UP 7000 Edge

Maker Board System
UP-EDGE-ADLN01

User's Manual 2nd Ed

Copyright Notice

Acknowledgement

Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● UP-EDGE-ADLN01 (UP 7000 Edge)	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1.   All cautions and warnings on the device should be noted.

2.   Make sure the power source matches the power rating of the device.

3.   Position the power cord so that people cannot step on it. Do not place anything over the power cord.

4.   Always completely disconnect the power before working on the system's hardware.

5.   No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.

6.   If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.

7.   Always disconnect this device from any AC supply before cleaning.

8.   While cleaning, use a damp cloth instead of liquid or spray detergents.

9.   Make sure the device is installed near a power outlet and is easily accessible.

10.   Keep this device away from humidity.

11.   Place the device on a solid surface during installation to prevent falls

12.   Do not cover the openings on the device to ensure optimal heat dissipation.

13.   Watch out for high temperatures when the system is running.

14.   Do not touch the heat sink or heat spreader when the system is running

15.   Never pour any liquid into the openings. This could cause fire or electric shock.

16.   As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

17.   If any of the following situations arises, please the contact our service personnel:

    i.   Damaged power cord or plug

    ii.   Liquid intrusion to the device

    iii.   Exposure to moisture

    iv.   Device is not working as expected or in a manner as described in this manual

    v.   The device is dropped or damaged

    vi.   Any obvious signs of damage displayed on the device

18.   DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

FCC Statement

Warning!

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur.
Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

产品中有毒有害物质或元素名称及含量

AAEON System   QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	○	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在
GB/T 26572标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了GB/T 26572的限量要求，然而该部件
仍符合欧盟指令2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

China RoHS Requirement (EN)

Hazardous and Toxic Materials List

AAEON System   QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	O	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.
O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.
X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:
1.   The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2.   Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3.   LCD Module and Touch Control Module only applies to certain products which feature these components.

Table of Contents

Chapter 1

Product Specifications

1.1   Specifications

System	
CPU	Intel® Processor N200
	Intel® Processor N97
	Intel® Processor N100
	Intel® Processor N50
Memory	Up to 8GB LPDDR5
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors
Storage	Up to 64GB eMMC
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111H CG)
Wi-Fi/BT	—
Expansion Slot	HDMI 1.4b/USB 3.2 Gen 2 Stack Connector
	(Type-A) x 1
	Power Button x 1
Security	Onboard TPM 2.0
OS Support	Windows 10 LTSC 2021
	Linux: Ubuntu 22.04 LTS/Kernel 5.15, Yocto 4.0

I/O	
USB	USB 3.2 Gen 2 (Type-A) x 3
Display Port	HDMI 1.4b x 1
Ethernet	1GbE RJ-45 x 1 (Realtek RTL8111H CG)
COM	—
Audio	—
GPIO	—

Power Supply

Power Requirement	12V DC-in, 5A
Power Supply Type	AT/ATX
Power Consumption (Typical)	30W~36W

Mechanical

|	
Mounting	VESA Mount (Optional)
Dimensions (WxHxD)	3.62" x 2.52" x 1.78" (92mm x 64mm x 45.2mm)
Net Weight	0.68 lb. (0.31Kg)
Gross Weight	1.04 lb. (0.47Kg)

