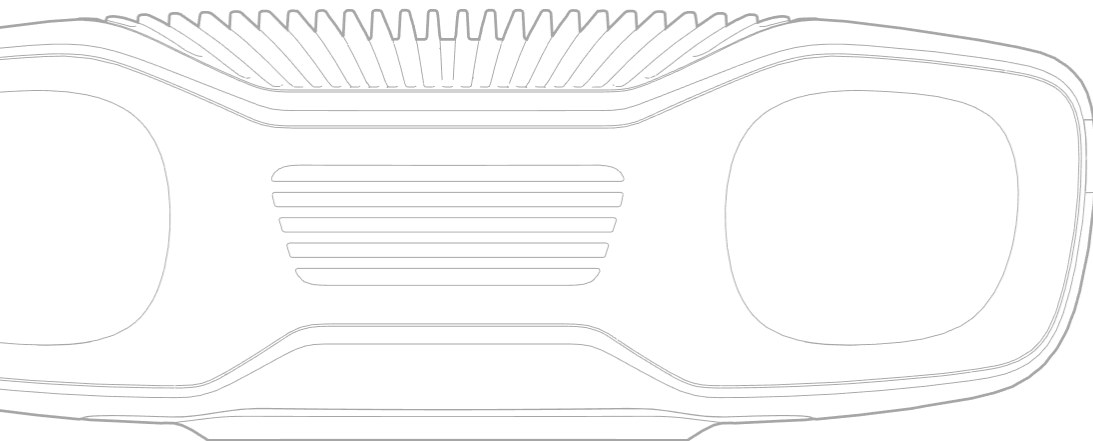




# Zivid Two

Technical specification

PRELIMINARY



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## General specifications

3D technology	Structured light
Imaging	1944 x 1200 (2.3 MP) Native 3D Color
Point cloud output	3D (XYZ) + Color (RGB) + SNR
Aperture (A)	f/1.8 to f/32
Shutter (S)	1/600 s to 1/10 s
Gain (G)	1x to 16x
Projector Brightness (B)	1/4x to 1.8x 1x = 360 lumens
Exposures per 3D frame	13
Min acquisition time	60 ms
Calibration	Factory calibrated Zivid Camera Model 2 (ZCM2)
Data interface	Ethernet (10 GigE)
Power	24 V DC
Operating temperature	0° to 45° C
Storage temperature	-20° to 60° C
Safety and EMC	CE CB EN60950 FCC Class A

# Operating distance and field of view

Recommended working distance (mm)	400 to 1200
Max working distance (mm)	300 to 1500
Field of view (mm)	754 x 449 at 700
Spatial resolution (mm)	0.39 at 700

FIGURE 1 - FIELD OF VIEW

All values in degrees or mm.

