

ABOX-5211(P) Series

10th Gen Intel® Core™ Processor / 8 x GbE (Optional 8 x PoE) / 2 x DP / 4 x USB 3.2 10Gbps / 4 x USB 3.2 5Gbps
9~60V Input AI Computing

Features

- 10th Gen Intel® Core™ Processor
- 8 x DI, and 4 x DO and 4 x RS-232/422/485
- 3 x M.2 2280 Key M Support NVMe SSD Storage
- 9 ~ 60V DC Power Input
- Operating Temp.: - 40 ~ 70°C
- 8 x GbE RJ45 (Optional 8 x PoE)



Introduction

The ABOX-5211(P) Series is powered by the 10th Gen Intel® Core™ Processor and boasts 8 x DI, 4 x DO, and 4 x RS-232/422/485 support. It is perfect for Industrial IoT deployments, with high-performance computing and real-time capabilities certified by Intel® ESDQ (Edge Software Device Qualification) for Autonomous Mobile Robots (AMR). The Intel® UHD Graphics 630 Graphics and single-side I/O panel design, along with 9~60VDC power input, make it ideal for Factory Automation, Service Robots, Cellular V2X, Smart Retail, and any AIoT/Industry 4.0 applications. Moreover, it is suitable for industrial automation, digital signage, outdoor video surveillance, and AGV/AMR. In addition, ABOX-5211(P) Series accelerates AI inferencing for Edge Computing applications by equipping up to two Hailo-8™ AI Accelerators, and single Hailo-8™ AI Accelerator offers 26 TOPS inference performance.

Specifications

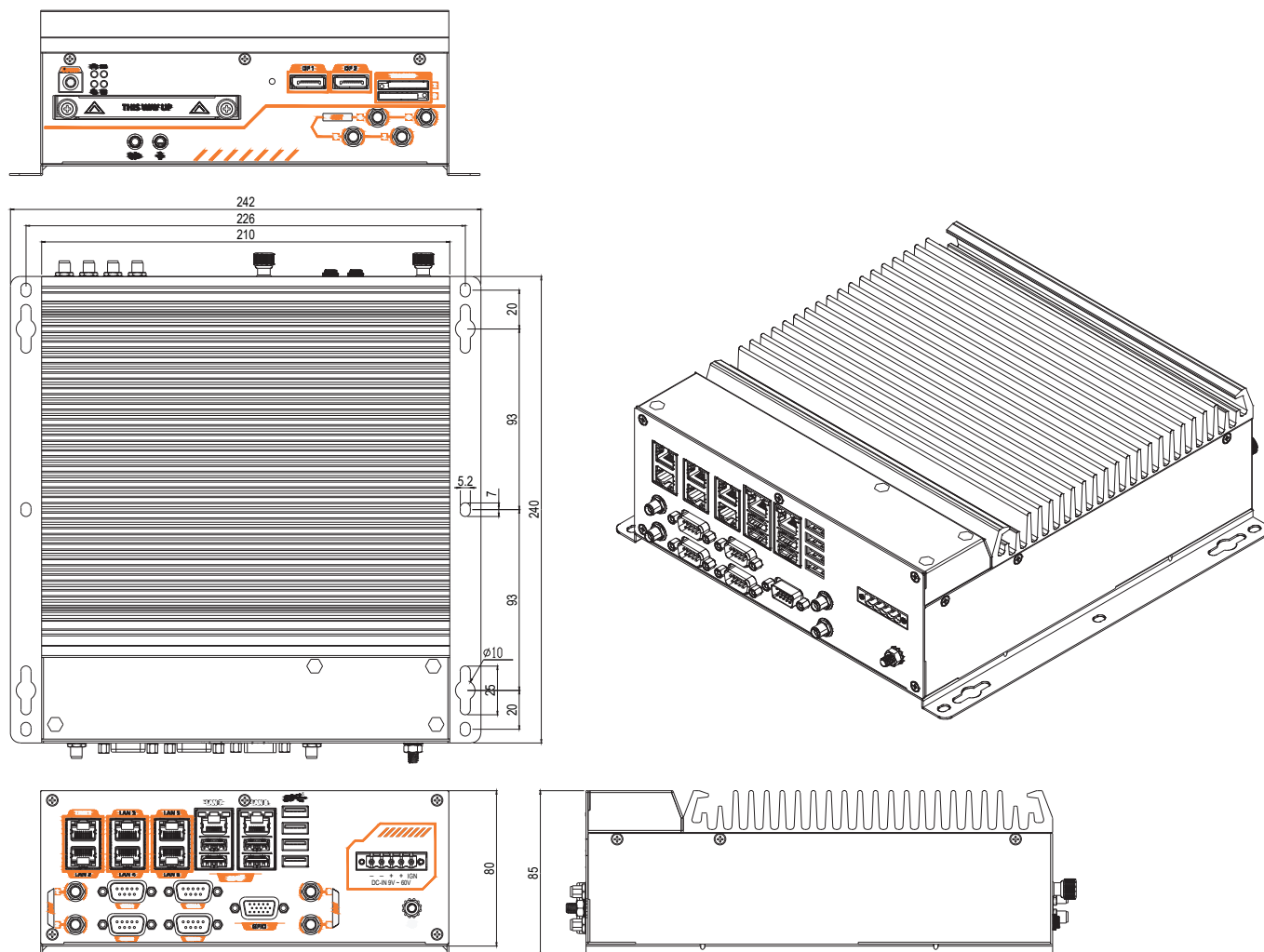
System	
CPU	10th Gen Intel® Core™ i9-10900TE (20M Cache 2.0GHz up to 4.5GHz)
	10th Gen Intel® Core™ i7-10700TE (16M Cache 2.0GHz up to 4.4GHz)
	10th Gen Intel® Core™ i5-10500TE (12M Cache 2.3GHz up to 3.7GHz)
	10th Gen Intel® Core™ i3-10100TE (6M Cache 2.3GHz up to 3.6GHz)
	Intel® Celeron® G5900TE (2M Cache 3.0GHz)
Chipset	Q470E
Memory	2 x DDR4 3200MHz SO-DIMM up to 64GB
LAN Chipset	7 x Intel i210-AT and 1 x i219LM (support iAMT) Gb/s Ethernet Controllers Onboard Support PXE and WOL
Watchdog	1 ~ 255 Level Reset
TPM	2.0
I/O	
Serial Port	4 x RS 232/422/485
USB Port	4 x USB 3.2 10Gbps and 4 x USB 3.2 5Gbps
LAN	8 x RJ45 Ports for GbE (Optional 8 x PoE Total Max. 120W)
Video Port	2 x DP
DIO Port	8 x DI (5~60VDC) and 4 x DO (5VDC, 100mA)
Audio	1 x Line-out and 1 x Mic-in
Expansion Bus	1 x M.2 Key B 3042/3052 for WWAN (USB3.0) w/ Dual SIM Slot
	1 x M.2 Key E 2230 Slot for Wi-Fi (PCIe + USB)
	2 x Full Mini-PCIe Slots (Support DIP Switch Enabled/Disabled SMBus Interface)
Mechanical	
Construction	Aluminum Extrusion with Steel Chassis
Mounting	Wall-mount
Weight	3680g (Barebone)
Dimensions	240(L) x 242(W) x 85(H)mm with Wall-mount

