AIM-37AT Computer

User Manual

ADVANTECH

研華科技

V1.0

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Declaration of Conformity

CE Conformity Statement

Radio products with the CE alert marking comply with the R&TTE Directive (1999/5/EC) issued by the Commission of the European Community. Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards).

• EN 60950-1 (IEC60950-1) - Product Safety
• EN 300 328 Technical requirement for radio equipment
• ET S301 489 General EMC requirements for radio equipment

Products that contain the radio transmitter are labeled with CE alert marking and may also carry the CE logo.

FCC Compliance Statement

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example: use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 15 of the 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.

15.21

Any changes or modifications not expressly approved by the party responsible for compliance could void the authority to operate equipment.

This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment for body-worn configuration in direct contact to the phantom.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment.

IC warning statement

CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada’s licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This radio transmitter has been approved by Industry Canada to operate with the

antenna types listed below with the maximum permissible gain and required antenna impedance are strictly prohibited for use with this device.

Le present emetteur radio a ete approuve par Industrie Canada pour fonctionner avec les types d'antenne enumeres ci-dessous et ayant un gain admissible maximal et l'impedance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est superieur au gain maximal indique, sont strictement interdits pour l'exploitation de l'emetteur.

IC Radiation Exposure Statement

This EUT is compliance with SAR for general population/uncontrolled exposure limits in IC RSS-102. This equipment should be installed and operated with minimum distance 0 cm between the radiator & your body.

Cet EUT est la conformite avec SAR pour la population generale / les limites d'exposition incontrolees dans IC RSS-102. Cet equipement doit etre installe et utilise a une distance minimale de 0 cm entre le radiateur et votre corps.

NCC Warning Statement

Article 12

Without permission, any company, firm or user shall not alter the frequency, increase the power, or change the characteristics and functions of the original design of the certified lower power frequency electric machinery.

Article 14

The application of low power frequency electric machineries shall not affect the navigation safety nor interfere a legal communication, if an interference is found, the service will be suspended until improvement is made and the interference no longer exists.

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this user manual for later reference.
3. Disconnect this equipment from AC outlet before cleaning. Do not use liquid or spray detergents for cleaning.
4. Keep this equipment away from hazard locations.
5. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
6. Do not leave this equipment in an environment unconditioned where the storage temperature under -10°C or above 60°C, it may damage the equipment.
7. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
8. Place the AC power adapter such a way that people cannot step on it. Do not place anything over the power adapter.
9. All cautions and warnings on the equipment should be noted.
10. If the equipment is not used for long time, disconnect it from the power source to avoid being damaged by transient over-voltage.
11. Never pour any liquid into MSR/IC Card reader slots of the AIM-37AT-MXXXXXXXXXXXXX Series. This could cause fire or electrical shock.
12. Never open or disassemble the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
13. If any of the following situations arises, get the equipment checked by service personnel:
    a. The power adapter plug is damaged.
    b. Liquid has penetrated into the equipment.
    c. The equipment has been exposed to moisture.
    d. The equipment does not work well or you cannot get it to work according to user manual.
    e. The equipment has obvious signs of breakage.

Battery Safety

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

Mistreat the battery used in this device may present a risk of fire or chemical burn.

Do not attempt to disassemble the computer or its accessories.

Only qualified personal is allowed to replace the battery.

Do not dispose batteries in a fire and check with local authorities for disposal instructions.

AIM-37AT can only be equipped with standard battery pack with TCL PR-396698G 7,900 mAH Polymer Lithium Ion Battery. Use of another battery may present a risk of

fire or explosion.

Battery Charge Notice

It is important to consider the environment temperature whenever you are charging the Lithium-Ion battery pack. The process is more efficient at normal room temperature or slightly cooler. It is essential that you charge batteries within the stated range of 0°C to 40°C. Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

Storage and Safety Notice

Although charge Lithium-Ion batteries may be left unused for several months, their capacity may be depleted due to the buildup of internal resistance. If this happens they will require recharging prior to use. Lithium Ion batteries may be stored at temperatures between -10°C to 60°C, however they may be depleted more rapidly at the high end of this range. It is recommended to store AIM-37AT within normal room temperature ranges.

WEEE

EN

Following information is only for EU-member states:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Technical Support and Assistance

1. Visit the Advantech website at http://support.advantech.com where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the 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

TABLE OF CONTENT

Chapter 1 Introduction 11
1.1 Symbols Used in this Manual 12
1.2 Product Features 12
1.3 Package Contents 12
1.4 Product Specifications 13
1.4.1 Technical Specifications 13
1.4.2 Product Outlook and Dimensions 15
1.5 Exploring the AIM-37AT 16
1.5.1 Front View 16
1.5.2 Rear View 17
1.5.3 Right View 17
1.5.4 Left View 18
1.5.5 Top View 19
1.5.6 Bottom View 20
Chapter 2 Getting Started 21
2.1 Charge the Computer 21
2.2 Turn on the Computer 21
2.3 Sleep Mode 22
2.4 Operate the computer 22
Chapter 3 Basic Setups 24
3.1 Windows 10 IoT Enterprise Basic Setups 25
3.2 Android 6.0.1 Basic Settings 26
Chapter 4 Running applications 28
4.1 Installing applications 28
4.1.1 Install applications with Windows 10 IoT Enterprise 29
4.1.2 Install applications with Android 6.0.1 30
Chapter 5 Maintenance 31

5.1 Maintaining the LCD Display..... 31

5.2 Cleaning the AIM-37AT..... 31

5.3 Trouble Shooting 31

5.4 ENERGY STAR 32

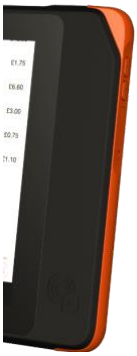
Chapter 1 Introduction

Congratulations on your purchase of the AIM-37AT Computer.

