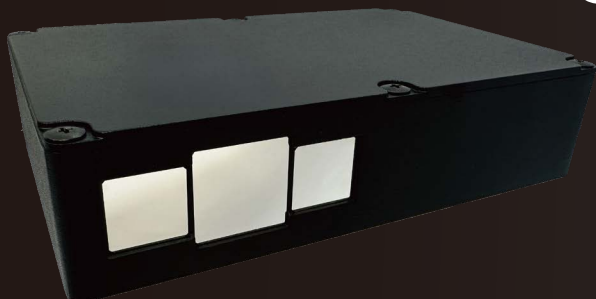


3D ToF Camera C11U



The C11U is a high-performance 3D ToF camera powered by TOPPAN' s proprietary hybrid ToF™ sensor, the TPHT4030. It incorporates an in-house developed 3D ToF sensor optimized for a short-pulse light source and a sophisticated range calculation algorithm (Depth Engine) within the camera itself. This hardware-level optimization enables robust performance even under intense sunlight up to 100,000 lx, effectively minimizing motion artifacts. Utilizing a USB Type-C connection, the C11U provides precise depth, IR, and point cloud data within a 0.5 m to 7.0 m range.



Outdoor Operation

Stable ranging accuracy is maintained even under intense sunlight up to 100,000 lx.



Stable Imaging on Mobile Robots

Suppresses motion artifacts (blurs) and supports a maximum frame rate of 120 fps to acquire accurate 3D data.

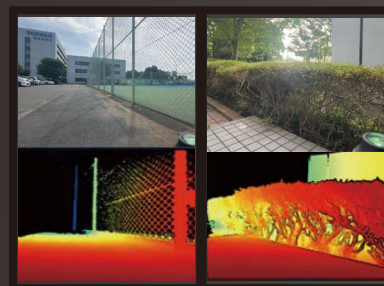


Simultaneous Near-to-Far Range Imaging

HDR technology simultaneously resolves near-range saturation and far-range signal loss without reducing the frame rate.



Outdoor
Demonstration



Outdoor Demo (Fence / Sidewalk)

7m



HDR
Demonstration



1m

HDR Demo

Optimal for various robot automation use Use Cases (Applications)



Autonomous Mobility
(Obstacle Detection)



Autonomous Forklift
(Pallet Detection)



AMR / AGV
(SLAM)



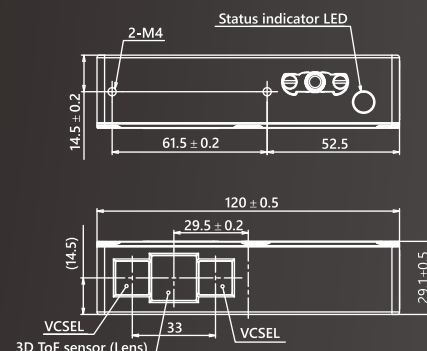
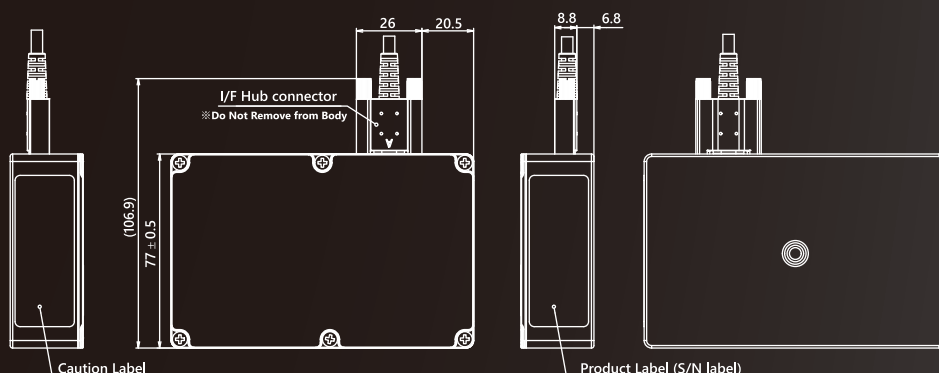
Small Mobility
(Step, Gap Detection)

Specification

Sensing method	Short-pulse type hybrid ToF method	Ambient light tolerance	Max. 100,000 lx
Sensor	TOPPAN 3D ToF sensor TPHT4030	Max. simultaneous units	16 units
Active pixels	640(H) x 480(V)	Camera synchronization	Hardware trigger sync.
Working range	0.5m - 7m	USB port (I/F Hub)	USB Type C (USB 3.1 Gen1)
Light source	2×VCSEL (λ=940 nm) [class 1 laser product: (IEC 60825-1:2014, EN 50689:2021)]	USB communication standard	UVC1.5
FOV	90° (H) x 67° (V)	Compliance	RoHS, REACH, WEEE, CE, FCC, FDA(CDRH)
Operating Mode	Standard mode (15fps, 30fps, 60fps) High-Speed mode (120fps) HDR mode (15fps, 30fps, 60fps)	Protection rating	IP67 (Camera body only)
Dimensions	Camera body: 29.1mm x 120mm x 77mm I/F Hub: 75mm x 25mm x 35mm	Power supply voltage	12V DC (AC 100V~240V, IEC C13)
Weight	Camera body: 320g I/F Hub: 110g	Power consumption	10W @ Standard (30fps, Light Times 100,000)

Excellent Durability For Harsh Environments

With its IP67-rated industrial design, the C11U is built to resist dust, water, and wind. This durability ensures reliable performance in many tough industrial environments.



User-Friendly SDK

The *senSPure*™ SDK (Software Development Kit) is designed for easy integration into multiple operating systems, which facilitates application development.

OS / Platform

- Windows 11 (x64)
- Windows 10 (x64)
- Linux Ubuntu 22.04 (x64)
- Linux Ubuntu 20.04 (x64)
- NVIDIA Jetson Platform (arm64) JetPack 6.x
- NVIDIA Jetson Platform (arm64) JetPack 5.x



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