Environmental

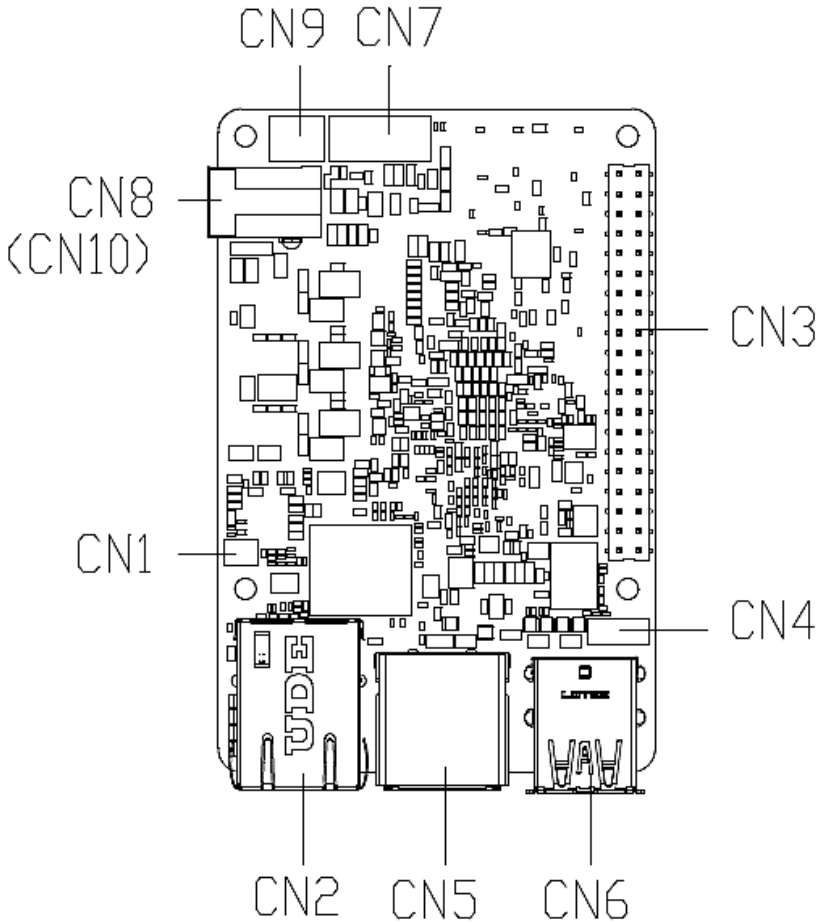|	
Operating Temperature	32°F ~ 131°F (0°C ~ 55°C) with 0.5m/s air flow
Storage Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Operating Humidity	10% ~ 80% relative humidity, non-condensing
MTBF	685,218 Hours
Certification	CE/FCC Class A, RoHS Compliant, REACH

