

TFM IC5 set industrial 3D-cam

gives the power of interaction and autonomy

Outdoor design.



the standard is not our limit

tofmotion's 3D-cams enable machines and facilities to perceive their own environment.

TFM IC5 cameras enable fastest 3D imaging at full QVGA resolution, based on time of flight technology (ToF). They're rugged and certified for industrial and outdoor environment. They record depth data maps up to 160 frames per second and are able to process all images at the onboard processor immediately. Object detection and classification targeted to your application minimizes data transfer and allows direct connection to automation and control, as well as to robotics.

When technology meets creativity.

It's fast

Up to 160 fps for fastest movements and time-critical control, human-machine interaction, high productivity, fast logistics and more.

It's independent

Independent infrared lighting prevents false data due to shadows, lack of contrast and loves the work in absolute darkness.

It works

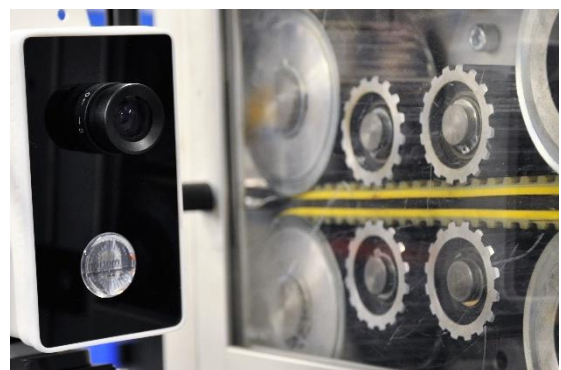
Rugged design, no moving parts means no mechanical maintenance, no operating stop, no optical adjustment, but care. Designed for outdoor use.

It's smart

The 3D-images comes from hardware, so there is sufficient computing capacity for customer-specific applications and the data transfer remains minimal.

It's everywhere

Automotive certification for electronics enables operation beyond industrial environmental standards. Indoor and outdoor.



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Use cases	Logistics Assistance warehousing & commissioning Object identification & tracking Sizing & damage control	Autonomous transport Material & tool transport Precision approach & docking Obstacle detection & collision avoidance
	Factory automation & surveillance Control sensor on production lines Components & objects detection Material & tool handling	Robotics Dynamic safety perimeter Workpiece identification Human machine collaboration (HMI) Gesture control and behavioral prediction
Features	Ready to use Preinstalled, out of the box Calibrated optics Industrial connectivity Unattended operation High speed application	Easy operation Industrial standard Independent from environment Customer application on board tofmotion support
Specs	ToF QVGA-sensor array Melexis ToF sensor 320 x 240pixel Phase frame rate up to 640fps Depth frame rate 65fps	Processor NXP i.MX6, quad core, max. 1,2GHz 2GB RAM, 4GB Flash 3 cores available for customer applications
	Optics 75deg field of view diagonal 62deg horizontal, 48deg vertical	Interface Gigabit Ethernet CAT6 RJ45 GPIOs on request
	Active exposure 4 VCSELs, 850nm Laser Programmable optical power 0...16W Eye safe, temperature controlled Background light up to 120.000 lux	Software TFM Firmware TFM SDK multiplatform 64bit and 32 bit Matlab API and ROS API 3 rd party visualizer
	Precision 0,15% of the distance (white target) 0,25% of the distance (grey target)	Housing IP65 Sealed aluminum, black PMMA front 2 flanges for mounting Operating temperature -40 ... +85°C
	Calibration Factory calibrated	Dimensions L x H x D 125 x 75 x 55 mm ³ (w/o lens & flanges) Weight 650 g
	Working range and pixel size 0,05 ... 10m outdoor 0,15 ... 27mm/pixel	
	Power Supply Power Input 9...16VDC Average power consumption 10W	
	Certificates EN 60825-1 Laser class 1 EN 61000-6 EMC compatibility	IEC 60529 housing
Documents	Product manual Quick start guide	
Order Numbers	TFM IC5.075 set TFM SDK	3D-cam including external AC/DC power supply 12 VDC Software Development Kit