

# ABOX-5211(P) Series

10th Gen Intel® Core™ 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

## Features

- 10th Gen Intel® 10-Cores i9-10900TE
- 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 Series is powered by the 10th Gen Intel® Core™ i9-10900TE 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. The ABOX Fanless PC can handle all outdoor digital applications and extreme weather conditions with ease.

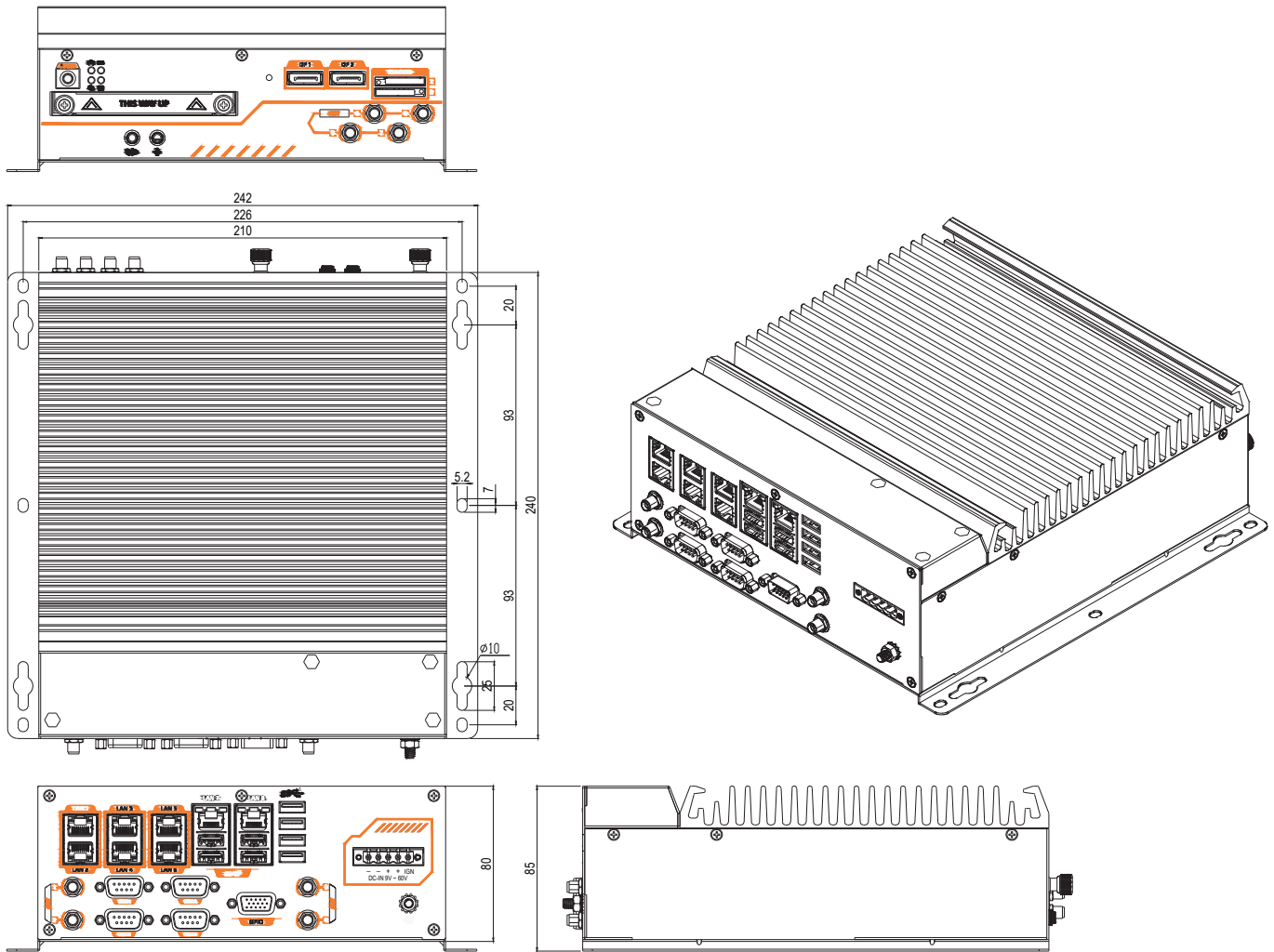
## Specifications

| 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 B Key 3042/3052 for WWAN (USB3.0) w/ Dual SIM Slot  |
|               | 1x M.2 A-E Key 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)<br>3 x M.2 M Key 2280 PCIe 4x Supported<br>* Thermal heatsink is required for M.2 storage. Please contact sales window for more information.   |
| Graphics                  |  |
| CPU Built-in Graphics     | Intel® UHD Graphics 630 for i9/i7/i5/i3<br>Intel® UHD Graphics 610 for G5900TE<br>Max Resolution (DP 1.2) : 4096 x 2340 @ 60Hz   |
| Software                  |  |
| Operating System          | Windows 10 64bit, Ubuntu 20.04 64bit   |
| Environmental             |  |
| Operating Temp.           | -40°C ~ 70°C w/0.6 m/s airflow<br>*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<br>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<br>P/N: BAT-5200 kit, Operating Temp. Charging 0 ~45°C, Discharging -20~60°C.<br>*UPS backup time varies depending on actual overall system power consumption, and battery self-depletion is an inevitable characteristic. |

## Dimensions

Unit : mm



## Ordering Information

|                        |  |
|------------------------|--|
| <b>Model Number</b>    | ABOX-5211x-yy<br>(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) |
| <b>Description</b>     | 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      |
| <b>State of Origin</b> | Made in Taiwan   |

## Optional Accessories

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

All specifications are subject to change without notice.