

FM07M

7-inch Vehicle Mount Computer

ARM A53 Quad Core 2.0GHz



User Guide

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Preface

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Advisory Conventions

Four types of advisories are used throughout the user manual to provide helpful information or to alert you to the potential for hardware damage or personal injury. These are Notes, Important, Cautions, and Warnings. The following is an example of each type of advisory.



Note:

A note is used to emphasize helpful information



Important:

An important note indicates information that is important for you to know.



Caution/ Attention

A Caution alert indicates potential damage to hardware and explains how to avoid the potential problem.

Une alerte d'attention indique un dommage possible à l'équipement et explique comment éviter le problème potentiel.



Warning!/ Avertissement!

An Electrical Shock Warning indicates the potential harm from electrical hazards and how to avoid the potential problem.

Un Avertissement de Choc Électrique indique le potentiel de chocs sur des emplacements électriques et comment éviter ces problèmes.

FCC Statement

This device complies with part 15 FCC rules.

Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 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 "B" 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 Notice (European Union)

Electromagnetic Compatibility Directive (2014/30/EU)

- EN55024: 2010/ A1: 2015
 - IEC61000-4-2: 2009
 - IEC61000-4-3: 2006+A1: 2007+A2: 2010
 - IEC61000-4-4: 2012
 - IEC61000-4-5: 2014
 - IEC61000-4-6: 2014
 - IEC61000-4-8: 2010
 - IEC61000-4-11: 2004
- EN55032: 2012/AC:2013
- EN61000-3-2:2014
- EN61000-3-3:2013

Low Voltage Directive (2014/35/EU)

- EN 60950-1:2006/A11:2009/A1:2010/A12:2011/ A2:2013

This equipment is in conformity with the requirement of the following EU legislations and harmonized standards. Product also complies with the Council directions.

Read Me First



Attention: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité. VERIFIER que le cordon électrique est la prise murale pour un delai d'inactivite prolongé. Pour arrêter complètement l'alimentation de l'appareil, débranchez le cordon d'alimentation de la prise AC. N'enlever ni le capot arrière ni les pièces internes de l'appareil. Contactez un personnel qualifié si nécessaire.



SA1965

Electrique Avertissement

Utilisé pour les instructions destinés à alerter l'utilisateur d'un CHOC ÉLECTRIQUE mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.



SA1966

Avertissement Utilisé pour les instructions destinés à alerter l'utilisateur d'un risque mortel ou de blessure grave en cas d'utilisation incorrecte de l'unité.



Attention: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité FAIRE le cordon électrique est DÉBRANCHÉ DE LA PRISE MURALE DANS UN DELAI DE PROLONGER INACTIVITÉ. De se désengager totalement LE POUVOIR DE L'UNITE, S'IL VOUS PLAÎT DEBRANCHER LE CORDON D'ALIMENTATION DE LA PRISE AC. NE PAS Remove le capot arrière, pas de PIÈCES À L'INTÉRIEUR. Contactez un personnel qualifié S'il faut le réparer.



SA1965

Electrique Avertissement

Sert aux instructions destin es alerter l'utilisateur d'un CHOC ÉLECTRIQUE mortel ou de blessure grave en cas d'utilisation incorrecte de l'unit.



SA1966

Avertissement Sert aux instructions destin es alerter l'utilisateur d'un risque mortel ou de blessure grave en cas d'utilisation incorrecte de l'unit .

Informations de sécurité (FR)

Suivez et respectez tous les avertissements et instructions figurant sur l'écran. Pour votre sécurité, s'il vous plaît lire toutes les consignes de sécurité et de fonctionnement avant d'utiliser le device. Gardez ce manuel pour référence future.

1. Lire avec attention toutes les recommandations et precautions d'emploi avant d'utiliser ce produit.
2. Veuillez conserver ces recommandations et précautions pour référence future.
3. Lire et comprendre tous les avertissements énumérés dans les précautions d'emploi.
4. Suivre toutes les précautions d'emploi pour utiliser ce produit.
5. Utiliser exclusivement un chiffon sec pour nettoyer ce produit.
6. Ne pas placer le produit près de toute source de chaeur telle que radiateurs, arrivées d'air chaud, fourneaux ou autres appareils générant de la chaleur (incluant les amplificateurs producteurs de chaleur) .
7. Ne pas négliger la sécurité que procure un branchement polarisé ou avec raccordement à la terre, Un branchement polarisé comprend deux fiches dont l'une est plus large que l'autre. Un branchement à la terre comprend deux fiches plus une troisième reliée à la terre. Si la fiche secteur fournie ne s'insert pas dans votre prise de courant. consulter un 'électricien afin de remplacer votre prise obsolète.
8. Protéger le cordon d'alimentation de tout écrasement ou pincement, particulièrement au

niveau des fiches, des réceptacles utilisés et à l'endroit de sortie de l'appareil. Ne pas casser la fiche de terre du cordon d'alimentation.

9. Utiliser uniquement les accessoires spécifiés par le constructeur.
10. Utilisez seulement des accessoires spécifiés par le fabricant ou vendus avec le produit.
11. Débrancher cet appareil lors d'orages ou s'il n'est pas utilisé pendant une longue période.
12. Faire exécuter le service par du personnel qualifié. Une intervention technique est requise lorsque l'appareil a été endommagé ou n'opère pas normalement.



Safety Information (EN)

Follow and adhere to all warnings and instructions on the screen. For your safety, please read all safety and operating instructions before using the device. Keep this manual for future reference.

1. Carefully read all recommendations and precautions for use before using this product.
2. Retain all recommendations and precautions for future reference as necessary.
3. Read and be sure to understand all warnings listed in the precautions.
4. Follow all operating precautions when using this product.
5. Use only a dry cloth to clean this product.
6. Do not place the product near any heat sources such as radiators, warm air intakes, stoves or other heat-generating devices (including amplifiers or other heat-producing equipment).
7. Do not disregard the safety that a polarized or grounded connection can provide. A polarized connection consists of two plugs, one of which is larger than the other. A grounded connection has two blades and a third one that is grounded. If the main plug provided cannot be inserted into your outlet, consult an electrician to replace your obsolete outlet.
8. Protect the power cord from being crushed or pinched, particularly in the area of the plugs, any receptacles used, and the point of exit from the apparatus. Do not break off the ground pin of the power cord.
9. Use only accessories specified by the manufacturer.
10. Use only with accessories specified by the manufacturer or sold with the product.
11. Unplug this apparatus during lightning storms or when it is not being used for long periods.
12. Refer all servicing to qualified service personnel. A technical intervention is required when the apparatus has been damaged in any way or does not operate normally.



General Guideline

It is recommended to reboot the device when some functions are defect or inactive. If it still can't solve the problems, please contact your dealer or agent.

About This Guide

This User Guide provides instruction for the system administrator to follow when configuring and using the FM07M Vehicle Mount Computer.



Note:

Display images shown may vary slightly from actual display. Information in this manual is subject to change without prior notification.

Chapter 1: Introduction

This chapter contains details of FM07M Vehicle Mount Computer, lists supplied accessories and shows components.

1.1 Introduction

The FM07M Vehicle Computer runs on an ARM A53 Quad Core 2.0GHz processor and supports Android 11 operating system. The FM07M features projected capacitive touch screen with 1024 x 600pixel resolution. The FM07M delivers flexibility and mobility in a vehicle mounted computer form factor. FM07M is designed to be mounted on the vehicle and supports 9 to 24V DC wide power input with ignition.



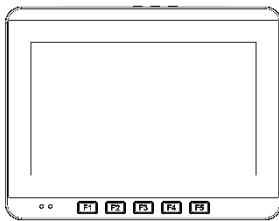
Note:

Contact our technical support for information on the latest firmware upgrade for your device.

1.2 Package Contents

Standard

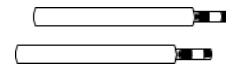
Before using this device, make sure that all the items listed below are present in your package:



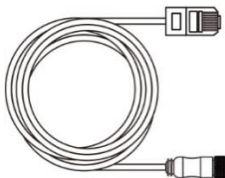
FM07M Computer
Varies by product specifications



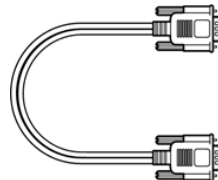
User Guide
Part No. 91521111109M



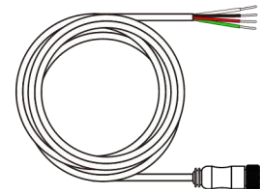
WLAN/BT Antenna x 2
Part No. 397SM000000S



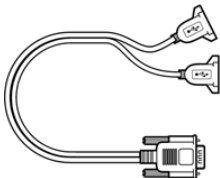
M12 LAN Cable, 1.8m
Part No.94I0120080K0



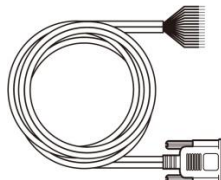
RS-232 Cable, 1.8m
Part No. 94G4094090K1



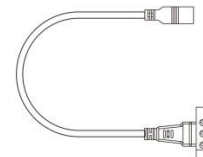
M12 Power Cable, 1.8m
Part No.94J004L040K1



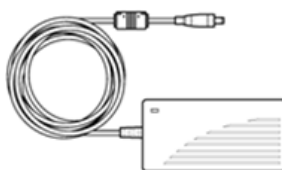
USB Cable, 0.3m
Part No.9483098080K0



CANBus Cable, 1.8m
Part No. 94E215L120K1



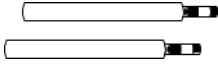
Power Converter Cable
Part No.94J602G030K2



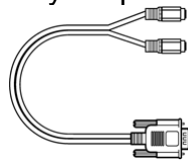
Power Adapter
Part No. 922D050W12VA

Optional

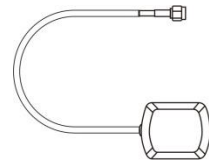
The following accessories may be included in your package based on your order:



WWAN Antenna x 2
Part No.397SM000000Q



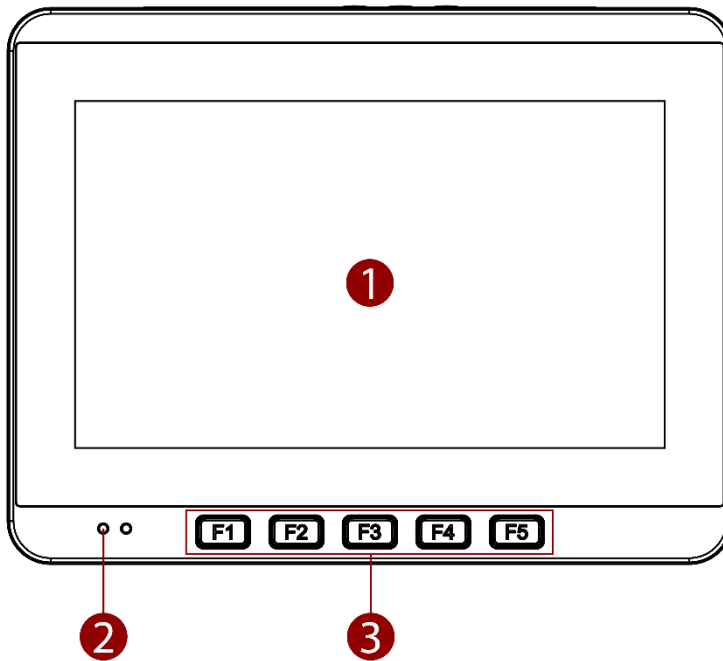
Audio Cable, 0.3m
Part No.94E215R060K0



GPS Antenna, 3m
Part No.397SM000000G

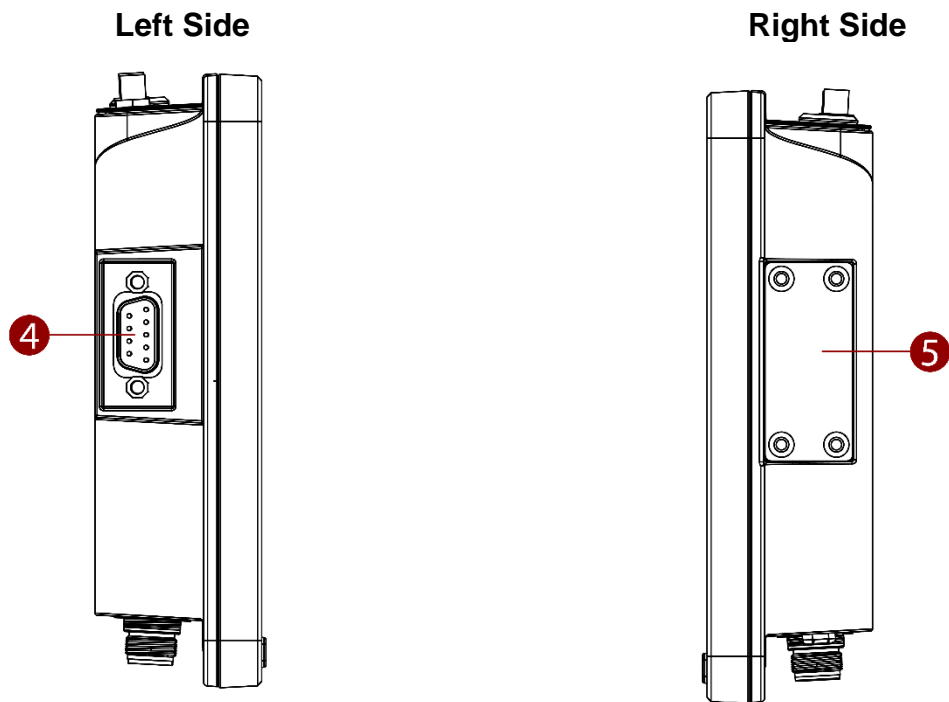
1.3 Components

1.3.1 Front View



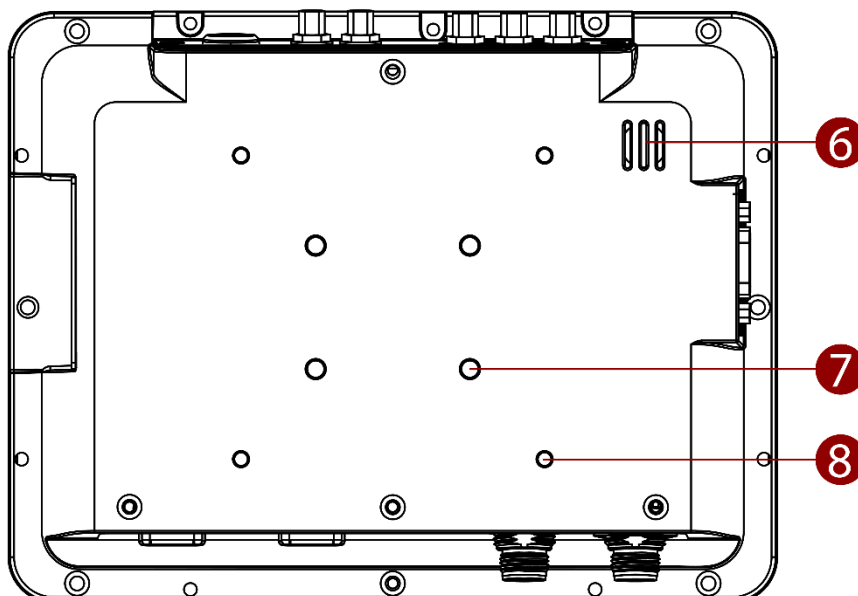
No	Item	Description
1	7-inch Touch Screen	Acts as one of the inputs for the device
2	LED Indicators	Power LED indicator <i>On: Power is on</i> <i>Off: Power is off</i>
3	Function Keys	5 programmable function keys that can be configured by Win-Set® Utility

1.3.2 Side Views



No	Item	Description
4	USB Connector	USB Connector (DB9) that supports a connection of two USB devices. It also accepts a dongle cable with a USB host port and a USB Client port.
5	SIM Card Slot (Optional)	SIM card slot under secured cover with 4 screws.
	SD Card Slot	MicroSD card slot under secured cover with 4 screws.
	Micro USB	Micro USB port under secured cover with 4 screws.

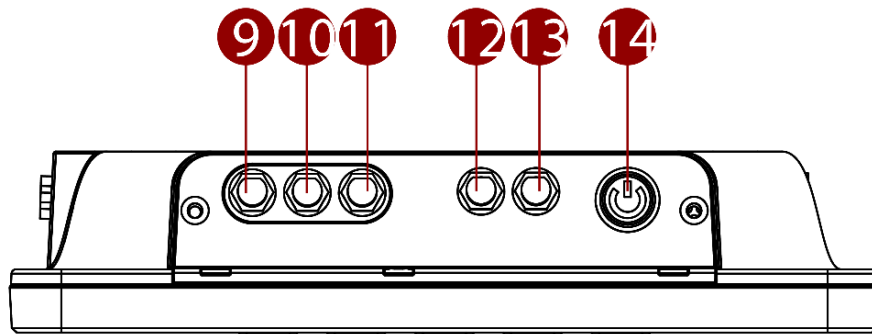
1.3.3 Rear View



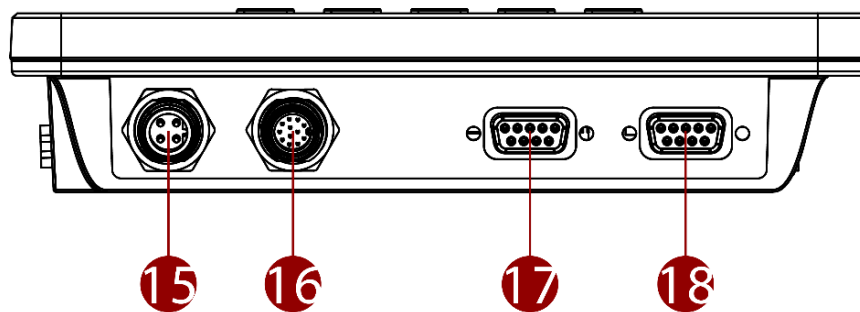
No	Item	Description
6	Speaker	Emits sound
7	RAM Mount	RAM base dimensions: 38.1 x 30 mm
8	VESA Mount	VESA dimensions : 75 x 75 mm

1.3.4 Top and Bottom View

Top Side



Bottom Side



No	Item	Description
9	LTE Main Antenna (Optional)	For LTE Main antenna.
10	GPS Antenna (Optional)	For GPS antenna.
11	LTE Aux Antenna	For LTE Aux antenna.
12	BT Antenna	For BT antenna.
13	WLAN Antenna	For WLAN antenna.
14	Power Button	Press power button to start the system.
15	Power Input Connector	9-24 V DC with Ignition control.
16	LAN	Gigabit Ethernet connector (M12 type) connects to on access point that provides connection to network
17	DIDO, CANBus	DIDO and CANBus (DB15) connector allows direct linking into vehicle, enable access to wide range of vehicle data
18	RS-232	RS-232 (DB9) connects to a device such as printer or scanner

Chapter 2: Hardware

This chapter describes system hardware of FM07M Vehicle Mount Computer.

2.1 System Hardware

2.1.1 Central Processing Unit

The FM07M Vehicle Computer runs on an ARM A53 Quad Core 2.0GHz processor and supports Android 11 operating system.

2.1.2 Input and Output Connectors

The FM07M device supports the following I/O connectors:

- Gigabit Ethernet LAN (M12 type)
- 1 x Power input 9-24V DC with ignition control (M12 type)
- 1 x RS-232
- 1 x CANBus/ Digital IO
- 2 x USB
- 1 x SIM card slot (optional)
- 1 x SD card slot
- 1 x Micro USB OTG

2.1.3 System Memory

The main system memory is 4GB LPDDR4.

2.1.4 Audio Interface

Your device is equipped with one speaker which is located on the back cover.

2.1.5 WLAN

Your device has an WLAN network card that can be used with internal or external antennas.

2.1.6 WWAN (Optional)

Using a SIM card for network connection, your device supports Wireless Wide Area Networking (WWAN).

2.2 Power Cable Installation

2.2.1 Wiring the Power Cable



WARNING!/ AVERTISSEMENT!

This procedure requires a trained service personnel only, improper installation can cause serious damage to the vehicle or the device.

Cette procédure nécessite un personnel de maintenance qualifié uniquement, une mauvaise installation peut causer des dommages importants au véhicule ou le dispositif.

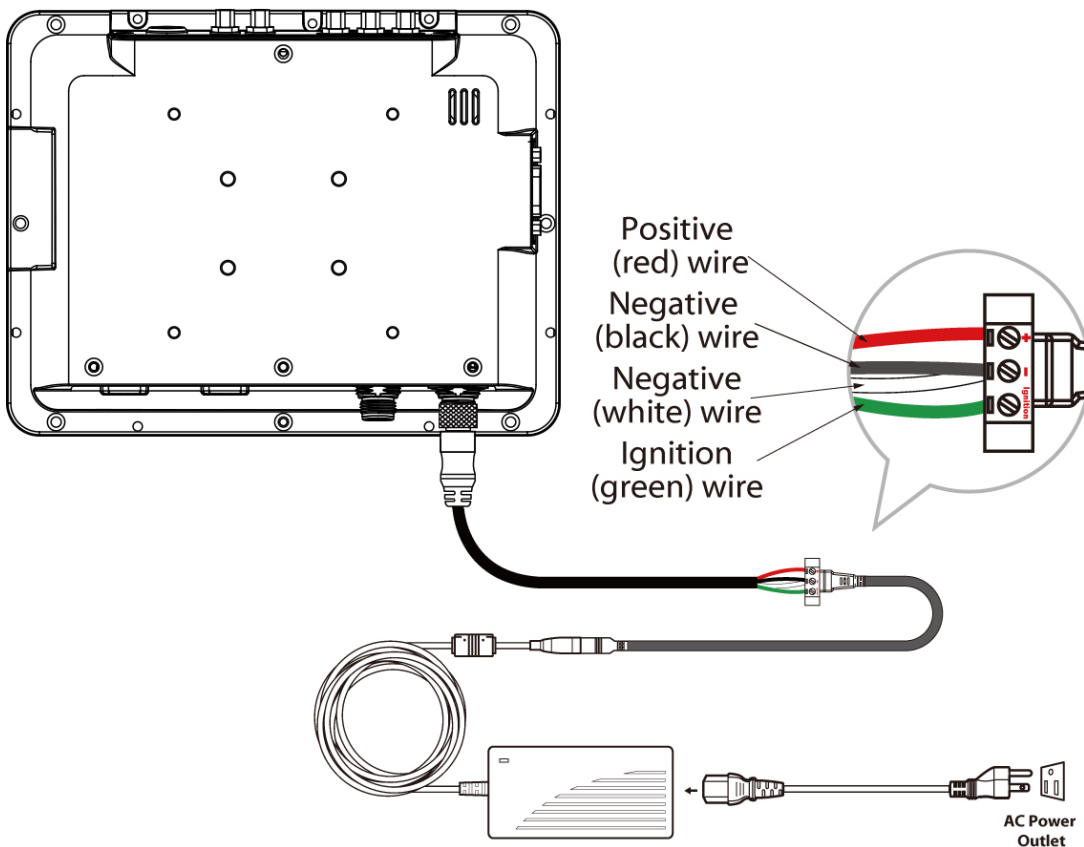
2.2.2 Connecting the Power Cable for Testing



IMPORTANT:

It is highly recommended to purchase the power cable for testing purpose.

Wiring Instruction



1. Place the device on the vehicle dock and make sure the device is Off.
2. Connect the M12 power cable to FM07M by aligning the connector pins and then push it, twist to fasten the connection.
3. Connect the AC plug to the electrical outlet.
4. Press the On button, located on the top side of the FM07M.
5. The device is ready for testing.

2.2.3 Connecting the Power Cable for Installation On the Vehicle



WARNING!/ AVERTISSEMENT!

This power cable should only be used on the 12 to 24 Volt forklifts.

Ce câble d'alimentation ne doit être utilisé que sur les chariots élévateurs de 12 à 24 volts.



WARNING!/ AVERTISSEMENT!

Select a mounting location and make sure it is not located on the outside the vehicle.

Sélectionnez un emplacement de montage et assurez-vous qu'il ne se trouve pas à l'extérieur du véhicule.

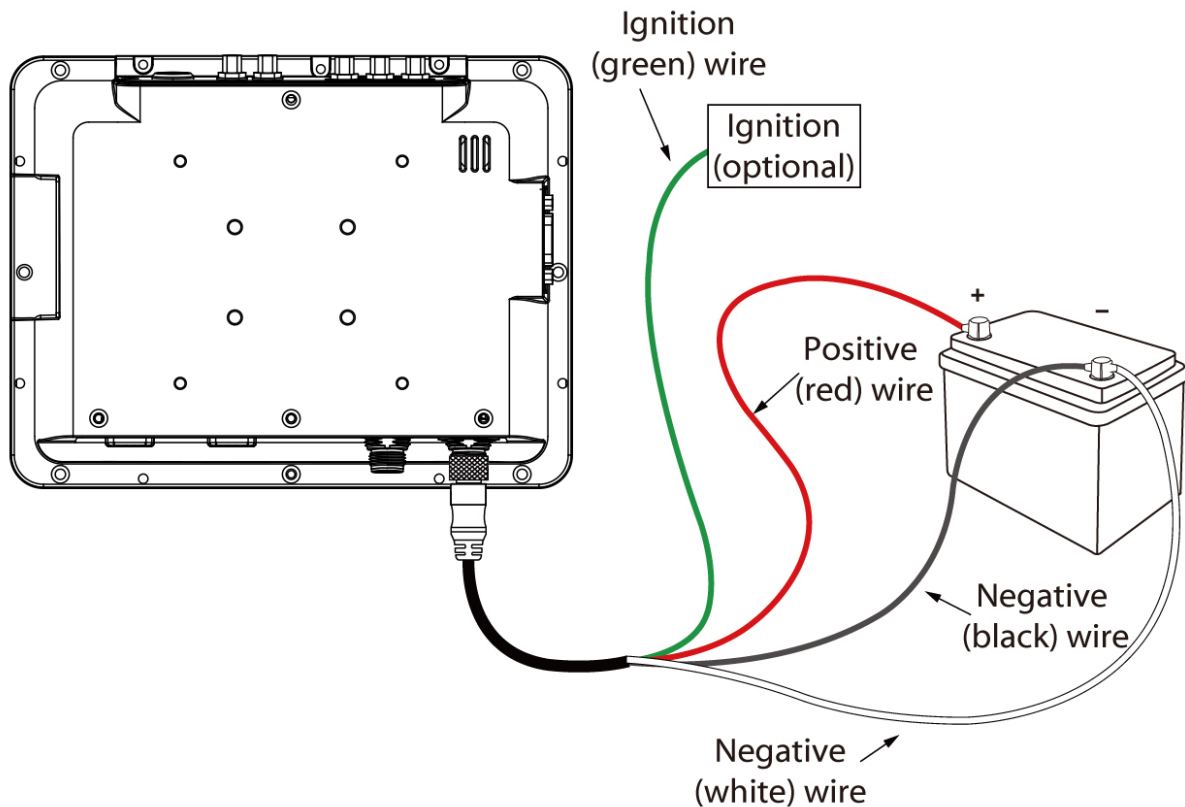


WARNING!/ AVERTISSEMENT!