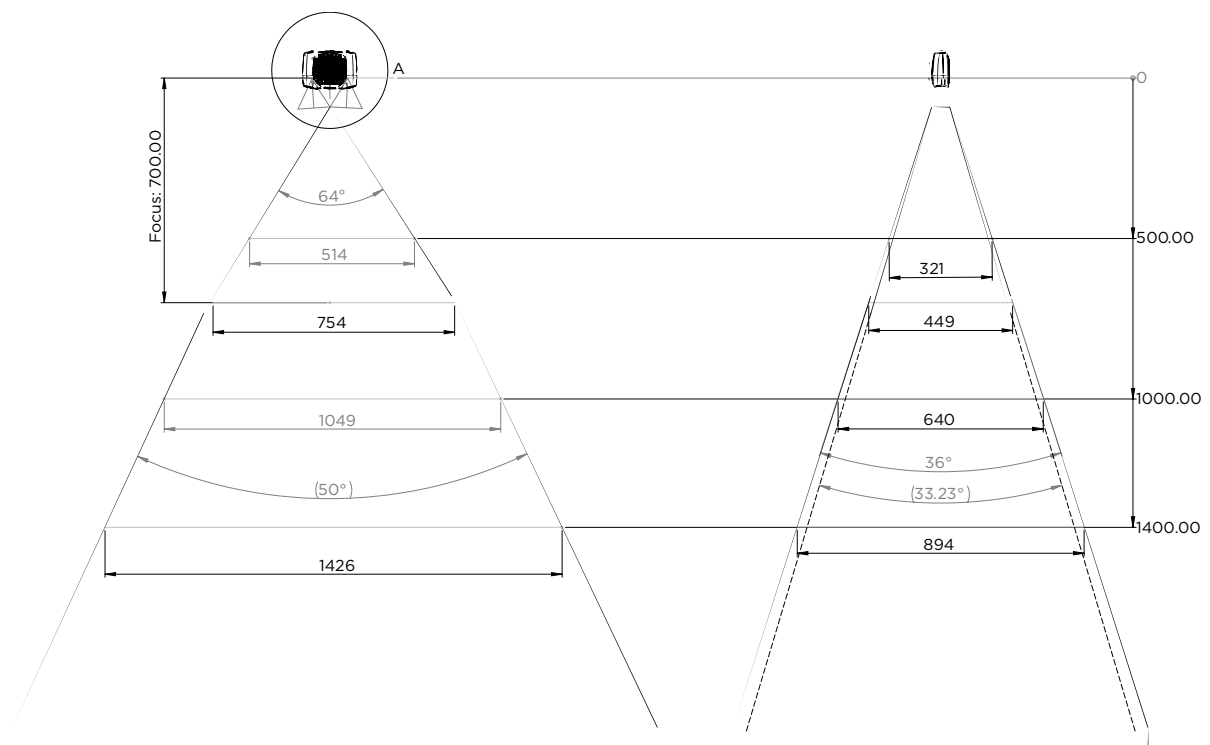
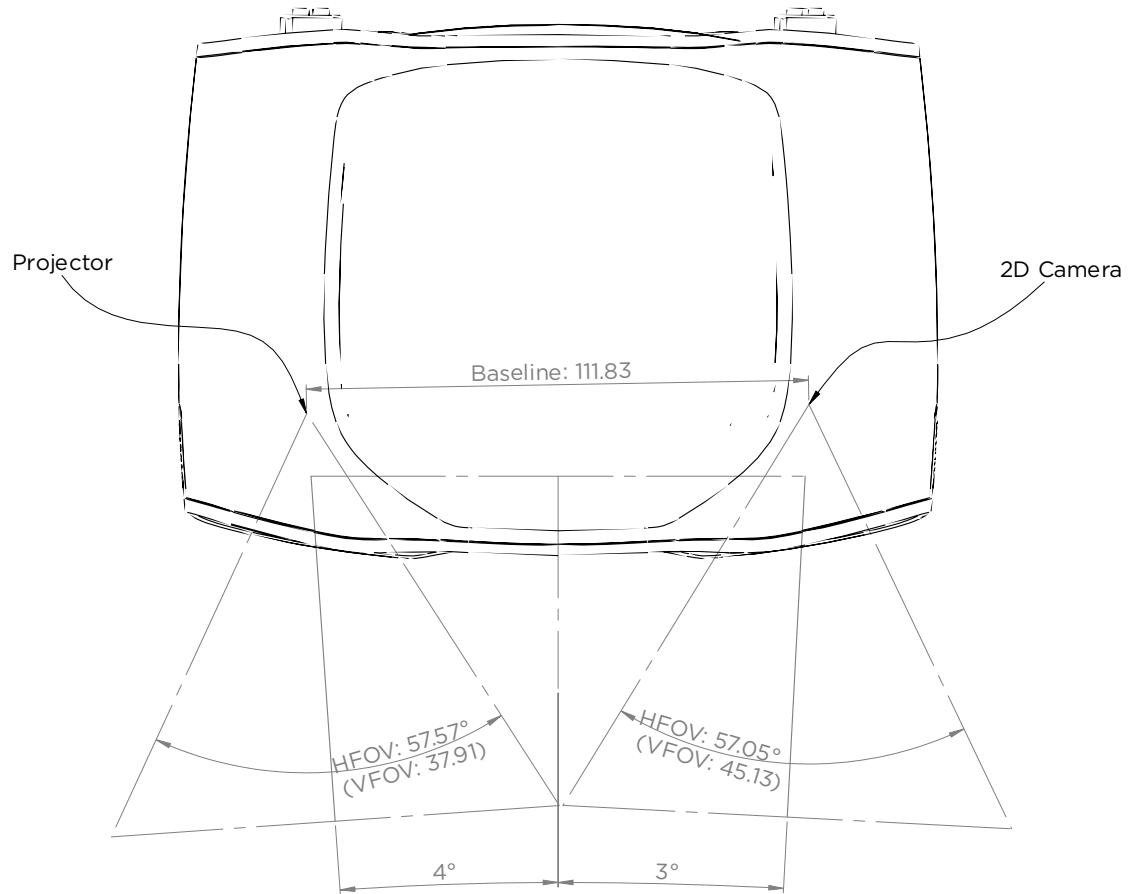


FIGURE 2 - FIELD OF VIEW

All values in degrees or mm.