AIM-37AT has two variants and the difference is the optional peripherals at the right side of the device.

AIM-37AT-MXXXXXXXXXXXXXX:
MSR and IC Card Reader slots are embedded at the right side.

AIM-37AT-SXXXXXXXXXXXXXX:
The card reader slots are sealed off and replaced by volume keys.



This product combines stylish design with reliable performance and powerful functionality to best suit all your needs, in a wide range of working conditions. This user manual outlines all you need to know to set up and use your AIM-37AT. If you have any further questions or queries, contact our technical support team via our website:

http://support.advantech.com.tw/

1.1 Symbols Used in this Manual

	Denotes information that must be observed. Failure to do so may result in personal harm or damage to the product.

	Denotes information that must be observed. This is informative notification to have a better experience while using this computer.

1.2 Product Features

- Semi-rugged stylish design with only 17.4mm in thickness.
- Low power Intel® ATOM ™ processor designed for mobile applications.
- Rich Built-in WLAN/Bluetooth/NFC wireless communications.
- 10.1 " WXGA TFT IPS LCD with 10-points multiple touch.
- Durable and reliable Anti-Glare, Anti-Fingerprint Corning Gorilla Glass™ 3.
- Dual USB 2.0 host connectors via Micro USB
- Optional 2D barcode scanner with trigger button and status LED.
- Comply with IP54 sealing for water and dust (AIM-37AT-SXXXXXXXXXXXXX).
- Built-in MSR and IC Card readers (AIM-37AT-MXXXXXXXXXXXXX).
- Can be configured to install either Android (AIM-37AT-SXXXXXXXXXXXXX) or Windows OS (both (AIM-37AT-SXXXXXXXXXXXXX and AIM-37AT-MXXXXXXXXXXXXX)

1.3 Package Contents

Ensure all the following items are present when you receive your AIM-37AT. If any of these items are missing, contact your dealer immediately.

- AIM-37AT Computer
- Startup Manual
- AC power adaptor (micro USB connector)

1.4 Product Specifications

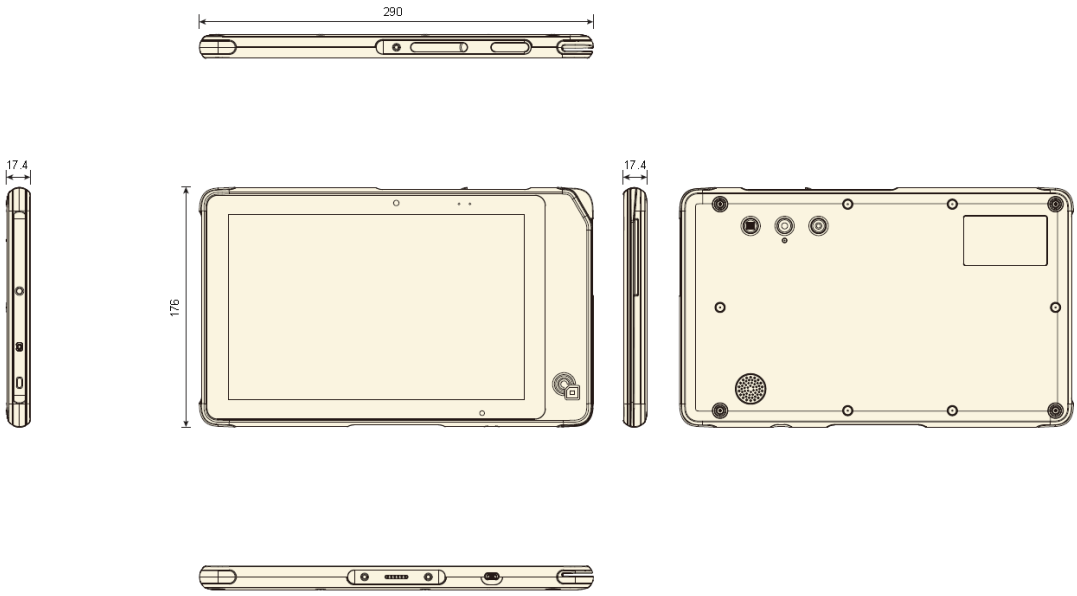
1.4.1 Technical Specifications

Model Name		AIM-37AT-MXXXXXXXXXXXXXX	AIM-37AT-SXXXXXXXXXXXXXX
Processor	CPU	Intel Atom X5-Z8350, quad-core processor, 1.92 GHz	
OS		Windows 10 IoT Enterprise 64 bit	Windows 10 IoT Enterprise 64 bit Android 6.0.1 64 bit
Memory		2 GB DDR3L	
Storage		32 GB eMMC	
Audio System		Speaker, 3.5mm headset jack	
Display	Size / Type	10" color touch screen, IPS TFT LCD	
	Glass Type	Corning Gorilla Glass 3 with Native Damage Resistance	
	Max. Resolution	WXGA (1280 X 800)	
	Brightness (cd/m²)	LCM Max 350 cd/m² LED back light	
	Bonding	Direct Bonding; >=84% transparency	
	Coating Features	Anti-Glare, Anti-Fingerprint	
Touch Panel		10 Points Capacitive multi touch screen	
Application Buttons		1 x Power button x 1 1 x Barcode Scanner trigger or Programmable button	1 x Power button 1 x Barcode Scanner trigger or Programmable button 1 x Volume Adjustment (Up/Down)
I/O Port		1 x Micro SD (up to 32GB) 1 x Micro USB 2.0 Host 1 x Kensington-lock for anti-theft	1 x MicroSD (up to 32GB) 1 x Micro USB 2.0 Host/ OTG(Android) 1 x Kensington-lock for anti-theft
Communication	WLAN	Internal 802.11b/g/n WLAN Module	
	Bluetooth	Bluetooth 2.1+ (EDR) / BT4.0	
	NFC	13.56 MHz; ISO 14443 Type A/B; ISO/IEC 15693; MIFARE; NFC	
	MSR	3-Track MSR with 3-DES encryption; Built-in Triple DES and AES Encryption; DUKPT key	N/A

