

# EBOX-7010

Taiwan Patent No. M447854, M592609, M601447

Intel Gen 10th i9/i7/i5/i3 CPU w/ 6 x RJ45 GbE (optional 4 x PoE Max. 100W) / 4 x COM / 1 x DP/ 1 x HDMI/ 1 x DVI-I/ 4 x USB 3.2 Gen 1/ 9-48V Edge Computing

## Features

- Intel Gen 10th i9/i7/i5/i3 CPU
- 1 x PCIe 3.0 x16 Interface Expansion (optional 2 x PCIe 3.0 x8 Interface)
- 6 x RJ45 GbE (optional 4 x PoE Max. 100W)
- 8 x DI, 4 x DO and 2 x RS-232/422/485
- 1 x DP + 1 x HDMI + 1 x DVI-I (Single Link w/o Analog Video)
- Dual Hot Swappable SATA Storage RAID 0,1,5
- 9-48V DC Input and Operating Temp.: -40~70°C
- TPM 2.0



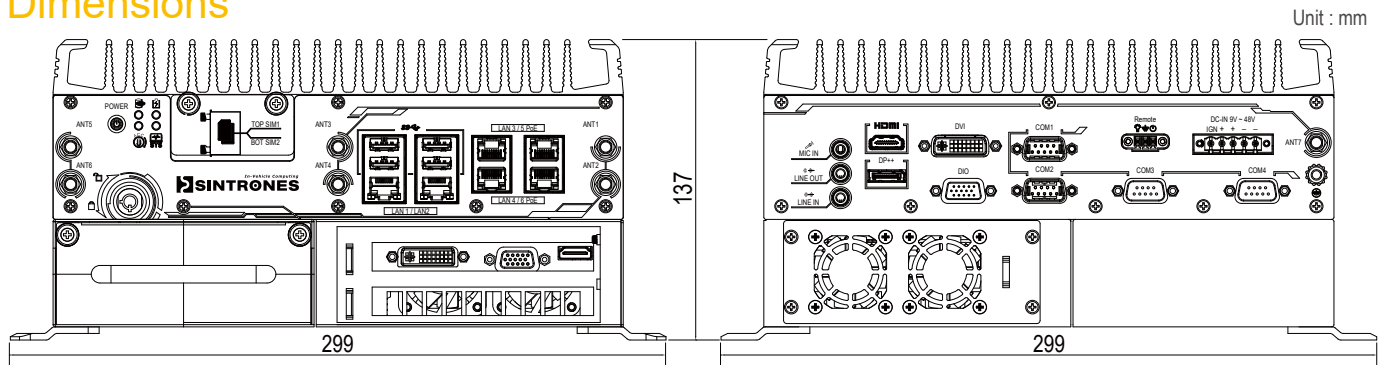
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## Introduction

The EBOX-7010 Edge Computing is suitable for various factory automation and Industrial Internet of Things (IIoT) control system in large-scale processes such as mining and manufacturing. It is powered by Intel 10th Gen Core i9/i7/i5/i3 CPU (Comet Lake) with 6 x RJ45 GbE (optional 4 x PoE Max. 100W).

EBOX-7010 features TPM 2.0 and memory 2 x DDR4 2666/2933 MHz SO-DIMM up to 64GB. Furthermore, the environmental tolerance continually maintains a wide range of operating temperatures (-40 ~ 70 °C). In addition, it provides Intel® UHD Graphics 630 with max resolution (HDMI): 4096x2304@24Hz.

## Dimensions



## Specifications

System	
<b>CPU</b>	Intel Gen9 Core i7-9700TE (12M Cache 1.8GHz up to 3.8GHz) Intel Gen8 Core i7-8700T (12M Cache 2.4GHz up to 4.0GHz) Intel Gen8 Core i5-8500T (9M Cache 2.1GHz up to 3.5GHz) Intel Gen8 Core i3-8100T (6M Cache 3.1GHz) Intel Gen8 Celeron G4900T (2M Cache 2.9GHz)
<b>Memory</b>	2 x DDR4 2666/2933 MHz SO-DIMM up to 64GB
<b>LAN Chipset</b>	5 x Intel i210-AT and 1 x i219 (iAMT9.5 w/ i5, i7 only) Gb/s Ethernet Controllers Onboard Support PXE and WOL
<b>Watchdog</b>	1 ~ 255 Level Reset
<b>TPM</b>	2.0
I/O	
<b>Serial Port</b>	4 x RS 232/422/485 (Auto Direction Control)
<b>USB Port</b>	4 x USB 3.2 Gen 1 Ports
<b>LAN</b>	6 x RJ45 GbE (optional 4 x PoE Max. 100W)
<b>Video Port</b>	1 x DP + 1 x HDMI + 1 x DVI-I (Single Link w/o Analog Video)
<b>DIO Port</b>	8 x DI (5~48VDC) and 4 x DO (5VDC, 100mA)
<b>Audio</b>	1 x Line-out, 1 x Line-in and 1 x Mic-in
<b>Expansion Bus</b>	Riser card w/ 1 x PCIe x16 slot (1 x PCIe 3.0 x16 interface w/ 1 x ATX 6 Pin Power Output) Optional riser card w/ 2 x PCIe x16 slot (2 x PCIe 3.0 x8 interface w/ 1 x ATX 6 Pin Power Output) * Supports up to 185mm in length and 112mm in height PCIe cards * Maximum power supply from PCIe slot and ATX 6 pin combined @ 150W when DC power source is above 19V * DC 19V or above power source is suggested when graphics cards are installed  2 x Full Mini-PCIe Slots  1x M.2 A-E Key 2230 slot, 1 x M.2 B Key 3042 slot w/ 2 x SIM Card Sockets for LTE <b>Patent No. : M592609 - Automatic SIM Card Detection</b>
Software	
<b>Operating System</b>	Win 10, Ubuntu 18.04 64bit

