



## AXP-9051-IoT/AXP-9251-IoT/AXP-9651-IoT

-2/6-slot Metal Standard PAC with i5-8365UE CPU and Win10 IoT

### Features

- Windows 10 IoT Enterprise (64-bit)
- Intel® Core™ i5-8365UE Processor (1.6 ~ 4.1 GHz, 4C8T)
- 32 GB DDR4 SDRAM
- 128 GB SSD
- VGA / HDMI Display Output
- 2 10/100/1000M Ethernet Ports
- Redundant Power Input
- Operating Temperature: -25 ~ +60 °C



### Introduction

The AXP-9000-IOT are Windows 10 IoT based PACs that combine computing, I/O, and operator interface into a single unit, and provide the perfect solution for integrating HMI, data acquisition and control in an individual PAC. It is equipped with an Intel Core i5-8365UE CPU, 0/2/6 I/O expansion slots and a variety of connectives including dual Gigabit Ethernet, VGA, HDMI, USB port, RS-232 and RS-485 interface. Local I/O slots are available to use our I-9K, I-97K, e-9K series I/O modules and remote I/O expansions are available to use our Ethernet I/O modules and RS-485 I/O modules.

AXP-9000-IoT has a built-in Windows 10 IoT Enterprise operating system, which can support both the Universal Windows App and traditional Windows applications simultaneously. For software development tools, it can maintain maximum sharing with Windows 10, and applications can be quickly ported to AXP-9000 and deployed in a variety of harsh environments.

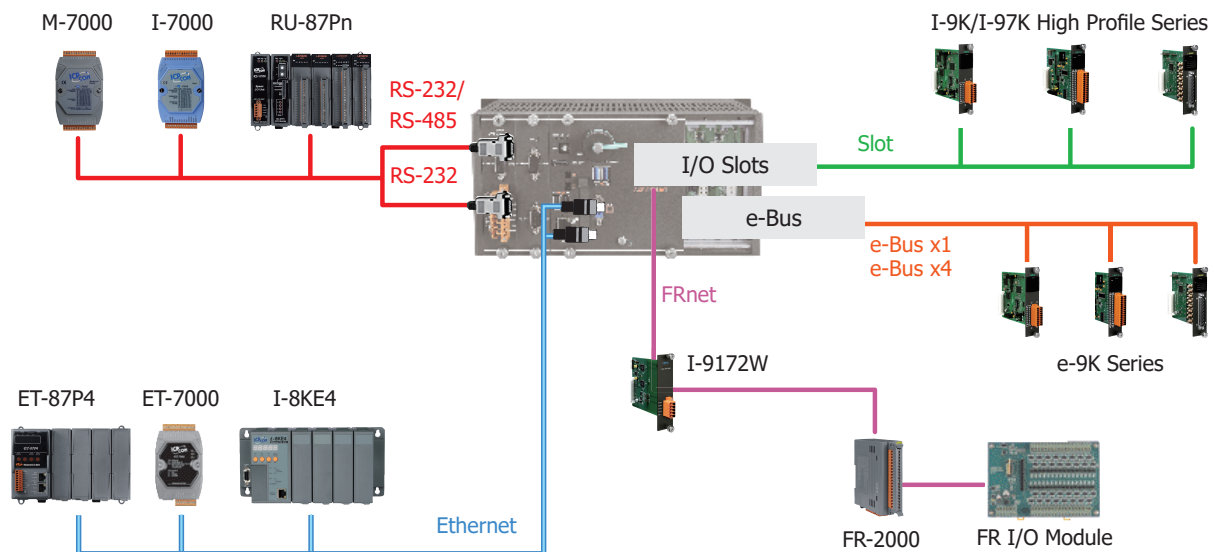
### What is Windows 10 IoT?



Windows 10 IoT is a member of the Windows 10 family that brings enterprise-class power, security and manageability to the Internet of Things. It leverages Windows' embedded experience, ecosystem and cloud connectivity, allowing organizations to create their Internet of Things with secure devices that can be quickly provisioned, easily managed, and seamlessly connected to an overall cloud strategy.