Storage	
Type	1 x 2.5" Drive Bay for SATA Type HDD/SSD (Rear Panel)
	2 x M.2 2280 Key M Supports NVMe 1 x M.2 2280 Key M Supports NVMe / SATA * Thermal heatsink is required for M.2 storage. Please contact sales window for more information. ** Support SATA Raid 0/1
Graphics	
CPU Built-in Graphics	Intel® UHD Graphics 630 for i9/i7/i5/i3 Intel® UHD Graphics 610 for G5900TE Max Resolution (DP 1.2) : 4096 x 2340 @ 60Hz
Software	
Operating System	Windows 10 & 11 IoT Enterprise 64bit, Ubuntu 20.04 LTS 64bit
Environmental	
Operating Temp.	- 40°C ~ 70°C w/0.6 m/S airflow *Operating temp. varies by accessories installed.
Storage Temp.	- 40°C ~ 80°C
Relative Humidity	10% RH ~ 90% RH (non-condensing)
Vibration (with SSD)	IEC60068-2-64, Random, 2.5G@5~500Hz, 1hr/axis MIL-STD-810G, Method 514.6, Procedure I, Cat.4, Operating
Shock	Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD
Certifications	CE, FCC Class A, E-Mark
Power Requirement	
Power Input	9~60VDC Power Input
Power Protection	Automatic Recovery Short Circuit Protection
Power Mgmt.	Vehicle Power Ignition for Variety Vehicle
Power Off Control	Power off Delay Time Setting by BIOS and Software
Battery Backup (Optional)	Internal Battery Kit for 10 Minutes Operating Patent No. : M447854 - Build-In Battery P/N: BAT-5200 kit, Operating Temp. Charging 0~45°C, Discharging -20~60°C. *UPS backup time varies depending on actual overall system power consumption, and battery self-depletion is an inevitable characteristic.

All specifications are subject to change without notice.

Dimensions

Unit : mm



Ordering Information

Model Number	ABOX-5211x-yy (x= P= w/PoE, x= Empty= w/o PoE, yy= i9= i9-10900TE, yy= i7= i7-10700TE, yy= i5= i5-10500TE, yy= i3= i3-10100TE, yy= C1= G5900TE)
Description	10th Gen Intel® 10 Cores i9-10900TE / 8 x GbE (Optional 8 x PoE) / 2 x DP / 4 x USB 3.2 10Gbps / 4 x USB 3.2 5Gbps / 9-60V Input AI Computing
State of Origin	Made in Taiwan

Optional Accessories

DRAM	DDR4-3200 MHz SO-DIMM, 4GB~32GB, -40~85°C
SSD	M.2 2280 B-M key NVMe TLC -40~85°C 64GB~1TB w/ Heatsink M.2 2280 B-M key SATA TLC -40~85°C 64GB~1TB w/ Heatsink 2.5 inch SATA TLC -40~85°C 64GB~2TB
AI	M.2 AI Acceleration Module
Wi-Fi	M.2 2230 A-E key 802.11 a/b/g/n/ac, Wi-Fi 6E
Modem	M.2 3042 B key 5G & LTE Module
GPS	MiniPCle GPS Module
CANBUS	MiniPCle CANBUS Module
Battery Backup Kit	BAT-5200 Battery Kit, 5200mAh, Charge 0~45°C, Discharge -20~60°C
Power adapter	AC/DC 24V Power Adapter

All specifications are subject to change without notice.