	management	
	IC Card Reader 5V smart card; ISO/IEC 7816-1, 2, 3, 4; T=0 & T = 1;	N/A
	Sensors G-sensor + E-compass, Gyroscope, Ambient Light Sensor	
Data Collection	1D/2D barcode scanner (optional) 5M pixel auto-focus main camera with flash LED 2M pixel fixed-focus front camera	
Dimensions	290 x 176 x 17.4 mm	
Weight with Battery	915g	900g
Power	Battery Li-Polymer Battery, 3.8V@7900 mAh (typ.)	
Environment	Operating Temperature 0 ~ 50° C	
	Operating Temperature 0 ~ 40° C	
	Storage Temperature -10 ~ +60° C	
	Operating Humidity 5% ~ 95%, non-condensing	
IP Certification	Front Panel IP54	Full device IP54
Package Bundle	Power Adapter (5V, 3A) with Micro USB connector	

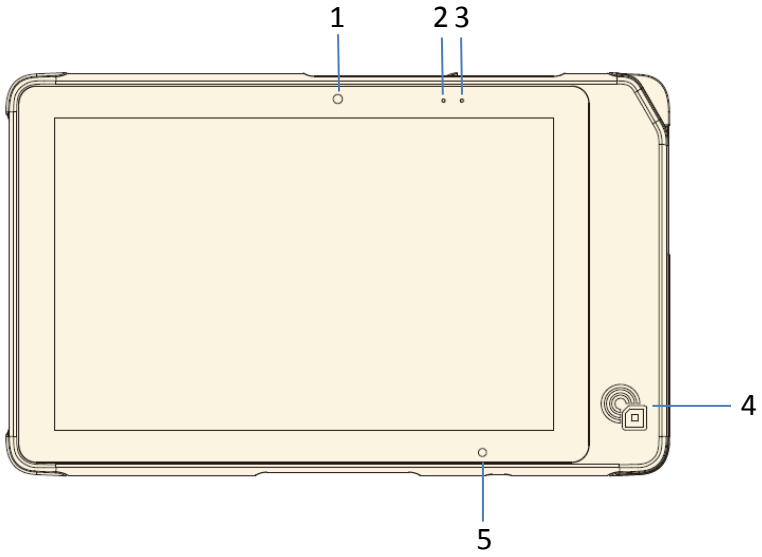
1.4.2 Product Outlook and Dimensions

All AIM-37AT Series share the same dimension, the following illustration uses AIM-37AT-MXXXXXXXXXXXXXX as example.



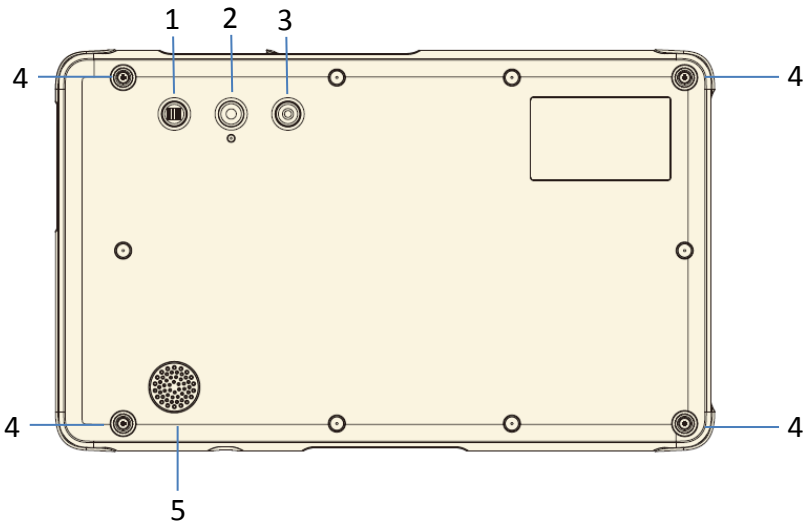
1.5 Exploring the AIM-37AT

1.5.1 Front View



No.	Component
1	Front Camera
2	Barcode scanner status LED
3	Power LED
4	NFC
5	Ambient Light Sensor

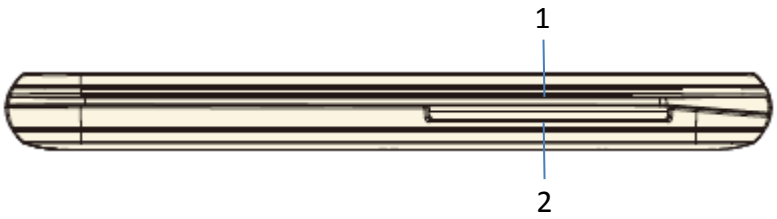
1.5.2 Rear View



No.	Component
1	Barcode scanner trigger or programmable button
2	Rear Camera with LED Flash
3	Power button
4	M6 screw holes
5	Speaker

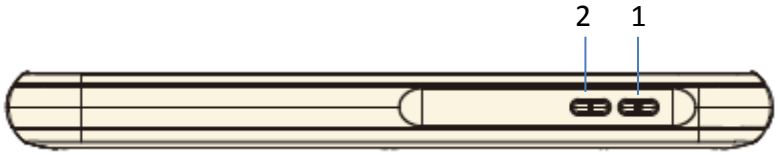
1.5.3 Right View

1.5.3.1 AIM-37AT-MXXXXXXXXXXXXXX



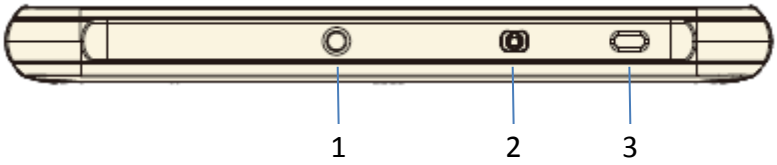
No.	Component
1	MSR (Magnetic Swipe Reader)
2	IC Card Reader