- Traditional Windows Shell with Advanced Lockdown Features
- Full Windows UI support (e.g. UWP, WinForms, etc)

### Applications

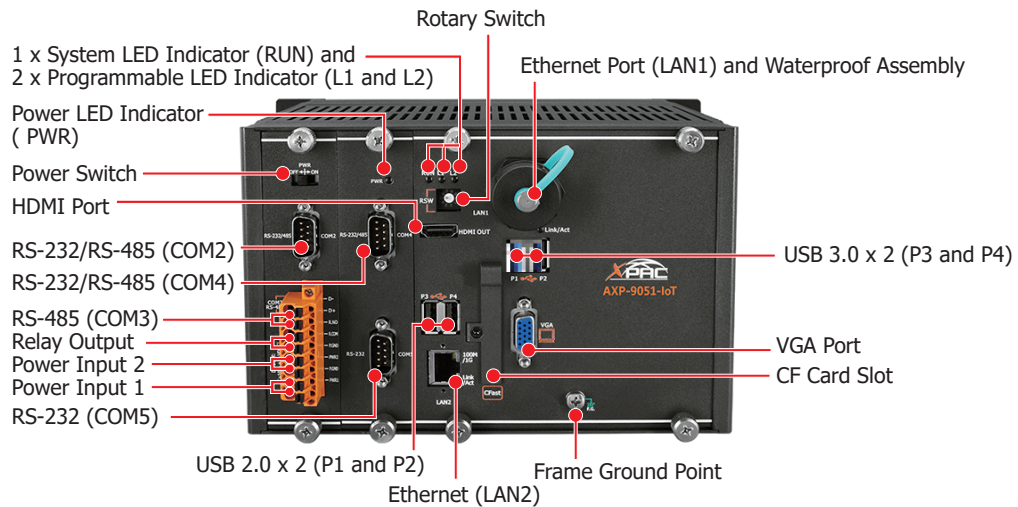


## Specifications

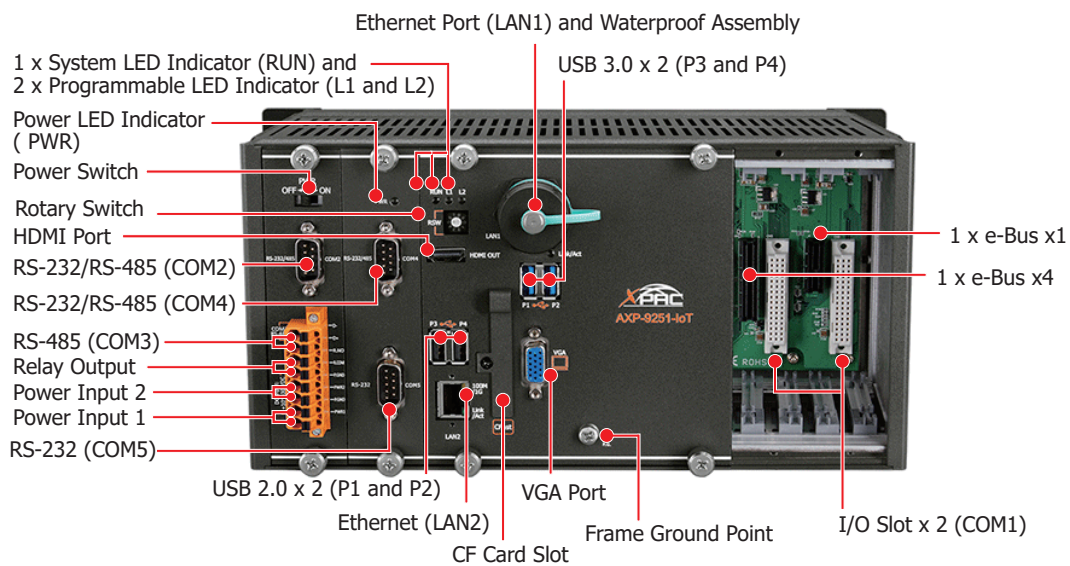
| Model                         | AXP-9051-IoT  | AXP-9251-IoT                             | AXP-9651-IoT                             |
|-------------------------------|---|--|--|
| <b>Software</b>               |   |  |  |
| OS                            | Windows 10 IoT Enterprise (64-bit)  |  |  |
| Framework Support             | .Net Compact Framework 3.5 ~ 4.8  |  |  |
| Service                       | IE11, FTP Server, IIS 7.0, ASP (Java Script, VB Script)   |  |  |
| SDK Provided                  | DII for VC, DII for Visual Studio.Net   |  |  |
| Multilanguage Support         | English, German, French, Spanish, Portuguese, Russian, Italian, Korean, Japanese, Simplified Chinese, Traditional Chinese |  |  |
| <b>Main Unit</b>              |   |  |  |
| CPU                           | Intel® Core™ i5-8365UE Processor (1.6 ~ 4.1 GHz, 4C8T)  |  |  |
| System Memory                 | 32 GB DDR4 SDRAM (Two SODIMM slots with a 16 GB DDR4)   |  |  |
| MRAM                          | 128 KB  |  |  |
| Flash                         | 128 GB SSD  |  |  |
| EEPROM                        | 16 KB   |  |  |
| Storage                       | 32 GB CFast card  |  |  |
| RTC (Real Time Clock)         | Provide seconds, minutes, hours, day of week/month, month and year  |  |  |
| 64-bit Hardware Serial Number | Yes, for software copy protection   |  |  |
| Watchdog Timer                | Dual Watchdog Timer   |  |  |
| Power Switch                  | Yes   |  |  |
| Rotary Switch                 | 1 x 10 Position (0 ~ 9)   |  |  |
| Buzzer                        | Yes   |  |  |
| <b>Display</b>                |   |  |  |
| VGA Resolution                | 1920 x 1200 @ 60 Hz   |  |  |
| HDMI Resolution               | 4096 x 2160 @ 30P   |  |  |
| LED Indicator                 | 1 x System, 1 x Power, 2 x Programmable   |  |  |
| <b>Communication Ports</b>    |   |  |  |
