STACKRACK

CPT320

GPUCPU AI Fusion Computer

- Design for reliability under demanding MIL-STD-810G Thermal, Shock, Vibration, Humidity/EMI/EMC conditions
- Intel® 9th Gen. Core i7-9700TE Processor (1.8GHz turbo up to 3.8GHz, 8 cores)
- 2 x DDR4 SO-DIMM up to 32GB
- nVidia GTX1060MXM Graphic Card
- 4 x RJ45 LAN, 4 x USB, 5 x DP
- 2 x 2.5" SSD/HDD
- Extended Temperature -20~+60°C

MIL-STD 810G

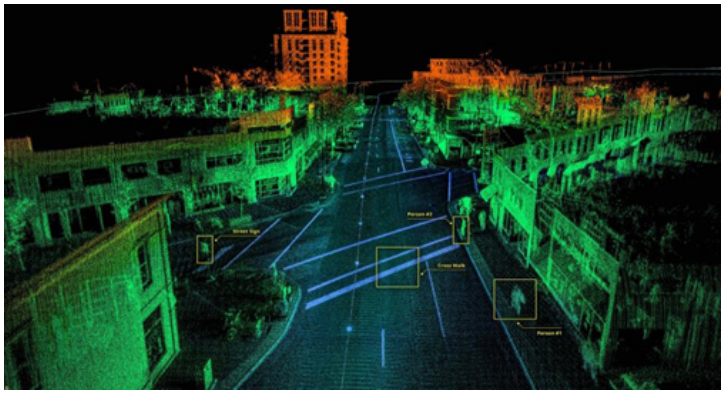
9th Coffeelake-R

NVIDIA GEFORCE GTX 1060M

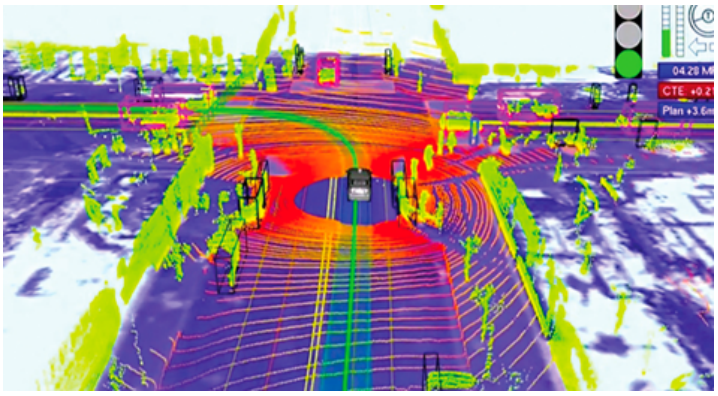
WWW.STACKRACK.COM

© Copyright STACKRACK Co., Ltd. All Rights Reserved .

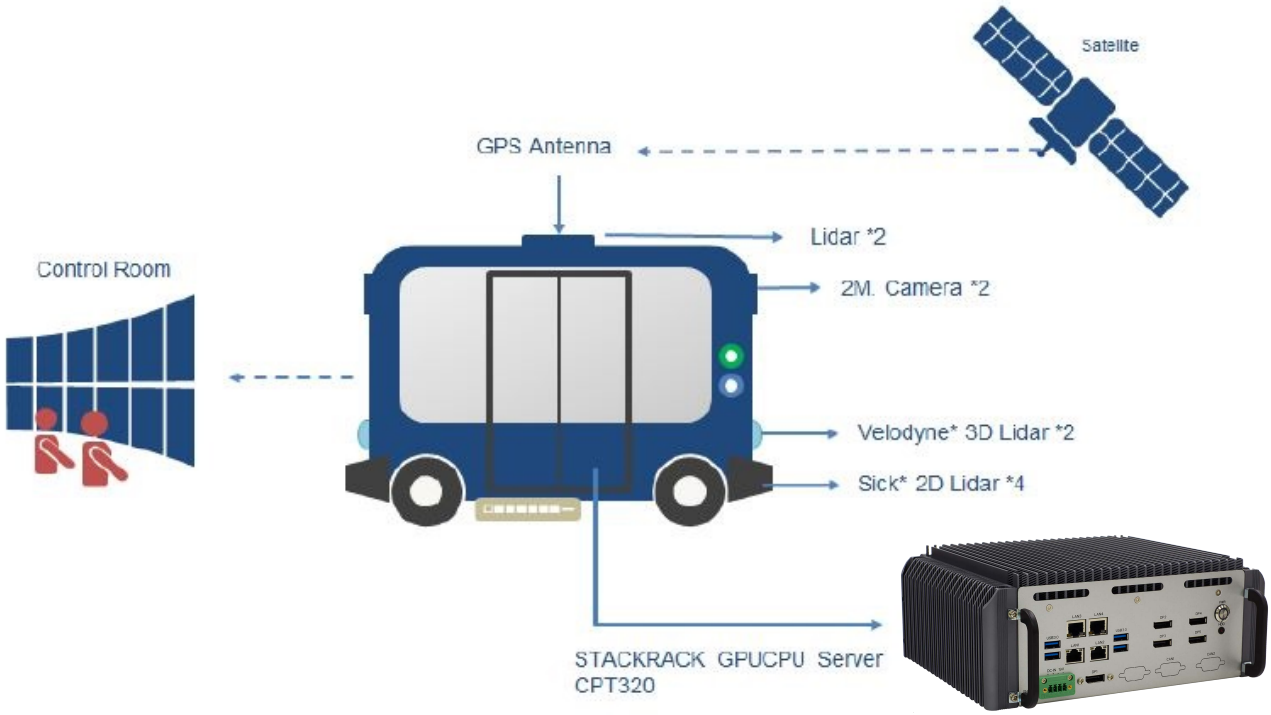
- **Advances in unmanned vehicles technologies**