1.5.3.2 AIM-37AT-SXXXXXXXXXXXXX



No.	Component
1	Volume Up
2	Volume Down

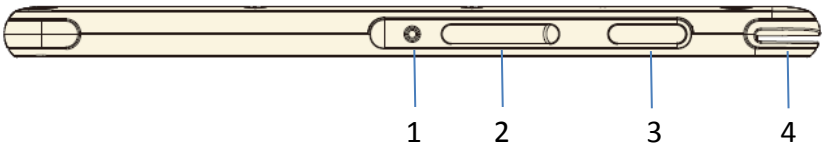
1.5.4 Left View



No.	Component
1	Wrist strap screw
2	Audio Combo Jack
3	Kensington Lock connector

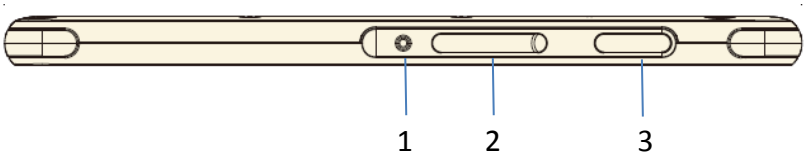
1.5.5 Top View

1.5.5.1 AIM-37AT-MXXXXXXXXXXXXXX



No.	Component
1	Guide pin
2	Micro SD slot
3	Barcode scanner
4	MSR slot

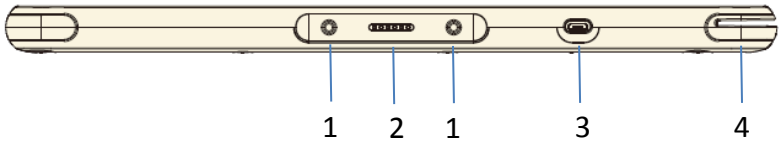
1.5.5.2 AIM-37AT-SXXXXXXXXXXXXXX



No.	Component
1	Guide pin
2	Micro SD slot
3	(Optional) barcode scanner

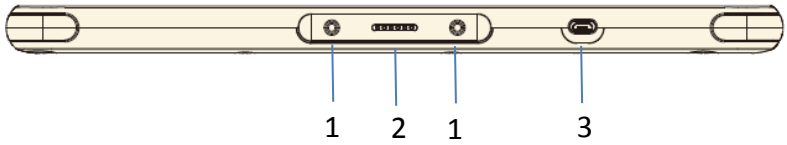
1.5.6 Bottom View

1.5.6.1 AIM-37AT-MXXXXXXXXXXXXXX



No.	Component
1	Guide pin
2	Pogo Pin (Reserved for future docking usage)
3	Micro USB
4	MSR slot

1.5.6.2 AIM-37AT-SXXXXXXXXXXXXXX



No.	Component
1	Guide pin
2	Pogo Pin (Reserved for future docking usage)
3	Micro USB

Chapter 2 Getting Started

2.1 Charge the Computer

To charge the embedded battery in AIM-37AT, connect the Micro USB adaptor on the AIM-37 computer.

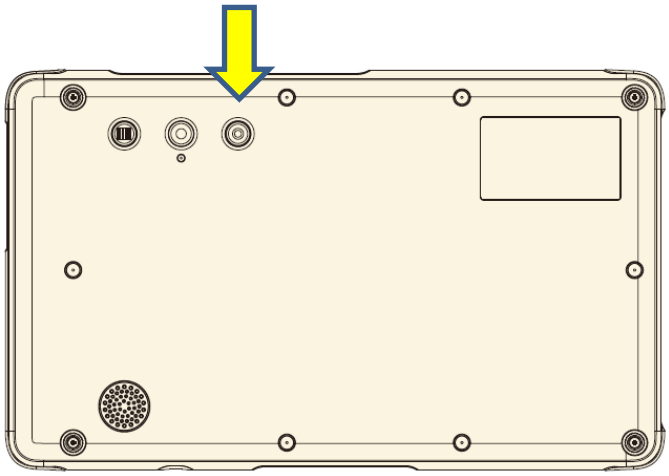
Micro USB Connector

Note	Please charge for at least one hour when you use this computer for the first time.

2.2 Turn on the Computer

Push the Power Button (located at no. 3 of Section 1.5.2 Rear View.) for 3 seconds to start the computer.

Power Button

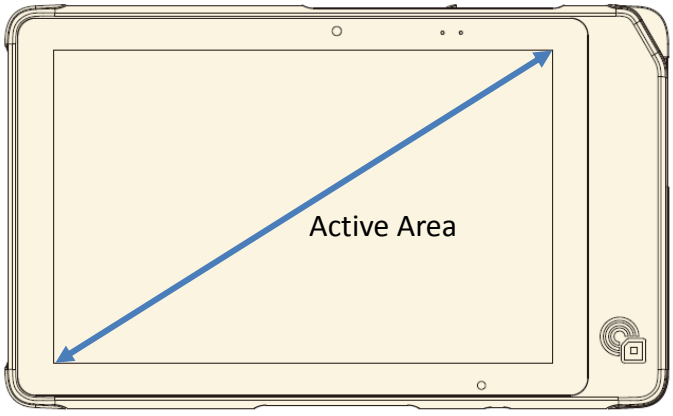


2.3 Sleep Mode

While the computer is running, push the Power Button for 1 second will move the equipment into sleep mode for power saving. Push the Power Button again will enable the backlight again.

2.4 Operate the computer

AIM-37AT is equipped with a 10.1” Capacitive Touch Panel. Use finger to touch the following Active Area to operate the computer.