Chapter 2

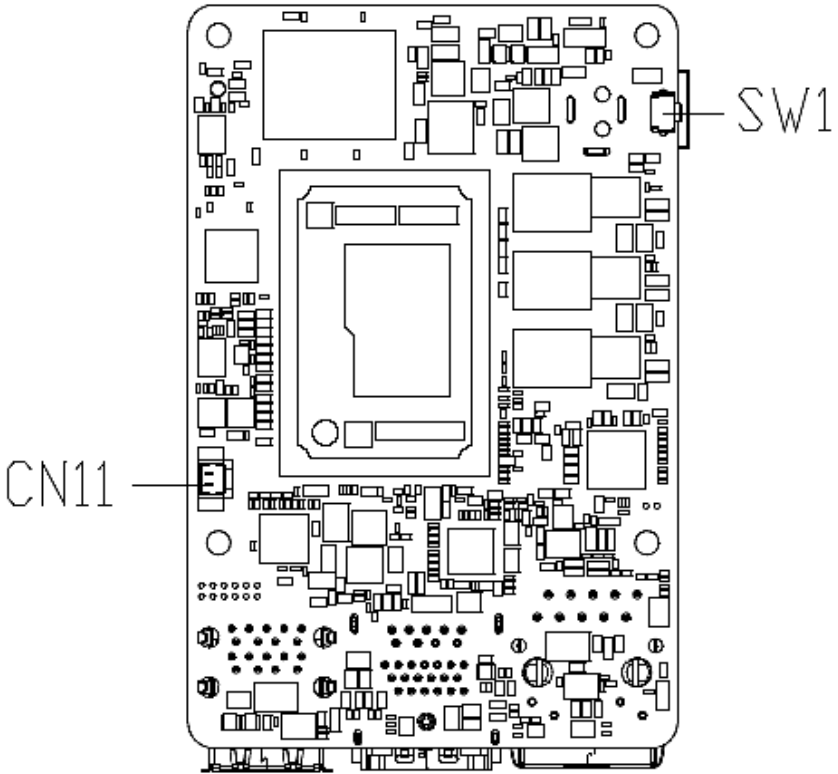Hardware Information

2.1 Dimensions
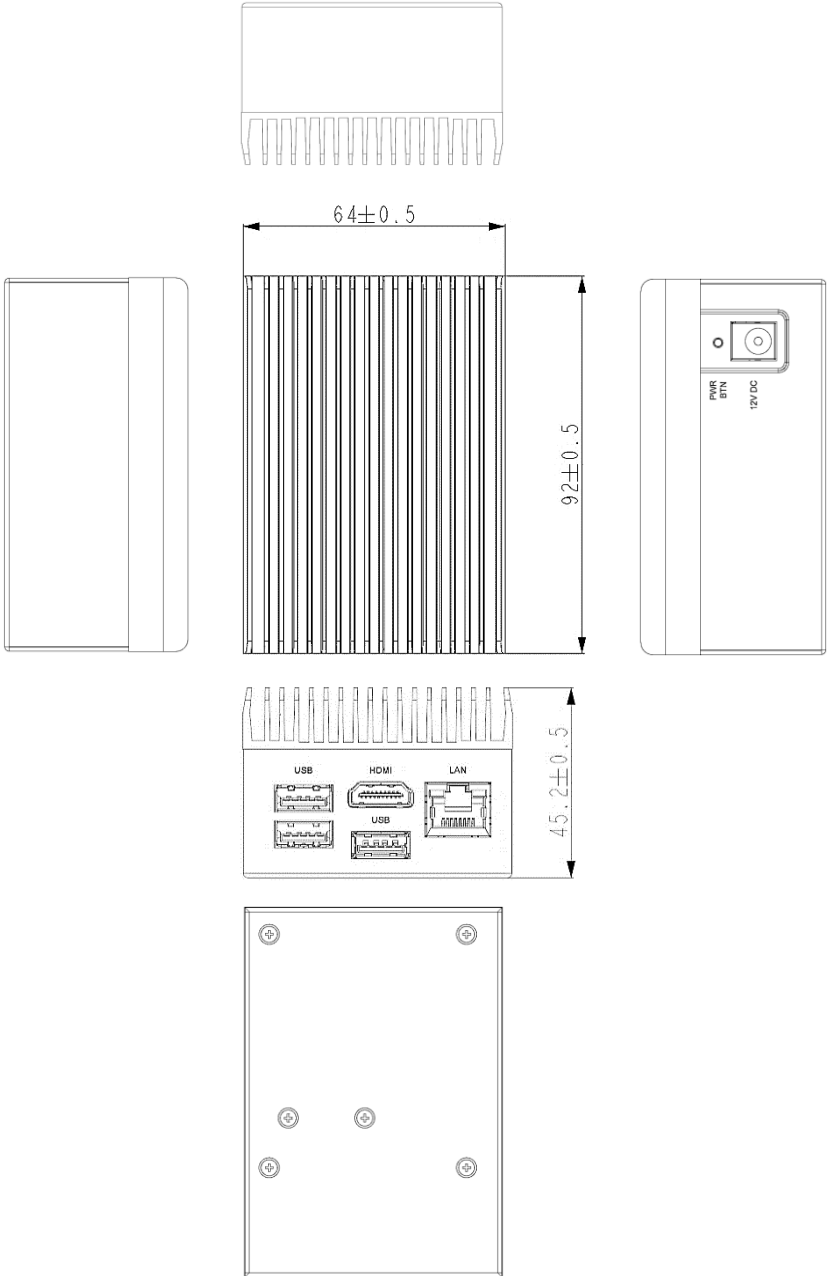
## 2.2   Jumpers and Connectors

Top:

Bottom:

2.3   List of Jumpers and Connectors

Please refer to the table below for all of the board's jumpers and connectors that you can configure for your application

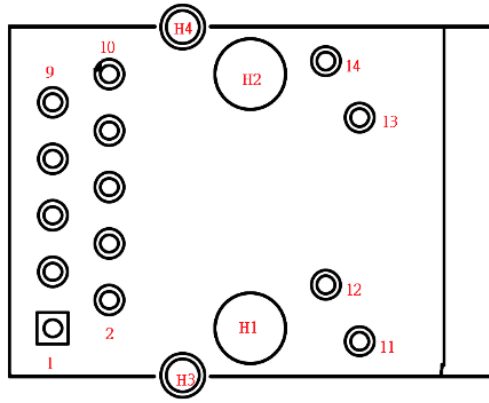| Label	Function
SW1	Power Button
CN2	LAN Port
CN5	HDMI/USB (Type-A)
CN6	Dual USB Port (Type-A)
CN8	DC Power Jack

Note: Not all PCBA-level internal connector pins are accessible via edge system

external ports.