Unmanned Vehicle Technology integrates high-power processing computers, intelligence, drive-by-wire technology and perception sensing technologies.
The trucks are equipped with LiDAR, RADAR, GPS, Vision, Advanced Algorithms, and, of course, very powerful computing capabilities.
Generally a certain level of autonomous flight capability is required for the vehicle to achieve its mission.
The basic autonomy level is to maintain its stability following a desired path under embedded guidance, navigation and control algorithm.
The UGV technology trends indicate that to cope with the more stringent operation requirements, the UGVs should rely less and less on the skill of the ground pilot and progressively more on the autonomous capabilities dictated by a reliable onboard computer system.

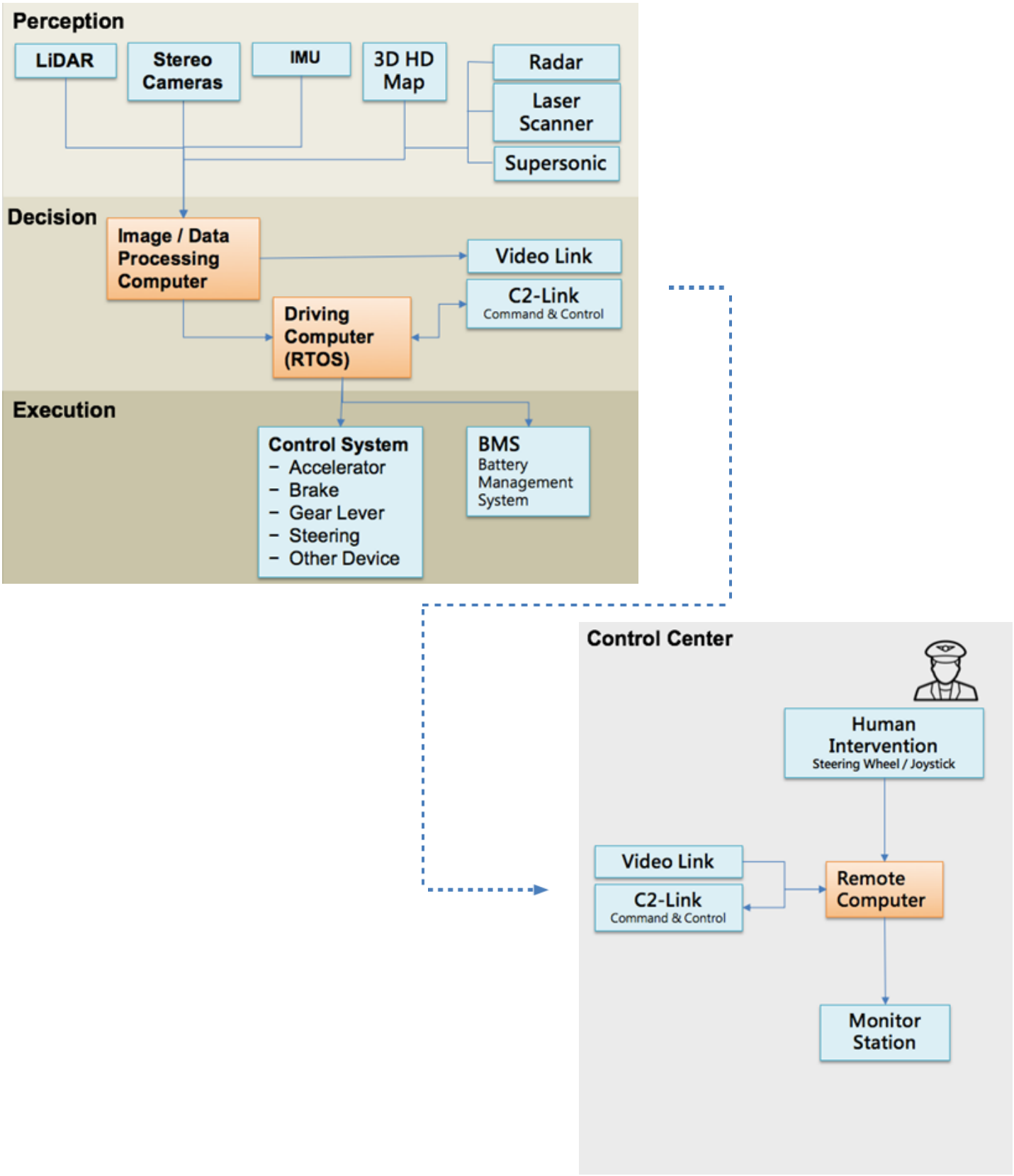


- **Advances in unmanned vehicles technologies**



© Copyright STACKRACK Co., Ltd. All Rights Reserved .

- **Architecture of UGV IT Diagram**



© Copyright STACKRACK Co., Ltd. All Rights Reserved .

Specifications

Specifications	
High Performance Processor	Intel® 9th Gen Core™ i7-9700TE (Frequency 1.8GHz, Turbo Boost Frequency up to 3.8GHz), 8 Cores, 12MB SmartCache. Build-in HD Graphics 630 for excellent 3D,Turbo Boost Technology 2.0, VPro support
Memory	Up to 32GB DDR4 RAM
Chipset	Intel® Q370 Chipset providing integrated USB 3.0 and supporting 8th /9th generation Intel® Core™ processor families
Expansion Slot	1 x M.2 (KEY E, 2230) with PCIe x1 and USB 2.0 for Wireless 1 x M.2 (KEY M, 2242/2260/2280) with PCIe x4 and SATA3 for SSD
Display	
GPU	NVIDIA GTX1060M
Display Port	Resolution up to 3840 x 2160@60Hz
Storage	
M.2	M.2 Solid State Disk (SSD) - up to 1TB Capacity. Rugged Industrial NAND Flash mSATA Storage w/ Rugged -40/+85C High Capacity, optional Pre-loaded with Linux or Windows OS. 128 / 256 / 512GB /1TB Innodisk 3MV2-P Series MLC SATA III 6Gb/s Flash SSD, Rated for 520 MB/sec Sequential Read ; 350 MB/sec Write Max.