Graphics	
<b>Graphics</b>	Intel® UHD Graphics 630
<b>Resolution</b>	Max Resolution (DP) 4096x2304@60Hz (HDMI) : 4096x2304@24Hz
Environmental	
<b>Operating Temp.</b>	-40°C ~ 70°C, with SSD and ambient w/ air flow 0.6m/s (System only, not including PCIe cards) -20°C ~ 60°C with BAT-5200-E1 Battery Kit
<b>Storage Temp.</b>	-40°C ~ 80°C
<b>Relative Humidity</b>	10% RH ~ 90% RH (non-condensing)
<b>Certifications</b>	CE, FCC Class A, RoHS (Self declaration)
Storage	
<b>Type</b>	Hot Swappable 2 x 2.5" Drive Bay for SATA Type HDD/SSD RAID 0, 1, 5 w/ External Accessibility via USB 3.2 Gen 1 when removed <b>Patent No. : M601447 - Removeable Storage Device</b> 1 x M.2 M key 2280 slot supports NVMe and SATA SSD * Thermal heatsink is required for M.2 storage. Please contact sales window for more information.
Power Requirement	
<b>Power Input</b>	9V - 48V DC Power Input
<b>Power Protection</b>	Automatics Recovery Short Circuit Protection
<b>Power Mgmt.</b>	Vehicle Power Ignition for Variety Vehicle
<b>Power Off Control</b>	Power off Delay Time Setting by BIOS and Software
<b>Battery (UPS)</b>	Internal Battery Kit for 10 Mins Operating (Optional and cannot be installed with PoE module) UPS operating time varies depending on PCIe cards w/ different power consumption <b>Patent No. : M447854 - Build-in Battery</b>
Mechanical	
<b>Construction</b>	Aluminum Alloy
<b>Mounting</b>	Wall-mount
<b>Weight</b>	7600g (Barebone)
<b>Dimensions</b>	260(L) x 250(W) x 137(H) mm

## Ordering Information

<b>Part Number</b>	EBOX-7010XY-ZZ (X= P= w/PoE, X= Empty= w/o PoE, YY= E1= w/1 x PCIe x 16 interface, YY= E2= w/2 x PCIe 3.0 x8 interface, ZZ= i9= i9-10900TE, ZZ= i7= i7-9700TE, ZZ= i5= i5-10500TE, ZZ= i3= i3-10100TE, ZZ= C1= G5900TE)
<b>Description</b>	Intel 9th Gen Core i7/ Intel 8th Gen Core i7/i5/i3 CPU w/ 6 x RJ45 GbE (optional 4 x PoE Max. 100W) / 4 x COM / 1 x DP/ 1 x HDMI/ 1 x DVI-I/ 4 x USB 3.2 Gen 1/ 9-48V Edge Computing
<b>State of Origin</b>	Made in Taiwan

## Optional Accessories

<b>DRAM</b>	DDR4-2933 MHz SO-DIMM, 4GB~32GB, 0~70°C/-40~85°C M.2 2280 B-M key NVMe TLC -40~85°C 64GB-1TB w/ Heatsink
<b>SSD</b>	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>Wifi</b>	M.2 2230 A-E key 802.3 a/b/g/n/ac
<b>Modern</b>	M.2 3042 B key LTE module

<b>GPS</b>	MiniPCIe GPS module
<b>CANBUS</b>	MiniPCIe CANBUS module
<b>Battery backup kit</b>	BAT-5200-E1 Battery Kit, 5200m/h, -30~60°C, discharge -20~60°C, operating about 10 mins w/o considering PCIe card power consumption
<b>Power adapter</b>	AC/DC 220W/24V or 280W/24V power adapter