| Ethernet                      | 2 x RJ-45 10/100/1000M Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)   |  |  |
| USB                           | 2 x USB 2.0, 2 x USB 3.0  |  |  |
| COM1                          | Internal communication with the I-97K series modules in slots   |  |  |
| COM2                          | RS-232/485 (RxD, TxD and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated                                      |  |  |
| COM3                          | RS-485 (Data+, Data-); 3000 VDC isolated  |  |  |
| COM4                          | RS-232/485 (RxD, TxD, CTS, RTS and GND for RS-232; Data+, Data- for RS-485); 3000 VDC isolated                            |  |  |
| COM5                          | RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); 3000 VDC isolated  |  |  |
| <b>I/O Expansion</b>          |   |  |  |
| I/O Type                      | e9K, I-9K, I-97K series   |  |  |
| Parallel/Series Bus           | -   | 3  | 7  |
| e-Bus                         | -   | 1 x eBusx1, 1 x eBusx4                   |  |
| <b>Mechanical</b>             |   |  |  |
| Dimension (W x L x H)         | 239 mm x 164 mm x 133 mm  | 300 mm x 164 mm x 133 mm                 | 422 mm x 164 mm x 133 mm                 |
| Installation                  | DIN-Rail, Wall mounting   |  |  |
| Cooling Type                  | CPU Heat Sink and 180,000 hour long-life fan with Smart Fan function  |  |  |
| <b>Environmental</b>          |   |  |  |
| Operating Temperature         | -25 ~ +60 °C  |  |  |
| Storage Temperature           | -30 ~ +80 °C  |  |  |
| Humidity                      | 10 ~ 90 % RH (non-condensing)   |  |  |
| <b>Power</b>                  |   |  |  |
| Input Range                   | +19 ~ 30 VDC (2 kV Isolated )   |  |  |
| Capacity                      | 80 W supply to CPU and backplane, 40 W supply to I/O expansion slots and USB ports, 120 W in total                        |  |  |
| Redundant Power Inputs        | Yes, with one power relay (1 A @ 24 VDC) for alarm  |  |  |
| Consumption                   | 30.5 W (Typical)<br>71 W (CPU Full Load)  | 31.5 W (Typical)<br>72 W (CPU Full Load) | 32.6 W (Typical)<br>73 W (CPU Full Load) |

