ZiVID

3D TECHNOLOGY BY ZIVID LABS

QUICK USER GUIDE

INDEX

SAFETY 01

- Please read the quick user guide before installation and use.

- Connections, assembly and settings must be performed by competent technicians.

- Do not connect external I/O signals to the device while it is powered. This may damage the device.

PRODUCT SPECIFICATIONS 02

- The camera is primarily targeted at industrial applications, such as 3D machine vision, in-line inspection in manufacturing and 3D part localization for robots.

- Zivid acquires point cloud data (x, y, z) and RGB colors with the same sensor chip. One-to-one correspondence between color and depth. The device is factory calibrated and ready to use.

CONNECTIVITY I/O 03

- The device should be connected to a 24 VDC power supply and a PC running Windows 7/8/10 via USB 3 interface.

- The Sync input is for future use.
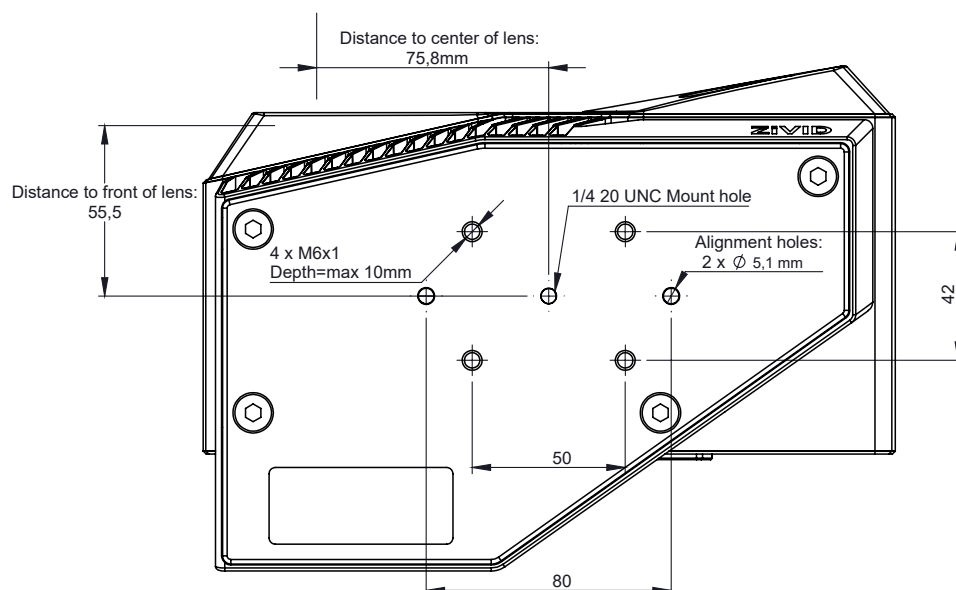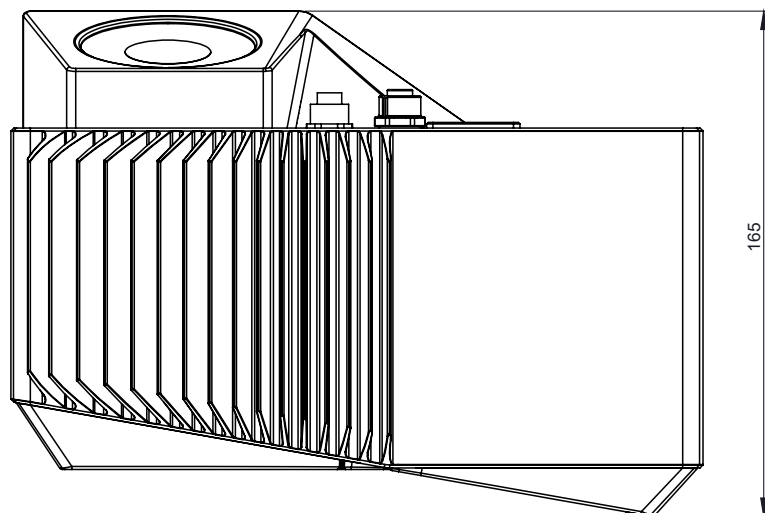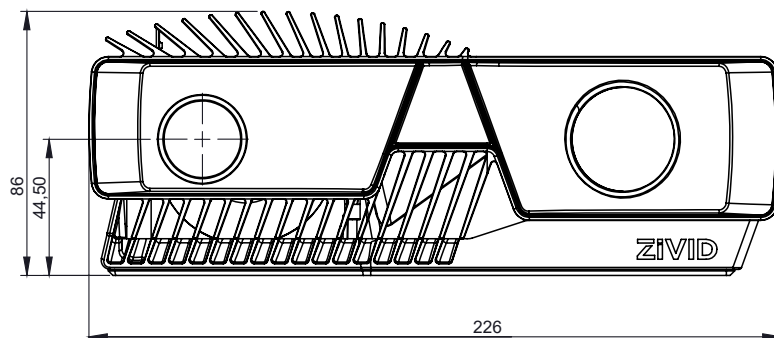
SYSTEM REQUIREMENTS 04

