

VTK SLAM Kit

Vecow Turn-key Solution of SLAM Kit with SPC-7100



Features

- 11th Gen Intel® Core™ i7/i5 processor (Tiger Lake UP3), up to 15W TDP
- DDR4 3200MHz 32GB memory and 1TB M.2 NVME storage
- Perpetual localization and mapping tech software license for precise tracking indoors and outdoors
- Cameras with Global shutter for both RGB and depth sensors
- IMU for meter level positioning and orientation tracking
- Lidar with fixed resolution per frame
- Mounting Kit can be customised with need



SPC-7100 Specifications

System	
Platform	Quad Core Intel® Core™ i7/i5 Processor (Tiger Lake UP3)
GPU	Intel® Iris® X® Graphics
Memory	DDR4 SO-DIMM 3200MHz 32GB
OS	Linux
I/O Interface	
Serial	2 COM RS-232/422/485 (ESD 8KV)
USB	2 USB 3.1, 2 USB 2.0
LAN	▪ LAN 1: Intel® I219LM GigE LAN supports iAMT ▪ LAN 2: Intel® I225-IT 2.5 GigE LAN
Audio	1 Mic-in, 1 Line-out
Display	2 DisplayPort: Up to 4096 x 2304 @60Hz
SIM Card	1 External Nano SIM Card Socket
Storage	
M.2	1TB M.2 Key B NVME Storage
SATA	1 SATA III (6Gbps) with internal bracket
Expansion	
M.2	▪ 1 M.2 Key B Socket (2260/3042/3052, PCIe x2/USB 3, Default/USB 2) ▪ 1 M.2 Key E Socket (2230, PCIe/USB)
Power	
Power Input	DC 9V to 55V with 3-pin Terminal Block: V+, V-, GND
Ignition Control	16 Mode Ignition Control
Remote Switch	3-pin Terminal Block
Mechanical	
Dimensions	150.4mm x 106.2mm x 44.2mm (5.92" x 4.18" x 1.74")
Mounting	▪ Wallmount Bracket ▪ Standard SLAM Mounting Frame (Optional)
Environment	
Operating Temperature	-40°C to 60°C (-40°F to 140°F) @15W TDP CPU
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing

Sensor Specifications

3D Camera	
Model Name	Intel® RealSense™ Depth Camera D455
Image Sensor Technology	Global shutter for both RGB and depth sensors
Ideal Range	0.6m to 6m
Inertial Measurement Unit	Bosch BMI055
Depth	▪ Up to 1280 x 720, 90fps ▪ FOV 87° x 58° ▪ <2% at 4 m accuracy
RGB	▪ Up to 1280 x 800, 30fps ▪ FOV: 90° x 65°
Connectors	USB 3.1 Type-C
IMU	
Model Name	Movella XSENS MTI-670
Sensor Fusion	▪ Roll, pitch: 0.2deg RMS ▪ Yaw/heading: 0.8deg RMS ▪ Position 1m CEP ▪ Velocity: 0.05m/s RMS
Gyroscope	Standard full range: 2000 deg/s
Accelerometer	Standard full range: 10g
Interfaces	▪ Interface: CAN, RS232 ▪ Protocols: Xbus, NMEA or CAN
LiDAR	
Model Name	Ouster OSO-32
Field of View	▪ Vertical: 90° (+45° to -45°) ▪ Horizontal: 360°
Range	35 m @100 klx sunlight, >90% detection probability (10% Lambertian reflectivity, 1024 @10Hz mode)

SW License

SLAM Software	
Visual SLAM	For 3D Camera
Lidar SLAM	For LiDAR

Order Information

VTK-SLAM-1000-1185G7E	SPC-7100, onboard Intel® Core™ i7-1185G7E, 1 DDR4 32G, 1 NVME SSD 512G, 1 PWA-120W, 1 WiFi Module with antenna, 1 LiDAR, 2 3D Camera, Kudan SLAM SW Licence, Mounting Kit
VTK-SLAM-1000-1145G7E	SPC-7100, onboard Intel® Core™ i7-1145G7E, 1 DDR4 32G, 1 NVME SSD 512G, 1 PWA-120W, 1 WiFi Module with antenna, 1 LiDAR, 2 3D Camera, Kudan SLAM SW Licence, Mounting Kit

Optional Accessories

Power Cord	By Customer's Request
-------------------	-----------------------