FTC-07WN

Flex Touch Console for HMI application

User's Manual

1st Ed – 18 August 2025

Part No: E2047FTC700R

Document Amendment History

Revision	Date	By	Comment
1st	August 2025	Avalue	Initial Release

Declaration of Conformity

This device complies with part 15 FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "a" digital device, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE statement

The product(s) described in this manual complies with all application European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

Notice

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

Copyright Notice

Acknowledgements

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows is registered trademark of Microsoft Corp.

All other product names or trademarks are properties of their respective owners.

Disclaimer

This manual is intended to be used as a practical and informative guide only and is subject

to change without notice. It does not represent a commitment on the part of Avalue. This product might include unintentional technical or typographical errors. Changes are periodically made to the information herein to correct such errors, and these changes are incorporated into new editions of the publication.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support and Assistance

1. Visit the Avalue website at https://www.avalue.com/ where you can find the latest information about the product.
2. Contact your distributor or our technical support team or sales representative for technical support if you need additional assistance. Please have following information ready before you call:

- Product name and serial number
- Description of your peripheral attachments
- Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages

To receive the latest version of the user's manual; please visit our Web site at:
www.avalue.com

Product Warranty (Returns & Warranties policy)

1. Purpose

Avalue establishes the following maintenance specifications and operation procedures for providing the best quality of service and shortened repair time to our customers.

2. Warranty

2.1 Warranty Period

Avalue endeavors to offer customers the most comprehensive post-sales services and protection; besides offering a 2-year warranty for standard Avalue products, an extended warranty service can also be provided based on additional request from the customer. Within the warranty period, customers are entitled to receive comprehensive and prompt repair and warranty.

Standard products manufactured by Avalue are offered a 2-year warranty, from the date of delivery from Avalue. For ODM/OEM products manufactured by Avalue or PCBA with conformal coating, will follow up the define warranty of the agreement, otherwise will be offered 1-year warranty for ODM/OEM products but non-warranty for PCBA with conformal coating. For outsourcing parts kit by Avalue (ex: Motherboard, LCD touch panel, CPU, RAM, HDD) are offered a 6-month warranty, and Mobile/Tablet PC battery are offered a warranty of the half year, from the date of delivery by Avalue. Products before the mass production stage, i.e. engineering samples are not applied in this warranty or service policy. For extended warranty and cross-territory services, product defects resulting from design, production process or material are covered by the pre-set warranty period after the date of delivery from Avalue. For non-Avalue products, the product warranty and repair time shall be based on the service standards provided by the original manufacturer; in principle Avalue will provide these products a warranty service for no more than one year.

2.2 Maintenance services within the warranty period

In the case of Avalue product DOA (Defect-on-Arrival) when the customer finds any defect within 1 month after the delivery, Avalue will replace it with a new product in a soonest way. Except for custom products, once the customer is approved of a Cross-Shipment Agreement, which allows for delivery a new product to the customer before receiving the defective one, Avalue will immediately proceed with new product replacement for the said DOA case. On validation of the confirmed defect, Avalue is entitled to reserve the right whether to provide a new product for replacement. For the returned defective new product, it is necessary to verify that there shall be no bruise, alteration, scratch or marking to the appearance, and that none of the delivered accessories missing; otherwise, the customer will be requested to pay a processing fee. On the other hand, if the new product defect is resulting from incorrect configuration or erroneous use by the user instead of any problem of the hardware itself, the customer will also be requested to pay for relevant handling fees.

As for other conditions, Avalue will handle defects by way of repair. The customer will be requested to send the defective product to an Avalue authorized service center, and Avalue will return the repaired product back to the customer as soon as possible.

2.3 Ruling of an out-of-warranty defect

The following situations are not included in the warranty:

- The warranty period has expired.
- Product has been altered or its label of the serial number has been torn off.
- Product functionality issues resulting from improper use by the user, unauthorized dismantle or alteration, unfit operation environment, improper maintenance, accident or other causes. Avalue reserves the right for the ruling of the aforementioned situations.
- Product damage resulting from lightning, flood, earthquake or other calamities.
- The warranty rules of non-Avalue products and accessories shall be in accordance with standards set up by the original manufacturer. These products and accessories include RAM, HDD, FDD, CD-ROM, CPU, FAN, etc.
- Product upgrade request or test request submitted by the customer after expiration of the warranty.
- PCBA with conformal coating.
- Avalue semi-product and outsourced products without Avalue serial number.
- Products before the mass production stage, i.e. engineering samples.

3. Procedure for sending for repair

3.1 Attain a RMA number

A customer's rejected product returned for repair shall have a RMA (Return Merchandise Authorization) number. Without a RMA number, Avalue will not provide any repair service for the rejected product, and the product will be returned to the customer at customer's cost. Avalue will not issue any notice for the return of the product.

Each returned product for repair shall have a RMA number, which is simply the authorization of the return for repair; it is not a guarantee that the returned goods can be repaired or replaced. For applying for a RMA number, the customer may enter the eRMA webpage of Avalue https://www.avalue.com/en/member and log-in with an account number and a password authorized by Avalue. The system will then automatically issue a RMA number.

When applying for the RMA number, it is essential to fill in basic information of the customer and the product, together with detailed description of the problem encountered. If possible, avoid using ambiguous words such as "does not work" or "problematic". Without a substantial description of the problem, it is hard to start the repair and will cause prolonged repair time. Lacking detailed statement of fault steps also makes the problem hard to be identified, sometimes resulting in second-time repairs.

In case the customer can't define the cause of problem, please contact Avalue application engineers. Sometimes when the problem can be resolved even before the customer sends back the product.

On the other hand, if the customer only returns the key parts to Avalue for repair, it is necessary that the serial number of the entire unit is given in the "Problem Description" field, so that warranty period can be ruled accordingly; or Avalue will handle the case as an Out-of- warranty case.

3.2 Return of faulty product for repair

It is recommended that the customer not to return the accessories (manual, connection cables, etc.) with the products for repair, devices such as CPU, DRAM, CF memory card, etc., shall also be removed from the faulty goods before return for repair. If these devices are relevant to described repair problems and necessary to be returned with the goods; please clearly indicate the items included in the eRMA application form. Avalue shall not be responsible for any item that is not itemized. Moreover, make sure the problem(s) are detailed in the "Problem Description" field.

In the list of delivery, the customer may fill-in a value which is lower than the actual value, to prevent customs levying a higher tax over the excessive value of the return goods. The customer shall be held responsible for extra fees caused by this. We strongly recommend that "Invoice for customs purpose only with no commercial value" be indicated on the delivery note. Also for the purpose of expedited handling, please printout the RMA number and put it in the carton, also indicate the number outside of the carton, with the recipient addressing to Avalue RMA Department.