## Appearance

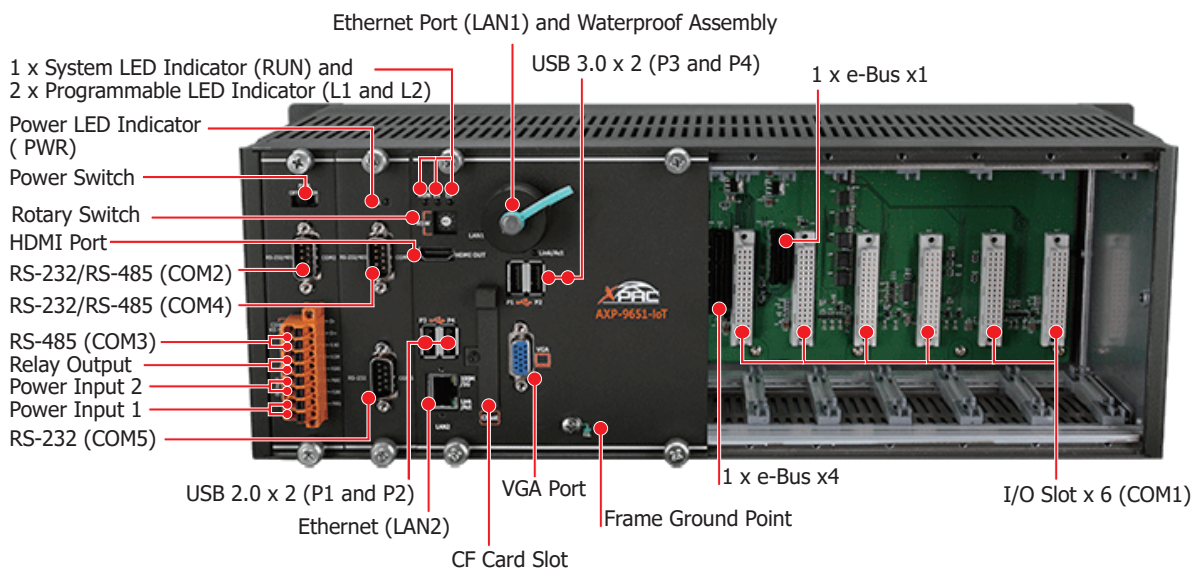
### AXP-9051-IoT



### AXP-9251-IoT

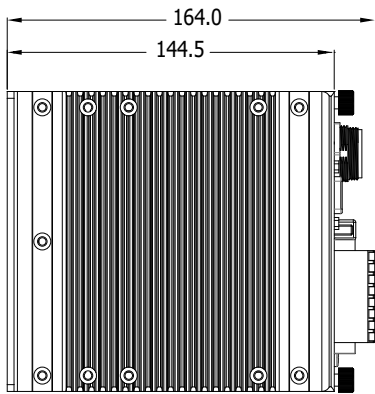


### AXP-9651-IoT



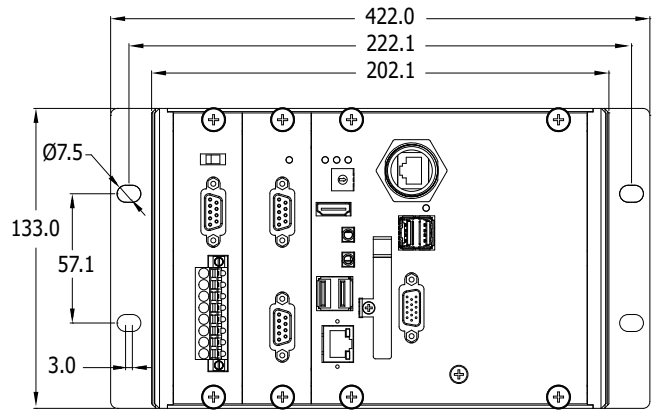
## ■ Dimensions (Units: mm)

**AXP-9051-IoT/AXP-9251-IoT/AXP-9651-IoT**



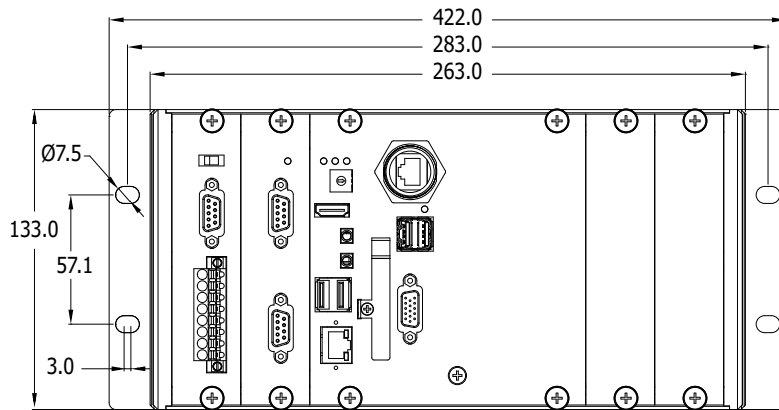
Left Side View

**AXP-9051-IoT**



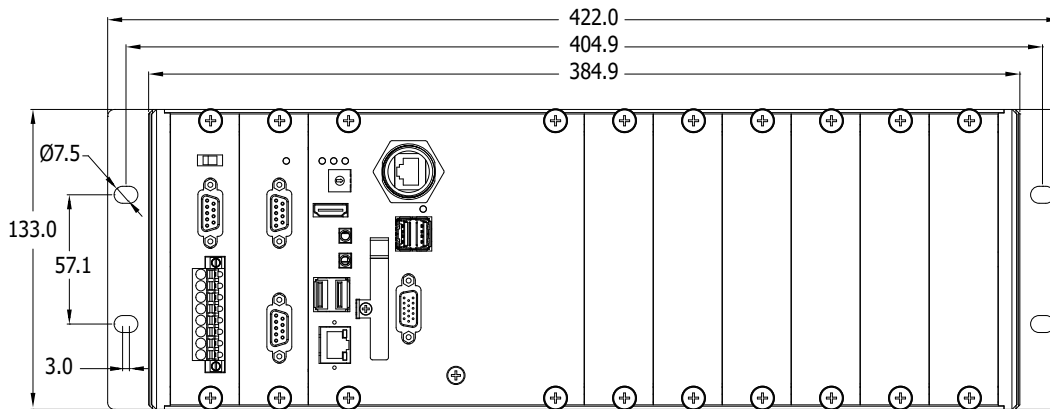
Front View

**AXP-9251-IoT**



Front View

**AXP-9651-IoT**



Front View

## ■ Ordering Information

|                        |   |
|------------------------|---|
| <b>AXP-9051-IoT CR</b> | Metal Standard PAC with i5-8365UE CPU and Win10 IoT (RoHS)        |
| <b>AXP-9251-IoT CR</b> | 2-slot Metal Standard PAC with i5-8365UE CPU and Win10 IoT (RoHS) |
| <b>AXP-9651-IoT CR</b> | 6-slot Metal Standard PAC with i5-8365UE CPU and Win10 IoT (RoHS) |