

# ABOX-5210G4

Taiwan Patent No. M447854, M565941, M592609

Intel Gen 10th 10 Cores Xeon, i9 CPU w/ 10 x GbE (Optional 8 x PoE)/ 3 x COM/ 3 x DP/ 2 x HDMI/ 4 x USB 3.2 Gen 1x1/  
NVIDIA® GeForce GTX 1060 GPU/ 9-48V Input AI GPU Computing

## Features

- Intel GEN 10th 10 Cores Xeon W-1290TE / i9-10900TE
- NVIDIA® GeForce GTX 1060 GPU
- Support 1280 CUDA Cores
- 8 x DI, and 4 x DO and 3 x RS-232/422/485
- 1 x M.2 B key, 1 x M.2 A-E key & 3 x MiniPCle expansion slots
- Dual Hot Swappable SATA Storage RAID 0,1,5
- 9-48V DC Input and Operating Temp.: -40~60°C
- 10 x GbE RJ45 (Optional 8 x PoE and 8 x M12 X coded connectors)
- Rolling Stock EN 50155 and EN 50121-3-2 certified



POE



GPS



Wireless



Wide Range



Delay Time

## Specifications

| System        |                                                                                                                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU           | Intel Gen10 Xeon W-1290TE (20M Cache 1.8GHz up to 4.6GHz)*                                                                                                                              |
|               | Intel Gen10 Core i9-10900TE (20M Cache 1.8GHz up to 4.5GHz)                                                                                                                             |
|               | Intel Gen10 Core i7-10700TE (16M Cache 2.0GHz up to 4.4GHz)                                                                                                                             |
|               | Intel Gen10 Core i5-10500TE (12M Cache 2.3GHz up to 3.7GHz)                                                                                                                             |
|               | Intel Gen10 Core i3-10100TE (6M Cache 2.3GHz up to 3.6GHz)                                                                                                                              |
|               | Intel Gen10 Core G5900TE (4M Cache 3.0GHz)                                                                                                                                              |
|               | <b>* Use only with Intel W480E</b>                                                                                                                                                      |
| Chipset       | Q470E / W480E                                                                                                                                                                           |
| Memory        | 2 x DDR4 2666/2933 MHz SO-DIMM up to 64GB (Optional ECC support with Xeon W-1290TE)                                                                                                     |
| LAN Chipset   | 9 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   | 3 x RS 232/422/485 (option additional 1 x RS 232/422/485)                                                                                                                               |
| USB Port      | 4 x USB 3.2 Gen 1x1 Ports                                                                                                                                                               |
| LAN           | 10 x RJ45 Ports for GbE (Optional 8 with M12 X coded connectors and 8 x PoE total Max.120W)                                                                                             |
| Video Port    | 3 x DP (Intel built-in GPU), 2 x HDMI Ports (MXM graphics)                                                                                                                              |
| DIO Port      | 8 x DI (5~48VDC) and 4 x DO (5VDC, 100mA)                                                                                                                                               |
| Audio         | 1 x Line-out, 1 x Line-in and 1 x Mic-in                                                                                                                                                |
| Expansion Bus | 2 x Full Mini-PCle Slots and 1 x Full Mini-PCle Slot w/ USB interface only for WWAN sharing 2 x SIM Card Sockets with M.2 B Key 3042 slot                                               |
|               | 1x M.2 A-E Key 2230 slot, 1 x M.2 B Key 3042 slot w/ 2 x SIM Card Sockets for WWAN<br><b>Patent No. : M592609 - Automatic SIM Card Detection</b>                                        |
| Storage       |                                                                                                                                                                                         |
| Type          | 2 x 2.5" Drive Bay for SATA Type HDD/SSD RAID 0, 1, 5                                                                                                                                   |
|               | 1x M.2 A-E Key 2230 slot, 1 x M.2 B Key 3042 slot w/ 2 x SIM Card Sockets for WWAN<br>* Thermal heatsink is required for M.2 storage. Please contact sales window for more information. |

## Graphics

|                   |                                                                                 |
|-------------------|---------------------------------------------------------------------------------|
| Built-in Graphics | Intel® UHD Graphics 630 for z9/i9/i7/i5/i3, Intel® UHD Graphics 610 for G5900TE |
|                   | Max Resolution (DP 1.2) : 4096 x 2340 @ 60Hz                                    |
| MXM Graphics      | NVIDIA® GeForce GTX 1060 GPU (1280 CUDA Cores) w/6GB GDDR5                      |
|                   | Max Resolution (HDMI 2.0b) : 4096 x 2160 @ 60Hz                                 |

## Environmental

|                      |                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------|
| Operating Temp.      | -40°C ~ 60°C w/GTX1060 w/0.6 m/S airflow<br><b>Patent No. : M565941 - Thermal Cooling</b>                  |
| 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, E13, EN50155                                                                              |