2.3.1   Power Button (SW1)
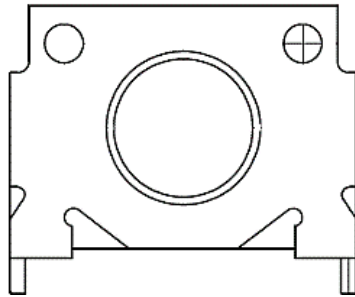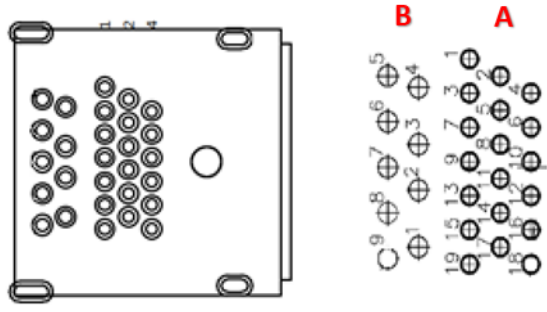

Pin	Signal	Pin	Signal
1	PWR_SW#	**2**	GND

2.3.2   LAN Port (CN2)

Pin	Signal	Pin	Signal
1	LAN1_MDI0+	**2**	LAN1_MDI0-
3	LAN1_MDI1+	**4**	LAN1_MDI1-
5	CT_GND	**6**	CT_GND
7	LAN1_MDI2+	**8**	LAN1_MDI2-
9	LAN1_MDI3+	**10**	LAN1_MDI3-
11	LAN Link LED 1000#	**12**	LAN Link LED 100#

Pin	Signal	Pin	Signal
13	LAN Active LED_N	14	LAN Active LED_P
H1	NC	H2	NC
H3	Chassis GND	H4	Chassis GND

2.3.3   HDMI/USB (Type-A) (CN5)

Pin	Signal	Pin	Signal
A1	HDMI_TMDS_TXP2	A2	GND
A3	HDMI_TMDS_TXN2	A4	HDMI_TMDS_TXP1
A5	GND	A6	HDMI_TMDS_TXN1
A7	HDMI_TMDS_TXP0	A8	GND
A9	HDMI_TMDS_TXN0	A10	HDMI_TMDS_Clock_P
A11	GND	A12	HDMI_TMDS_Clock_N
A13	NC	A14	NC
A15	HDMI_DDC_Clock	A16	HDMI_DDC_Data
A17	GND	A18	5V@1A for HDMI
A19	HDMI Hot Plug detect pin		
B1	5V@0.9A for USB 3.2	B2	USB2.0_DN3
B3	USB2.0_DP3	B4	GND
B5	USB3.2_RXN3	B6	USB3.2_RXP3
B7	GND	B8	USB3.2_TXN3
B9	USB3.2_TXP3		

2.3.4   Dual USB Port (Type-A) (CN6)
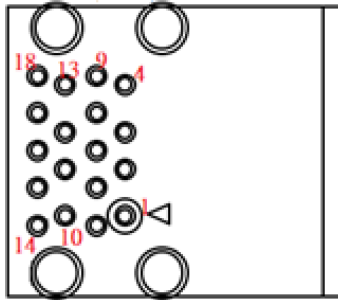
Pin	Signal	Pin	Signal
1	5V@0.9A for USB 3.2	**2**	USB2.0_DN1
3	USB2.0_DP1	**4**	GND
5	USB3.2_RXN1	**6**	USB3.2_RXP1
7	GND	**8**	USB3.2_TXN1
9	USB3.2_TXP1	**10**	5V@0.9A for USB 3.2
11	USB2.0_DN2	**12**	USB2.0_DP2
13	GND	**14**	USB3.2_RXN2
15	USB3.2_RXP2	**16**	GND
17	USB3.2_TXN2	**18**	USB3.2_TXP2
H1	GND	**H2**	GND
H3	GND	**H4**	GND

2.3.5   DC Power Jack (CN8)
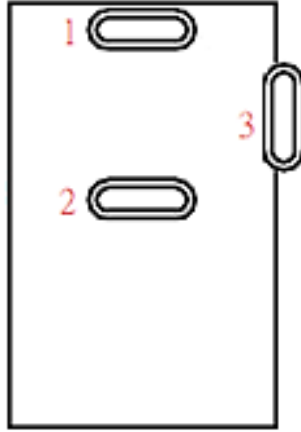
Pin	Signal	Pin	Signal
1	12V	**2**	GND
3	GND		

Chapter 3

Software Installation

3.1   Linux Setup

The UP 7000 Edge supports Linux operating systems (see Chapter 1 for specifications). For instructions on how to install a Linux OS onto your UP 7000 Edge, you can find several guides and tutorials in the wiki section of the UP Board website at https://up-board.org for both installing supported distributions as well as porting your own Linux build.