When returning the defective product, please use an anti-static bag or ESD material to pack it properly. In case of improper packing resulting in damages in the transportation process, Avalue reserves the right to reject the un-repaired faulty good at the customer's costs. Furthermore, it is suggested that the faulty goods shall be sent via a door-to-door courier service. The customer shall be held responsible for any customs clearance fee or extra expenses if Air-Cargo is used for the delivery.

In case of a DOA situation of a new product, Avalue will be responsible for the product and the freight. If the faulty goods are within the warranty period, the sender will take responsibility for the freight. For an out-of-warranty case, the customer shall be responsible for the freight of both trips.

3.3 Maintenance Charge

Avalue will charge a moderate repair fee for the following conditions:

- The warranty period has expired.
- Product has been altered or its label of the serial number has been torn off.
- Product functionality issues resulting from improper use by the user, unauthorized dismantle or alteration, unfit operation environment, improper maintenance, accident

or other causes. Avalue reserves the right for the ruling of the aforementioned situations.

- Product damage resulting from lightning, flood, earthquake or other calamities.
- The warranty rules for non-Avalue products and accessories shall be in accordance with standards set up by the original supplier. These products and accessories include RAM, HDD, FDD, CD-ROM, CPU, FAN, etc.
- Product upgrade request or test request submitted by the customer after expiry of the warranty.
- PCBA with conformal coating.
- Avalue semi-product and outsourced products without Avalue serial number
- Products before the mass production stage, i.e. engineering samples.
- In case the products received are examined as NPF (No Problem Found) within the warranty period, the customer shall be responsible for the freight of both trips.
- Please contact your local distributor to examine in advance to prevent unnecessary freight cost.

For system failure of out-of-warranty products, Avalue will provide a quotation prior to repair service. When the customer applies for the cost, please refer to the Quotation number. In case the customer does not return the DOA product that has already been replaced by a new one, or the customer does not sign back the quotation of the out-of-warranty maintenance, Avalue reserves the right of whether or not to provide the repair service. In case the customer does not reply in 3 months, Avalue shall directly scrap or return the product back to customer at customer's cost without further notice to the customer.

3.4 Maintenance service of phased-out products

For servicing phased-out products, Avalue provides an extended period, starting the date of phase-out, as a guaranteed maintenance period of such products, for continuance of the maintenance service to meet customer's requirements. In case of unexpected factors causing Avalue to be unable to repair/replace a warranted but phased-out product, Avalue will, depending on the availability, upgrade the product (free of charge with continued warranty period as of the original product), or, give partial refund (based on the length of the remaining warranty period) to solve this kind of problem.

3.5 Maintenance Report

On completion of repair of a defective product, a Maintenance Report indicating the maintenance result and part(s) replaced (if any) will be sent to the customer together with the product. If the customer demands an additional maintenance analysis report, a service fee of various level will be charged depending on the warranty status. In case the analysis result shows that the defect attributes to Avalue's faulty design or process, the analysis fee will be exempted.

4. Service Products

Avalue provides service products to manage with different customer needs. Should you have any need, please consult to Avalue Sales Department.

Defect Analysis Report (DAR)

Avalue provides DAR (Defect Analysis Report) services aiming to elevating customer satisfaction. A DAR includes defect cause identification/verification/suggestion and improvement precautions, with instructions on correct usage for the avoidance of any reoccurrence.

Upgrade Service

Avalue is capable to provide system upgrade service for customization requirements. This upgrade service is applicable for main parts, such as CPU, memory, HDD, SSD, storage devices; also replacements motherboards of systems. Please contact Avalue sales for details to evaluate the possibility of system upgrade service and obtain information of lead time and price.

Safety Instructions

Safety Precautions

Before installing and using this device, please note the following precautions.

1. Read these safety instructions carefully.
2. Keep this User's Manual for future reference.
3. Disconnected this equipment from any AC outlet before cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
8. Use a power cord that has been approved for using with the product and that it matches the voltage and current marked on the product's electrical range label. The voltage and current rating of the cord must be greater than the voltage and current rating marked on the product.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to

avoid damage by transient overvoltage.

12. Never pour any liquid into an opening. This may cause fire or electrical shock.

13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel. If one of the following situations arises, get the equipment checked by service personnel:

- The power cord or plug is damaged.
- Liquid has penetrated into the equipment.
- The equipment has been exposed to moisture.
- The equipment does not work well, or you cannot get it work according to the user's manual.
- The equipment has been dropped and damaged.
- The equipment has obvious signs of breakage.

14. CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer.

15. Equipment intended only for use in a RESTRICTED ACCESS AREA.

Explanation of Graphical Symbols

	Warning	A WARNING statement provides important information about a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	Caution	A CAUTION statement provides important information about a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or in damage to the equipment or other property.
	Note	A NOTE provides additional information intended to avoid inconveniences during operation.
		Direct current.
		Alternating current
		Stand-by, Power on
		FCC Certification
		CE Certification
		Follow the national requirements for disposal of equipment.
		Stacking layer limit
		This side up

		Fragile Packaging
		Beware of water damage, moisture-proof
		Carton recyclable
		Handle with care
		Follow operating instructions of consult instructions for use.

Disposing of your old product

WARNING:
There is danger of explosion if the battery is mishandled or incorretly replaced. Replace only with the same type of battery. Do not disassemble it or attempt to recharge it outside the system. Do not crush, puncture, dispose of in fire, short the external contacts, or expose to water or ther liquids. Dispose of the battery in accordance with local regulations and instructions from your service provider.

CAUTION:
- Lithium Battery Caution: Danger of explosion if battery is incorrectly replaced. Replace only with same or equivalent type. Dispose batteries according to manufacturer's instructions.
- Disposal of a BATTERY into fire or a hot oven, or mechanically crushing or cutting of a BATTERY, that can result in an EXPLOSION
- Leaving a BATTERY in an extremely high temperature surrounding environment that can result in an EXPLOSION or the leakage of flammable liquid or gas.
- A BATTERY subjected to extremely low air pressure that may result in an EXPLOSION or the leakage of flammable liquid or gas.

Mise en garde!
AVERTISSEMENT : Il existe un risque d'explosion si la batterie est mal manipulée ou remplacée de manière incorrecte. Remplacez uniquement par le même type de batterie. Ne le démontez pas et ne tentez pas de le recharger en dehors du système. Ne pas écraser, percer, jeter au feu, court-circuiter les contacts externes ou exposer à l'eau ou à d'autres liquides. Jetez la batterie conformément aux réglementations locales et aux instructions de votre fournisseur de services.