Do not perform the installation on a moving or live electric forklift.

Ne pas effectuer l'installation sur un mobile ou un chariot élévateur électrique sous tension.

Wiring Instruction



1. Remove the vehicle battery before connecting the power cable.
2. Place **Red** (VCC +) and **Green** (ignition) wires as shown below.

**WARNING! / AVERTISSEMENT!**

Use the supplied M12 power cable for all power wiring.

Tout le câblage électrique doit utiliser le câble d'alimentation fourni.

3. Slide tubing over wires, remove the wires and insert it to the fuse holder, crimp it.
4. Connect the **Red** wire to the vehicle's positive power source. Connect both **black** and **white** wires to the vehicle's negative power source.
5. Connect the **Green** wire to the vehicle's ignition switch for the ignition function.

Power cable description:

Color	Symbol
Red	VCC+
Green	Ignition input (optional)
Black	VCC-
White	VCC-

6. Press the power button on the top of the device See *Power Button*.

		Vehicle Installation		Office Test / Evaluation	
		With Ignition	Without Ignition	AC/DC Mode	AP to switch
Power Mode		Ignition-On mode	AC/DC Mode	AC/DC Mode	AP to switch
Auto-On		Auto-On is ON	Auto-On is ON	Auto-On is OFF	BIOS switch
Trigger On	Ignition On Signal	√	√	X	
	Power Button	X	X	√ (press for 2 sec)	
On Delay		0 Second (Default) adjustable by AP		X	
Turn Off					
Trigger Off	Ignition Off Signal	√	X	X	
	Power Button	√	√	√	
				First time use: Install all the power cables require for testing. Turn on the power button; the device will automatically boot up in 10 seconds.	

2.2.4 Vehicle DC Power Supply

The power input voltage range for the FM07M is between 9 to 24 V DC with ignition control.



Warning!/ Avertissement!

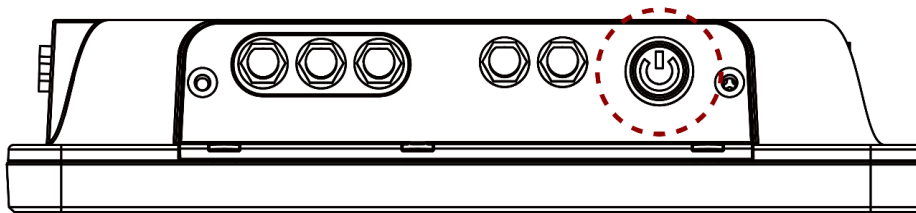
Longer cable length may cause voltage drop resulting in failure to boot the device , if you are unable to boot the device ,please check the line loss of your cable and make sure the power input for power connector of the unit is higher than 9V.

Une longueur de câble plus longue peut provoquer une chute de tension et empêcher le démarrage du périphérique. Si vous ne parvenez pas à démarrer le périphérique, vérifiez la perte de ligne de votre câble et assurez-vous que l'entrée d'alimentation du connecteur d'alimentation de l'unité est supérieure à 9V.

2.3 Power Control

2.3.1 Power Button

Power button is located on the top of the device. When the FM07M is connected to the external power and the power button is ON, the device can be powered on.



2.3.2 Ignition Control

The FM07M supports power ignition function.

2.4 External Connectors



Note:

Power OFF the FM07M before connecting cables to any port.

2.4.1 Power Connector

The FM07M has M12 type 4 pin power input connector which accepts 9-24V DC power input. Use power cable (supplied with FM07M) to connect the FM07M to the source of power.

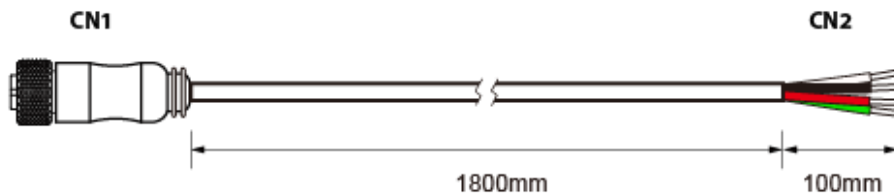


Warning! / Avertissement!

This procedure requires a trained service personnel only, improper installation can cause serious damage to the vehicle or the device.

Cette procédure nécessite un personnel de maintenance qualifié uniquement, une mauvaise installation peut causer des dommages importants au véhicule ou le dispositif.

Pin Assignment and signal names of power cable



Pin No.	Symbols	Color
CN1-1	VIN+	Red
CN1-2	VIN-	Black
CN1-3	VIN-	White
CN1-4	IGN_IN	Green

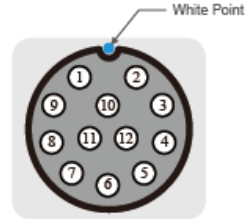
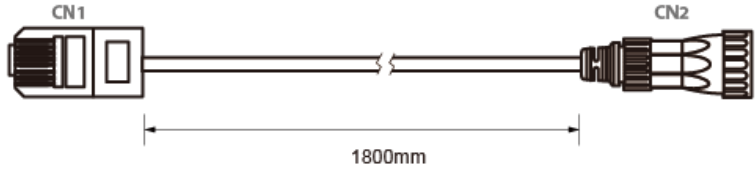


Pin No.	Symbols	Color
CN2-1	VIN+	Red
CN2-2	VIN-	Black
CN2-3	VIN-	White
CN2-4	IGN_IN	Green

2.4.2 LAN Connector

The FM07M has M12 type 12 pin LAN connector. Use LAN cable (supplied with FM07M) to connect the FM07M to the Ethernet.

Pin assignment and signal names of LAN cable

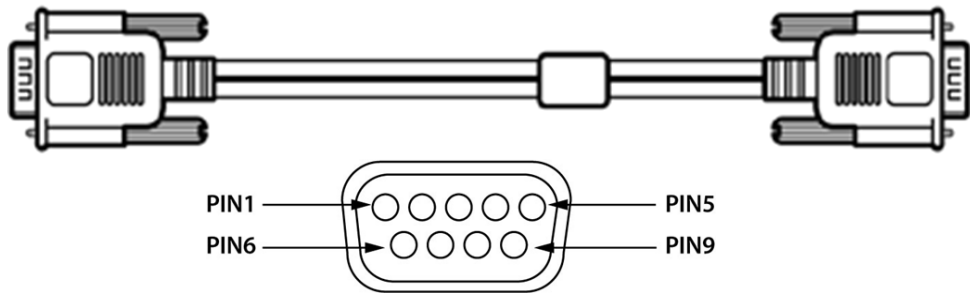


	Pin No.	Symbols	Color		Pin No.	Symbols	Color	
Twisted	CN1-1		white/orange	↔	CN2-1		white/orange	Twisted
	CN1-2		orange	↔	CN2-2		orange	
Twisted	CN1-3		white/green	↔	CN2-3		white/green	Twisted
	CN1-4		blue	↔	CN2-4		blue	
Twisted	CN1-5		white/blue	↔	CN2-5		white/blue	Twisted
	CN1-6		green	↔	CN2-6		green	
Twisted	CN1-7		white/brown	↔	CN2-7		white/brown	Twisted
	CN1-8		brown	↔	CN2-8		brown	
	CN1-9	NC		↔				
	CN1-10	NC		↔				

2.4.3 RS-232 Connector

The FM07M has DB-9 RS-232 connector. Use serial cable to connect the FM07M to external devices such as printer or scanner.

Pin assignment and signal names of RS-232 connector

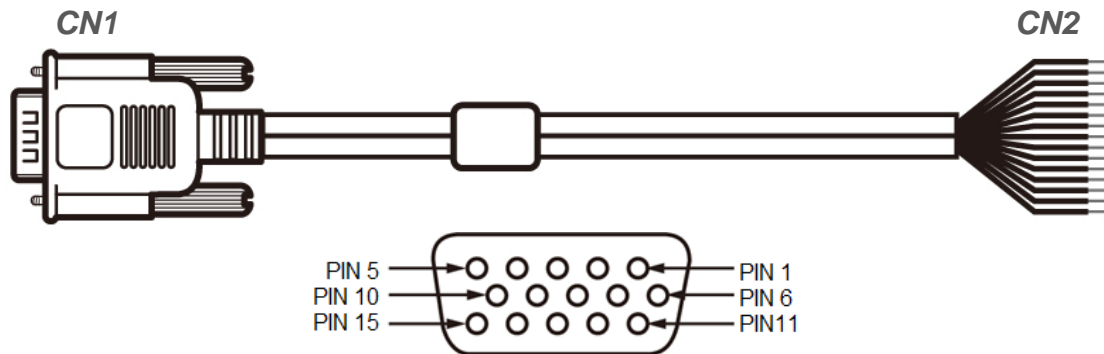


Pin	Signal	Description
1	DCD	Data Carrier Detect – Input
2	RXD	Receive Data – Input
3	TXD	Transmit Data – Output
4	DTR	Data Terminal Ready – Output
5	GND	Signal / Power Ground
6	DSR	Data Set Ready – Input
7	RTS	Request to send – Output
8	CTS	Clear to send – Input
9	+5 VDC	Barcode Scanner Power – 500mA Max

2.4.4 DIDO & CANBus Connector

The DIDO and CANBus connector is a DB-15 male connector located on the bottom side of the device. The connector supports a CANBus cable or a DIDO cable.

Pin assignment and signal names of DIDO & CANBus connector and cable



Pin	Signal
CN1-1	CAN_B_L
CN1-2	CAN_A_L
CN1-3	GND_ISO
CN1-4	CAN_B_H
CN1-5	DIN0
CN1-6	DIN1
CN1-7	DIN2
CN1-8	DIN3
CN1-9	DIN4
CN1-10	DOUT0
CN1-11	DOUT1
CN1-12	DOUT2
CN1-13	CAN_A_H
CN1-14	NC
CN1-15	5V

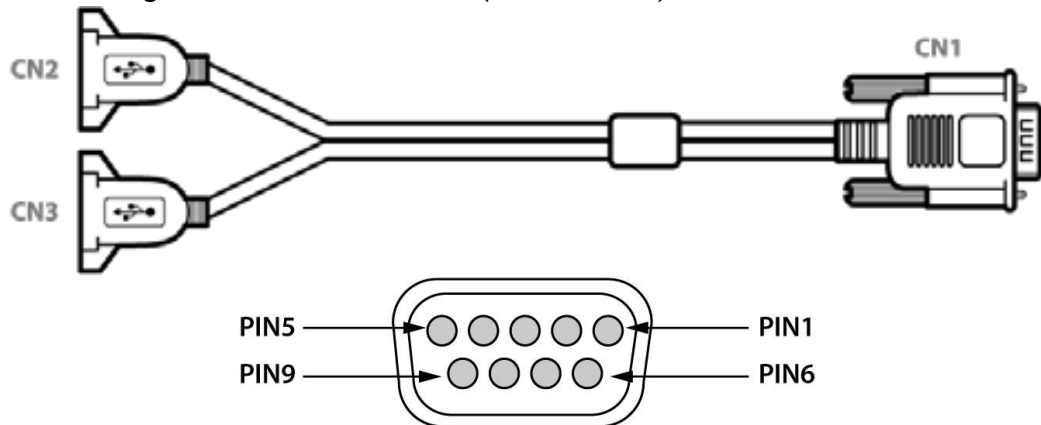


Pin	Signal
CN2-2	CAN_A_L
CN2-3	GND_ISO
CN2-5	DIN0
CN2-6	DIN1
CN2-7	DIN2
CN2-8	DIN3
CN2-9	DIN4
CN2-10	DOUT0
CN2-11	DOUT1
CN2-12	DOUT2
CN2-13	CAN_A_H
CN2-14	NC
CN2-15	5V

2.4.5 USB 2.0 Connector

The FM07M has DB-9 USB 2.0 connector located on the side that can support two USB devices such as printer or scanner.

Pin assignment and signal names of USB 2.0 (D-9 Female) connector and cable



Pin	Signal
CN1-1	GND
CN1-2	USB1_D+
CN1-3	USB1_D-
CN1-4	USB1_VCC
CN1-5	GND
CN1-6	GND
CN1-7	USB2_D+
CN1-8	USB2_D-
CN1-9	USB2_VCC

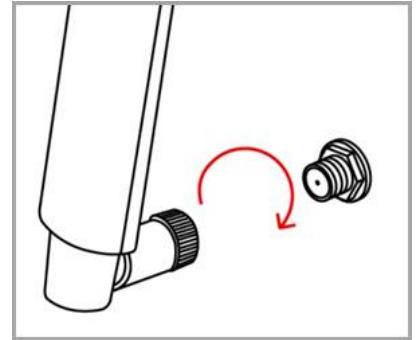


Pin	Signal	Description
CN2-1	USBVCC1	Red
CN2-2	USB1_DM	White
CN2-3	USB1_DP	Green
CN2-4	GND	Black
CN3-1	USBVCC2	Red
CN3-2	USB2_DM	White
CN3-3	USB2_DP	Green
CN3-4	GND	Black

2.5 External Vehicle Remote Antenna Installation

The FM07M is equipped with connectors for additional external antenna (WLAN, GPS or WWAN), to install the antenna please perform the following:

1. Remove the rubber cap on the SMA connector before installing the antenna.
2. Align the antenna with the SMA connector and fasten it as following picture.
3. Adjust the position of external antennas.



2.6 Display

The FM07M's display measures 7 inches diagonally, display resolution is 1024 x 600 pixel resolution and bonded with projected capacitive touch.

Chapter 3: Software

This chapter and describes how to operate FM07M Vehicle Mount Computer.