3.2   Windows Drivers Installation

Drivers for the UP 7000 Edge can be downloaded from the UP Board website by following the link https://up-board.org and navigating to the Downloads section, then clicking on the UP 7000 Edge to find all relevant drivers.

Appendix A

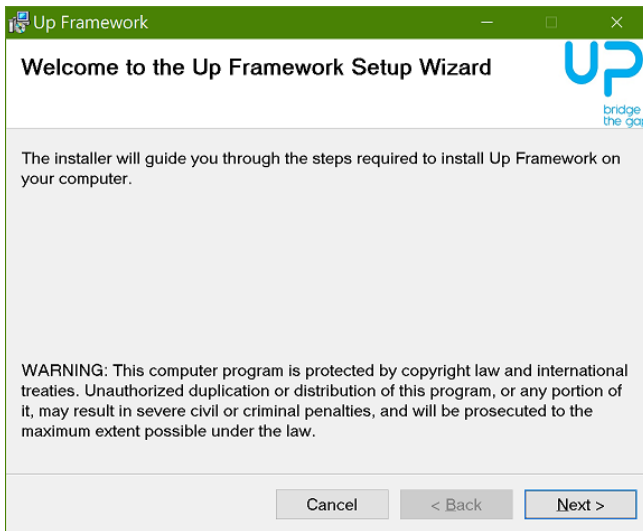UP Framework SDK Installation

A.1 Introduction

This section provides instructions for the installation of the UP Framework SDK. Instructions are provided for Windows 10 and Windows IoT Core. You can download the latest version of UP Framework SDK from the UP community:

https://downloads.up-community.org/download/up-sdk-for-windows-10-and-windows-iot/
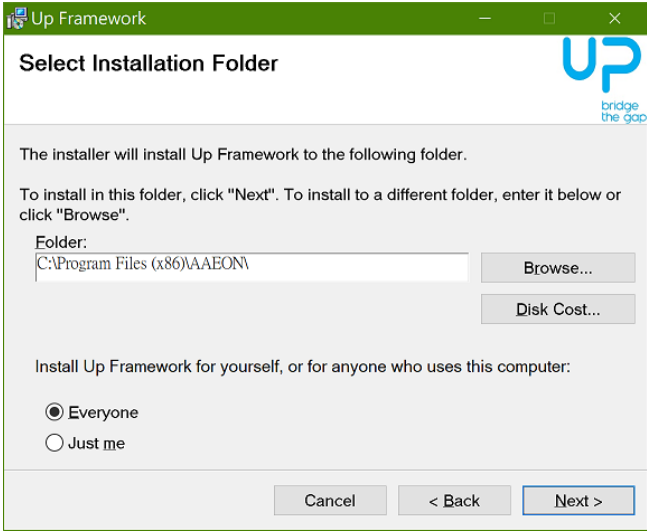
A.2 Installation for Windows 10

Step 1

Locate the downloaded file UpFrameworkSetup.msi and run the installer. Press "Next" to begin the setup process.
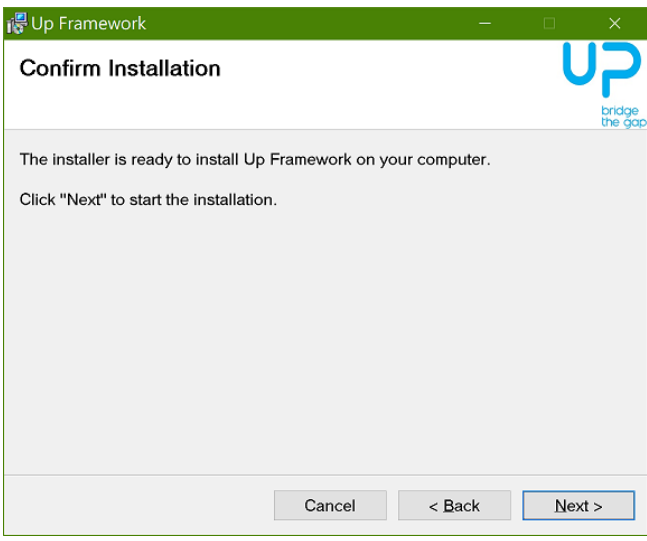
Step 2

Select the installation folder. Default destination path is C:\Program Files(x86)\AAEON\

You may also choose to install the UP Framework SDK for all users or only the current

user. Press "Next" to continue installation.

Step 3

Press "Next" to confirm the installation.

Step 4

Press "Close" to exit once setup is complete.