



The USB powered CamBoard pico flexx is the smallest 3D camera development kit based on pmd Time-of-Flight (ToF) technology using a VCSEL based IR illumination. The integrated REAL3™ image sensor is a joint development of Infineon and pmdtechnologies. A small form factor and the low power consumption enable a wide range of new use cases and make the pico flexx the perfect development kit for 3D depth sensing applications.

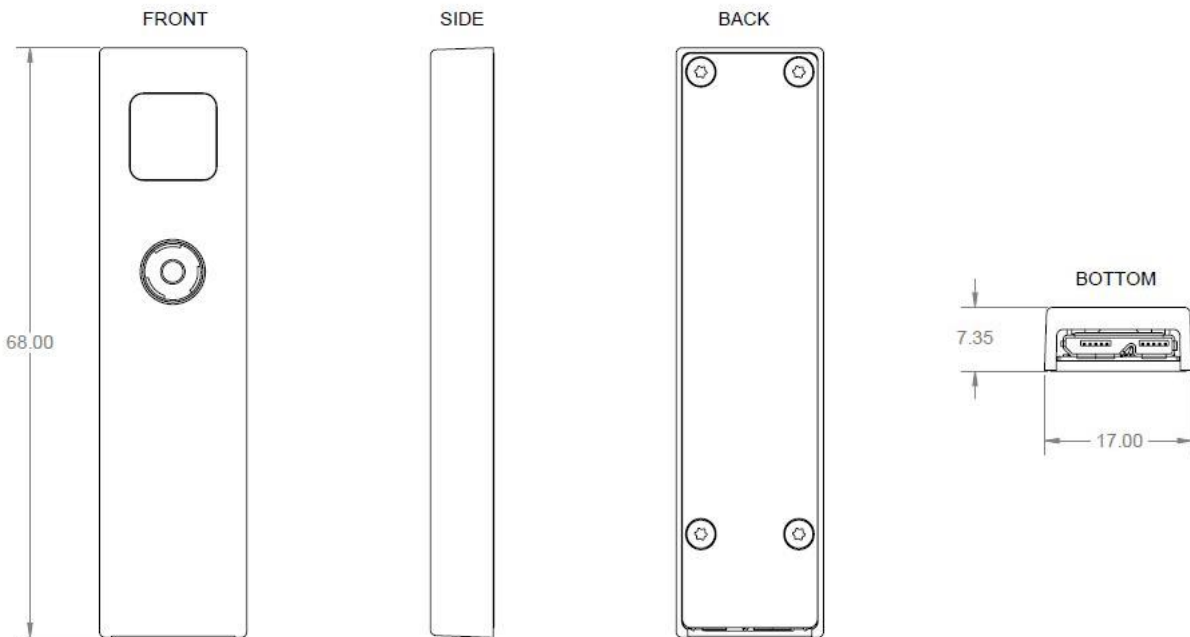
Parameter	CamBoard pico flexx
Dimensions ¹⁾	68mm x 17mm x 7.35 mm
Weight ¹⁾	8g
ToF-Sensor	IRS1145C Infineon® REAL3™ 3D Image Sensor IC based on pmd intelligence
Measurement range	0.1 – 4 m
Framerate	Up to 45fps (3D frames); 8 pre-defined operation modes
Acquisition time per frame	4.8 ms typ. @ 45 fps / 30 ms typ. @ 5 fps
Power consumption	USB2.0 compliant, average 300mW for IRS chip and illumination
Illumination	850 nm, VCSEL, Laser Class 1
Software	Royale SDK (C/C++ based, supports Matlab, DotNet, CAPI, OpenCV, OpenNI2, ROS)
Resolution	224 x 171 (38k) px
Viewing angle (H x V)	62° x 45°
Interface	USB2.0 / USB3.0 (data & power)
Depth resolution ²⁾	<= 1% of distance (0.5 – 4m @ 5fps) <= 2% of distance (0.1 – 1m @ 45fps)
Operating System	Windows 7/8/10, Linux/ARM, Ubuntu Linux 16.04 + Qt5.5, macOS , Android/ARM ³⁾

1) incl. housing

2) for lambertian reflection of 75% without ambient light

3) tested on assorted devices

Dimensions



Software

The CamBoard pico flexx comes with pmd's powerful software suite Royale, containing all the logic to operate the 3D camera including a visualization tool, the Royale Viewer. Royale is cross platform compatible and runs on Windows, Linux/ARM, Ubuntu Linux, macOS and Android/ARM. The SDK to develop your own applications is C++ based and supports also several programming languages and libraries like ROS, OpenCV, OpenNI2, Matlab, C, DotNet.

For more information and to download the software package, visit www.pmdtec.com/picofamily/



Frequently Asked Questions

If you have further questions about the functionality of the CamBoard pico flexx and the technology in general, please visit our comprehensive FAQ: www.pmdtec.com/picofamily/faq/