# Accuracy specifications

## Common conditions

Applies to all specifications unless otherwise stated.

Parameter	Description	Typical
Working distance (D)		700 mm
Ambient temperature (Ta)		25°C
Ambient light (La)		250 lux
Aperture (A)		f/4.0
Gain (G)		1.0x
Projector Brightness (B)		1.8x
Framerate	Capture rate used during measurement.	0.2 FPS
Other		81% center crop HDR = off 10 min warm-up

## Typical specifications

Typical numbers are given at common conditions unless otherwise specified.

Property	Description	Typical
Point precision	1 $\sigma$ Euclidian distance variation for a point between consecutive measurements.	60 $\mu\text{m}$
Local Planarity Precision	1 $\sigma$ Euclidian distance variation from a plane for a set of points within a smaller local region.	90 $\mu\text{m}$
Global Planarity Trueness	Average deviation from a plane in field of view with noise filtering.	< 180 $\mu\text{m}$
Global Planarity Accuracy	Average deviation from a plane in field of view without noise filtering.	< 240 $\mu\text{m}$
Dimension Trueness	Average dimension error in field of view over 10 consecutive measurements.	< 0.20 %
	Standard deviation of dimension error in field of view over 10 consecutive measurements.	0.10%

FIGURE 3 - POINT PRECISION VS. WORKING DISTANCE

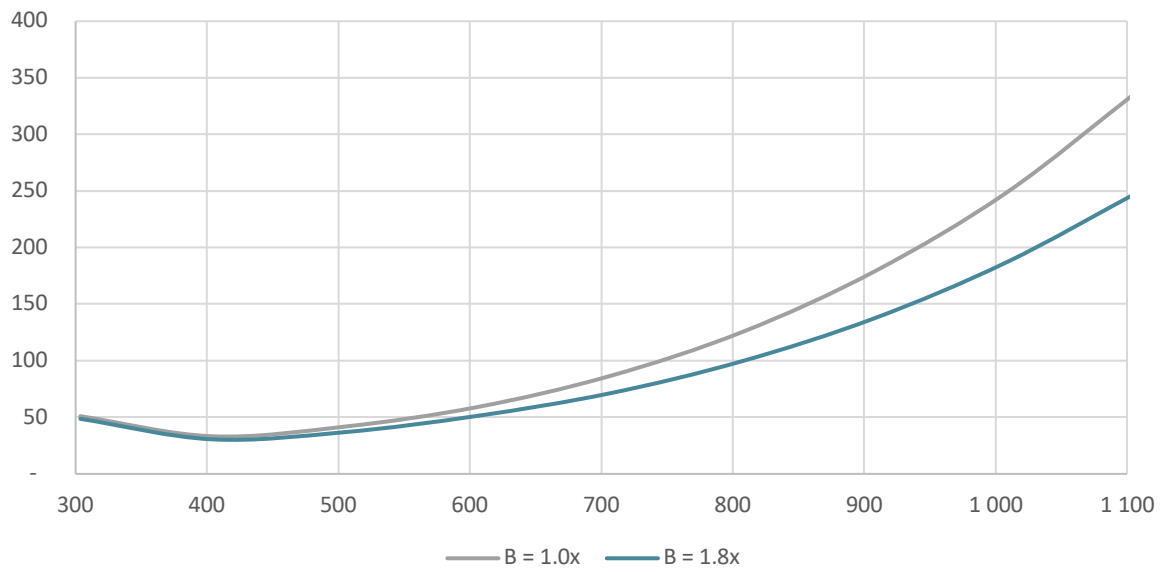
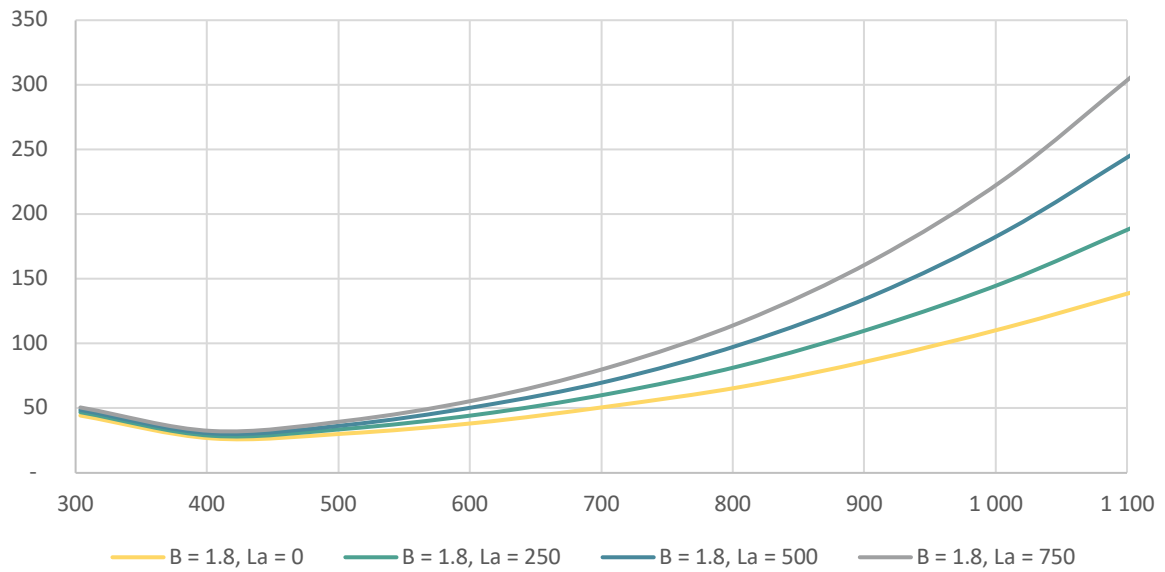