2.5 LED indicator status

AIM-37AT is equipped with two LED indicators. The following tables show LED status of each indicator.

2.5.1 Power LED

AIM-37AT power LED has three colors: Red, Green, Blue.

a) The Red LED blinks when internal battery capacity is below 10% to warn the user to charge.
b) The Blue LED lights up when internal battery is being charged.
c) The Green LED lights up when internal battery has been fully charged.

2.5.2 Barcode scanner status LED

When barcode scanner is installed on the computer, barcode scanner status LED (orange) blinks when data is received.

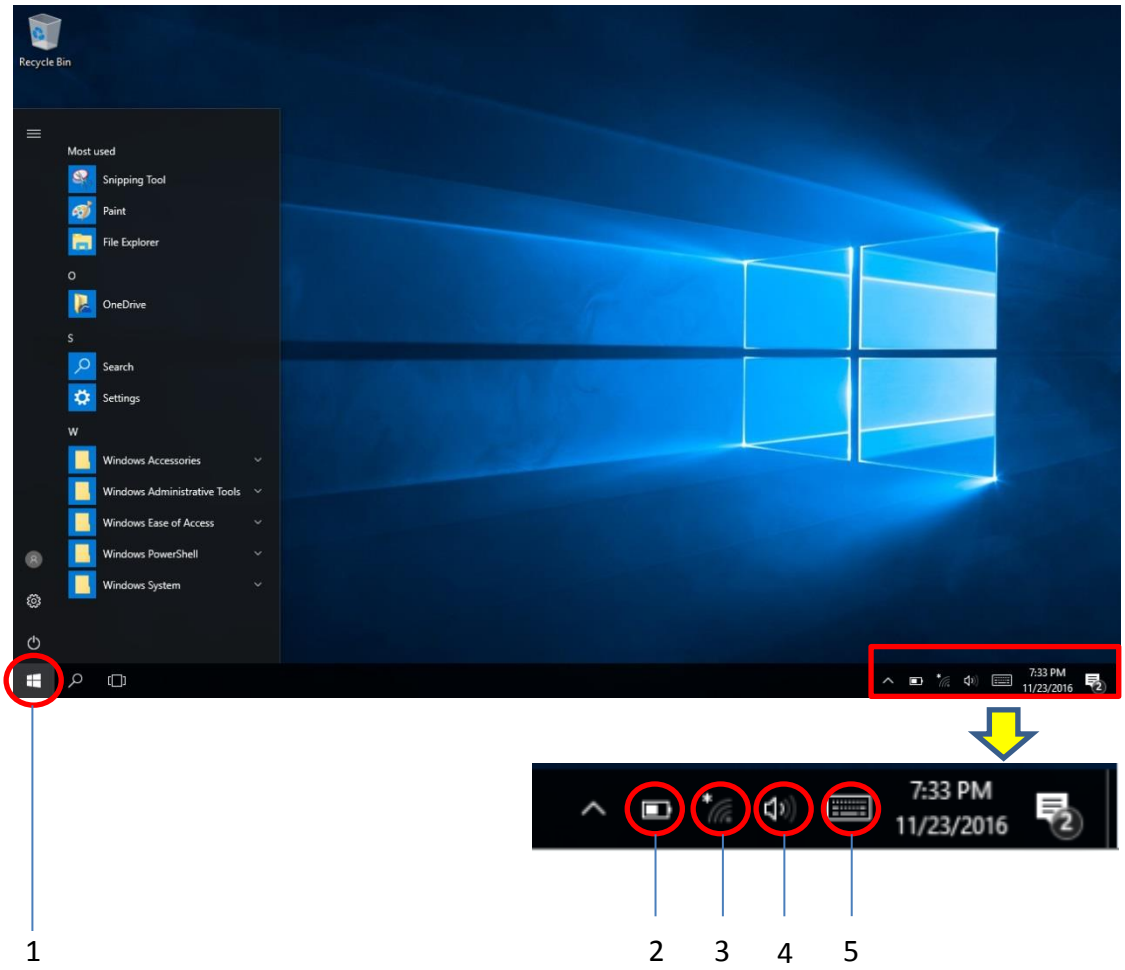
Chapter 3 Basic Setups

	WLAN access requires a separate purchase of an access point. Contact a wireless service provider for more information.

	Screens used in this manual are for illustrative purposes only. Actual screens may vary depending on your product version and pre-installed Operating System versions.