- OS: Windows 7/8/10

- PC: DirectX 11 compatible graphics card and minimum 1xUSB3 SuperSpeed port available

- Interface: USB3 (SuperSpeed)

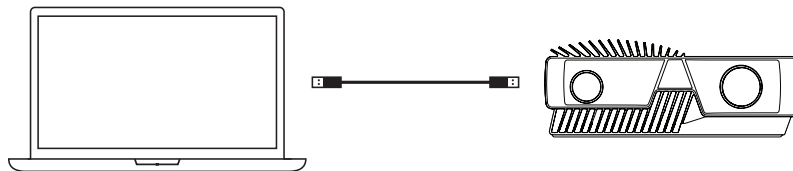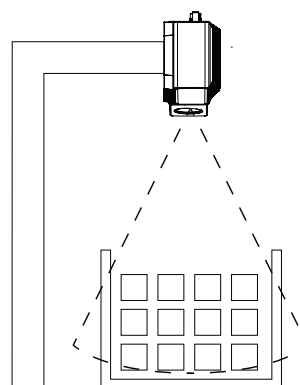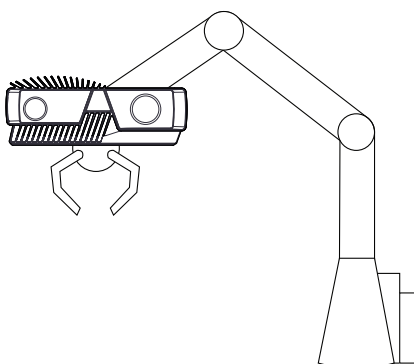## DIMENSIONS AND MOUNTING   05

86
44,50
226

165

Distance to center of lens:
75,8mm

Distance to front of lens:
55,5

1/4 20 UNC Mount hole

4 x M6x1
Depth=max 10mm

Alignment holes:
2 x ∅ 5,1 mm

42

50

80

INSTALLATION 06

- Install the latest version of Zivid Software from www.zivid.com/software. See further install instructions there.

- Mount the device using the interface bracket underneath the device.

- Connect the USB3 cable to the product and PC.

- Plug the power cable to the M12 connector (24VDC 5A).

- Connect the power supply to 100/240 VAC.

- For more guidance on installation and usage, please refer to www.zivid.com/support.

CONNECTIVITY   07

A : USB3: DATA
B : M12-8: External Sync
C : M12-5: Power (24VDC)

- For more guidance on usage and troubleshooting, please refer to www.zivid.com/support.

  A: DATA. USB SuperSpeed USB-B (USB3.0 Camera interface, USB2.0 Control Interface).
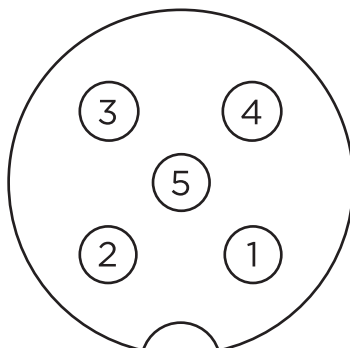
- USB SuperSpeed type-B receptacle for PC connection. Note: PC must support USB 3.0 SuperSpeed. Cables need to be "USB3 Vision" compliant.

  B: SYNC. Interface Connector (for future use).

- Synchronization and external trigger interface.

  C: 24V. Power Connector 24V, 5A DC

Pin	
1	24V DC +/- 20% (Max 4A)
2	24V DC +/- 20% (Max 4A)
3	GND
4	GND
5	SENSE SIGNAL (optional)

- Power-supply interface for the Zivid unit. Exceeding the limit values may cause permanent damage. Please note the power ratings if power is provided from other sources than the supplied AC/DC converter.

- The unit is protected against reverse polarity.

- The unit is protected against overheating by a thermistor that physically removes the power.