3.1 Introduction

This section includes the software and hardware installation, the FM07M configuration, the wireless communication, and some other optional features. Since the FM07M configuration varies by your order, utility programs for its configurations and operations, the examples describe in this section are to be used as a guideline only; therefore, the function configuration of the device might vary.

3.1.1 Operating System

The operating system of the FM07M is Android 11.

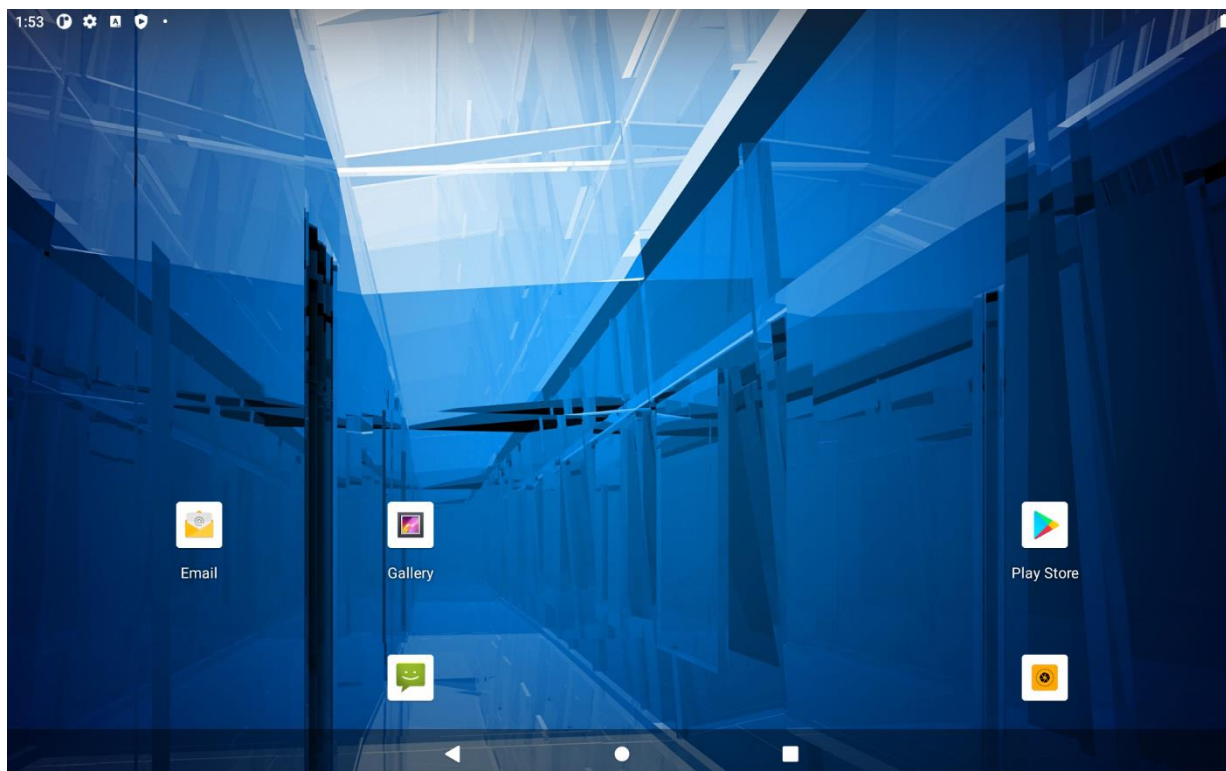
3.1.2 About Android 11




We assume the user is very familiar with various features and options of Android OS. Therefore, this section will describe the specific software and utility programs that related to the device usage and the Android OS.

3.2 Setting up the Device


When you first turn on your device, you'll see a **Welcome screen**. Choose the language you want and touch **Start** or the Start icon. When prompted, you can sign in with your Google Account or create one at that time. You can also choose to skip this step and create one later.

3.2.1 Home Screen



Button	Description
	Back Opens the previous screen you were working in, even if it was in a different app. Once you back up to the Home screen, you can't go back any further.
	Home Returns to the main Home screen. To get suggestions based on the screen you're currently viewing, touch & hold this button.
	Overview Show apps you've used lately and let you switch between them. Double-tap to jump between the current app and the previously used one, and back again.

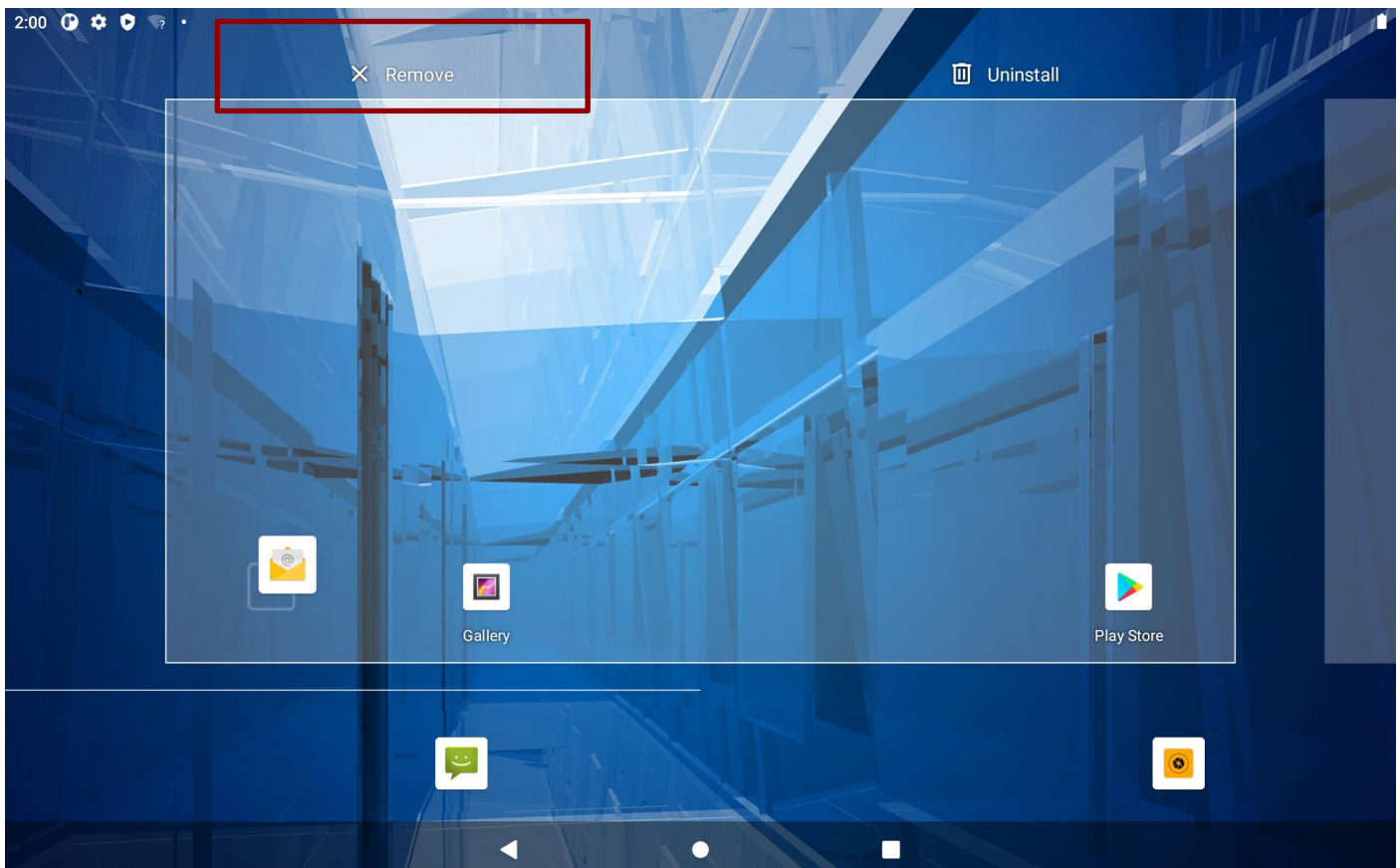
Some apps hide these buttons temporarily, or fade them to small dots in the same position. To bring them back, touch the dots, touch the screen in the middle, or swipe up from the bottom.

Many screens in apps and Settings include a **menu**  icon at the top right of the screen. Touch it to explore additional options, including Help & feedback.

To add an app to a Home screen:


1. Go to the Home screen where you want to place the app.
2. Swipe up.
3. Swipe up and down to find the app you want.
4. Touch & hold the app until the Home screen appears, slide it into place, and lift your finger.

*To remove an app icon from the Home screen without removing it permanently from your device, touch & hold it, slide your finger toward the top of the screen, and drop the app over **Remove** in the top left.*







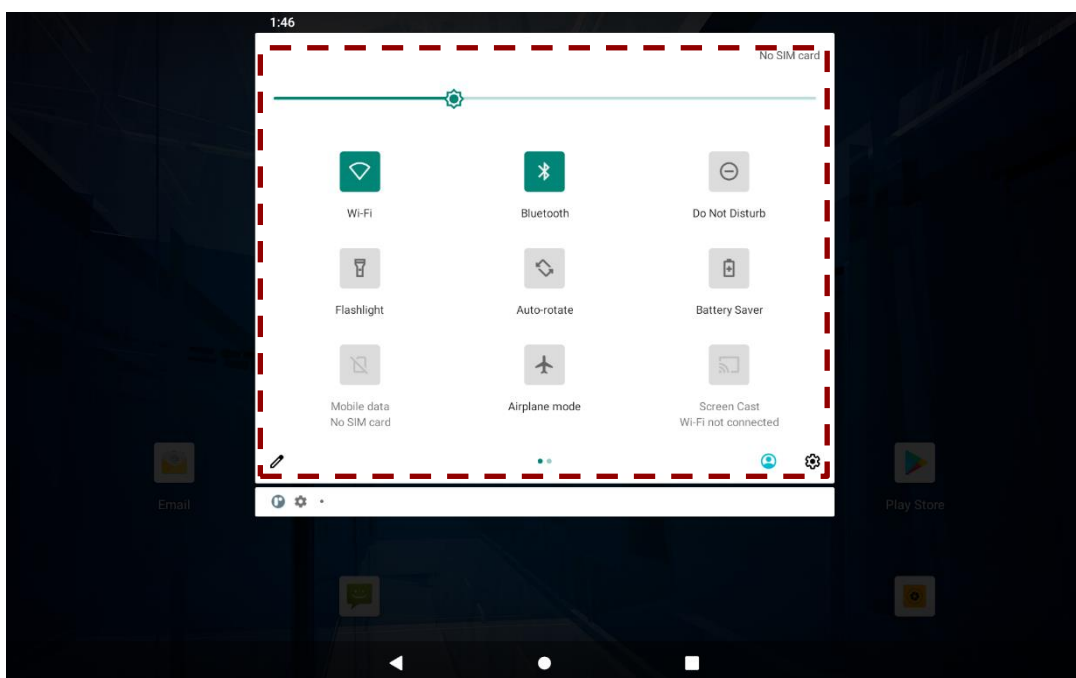
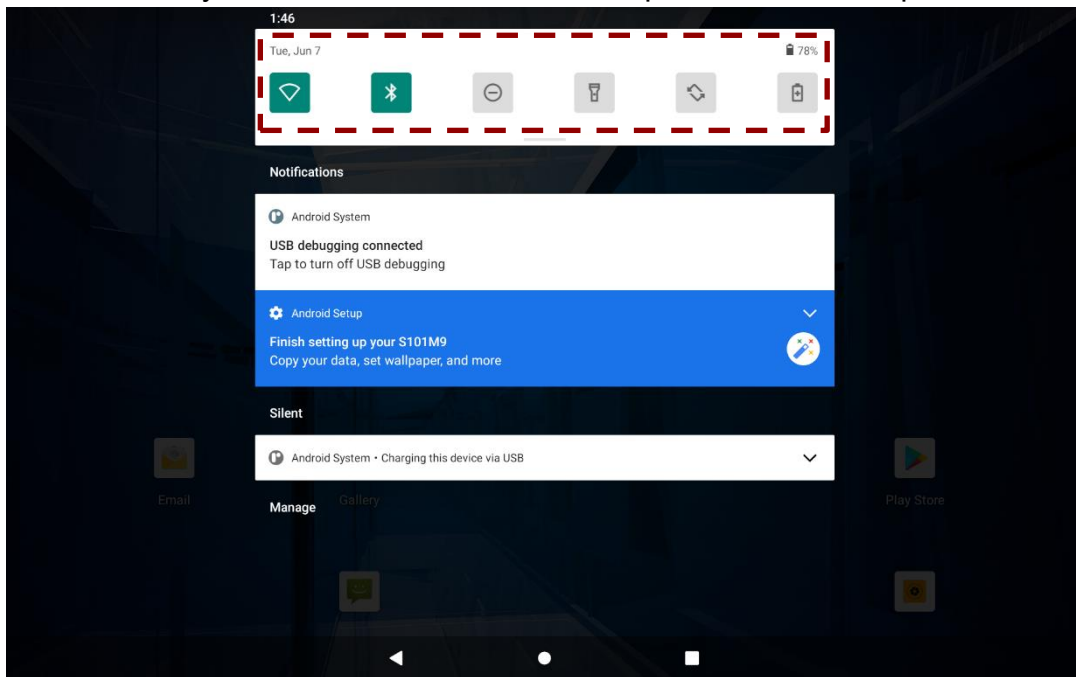
3.2.2 Quick Settings

You can open your device's Settings app from the All Apps screen or from Quick Settings.

For example, to change notification sounds, and volume go to Settings  > Device > Sound to change the volume.