MISE EN GARDE:
- Pile au lithium Attention : Danger d'explosion si la pile n'est pas remplacée correctement. Remplacer uniquement par un type identique ou équivalent. Jetez les piles conformément aux instructions du fabricant.
- L'élimination d'une BATTERIE dans le feu ou dans un four chaud, ou l'écrasement ou le découpage mécanique d'une BATTERIE, pouvant entraîner une EXPLOSION
- Laisser une BATTERIE dans un environnement à température extrêmement élevée pouvant entraîner une EXPLOSION ou une fuite de liquide ou de gaz inflammable.
- UNE BATTERIE soumise à une pression d'air extrêmement basse pouvant entraîner une EXPLOSION ou une fuite de liquide ou de gaz inflammable.

Content

1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

Before installation, please ensure all the items listed in the following table are included in the package.

Item	Description	Q'ty
1	FTC Product	1

If any of the above items is damaged or missing, contact your retailer.

1.3 Manual Objectives

This manual describes in details Avalue Technology FTC-07WN Single Board.

We have tried to include as much information as possible but we have not duplicated information that is provided in the standard IBM Technical References, unless it proved to be necessary to aid in the understanding of this board.

We strongly recommend that you study this manual carefully before attempting to set up FTC-07WN or change the standard configurations. Whilst all the necessary information is available in this manual we would recommend that unless you are confident, you contact your supplier for guidance.

Please be aware that it is possible to create configurations within the CMOS RAM that make booting impossible. If this should happen, clear the CMOS settings, (see the description of the Jumper Settings for details).

If you have any suggestions or find any errors regarding this manual and want to inform us of these, please contact our Customer Service department with the relevant details.

1.4 System Specifications

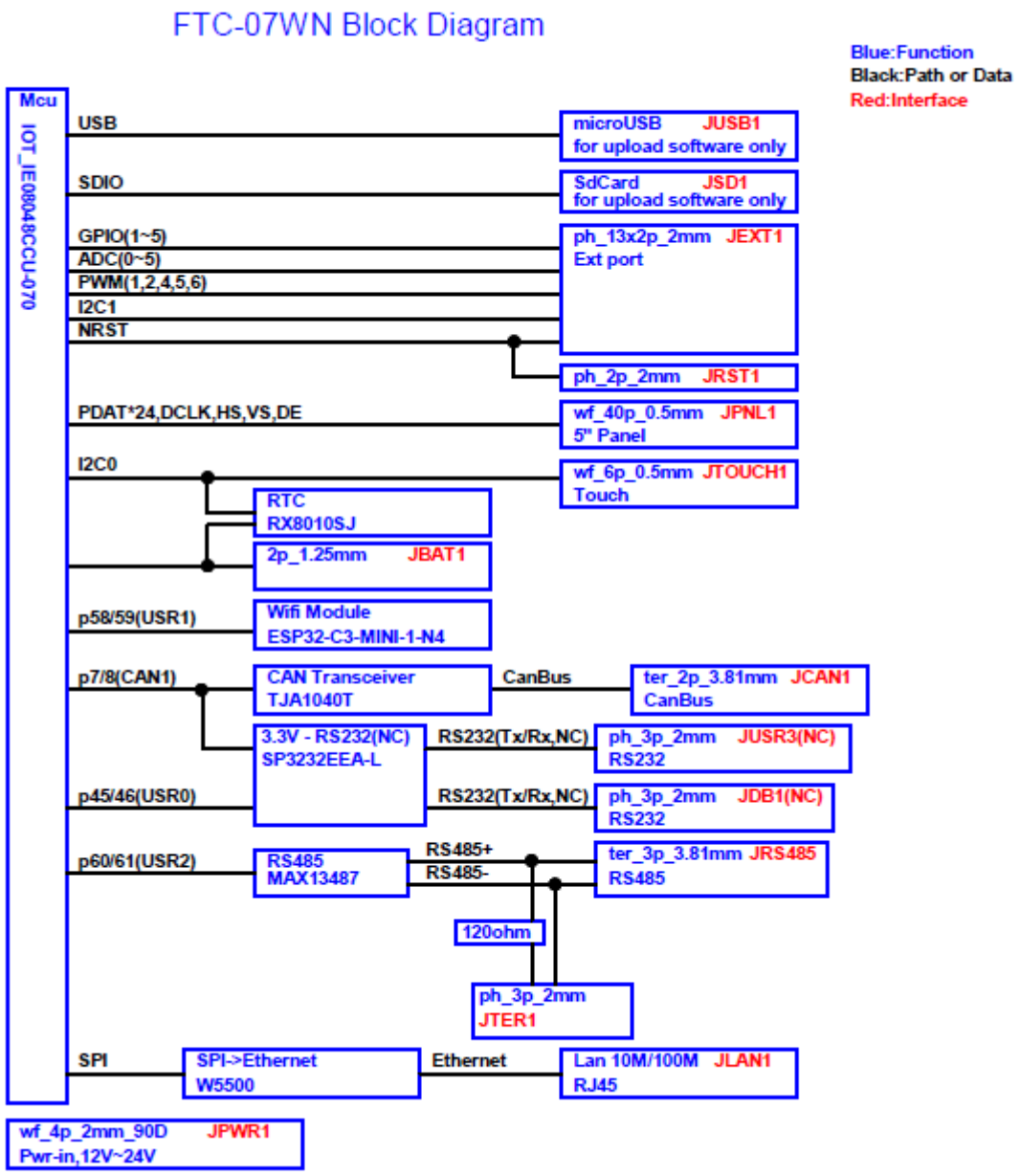
System	
MCU Board	MCU board embedded with STM32H7 MCU
System Memory	32MB DRAM
Storage	
Other	2Gb (256MB) Flash memory
Edge I/O	
COM	1 x RS485 (JRS485 :3.81mm Terminal Block 3P)
LAN	1 x RJ45 (JLAN1)
USB	1 x Mirco USB, for upload software only (JUSB1)
DC Input	+12~24V (JPWR1)
Others	JSD1 : Sd(for upload software only)
CAN	1 x CAN bus (JCAN1)
Onboard I/O	
GPIO	GPIO (1~5), PWM(1,2,4,5,6), ADC(0~5) (JEXT1 : PH 13P x 2, 2.00mm)
Wi-Fi	1 x wi-fi
RTC Battery	CR2032 with cable (JBAT1 : Wafer 2P B-W, 1.25mm)
Touch	I2C LT (JTOUCH1 : FPC 6P 0.5mm)
Other	JRST1: PH 2P x 1, 2.00mm JTER1: PH 3P x 1, 2.00mm J1: PH 3P x 2, 2.00mm
Display	
Spec. & Resolution	7" TFT 800 x 480
Other	JPNL1 : FPC_40H_S0.50mm
Ethernet	
LAN Spec.	RJ45-I 12P 90D UP LED(GO/Y) GF SMD UDE
Mechanical & Environmental Specification	
Power Requirement	DC 12~24V
Power Mode	AT
Operating Temp.	-15~65°C (-5~181°F)
Storage Temp.	-30~80°C (-22~176°F)

Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Size (L x W)	184.1 x 106.85mm
Weight	275g
Vibration Test	Sine Vibration test (Non-operation) Reference IEC60068-2-6 Testing procedures Test Fc : Vibration sinusoidal 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep：1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :30 min. each axis 6 System condition : Non-Operating mode Package Vibration Test Reference IEC60068-2-64 Testing procedures Test Fh : Vibration broadband random Test 1. PSD: 0.026G²/Hz , 2.16 Grms 2. Non-operation mode 3. Test Frequency : 5-500Hz 4. Test Axis : X,Y and Z axis 5. 30 min. per each axis Random Vibration Operation Reference IEC60068-2-64 Testing procedures Test Fh : Vibration broadband random Test 1. PSD: 0.00454G²/Hz , 1.5 Grms 2. Operation mode 3. Test Frequency : 5-500Hz 4. Test Axis : X,Y and Z axis 5. 30 minutes per each axis 6. IEC 60068-2-64 Test:Fh
Drop Test	1. One corner, three edges, six faces 2. ISTA 2A, IEC-60068-2-32 Test:Ed

Note: Specifications are subject to change without notice.

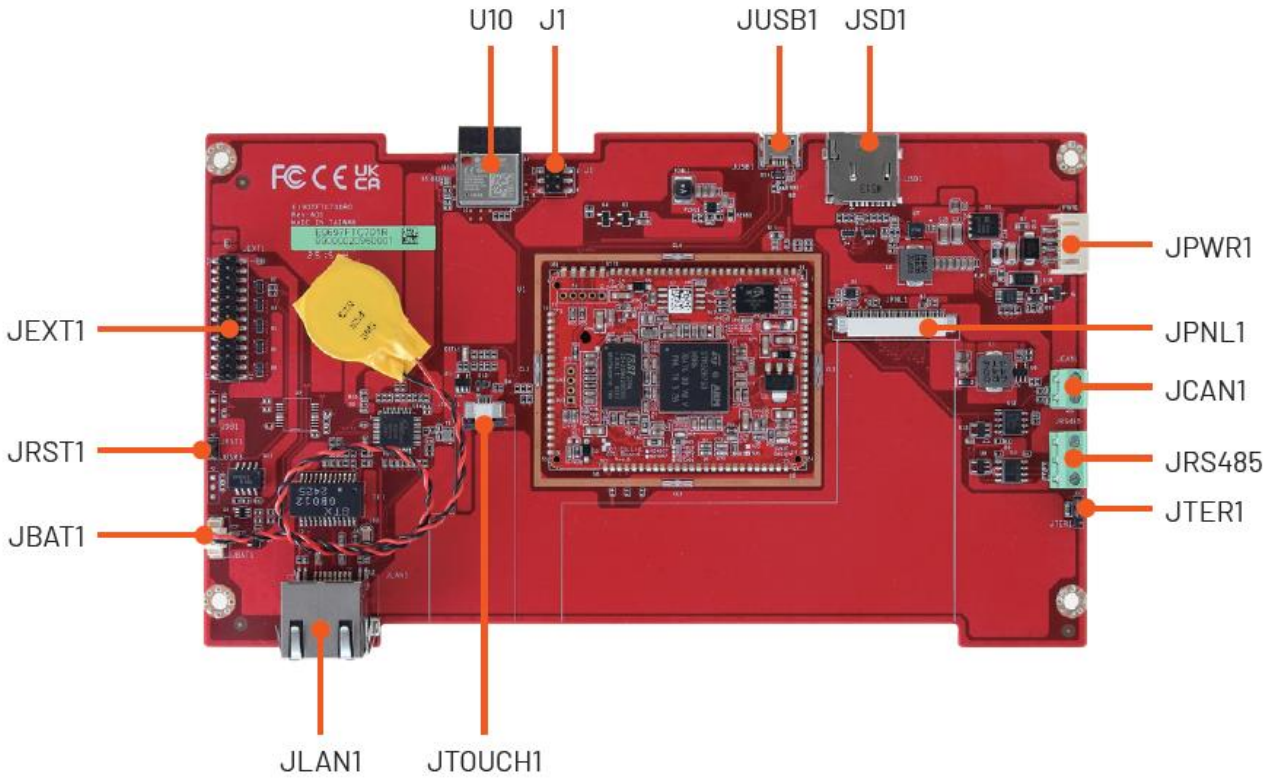
1.5 Architecture Overview—Block Diagram

The following block diagram shows the architecture and main components of FTC-07WN.



2. Hardware Configuration

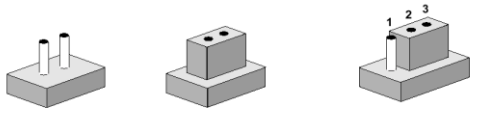
2.1 Product Overview



2.2 Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip. To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



Open Closed Closed 2-3

The jumper settings are schematically depicted in this manual as follows:

Open Closed Closed 2-3

A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board's jumpers and connectors.

Jumpers

Label	Function	Note
JTER1	RS485 terminal R set	3 x 1 header, pitch 2.00mm

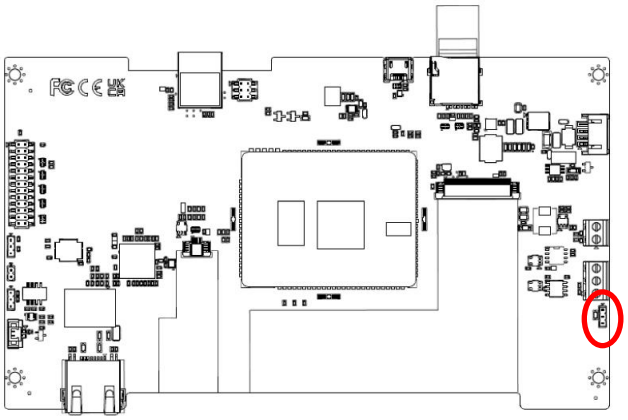
Connectors

Label	Function	Note
JPWR1	DC IN connector	4 x 1 wafer, pitch 2.00mm
JEXT1	Extension port connector	13 x 2 header, pitch 2.00mm
JPNL1	Panel connector	40 x 1 FPC, pitch 0.50mm
U10	Wi-Fi	
JCAN	CAN bus connector	2 x 1 TER, pitch 3.81mm
JRS485	RS485 connector	3 x 1 TER, pitch 3.81mm
JTOUCH1	Touch panel connector	6 x 1 FPC, pitch 0.50mm