FIGURE 4 - POINT PRECISION VS. WORKING DISTANCE VS. AMBIENT LIGHT





# Physical specifications

Size and weight	Magnesium body 169 mm x 56 mm x 122 mm 880 g
Environmental	IP65 5 G Random 15 G Shock
Power connector	M12-5
Data connector	10 GigE M12-8
Power adapter	24 V 5A EU, US, and UK power plug options

# Mechanical drawings

FIGURE 5 - DIMENSIONS

All values in degrees or mm.

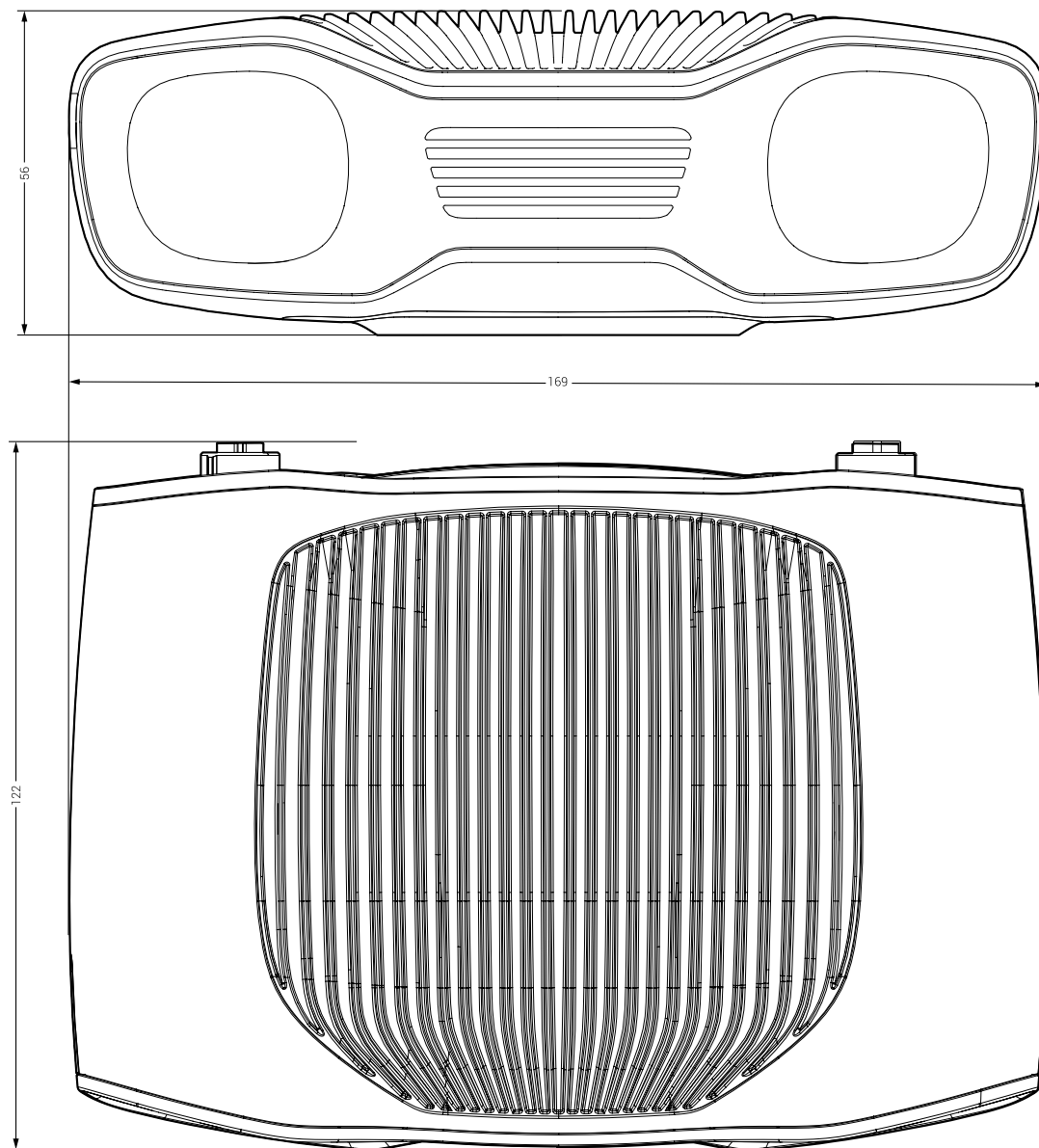
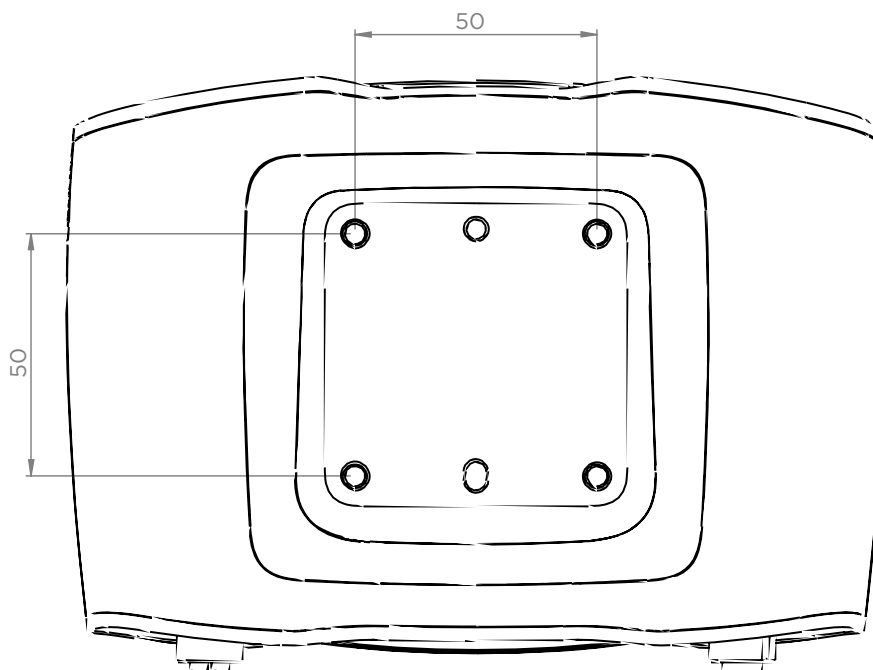
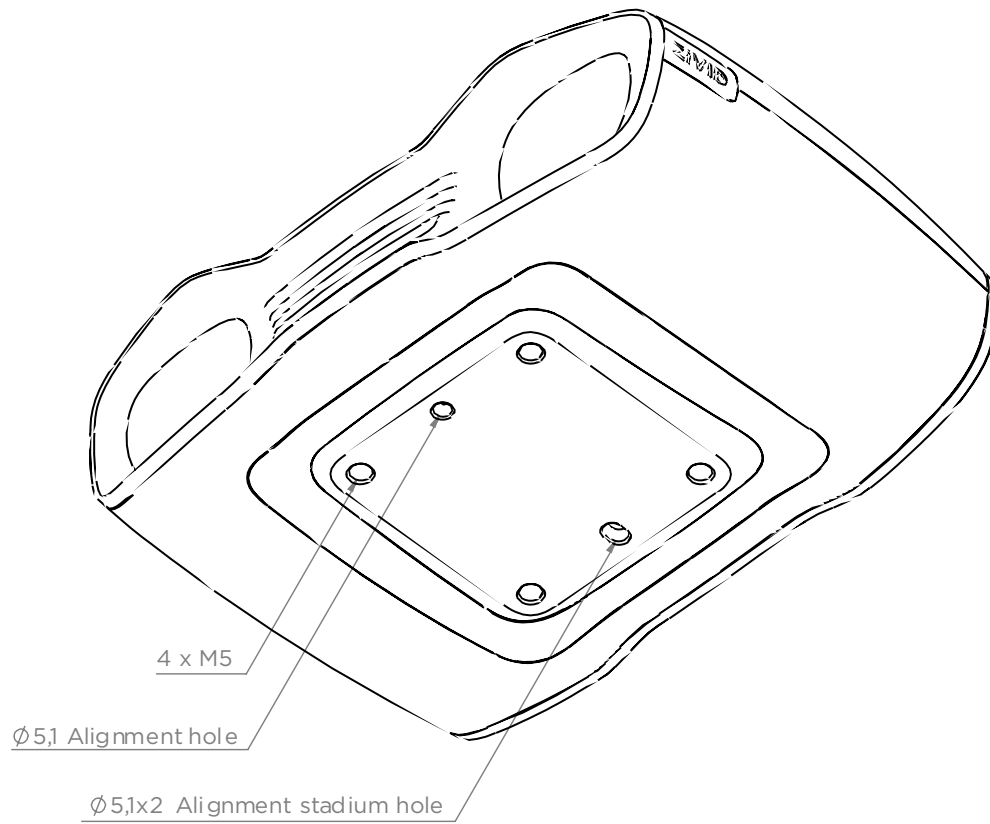