Use Quick Settings to easily change frequently used settings, like turning on WLAN. To open Quick Settings, swipe down from the top of the screen with two fingers. To change a setting, just touch the icon:

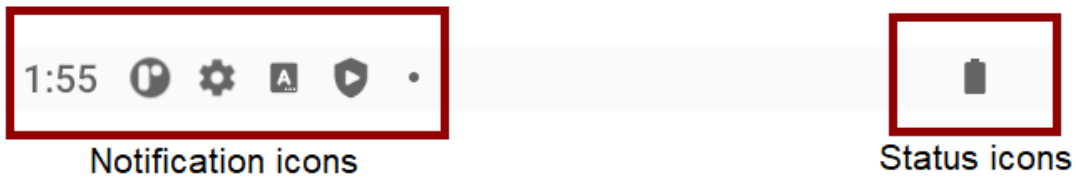
- **Display brightness:** Slide  to lower or increase the brightness of your screen.
- **WLAN network:** Turn Wi-Fi  on or off or open the Wi-Fi settings menu.
- **BT settings:** Turn Bluetooth  on or off or open the Bluetooth settings menu.
- **Auto-rotate:** Lock your device's orientation  in portrait or landscape mode.



Touch **Settings**  icon to open the main Settings menu.

3.3 Status and Notification Icons

To open the status bar appears at the top of every screen. On the left are notification icons and on the right are status icons, along with the current time.



3.3.1 Status Icons

Pull down from the right top of the screen to get the notifications area. The following icons indicate the status of your device, for example if users are connected to a WLAN network that is not connected to the internet, the network icons are appears in white color.

Status icons that appear in the status bar are as follows:

	Connected to GPRS mobile network		Bluetooth is on
	Connected to 1xRTT mobile network		Connected to a Bluetooth device
	Connected to EDGE mobile network		No SIM card installed
	Connected to 3G mobile network		Vibrate mode
	Connected to 4G mobile network		Ringer is silenced
	Mobile network signal strength		Battery is very low
	Searching for a network signal		Battery is low
	No signal		Battery is partially drained
	Connected to a Wi-Fi network		Battery is full
	Roaming		Battery is charging
	Airplane mode		Receiving location data from GPS

3.3.2 Notification Icons





Pull down from the left top of the screen to get the notifications area. The following icons indicate that you have received notification

	New email message		Incoming call
	New text or multimedia message		Missed call
	Alarm is set		Speakerphone is activated
	Upcoming event		Phone microphone is muted
	Data is syncing		Downloading data
	Problem with sign-in or sync		Phone is connected via USB cable
	A screenshot is captured		

3.4 Control Panel

3.4.1 Using the Touch Screen

The touchpad supports the core gestures for Android.

Gesture	Action	Description
Single Touch		To select or activate something
Double-touch		Tap quickly twice on a webpage, screen, or App to zoom
Touch and hold		Touch and hold an item on the screen by touching it and not lifting your finger until it responds
Swipe or slide		Quickly move the finger across the surface of the screen. i.e. slide a lock screen to open the lock

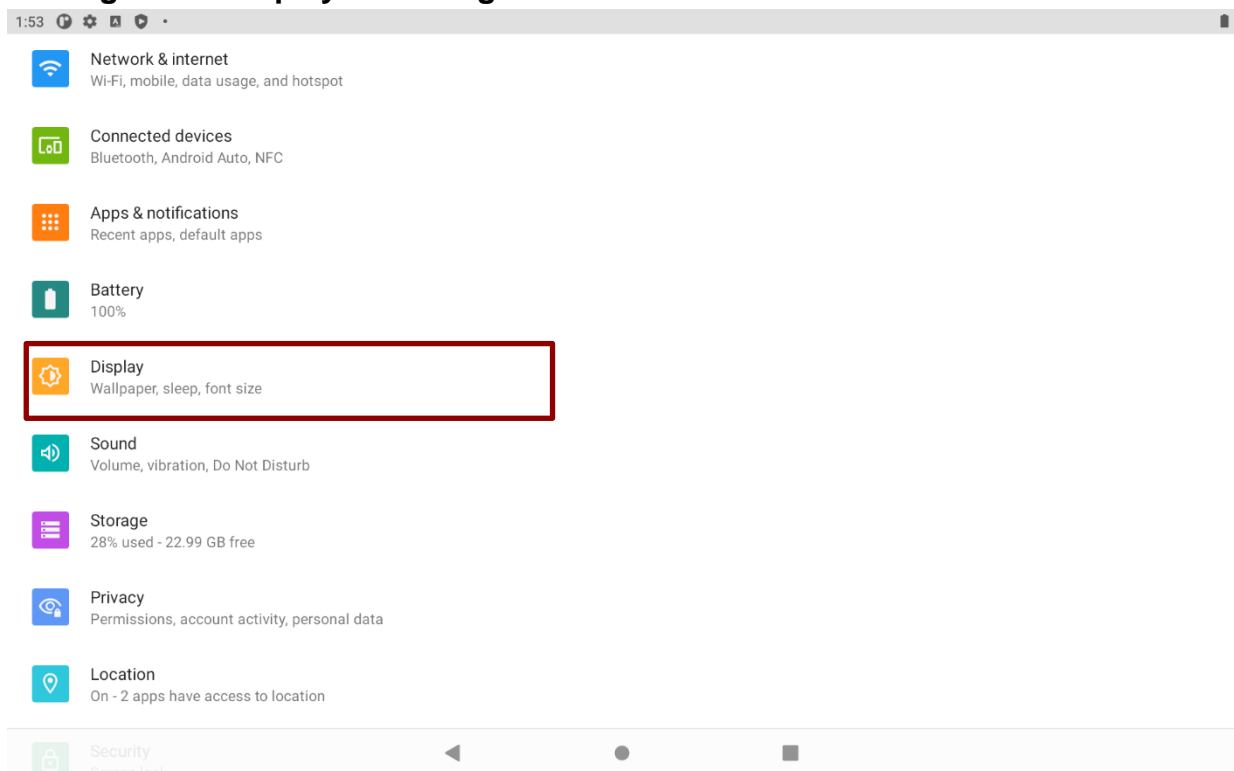
3.4.2 System Settings

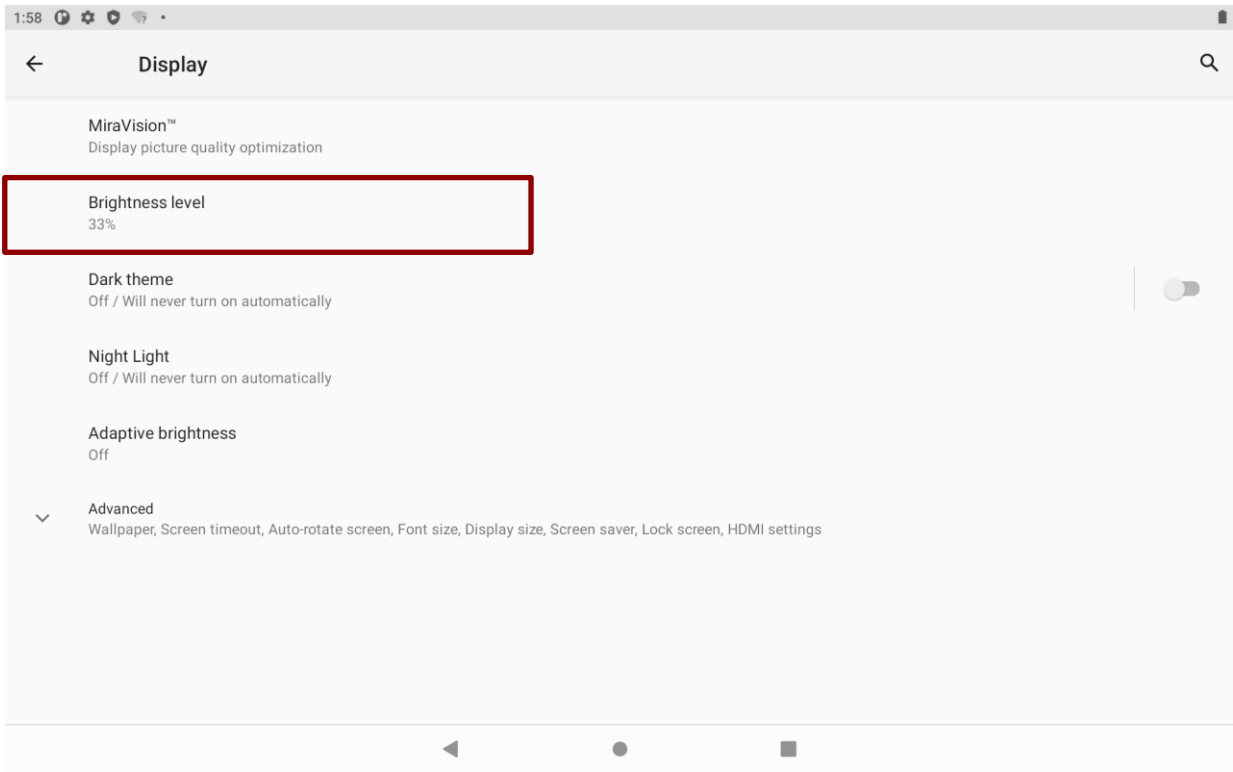
3.4.2.1 Display

In the Android OS user can adjust the screen brightness. Pull down from the top of the screen to get the notifications area. You can also access display settings in settings:

To adjust the brightness of the screen:

1. **Settings**  > **Display**  > **Brightness Level**





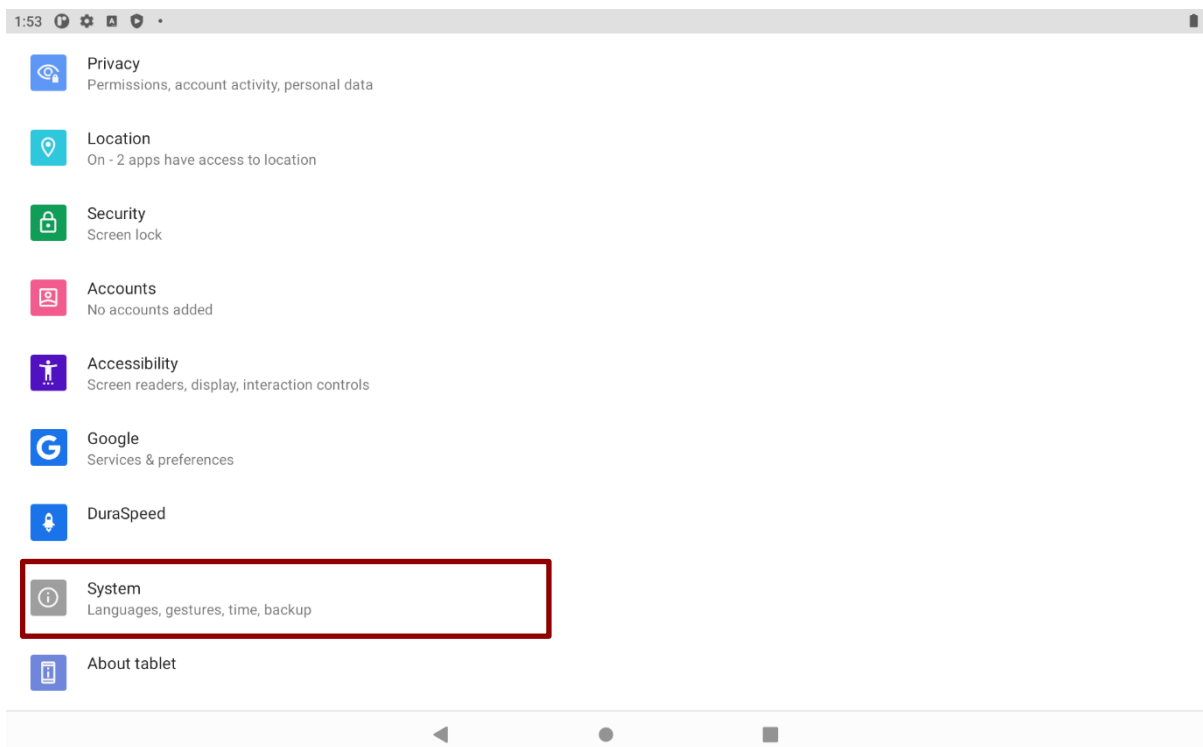
Tap the cursor to the left to reduce the screen brightness.
Tap the cursor to the right to increase the screen brightness.

