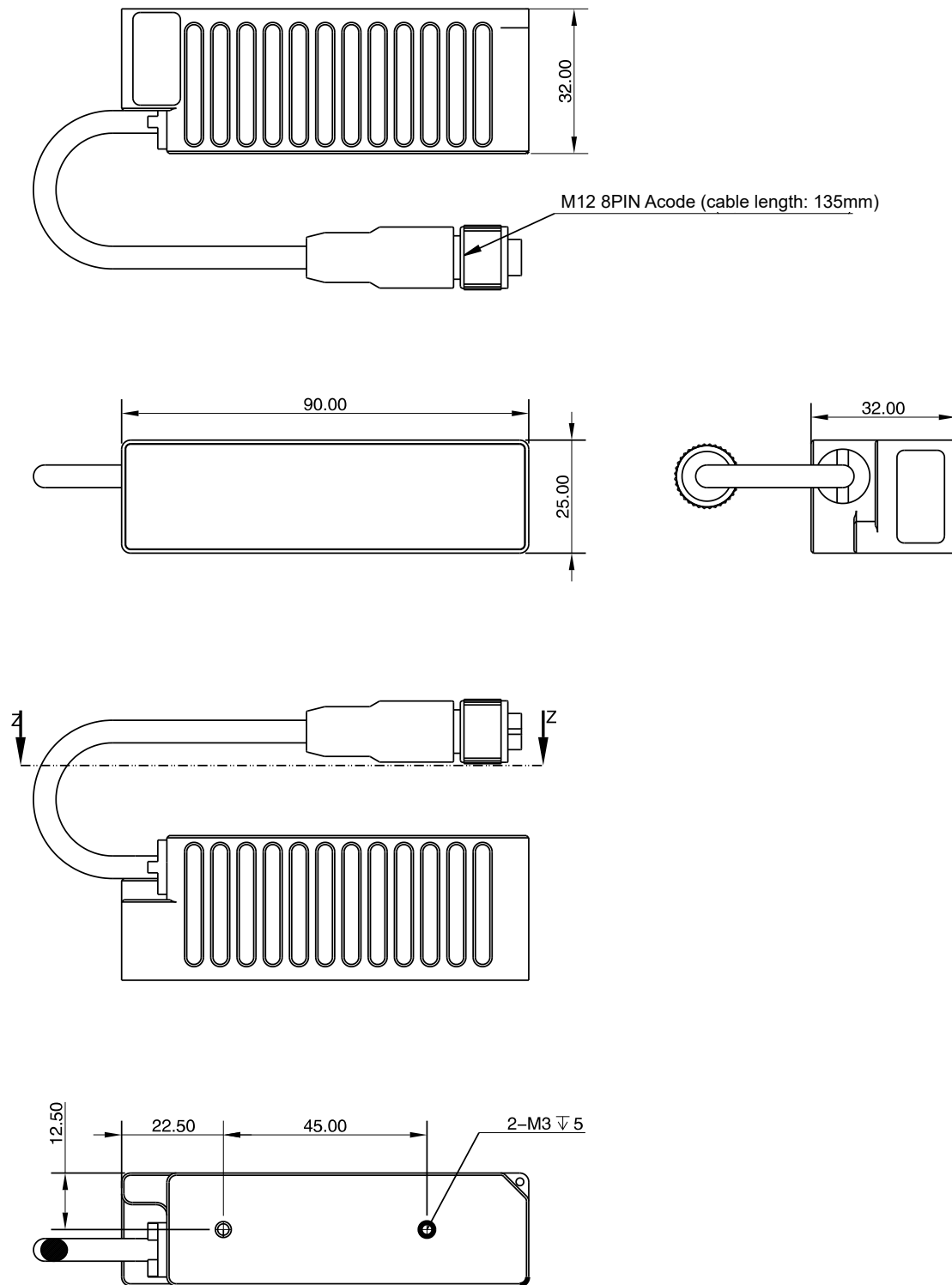


Figure 2 Pinout of the Connector

Pin No.	Name	Description
1	P_24V	Power (camera, DC 24V $\pm$ 20%)
2	NC	—
3	P_GND	GND (camera)
4	MD1-	—
5	MD2+	—
6	MD1+	—
7	NC	—
8	MD2-	—

Mechanical Dimensions



Z-Z
Figure 3 GM465-E1 Mechanical Dimensions (unit: mm)

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Percipio is an independent vendor of 3D machine vision solutions. We provide products and services to system integration customers rather than end users. This marketing strategy allows us to serve multiple sectors and segments, and also means that our success will be based on our customer's success. Together with our customer's industry specific expertise, we can support end users with implementing machine intelligence, which will improve productivity and/or reduce cost.

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