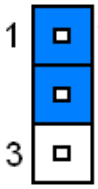
JUSB1	Micro USB2.0 connector (for upload software only)	
JSD1	Micro SD slot (for upload software only)	
JBAT1	RTC Battery connector	2 x 1 wafer, pitch 1.25mm
JRST1	Reset button connector	2 x 1 header, pitch 2.00mm
J1	For Wi-Fi Module programming	3 x 2 header, pitch 2.00mm

2.3 Setting Jumpers & Connectors

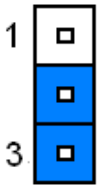
2.3.1 RS485 terminal R set (JTER1)



No terminal*

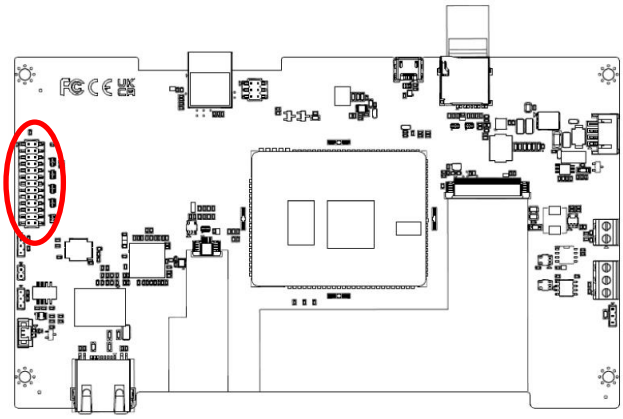


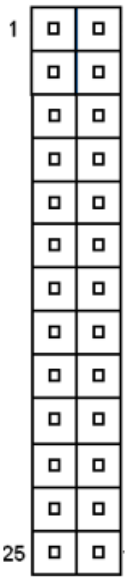
Terminal 120ohm



*** Default**

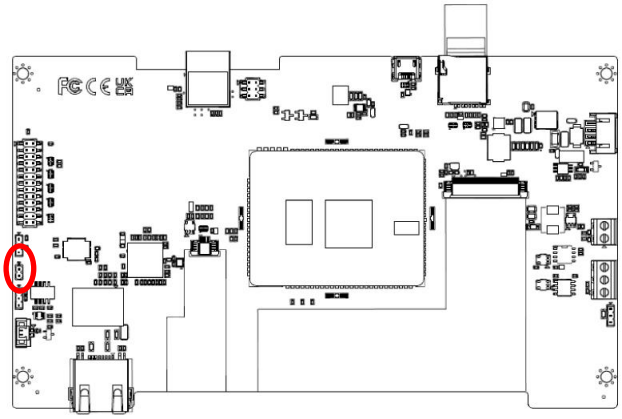
2.3.2 Extension port connector (JEXT1)





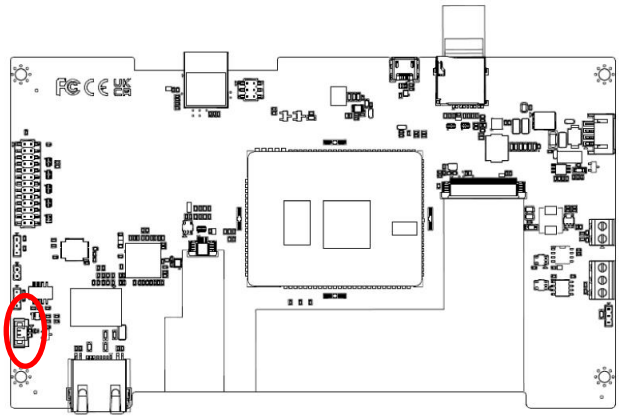
Signal	PIN	PIN	Signal
+5V	1	2	+3.3V
GND	3	4	GND
NRST	5	6	I2C1_SCL_EXT
PWM1	7	8	I2C1_SDA_EXT
PWM2	9	10	GPIO1
PWM3(DEBUG)	11	12	GPIO2
PWM4	13	14	GPIO3
PWM5	15	16	GPIO4
PWM6	17	18	GPIO5
GND	19	20	GND
ADC0	21	22	ADC1
ADC2	23	24	ADC3
ADC4	25	26	ADC5

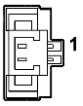
2.3.3 Reset button Connector (JRST1)



PIN	Signal
1	NRST
2	GND

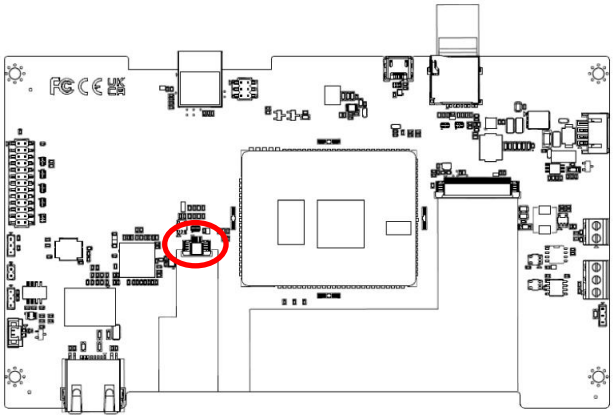
2.3.4 RTC Battery connector (JBAT1)

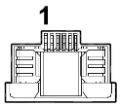




PIN	Signal
1	+V3_BAT
2	GND

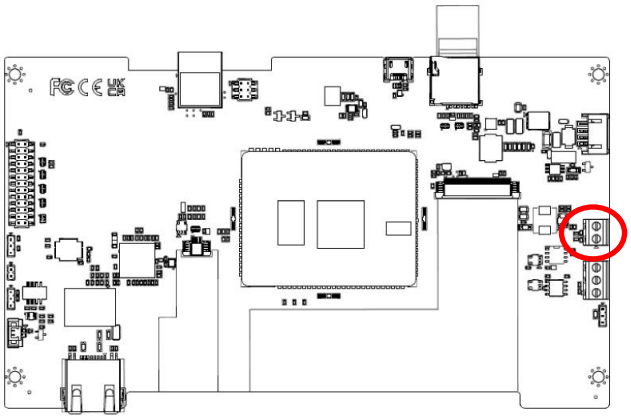
2.3.5 Touch panel connector (JTOUCH1)