3.4.2.2 Region and Language

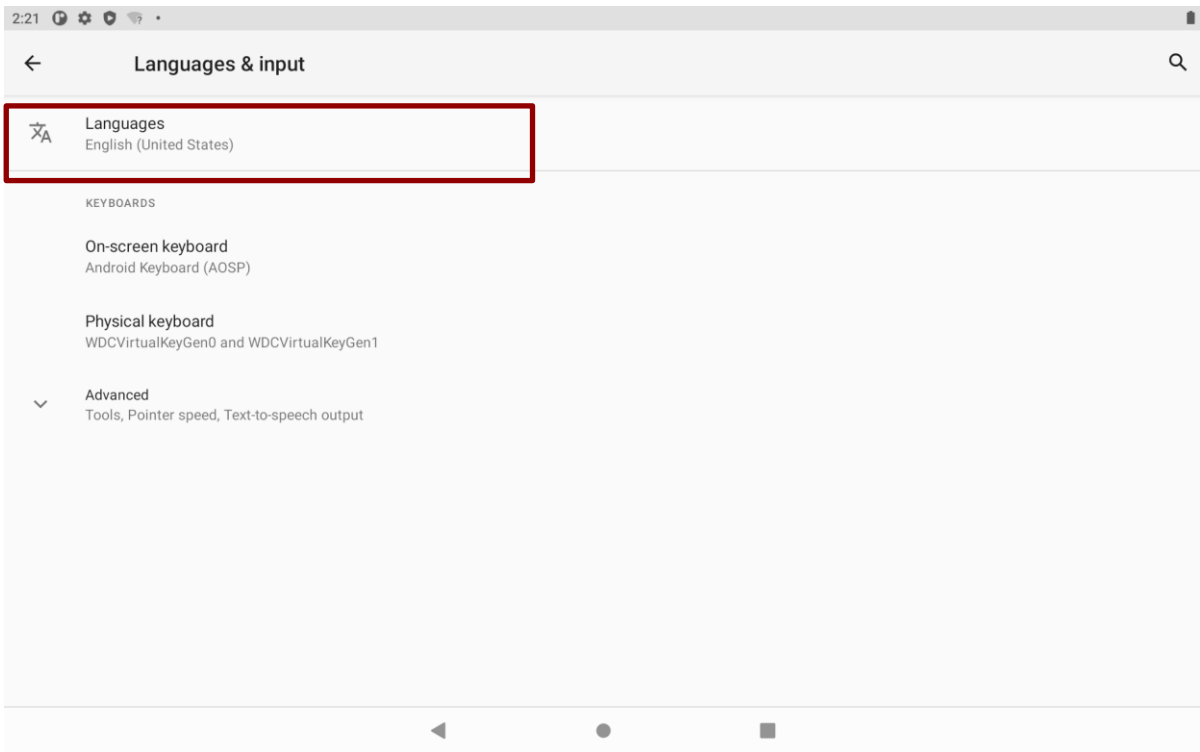
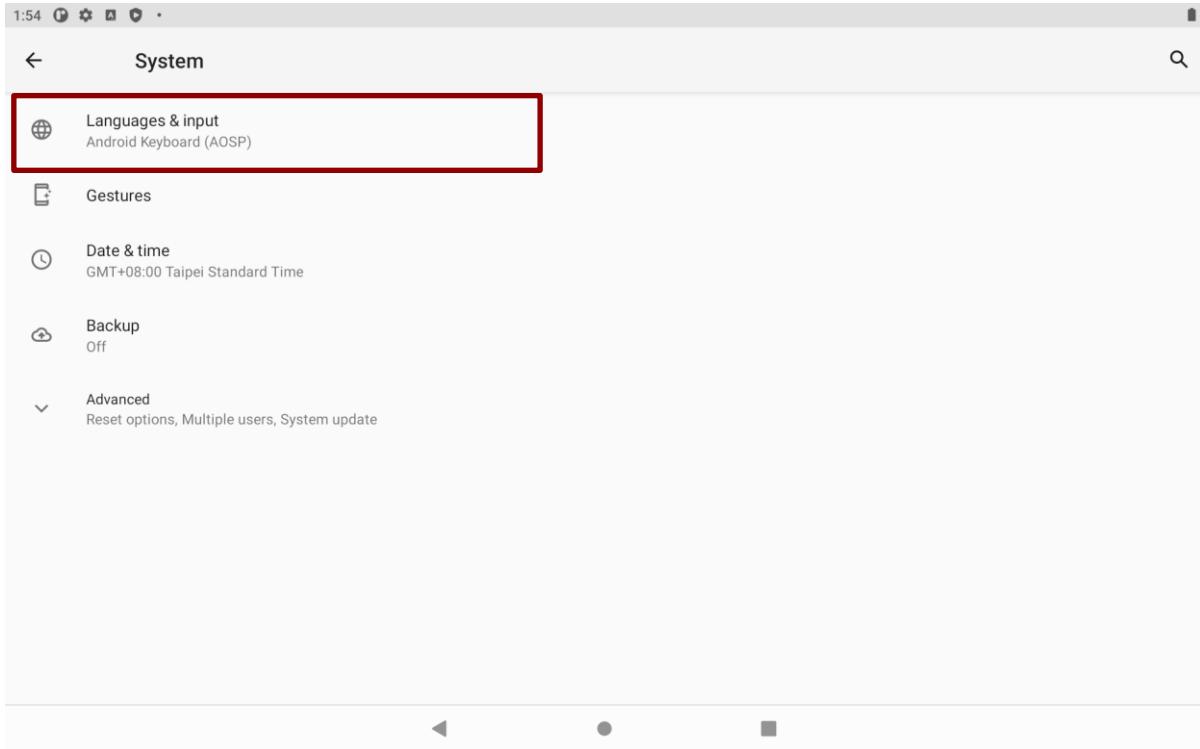
The instruction for installing, changing and uninstalling language in this section are applicable to FM07M with Android OS.

To access region and language settings, perform the following:

Settings  > **System**  > **Language & Input**  > **Languages** 



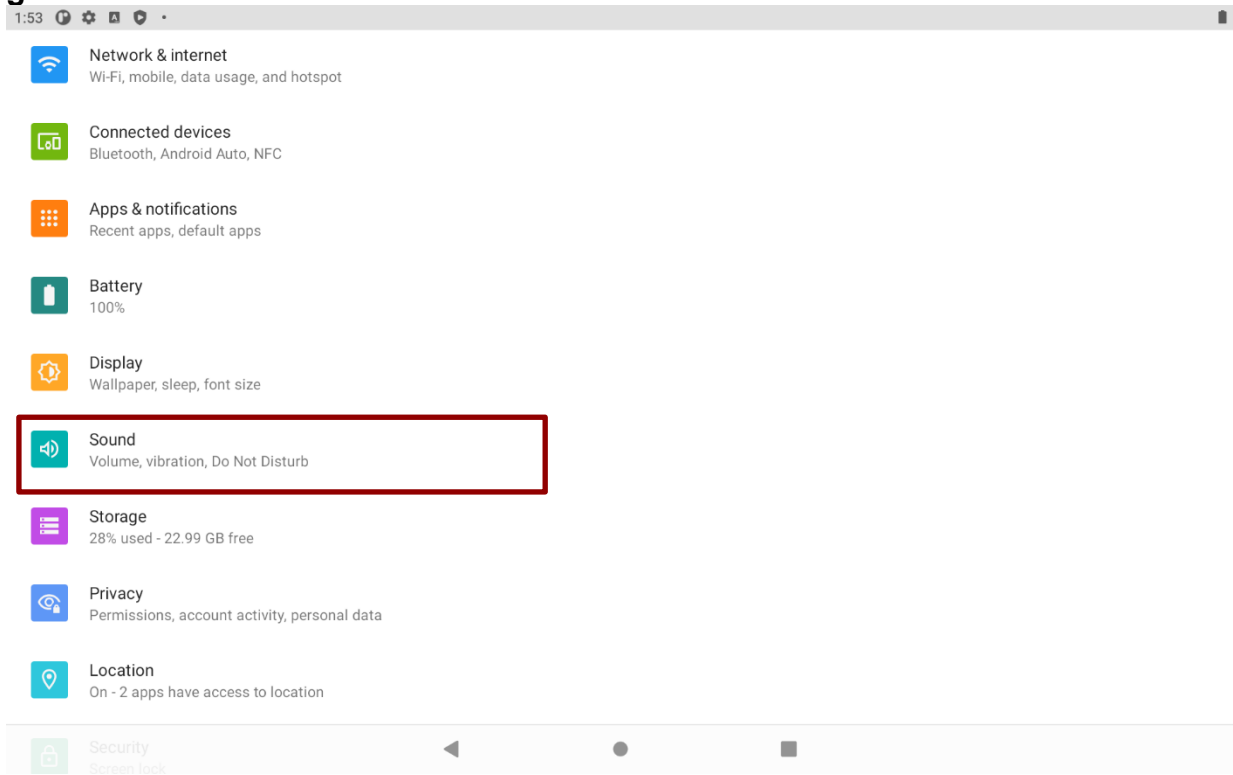
The FM07M is shipped with English language settings by default.



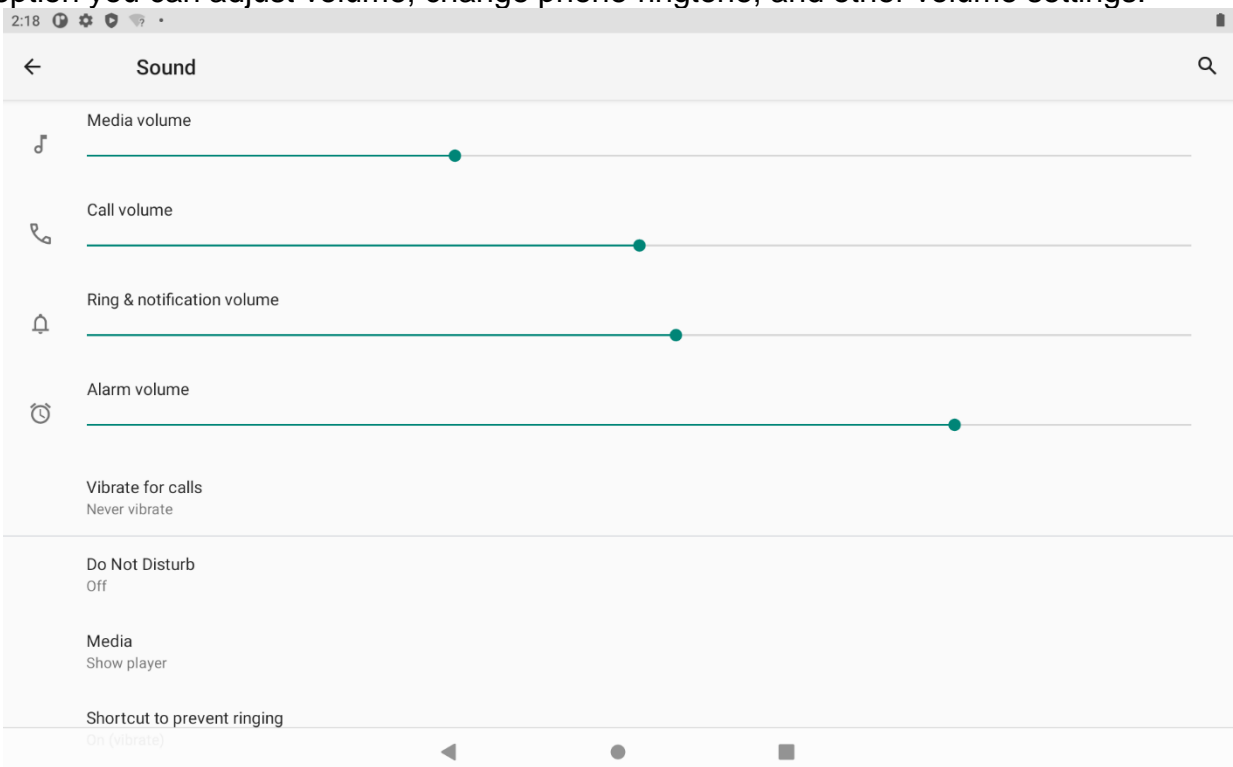
3.4.2.3 Sound

To access sound settings, perform the following:

Settings > Sound



In this option you can adjust volume, change phone ringtone, and other volume settings.

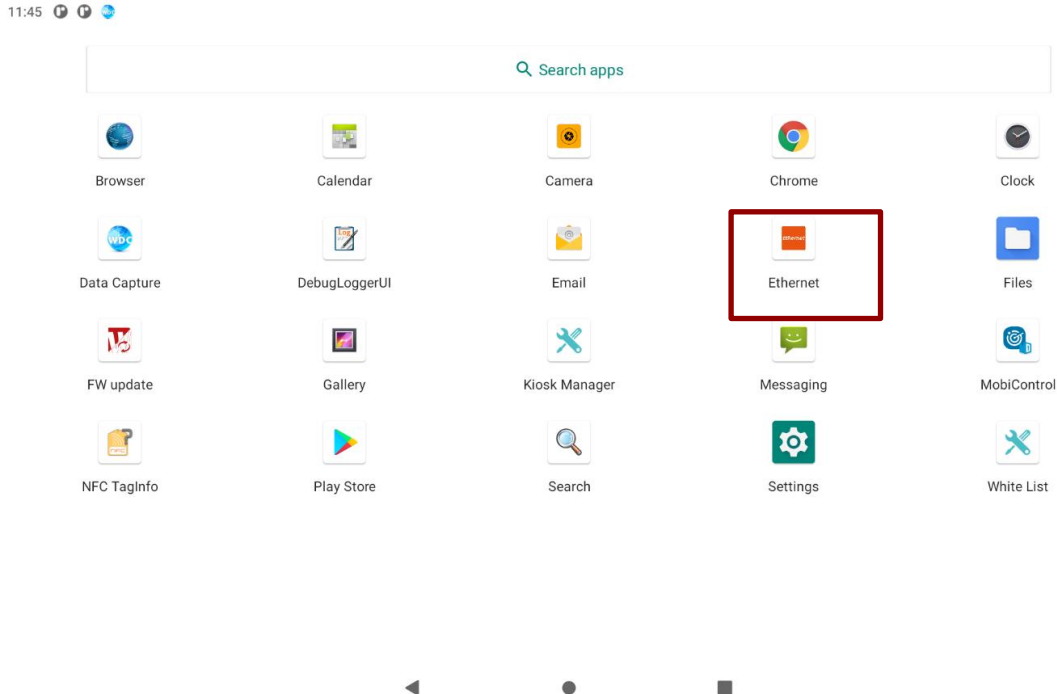


3.5 Ethernet

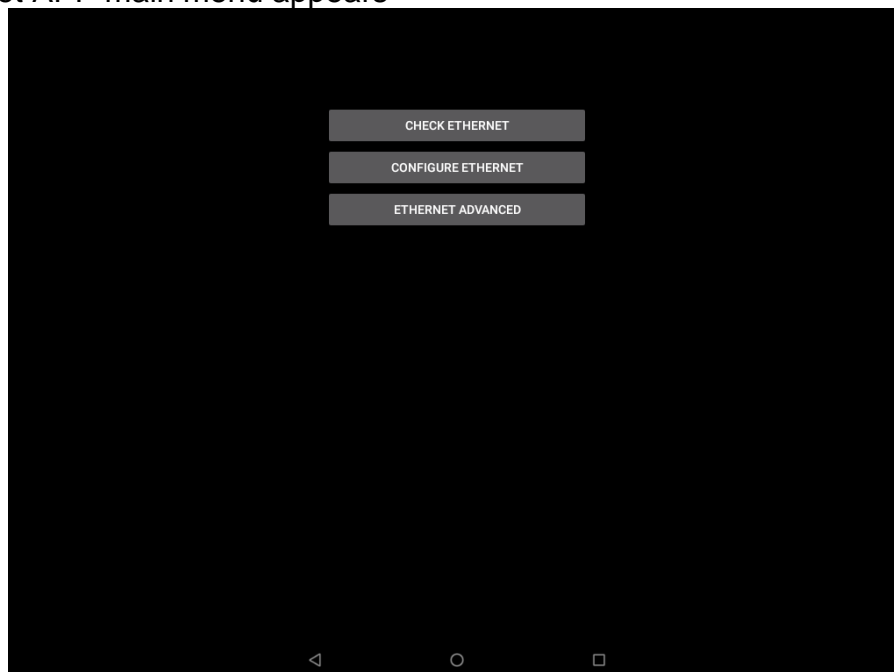
Vehicle computer supports Ethernet LAN. To use the Ethernet LAN feature to connect to the network, perform the following procedure:

Step 1 Connect Ethernet Cable to the FM07M device.