  Optional mating connector : TE Connectivity AMP, 1838275-3 (Digikey: A97645-ND)
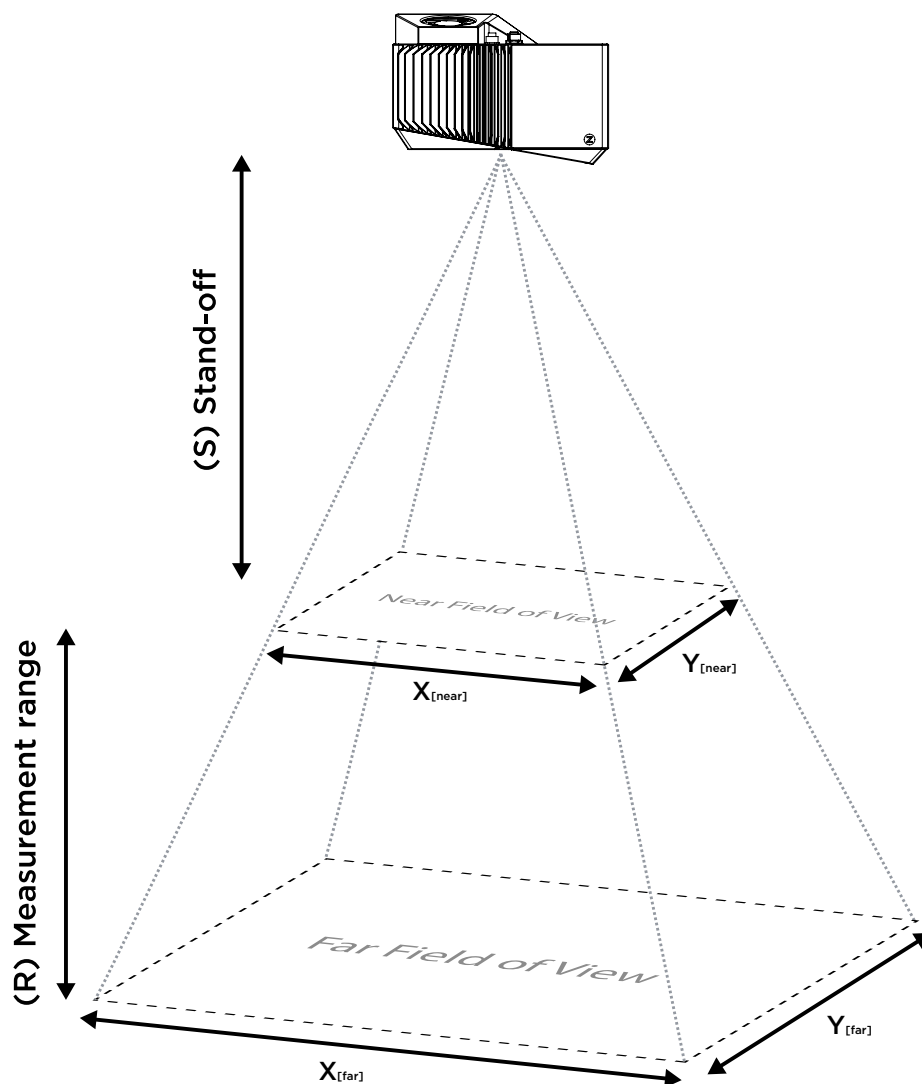
SERVICE AND MAINTENANCE 08

- The device contains no user serviceable parts inside. The warranty of the product will be void if opened.

- Check screw connections and connectors at regular intervals.

- Do not block the air opening on the front and rear side of the product.

- The device is dust resistant thus completely sealed. However, in case there are dust or other particles building up on the front glasses or in between the ribs of the heat sink, you should either use a small vacuum cleaner or a small canister of compressed air to remove the unwanted particles.

- In case of unit failure, please contact: **support@zivid.com**

VOLUME OF VIEW 09

(S) Stand-off

(R) Measurement range

Near Field of View

$X_{[near]}$

$Y_{[near]}$

Far Field of View

$X_{[far]}$

$Y_{[far]}$

Zivid	Distances
(S) Stand-off distance [overlap]	600 mm
(R) Measurement range [overlap]	500 mm
(S+R) Maximum distance [overlap]	1100 mm
Near Field of View image area ($X_{[near]}$ x $Y_{[near]}$)	430 x 270 mm
Far Field of View image area ($X_{[far]}$ x $Y_{[far]}$)	780 x 490 mm

Only optimal ranges are listed which includes full overlap between the field-of-view of the projector and the imaging sensor. The 3D camera can work beyond these limits both at closer range and above the maximum overlap distance at 1100 mm. However, outside these ranges there's only partial overlap and certain loss in quality can be expected at the far ranges.

TECHNICAL DATA　　　　　10

Zivid	Specifications
Output	2.3 Mpixels 3D RGB image (x,y,z and RGB for each pixel)
Acquisition rate	≥10 Hz, 100 ms snapshot
Optimal Working Distance	0.6 m - 1.1 m
Depth Resolution	0.1 mm @ 0.6 m
Software APIs	C++, C#, .NET, Python, MATLAB
OS	Windows 7/8/10
Housing	Rugged aluminum Water & dust resistant
Dimensions	226 x 165 x 86 mm
Weight	2 kg
Input	24 VDC, 5A
Interfaces & Connectors	USB 3.0: Data I/O M12-5: Power & Status M12-8: Sync I/O
Available USB 3.0 cables	5m USB High Flex [standard] 10m Optical USB 3.0 [optional] 25m Optical USB 3.0 [optional]
PC requirements	DirectX11 compatible, USB3 SuperSpeed
Safety standards	EN60950, UL950, FCC class A, CE
Environmental	According to IEC60068

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