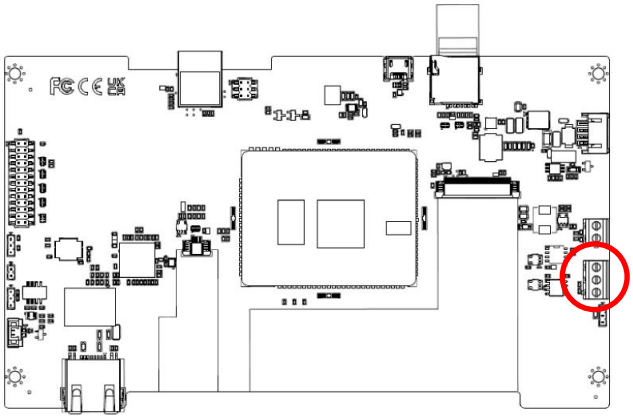
PIN	Signal
1	GND
2	RST
3	INT
4	SDA
5	SCL
6	VDD

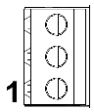
2.3.6 JCAN connector (JCAN)



PIN	Signal
2	CAN0_L
1	CAN0_H

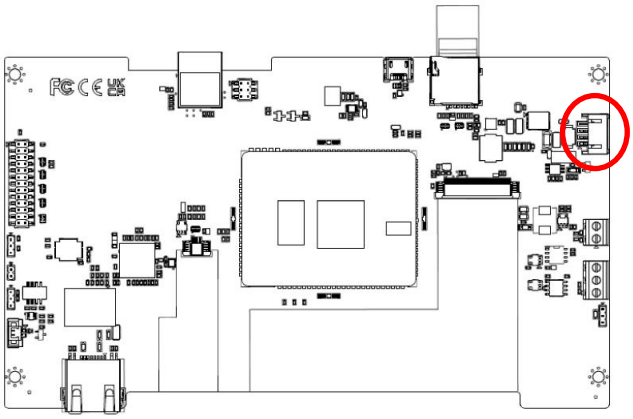
2.3.7 RS485 connector (JRS485)

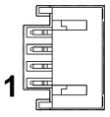




PIN	Signal
3	GND
2	RS485-
1	RS485+

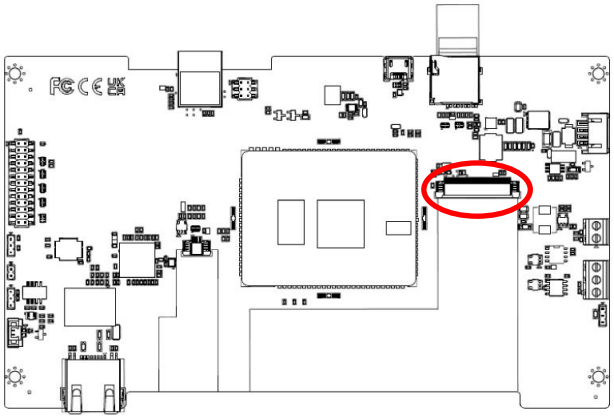
2.3.8 DC IN connector (JPWR1)

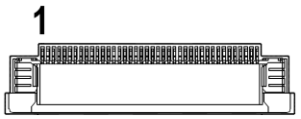




PIN	Signal
4	GND
3	GND
2	+VIN_12V~24V
1	+VIN_12V~24V

2.3.9 Panel connector (JPNL1)

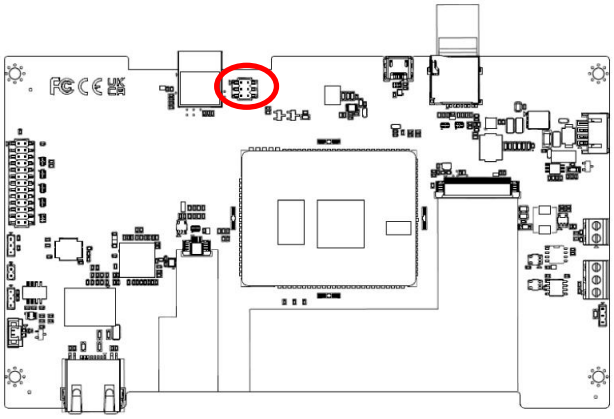


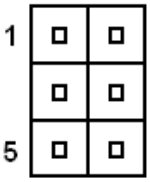


PIN	Signal
40	LEDK
39	LEDA
38	GND
37	+3.3V
36	PDAT16
35	PDAT17
34	PDAT18
33	PDAT19
32	PDAT20
31	PDAT21
30	PDAT22
29	PDAT23
28	PDAT8
27	PDAT9
26	PDAT10

PIN	Signal
25	PDAT11
24	PDAT12
23	PDAT13
22	PDAT14
21	PDAT15
20	PDAT0
19	PDAT1
18	PDAT2
17	PDAT3
16	PDAT4
15	PDAT5
14	PDAT6
13	PDAT7
12	GND
11	DCLK
10	ID4
9	HS1
8	VS1
7	DEN
6	NC
5	GND
4	NC
3	NC
2	NC
1	NC

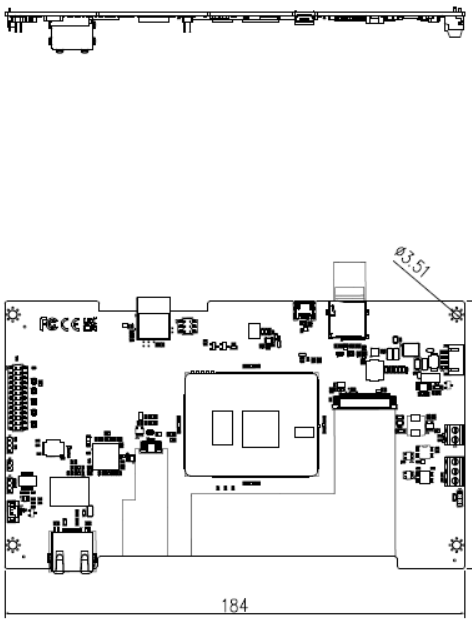
2.3.10 For Wi-Fi Module programming (J1)