Step 2 Touch **All APPS** icon, and the open **Ethernet** application.



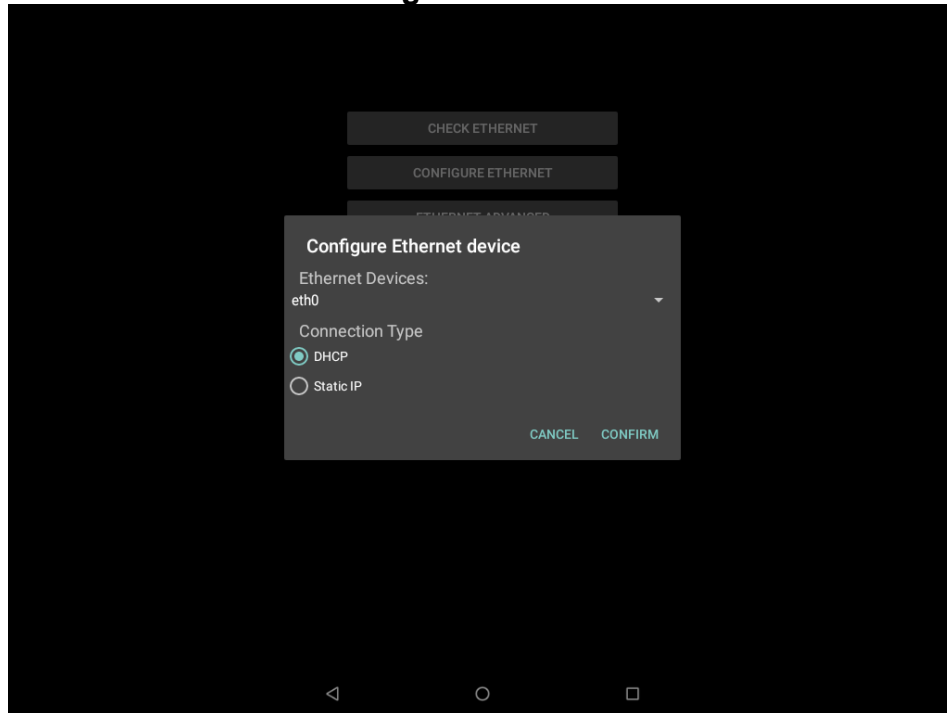
Step 3 Ethernet APP main menu appears



Setting	Description
Check Ethernet	Check Ethernet connection parameters: IP mode, IP address, DNS address and others
Configure Ethernet	Enable Ethernet connection and configure its such as connection type
Advanced Settings	Configure advanced parameters of the Ethernet

3.5.1 Configuring Ethernet Settings

Go to All Apps  > Ethernet  > Configure Ethernet





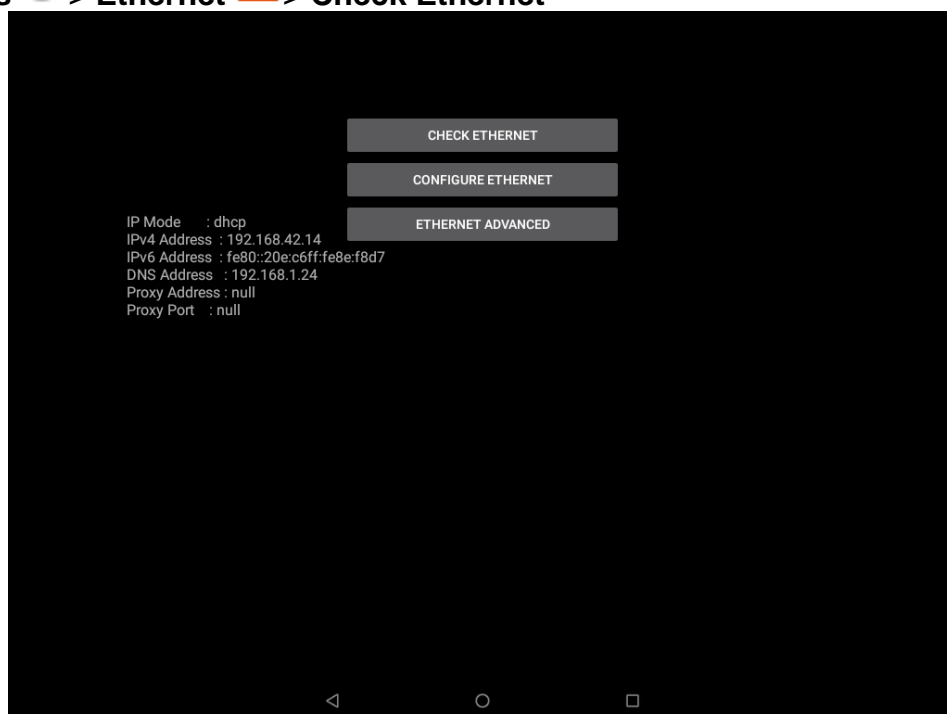
Connection Type

Setting	Description
DHCP (default)	The device automatically capture IP-address from the router
Static IP	Allows to manually set up IP-address, DNS, Network and Gateway

3.5.2 Checking the Ethernet Settings

To check Ethernet settings:

Go to All Apps  > Ethernet  > Check Ethernet



Ethernet settings menu appears on the top right side of the desktop.

3.6 Winset

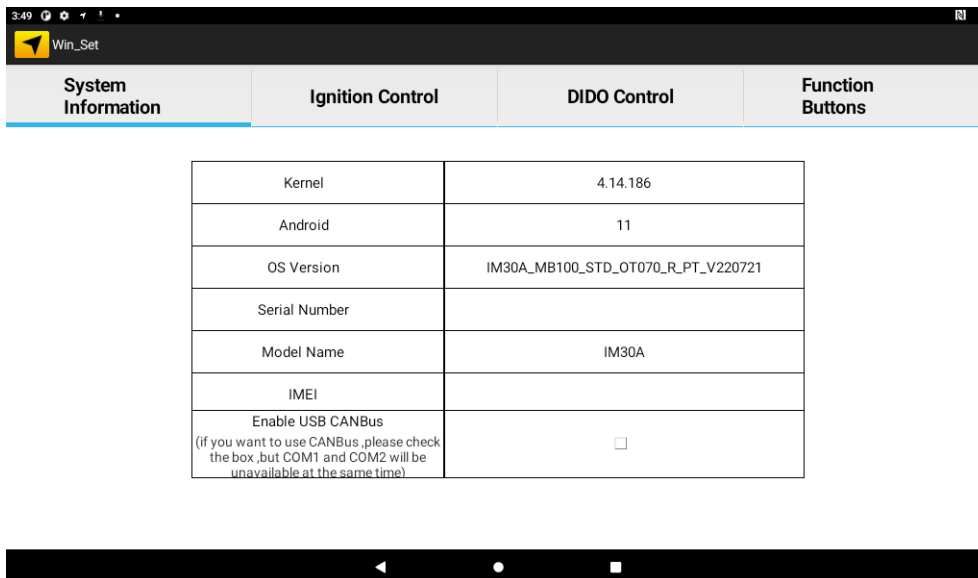
Winset provides quick access to the tablet's functions and features, such as setting up shortcuts, using camera, powering on/off built-in devices, programming function key, and changing power management.

To launch the Winset, double-tap on **Winset Utility Icon** . Operations and functions on each menu options is explained in detail in the coming section.

Winset Interface:

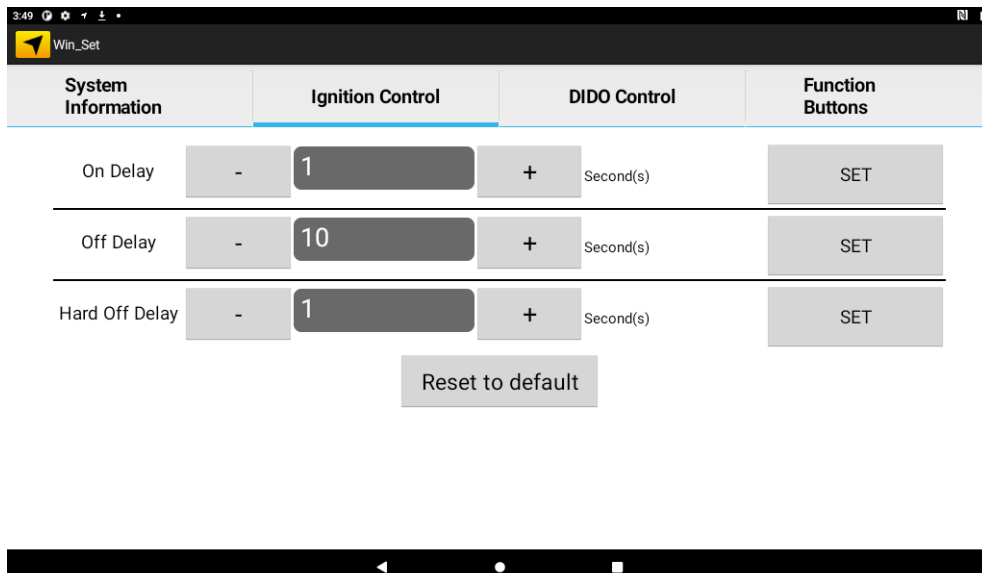
Item	Description
System Information	Provides system information such as Winset version, OS version, serial number and model name. You can also set up password here.
Ignition Control	Setup the timing delay of turning On/ Off/ Hard Off.
DIDO Controller	Set up digital input/ output controller.
Function Buttons	Set up function buttons functions.

3.6.1 System Information



Kernel	4.14.186
Android	11
OS Version	IM30A_MB100_STD_OT070_R_PT_V220721
Serial Number	
Model Name	IM30A
IMEI	
Enable USB CANBus (if you want to use CANBus ,please check the box ,but COM1 and COM2 will be unavailable at the same time)	<input type="checkbox"/>

3.6.2 Ignition Control



On Delay	-	1	+	Second(s)	SET
Off Delay	-	10	+	Second(s)	SET
Hard Off Delay	-	1	+	Second(s)	SET

Reset to default

Setting	Default Setting	Description
On Delay	1 second	When the system is powered on via ignition key, the system will delay 1 second to power on.
Off Delay	10 seconds	When the system is powered off via ignition key, the system will delay 10 seconds to shut down.
Hard Off Delay	30 seconds	When the system is powered off via ignition key, the device will cut off power after 30 seconds.
Reset to default	-	Resets the ignition settings back to the default.