3.1 Windows 10 IoT Enterprise Basic Setups

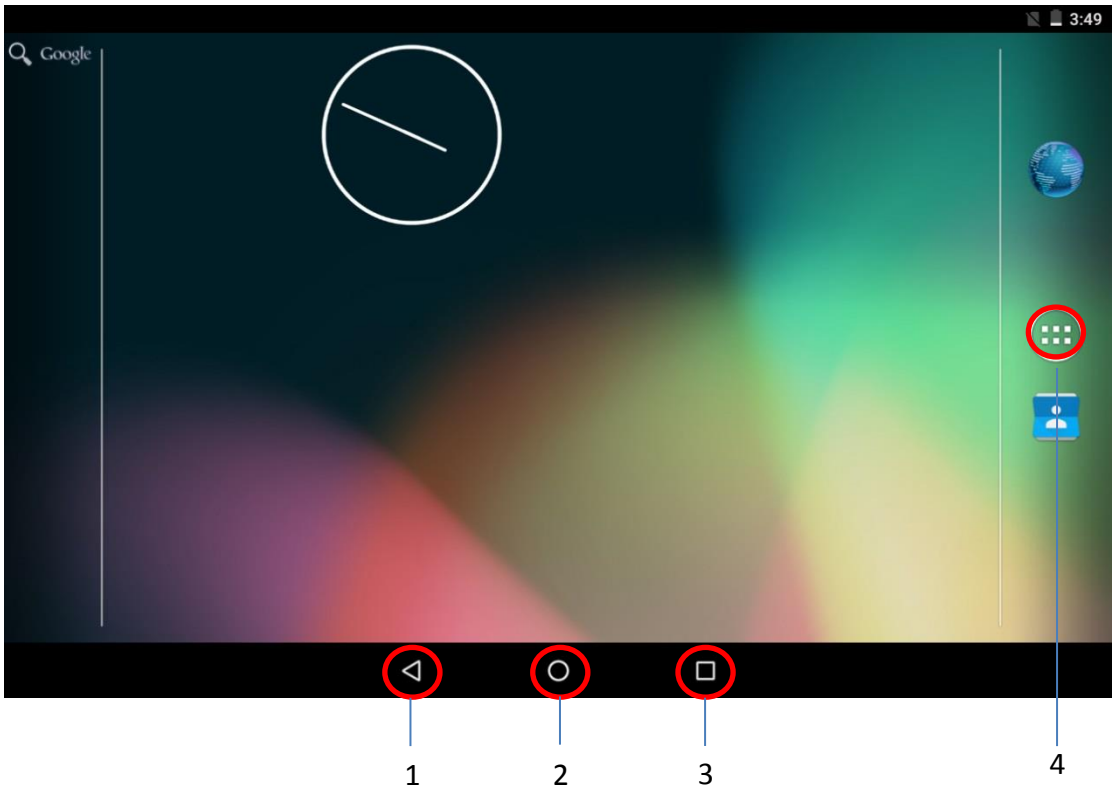
Windows 10 IoT Enterprise Home Screen



No.	Function
1	Program Launcher
2	Battery Status
3	Connect WLAN
4	Adjust audio volume
5	Open the On-screen keyboard

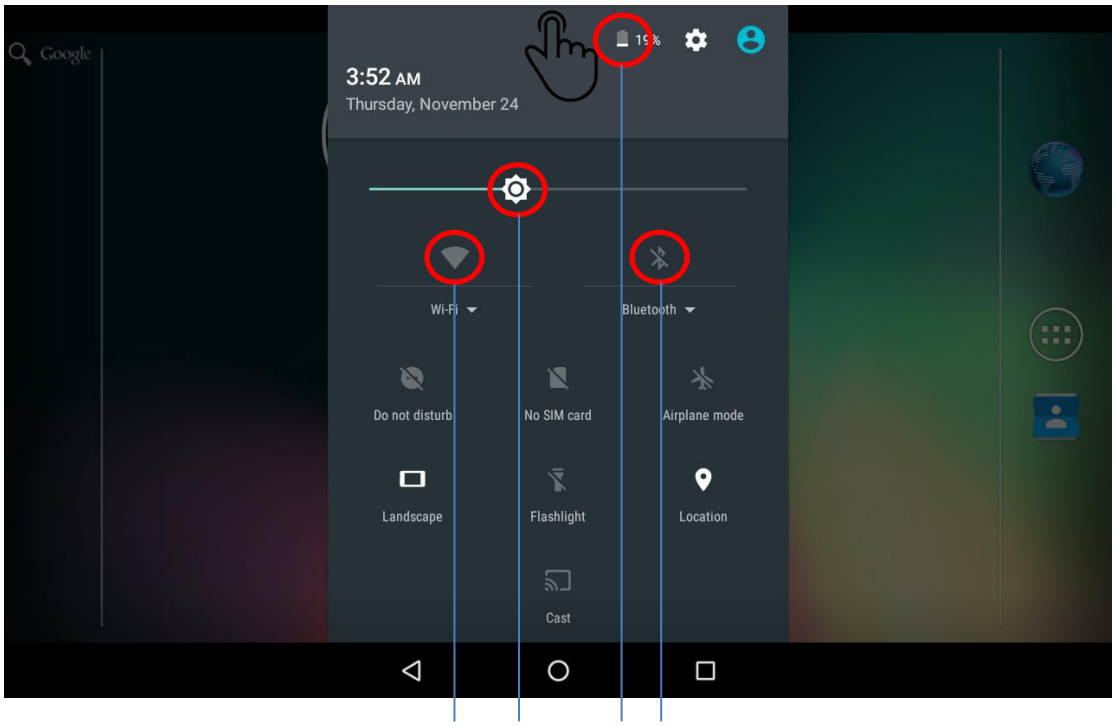
3.2 Android 6.0.1 Basic Settings

Android 6.0.1 Home Screen



No.	Function
1	Back
2	Home
3	Background Applications
4	Program Launcher

Tap top of the screen and scroll down for Settings menu



No.	Function
5	Connect WLAN
6	Adjust backlight
7	Battery Status
8	Connect Bluetooth

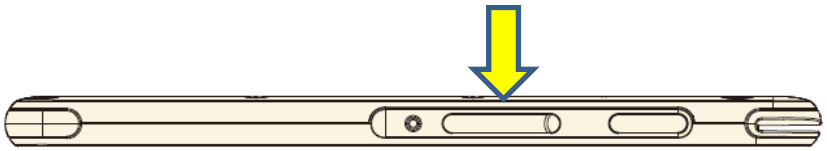
Chapter 4 Running applications

4.1 Installing applications

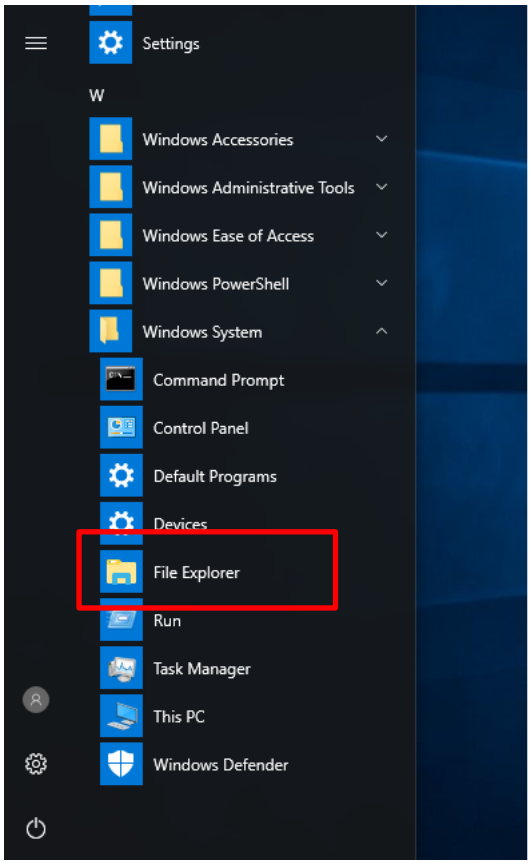
There are multiple ways to install applications on AIM-37AT and this section shows the steps to install applications via Micro SD cards.