Signal	PIN	PIN	Signal
TXD	1	2	NC
RXD	3	4	IO9
GND	5	6	GND

3. Mechanical Drawing



Unit: mm

4. ADE Reference Manual

4.1 Install and Launch ADE

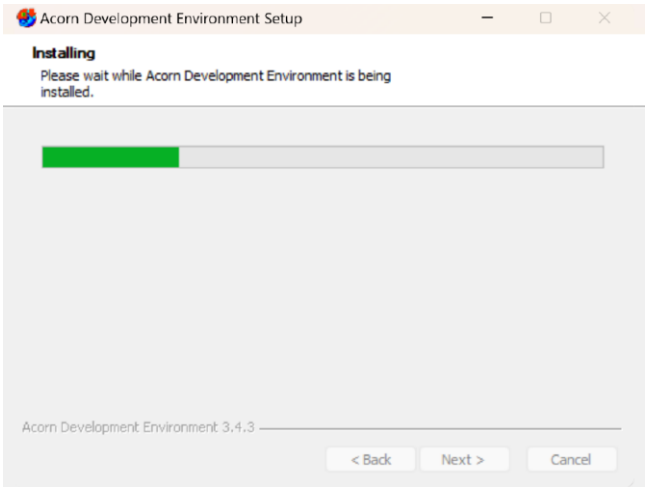
4.1.1 Install

- **Download ADE Installation program**

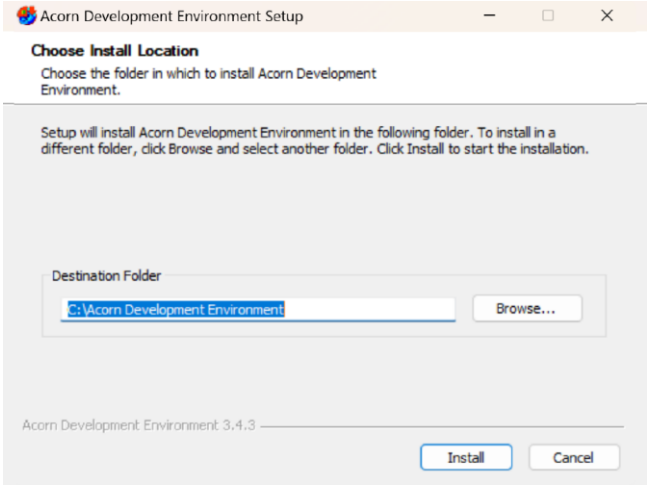
Please visit IOT's website ADE for downloading ADE installation program.

- **Install ADE**

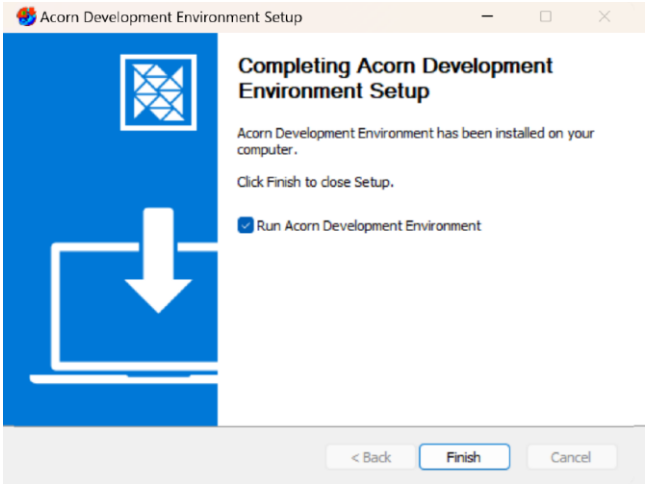
Step1. Once the downloading is finished, please open ADE Installation Program.



Step3. Once the Insall is clicked, the Installing pop-up window will show up. Please wait for the installation to be completed.



Step2. Once the ADE Installation program starts to run, Select Target Folder pop-up window will show up. Users can select or enter the target folder to which ADE will be installed.



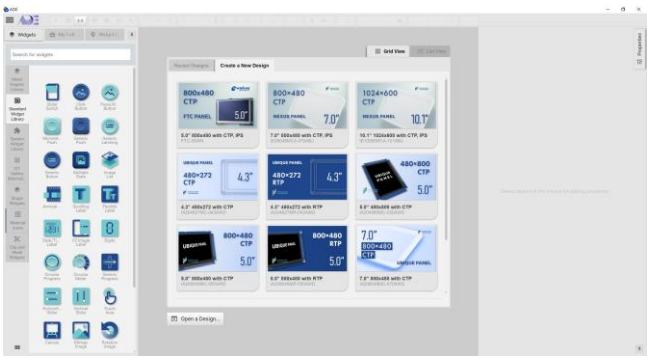
Step4. Once the installation is done, users can decide whether to open ADE or not.

4.1.2 Launch ADE

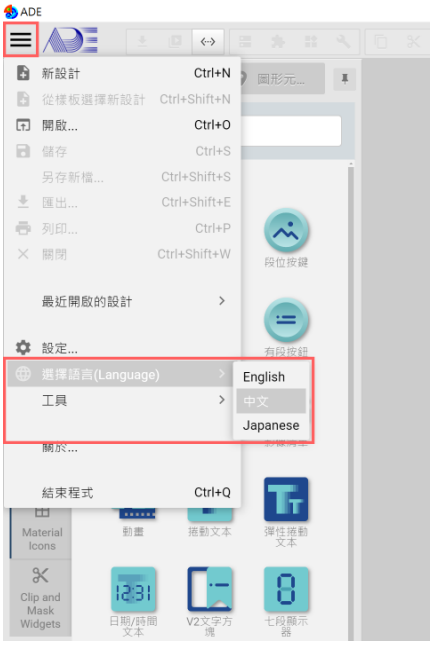
- **First Launch of ADE**

After the installation, the below ADE icon will show up in user's Windows desktop:

Step1. Users can double click this ADE click for launching it. Or users can search Acorn Development Environment for launching ADE.



Step2. Once ADE is launched, users can see the following window:
This ADE window declares that the ADE is installed and executed successfully. ADE is ready to go.



Step3. Please click the top left icon ☰ for calling out the system menu of ADE. For users that are not familiar with English, they can click Select Language for switching to a different language.

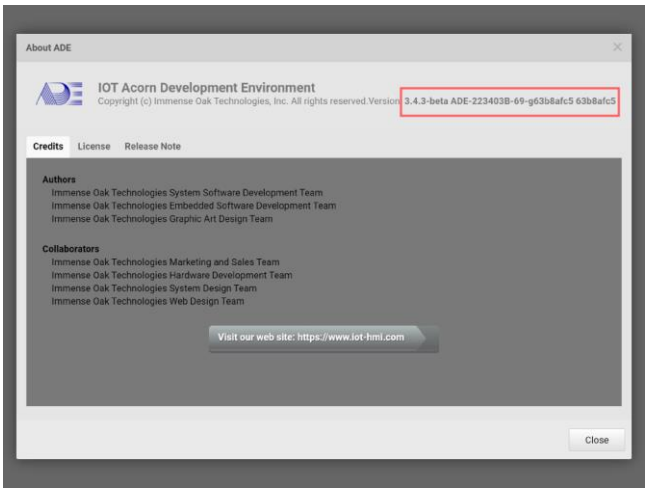
- **ADE Version**

ADE provides version number for identification. It is highly recommended for users to check the version number to avoid any compatibility issue. If users intend to share ADE projects with others, users had better check the version number first.