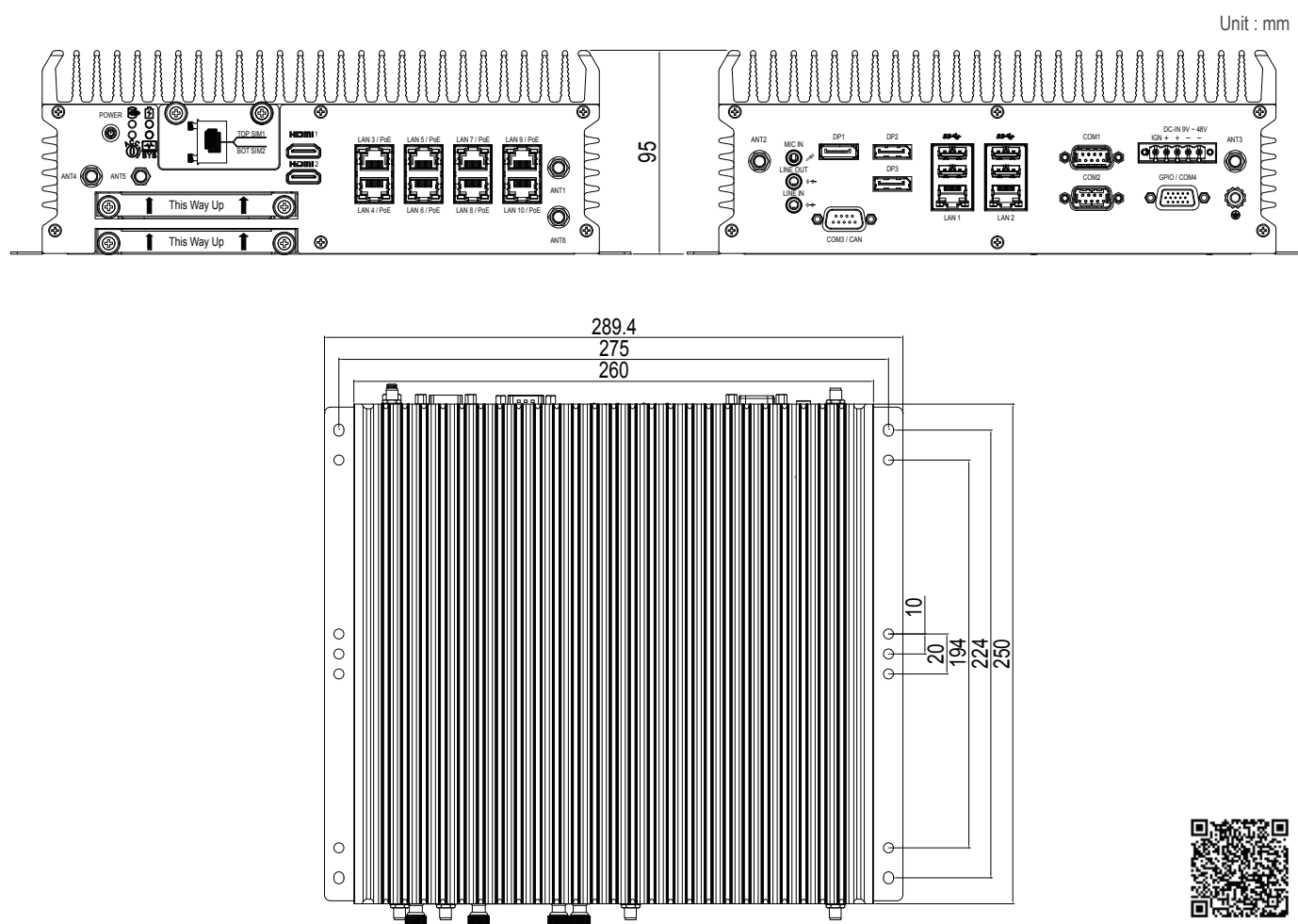
## Power Requirement

|                         |                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Power Input             | 9V - 48V DC Power Input                                                                                                                      |
| Power Protection        | Automatics 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 (Option) | Internal Battery Kit for 10 Mins Operating (P/N: BAT-5200 kit, Operating Temp. -20 ~ 60°C)<br><b>Patent No. : M447854 - Build-in Battery</b> |

## Mechanical

|              |                            |
|--------------|----------------------------|
| Construction | Aluminum Alloy             |
| Mounting     | Wall-mount                 |
| Weight       | 5300g (Barebone)           |
| Dimensions   | 260(L) x 250(W) x 95(H) mm |

## Dimensions



Please Scan The QR Code For More Information

## Ordering Information

|                 |                                                                                                                                                                                    |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part Number     | ABOX-5210xyy-zz (x= P= w/PoE, x= Empty= w/o PoE, yy=G4=GTX 1060, zz=Z9= W-1290TE, zz= i9= i9-10900TE, zz= i7= i7-10700TE, zz= i5= i5-10500TE, zz= i3= i3-10100TE, zz= C1= G5900TE) |
| Description     | Intel Gen 10th 10 Cores Xeon, i9 CPU w/ 10 x GbE (Optional 8 x PoE)/3 x COM/ 3 x DP/ 2 x HDMI/4 x USB 3.2 Gen 1/ NVIDIA® GeForce GTX 1060 GPU/ 9-48V Input AI GPU Computing        |
| State of Origin | Made in Taiwan                                                                                                                                                                     |

## Optional Accessories

|                    |                                                                                                                                                           |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRAM               | DDR4-2933 MHz SO-DIMM, 4GB~32GB, 0~70°C/-40~85°C                                                                                                          |
| SSD                | M.2 2280 B-M key NVMe TLC -40~85°C 64GB~1TB w/ Heatsink<br>M.2 2280 B-M key SATA TLC -40~85°C 64GB~1TB w/ Heatsink<br>2.5 inch SATA TLC -40~85°C 64GB~2TB |
| Wifi               | WiFi M.2 2230 A-E key module                                                                                                                              |
| Modem              | M.2 3042 B key 5G&LTE module                                                                                                                              |
| GPS                | MiniPCle GPS module                                                                                                                                       |
| CANBUS             | MiniPCle CANBUS module                                                                                                                                    |
| Battery backup kit | BAT-5200 Battery Kit, 5200m/h, -30~60°C, discharge -20~60°C, operating about 10 mins                                                                      |
| Power adaptor      | AC/DC 220W/24V or 280W/24V power adaptor                                                                                                                  |