1. Before installation, please ensure your Micro SD card has been correctly formatted with FAT32 file system.
2. Copy .exe (Windows) or .apk (Android) on the Micro SD card.
3. Open the Micro SD card slot on the top of the device and inset the card.

Micro SD Slot

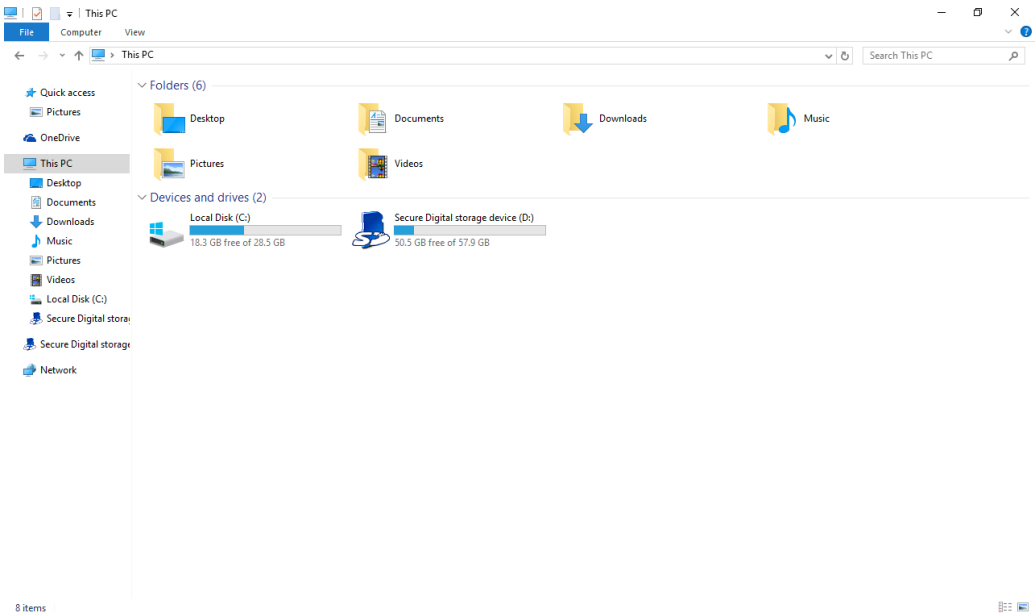


4.1.1 Install applications with Windows 10 IoT Enterprise



a) Go to Program Launcher

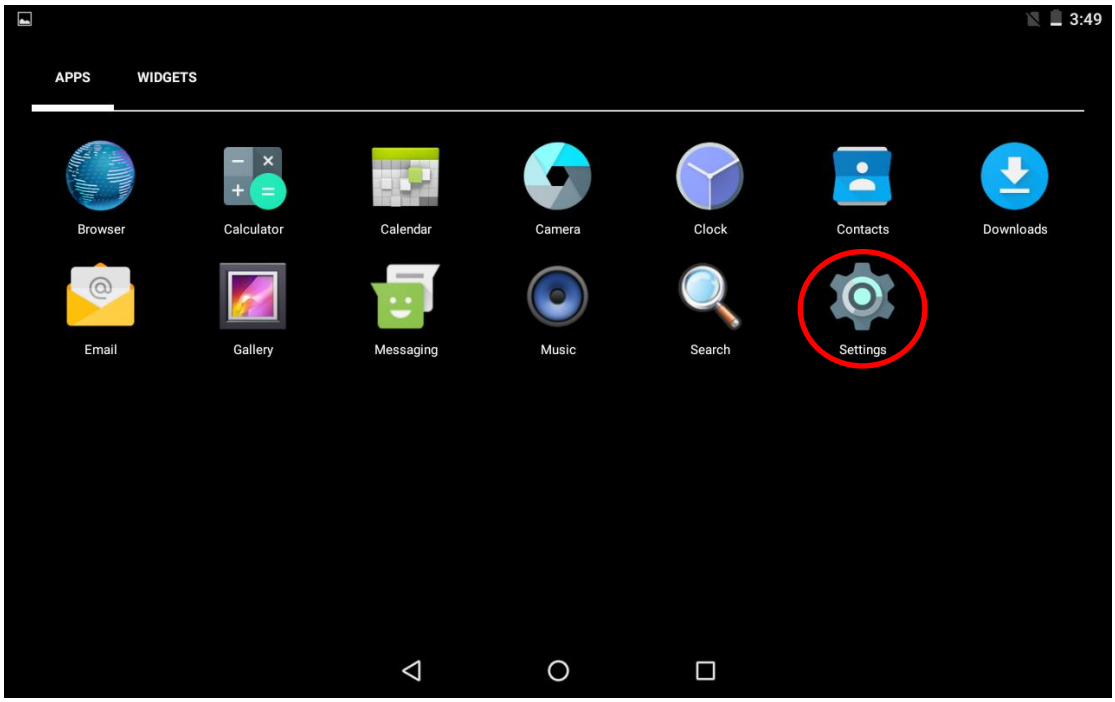
b) Launch File Explorer and will find Secure Digital storage device (D:)