- **How to identify ADE version number:**

Step1. Please click the top left icon to call out the system menu.

Click About…, then About ADE window will show up. In this window, the ADE version number is listed along with the copyright declaration and the release note.

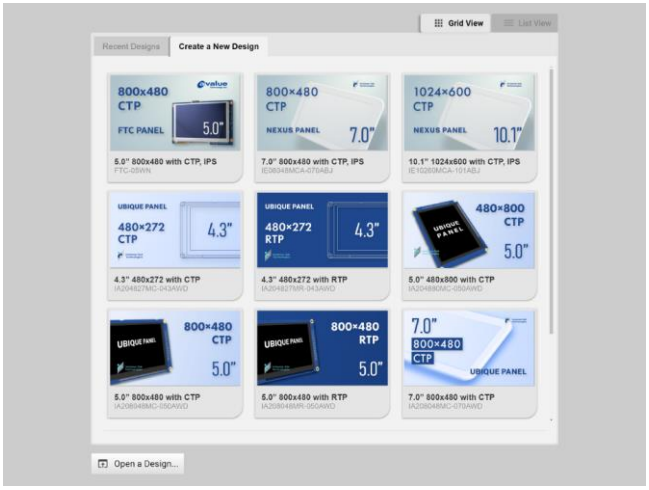


Step2. Users can gather the ADE version information in this window.

4.1.3 Start a New Design

- **Create a New Design**

After ADE is installed successfully and the version is confirmed, users can start to design HMI in ADE.



Step1. First time when ADE is launched, in the center of main ADE window, a pop-up window Create a New Design is shown:

The New Design window allows users to choose their target product. The target products are sorted based on the screen size, resolution and touch control type. Once users choose a target product by clicking the the image of it; then, a corresponding template will appear. This template includes a blank as well as the I/O configuration page. Users can start to design their HMI in the blank page.

Step2. On the other hand, if the ADE is not launched at the first time, the main window will stay in Recent Designs.

The Recent Designs records at most 20 recently created designs. The Recent Designs offers convenience for users to search the recently created works.

In both Create a New Design and Recent Designs windows, there are two tabs, Grid View and List View, allowing users to choose different representation methods. After choosing List View, users can see the following result:

Step3. In the "Recent Designs" window, users can remove any design by clicking the remove button in the top right conner of each design:

Step4. Users can pin any recent design in the Recent Designs window by clicking the pin icon. Doing so can prevent the pinned recent design from being removed or replaced by other designs.In the "Recent Designs" window, users can remove any design by clicking the remove button in the top right conner of each design:

4.2 Main Window Introduction

4.2.1 Main Window Introduction

When users open a design, they can see the main window. The main window consists of three major parts: Control Panel, Widget Pane and Design Panel.

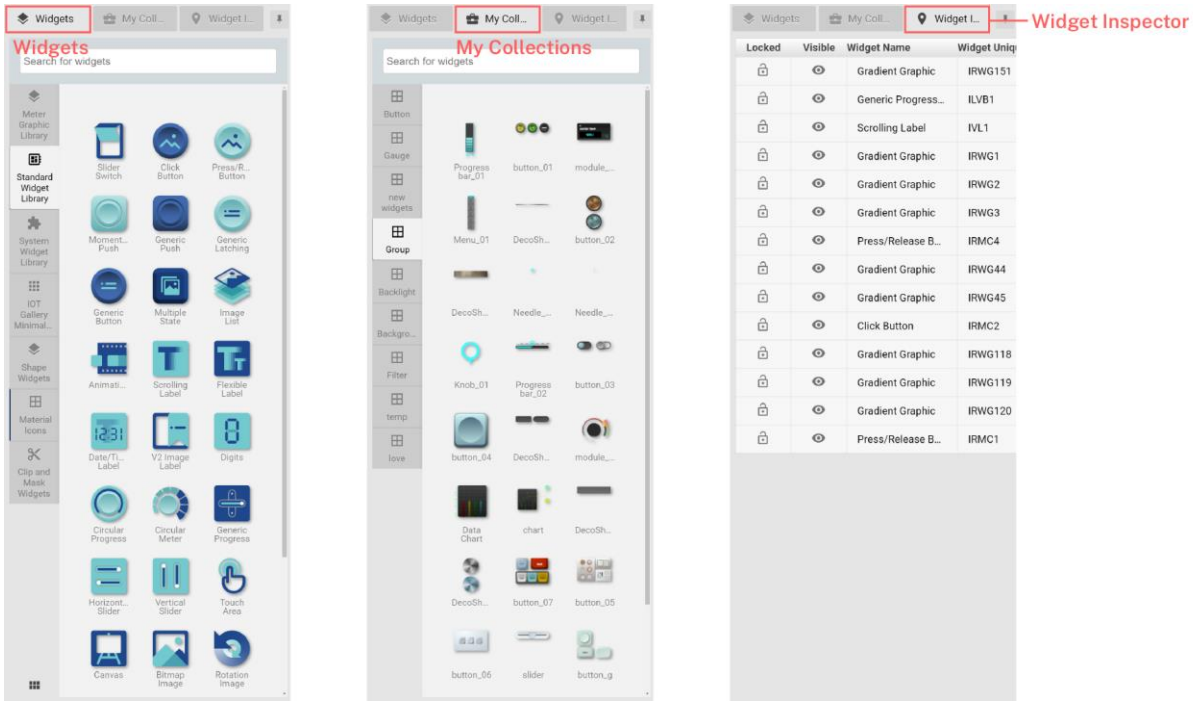
4.2.2 Control Panel

Control Panel includes System Menu and Tool Bar.

- System Menu: Please refer System Menu
- Tool Bar: Please refer Tool Bar

4.2.3 Widget Panel

Widget Panel includes Widget, My Collections, and Widget Inspector.



- Widgets: Please refer Widgets
- Private Collections: Please refer My Collections
- Widget Inspector: Please refer Widget Inspector

4.2.4 Design Panel

This Panel is used for designing HMI and setting up the widgets' attributes.