SSD/HDD	2 x 2.5" Drive Bay
Ethernet	
Ethernet	2 x Intel Gigabit Ethernet LAN Interfaces (10/100/1000Mbps)
Rear I/O	
DisplayPort	5 x 20Pin DisplayPort connectors (Female)
Ethernet	2 x RJ45 Gigabit Ethernet LAN Interfaces 4 x RJ45 Gigabit Ethernet LAN Interfaces (Optional)
Serial Port	2 x DB9 connector RS-232 (Optional)
Button	1 x Power Button with LED
DC-IN	4P Rugged Terminal connector, DC 12V
Indicator LED	HDD Active LED

© Copyright STACKRACK Co., Ltd. All Rights Reserved .

Applications, Operating System	
Applications	Commercial and Military Platforms Requiring Compliance to MIL-STD-810G Embedded Computing, Process Control, Intelligent Automation and manufacturing applications where Harsh Temperature, Shock, Vibration, Altitude, Dust and EMI Conditions. Used in all aspects of the military
Operating System	Windows 10 Ubuntu13.04, Ubuntu13.10, Ubuntu14.04, Fedora 20
Physical	
Dimension (W x D x H)	250 x 225 x 98mm
Weight	5.5Kg
Chassis	SECC + Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide (Color silver)
Cooling	Natural Passive Convection/Conduction. No Moving Parts
Ingress Protection	Dust Proof (Similar to IP50)
Environmental	
MIL-STD-810G Test	Method 507.5, Procedure II (Temperature & Humidity) Method 516.6 Shock-Procedure V Non-Operating (Mechanical Shock) Method 516.6 Shock-Procedure I Operating (Mechanical Shock) Method 514.6 Vibration Category 24/Non-Operating (Category 20 & 24, Vibration) Method 514.6 Vibration Category 20/Operating (Category 20 & 24, Vibration) Method 501.5, Procedure I (Storage/High Temperature) Method 501.5, Procedure II (Operation/High Temperature) Method 502.5, Procedure I (Storage/Low Temperature) Method 502.5, Procedure II (Operation/Low Temperature) Method 503.5, Procedure I (Temperature shock)
Operating Temperature	-20 to 60°C (ambient with air flow)
IStorage Temperature	-40 to 85°C
EMC	CE and FCC compliance