FIGURE 6 - MOUNTING OPTIONS

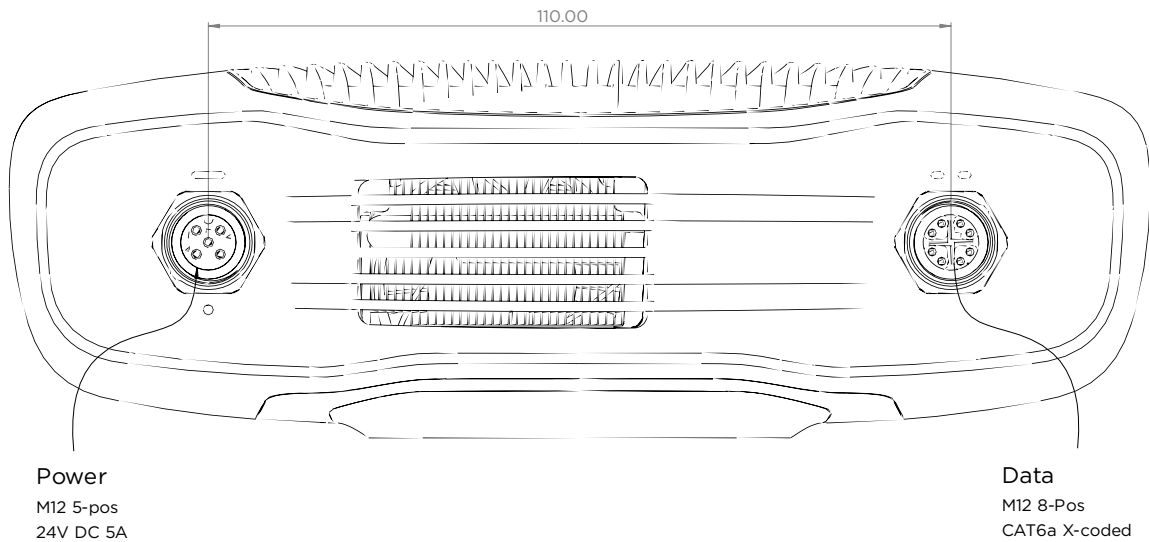
All values in degrees or mm.



## Connectors

FIGURE 7 - CONNECTORS

All values in degrees or mm.



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