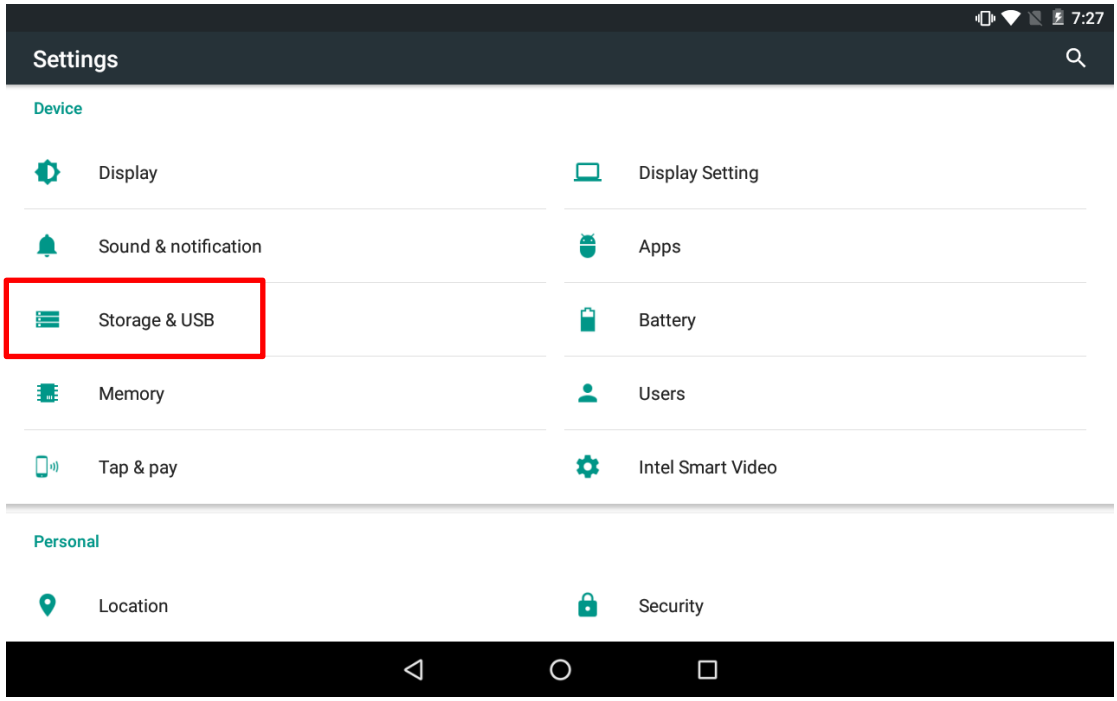
c) Tap Secure Digital storage device (D:) to find .exe executable file.

d) Tap .exe file to install the application.

4.1.2 Install applications with Android 6.0.1



a) Go to Settings



b) Go to Storage & USB

c) Choose SD Card

d) Tap .apk file to install the application

Chapter 5 Maintenance

5.1 Maintaining the LCD Display

• Do not scratch the surface of the screen with any hard objects.
• Do not spray liquid directly on the screen or allow excess liquid to drip down inside the device.
• Do not place anything, such as food and drink, on the screen at any time to prevent damage to the screen.
• Clean the LCD display only with a soft cloth dampened with denatured alcohol or a proprietary LCD screen cleaner.

5.2 Cleaning the AIM-37AT

1. Turn off the device and unplug the power cord.
2. Wipe the screen and exterior with a soft, damp cloth moistened only with water. Do not use liquid or aerosol cleaners on the screen, as these will discolor the finish and damage the screen.

5.3 Trouble Shooting

When System behaves abnormally, such as

1. Failure to power on.
2. Failure to power off.
3. Power LED does not light up when DC power plug in.
4. System does not respond to touch behaviors.

Contact your distributer, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:

- Product name and serial number.
- Descriptions of your peripheral attachments.
- Descriptions of your software (operating system, version, application software,

etc.)

- A complete description of the problem.
- The exact wording of any error messages.
- Symptoms, photo or video if available.

5.4 ENERGY STAR

An ENERGY STAR qualified computer delivers substantial savings over a conventional computer. Desktop, integrated desktop, and notebook (laptop) computers, workstations, small-scale servers, and thin clients are all eligible to earn the ENERGY STAR, and those that do are now more efficient than ever.
It is an honor for Advantech to provide you such products.

What is ENERGY STAR?

ENERGY STAR is a U.S. Environmental Protection Agency (EPA) voluntary program that helps businesses and individuals save money and protect our climate through superior energy efficiency.
The ENERGY STAR program was established by EPA in 1992, under the authority of the Clean Air Act Section 103(g). Section103(g) of the Clean Air Act directs the Administrator to "conduct a basic engineering research and technology program to develop, evaluate, and demonstrate non-regulatory strategies and technologies for reducing air pollution."

In 2005, Congress enacted the Energy Policy Act. Section 131 of the Act amends Section 324 (42 USC 6294) of the Energy Policy and Conservation Act, and "established at the Department of Energy and the Environmental Protection Agency a voluntary program to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution through voluntary labeling of or other forms of communication about products and buildings that meet the highest energy efficiency standards."

For more information, please visit www.energystar.gov

The product is to enter display sleep mode after 4 minutes and computer sleep mode after 10 minutes in default, to wake it from sleep mode, simply press the power button on the back cover, while under sleep mode it allows the device to save 80% or more energy.

Power Management System:

Default mode is on balanced, after idle for 4 minutes, it will automatically shuts its Monitor and enter sleep mode if idle for more than 10 minutes.

Lists of default power management systems:

Balanced (Default)	*Idle 4 min. closes screen, 10 min. enters sleep mode.*
High performance	*Never idle and never enters sleep mode.*