Ordering Information

CPT320

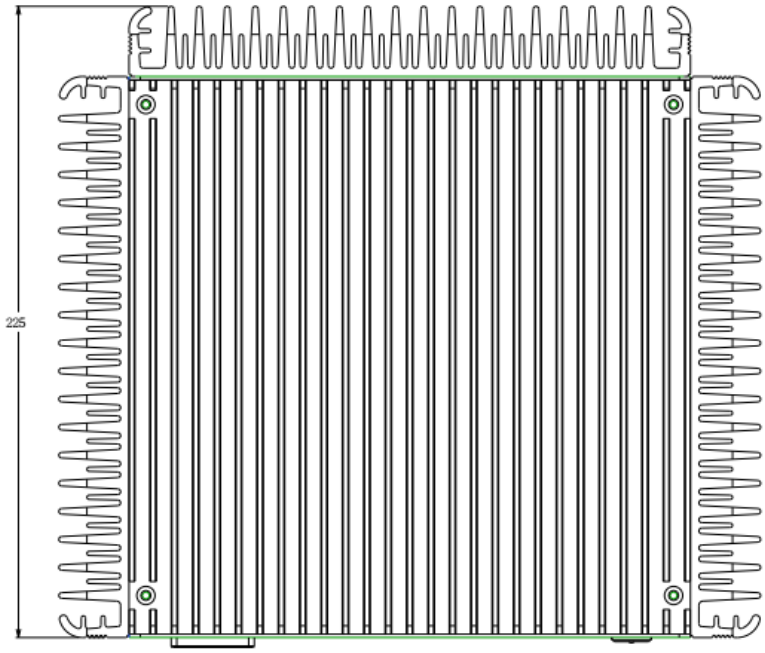
Fanless Rugged Server with Intel® 9th gen Core i7-9700TE, NVIDIA GTX1060M, Dual LAN, Operating Temperature -20~+60°C

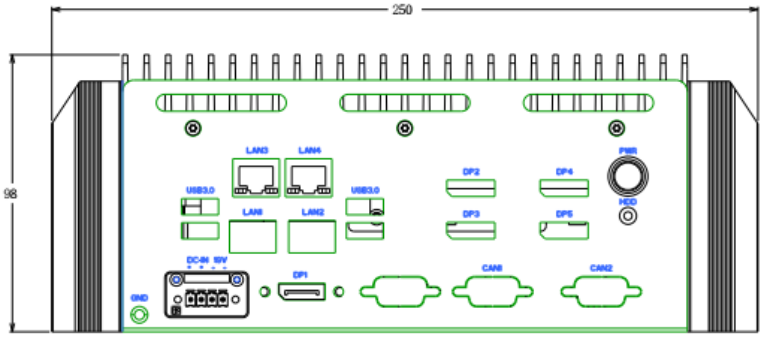
CPT320L

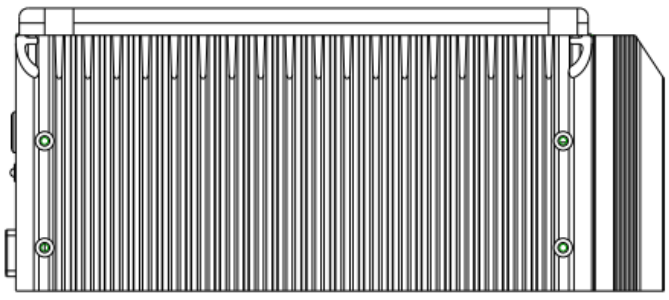
Fanless Rugged Server with Intel® 9th gen Core i7-9700TE, NVIDIA GTX1060M, Quad LAN, Operating Temperature -20~+60°C

© Copyright STACKRACK Co., Ltd. All Rights Reserved .

Drawing







© Copyright STACKRACK Co., Ltd. All Rights Reserved .