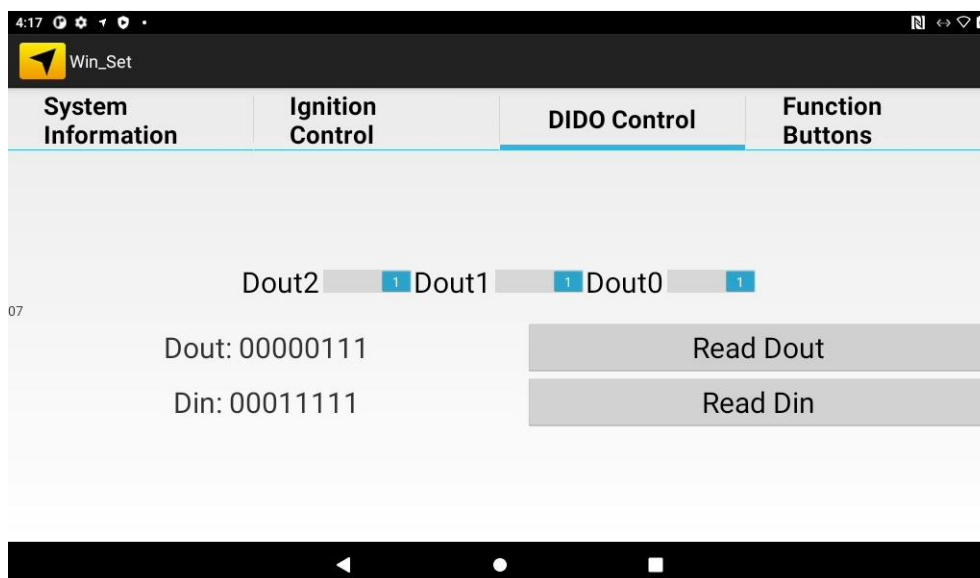
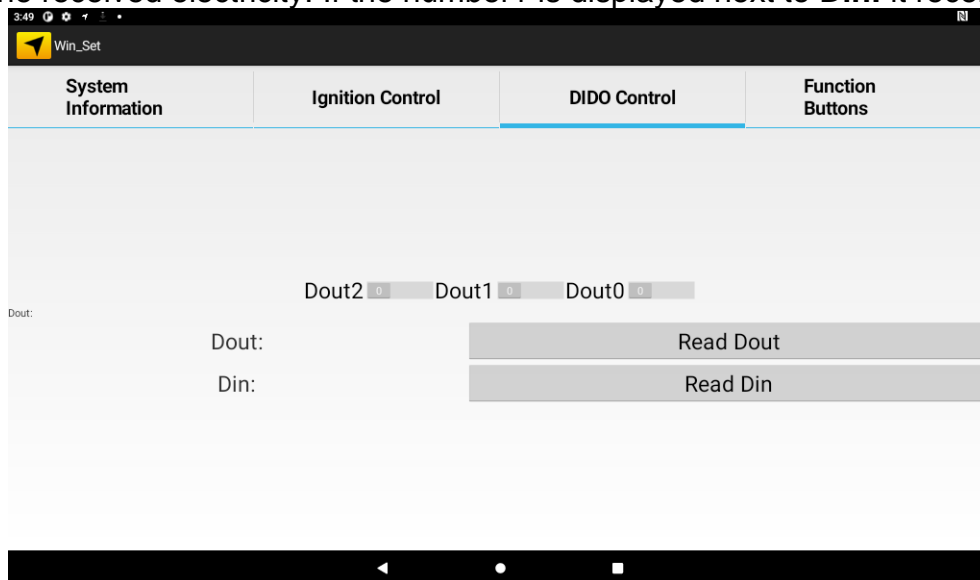


Note: If you don't plan to use the ignition feature connect the green wire to the vehicle's positive power source.


3.6.3 DIDO Controller

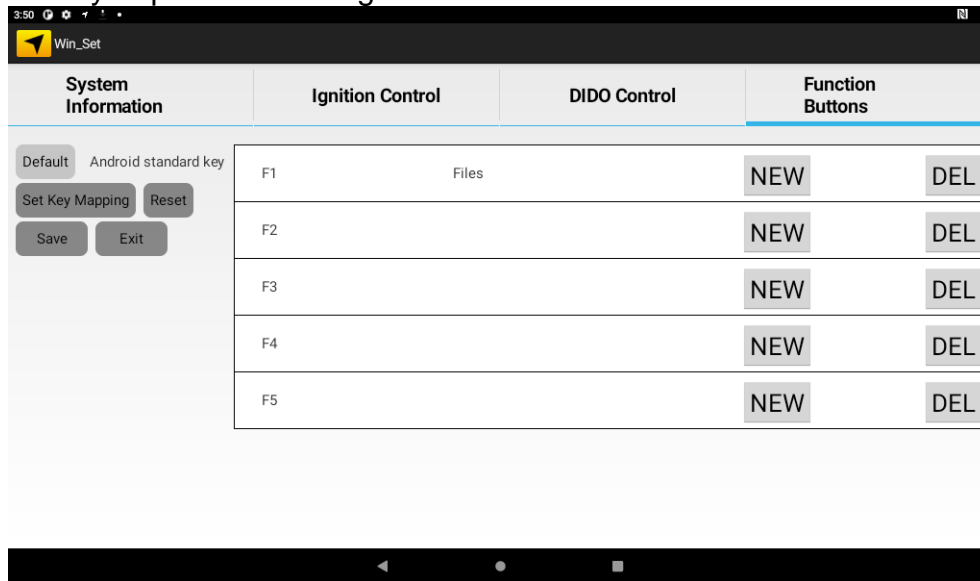
When the DIDO connector is connected to other devices:

1. Depending on the need, slide the **Dout2**, **Dout1**, and/or **Dout0** to the right to open to show the 1 mark. Then press **Read Dout** to check the connection. If the number 1 is displayed next to **Dout:** there is a power supply. Example, if all **Dout** buttons are slid open, it will show 00000111.
2. When the connected device is powered, the FM07M can receive power. Press **Read Din** to confirm the received electricity. If the number 1 is displayed next to **Din:** it receives electricity.



3.6.4 Function Buttons

To set function keys open **Winset** . In **Function Buttons** window of the **F1** click **NEW** to open the drop-down menu of function keys. Choose the function key and then select a **Default application** that will be opened by pressing on the function key you have selected. Press **DEL** to reset the function key to previous settings.




Combination keys:

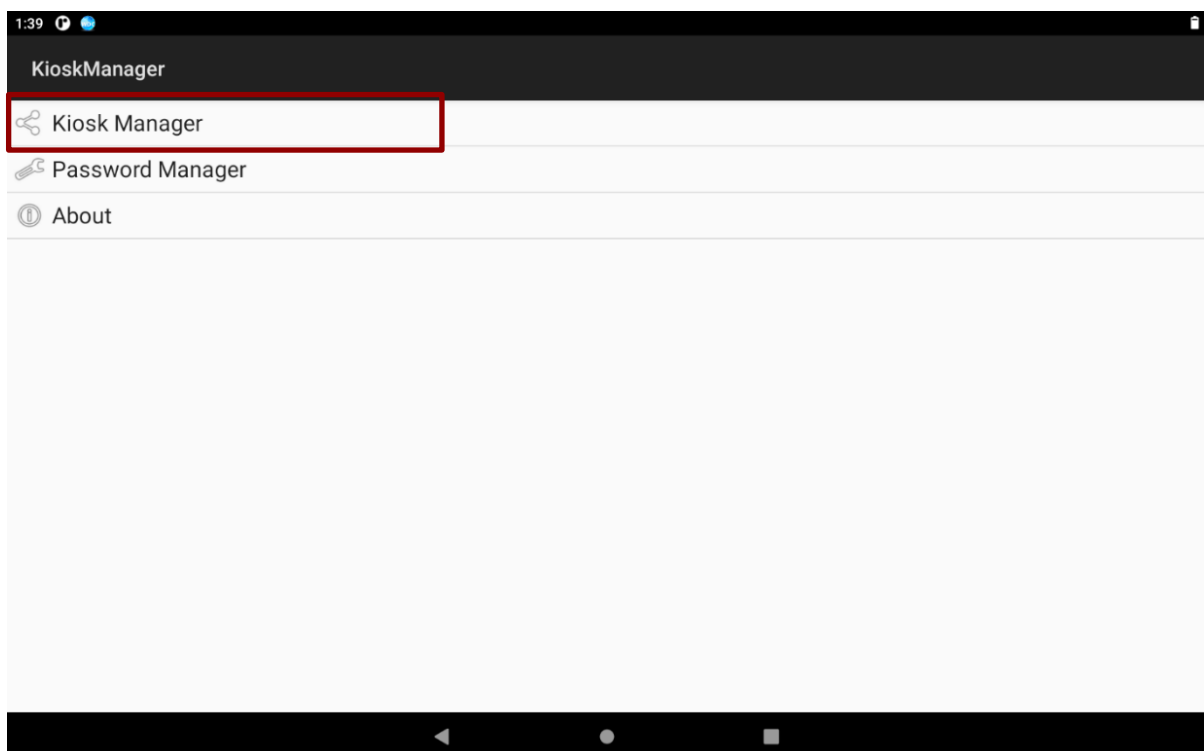
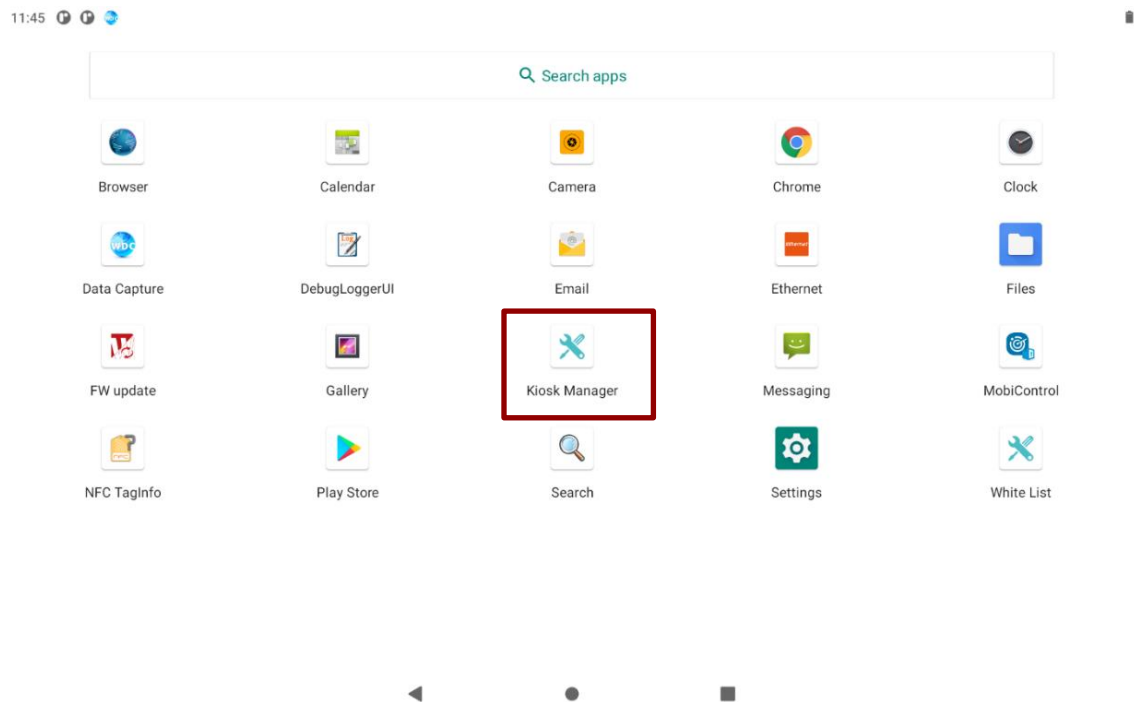
Function Key	Description
F1	Long press to call Winset
F1 + F2	Touch lock
F3 + F4	Volume setting
F4 + F5	Brightness setting

3.7 Winmate Kiosk Manager

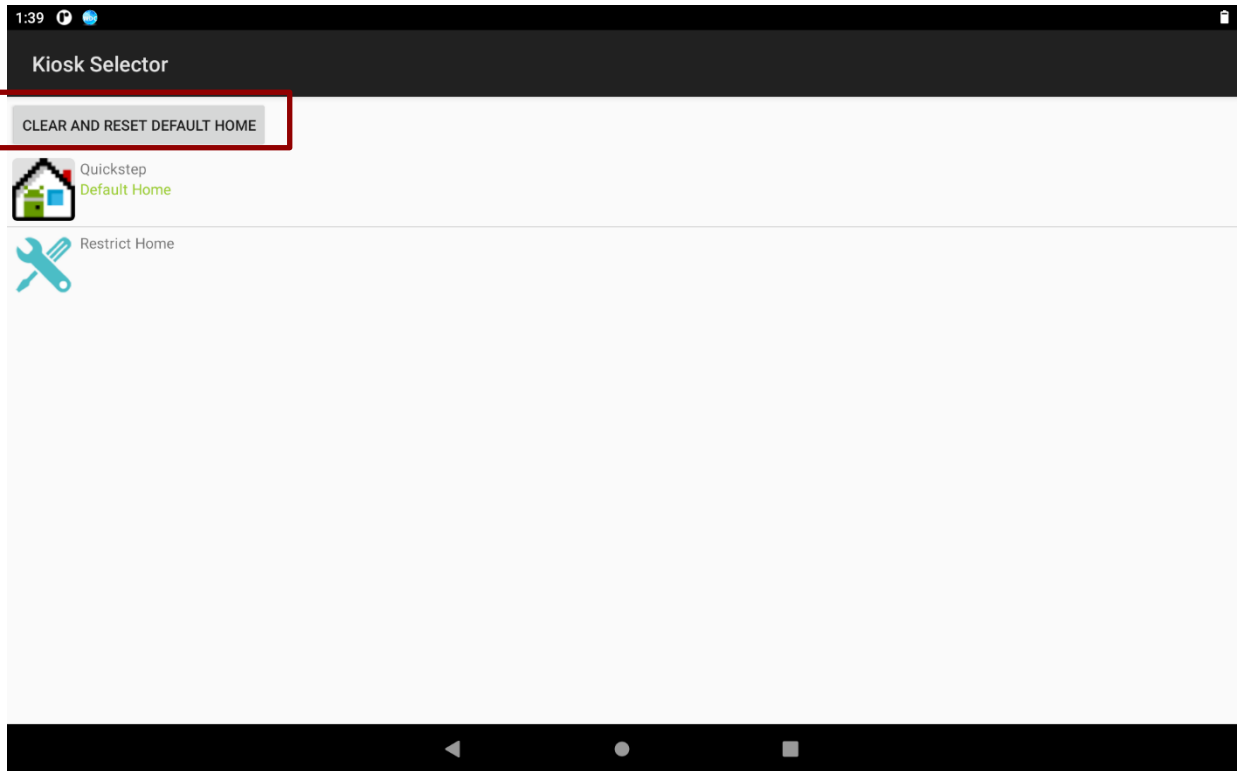
The FM07M Vehicle mount computer comes with preinstalled APP named Winmate® Kiosk Manager (WKM). This application lets the device manager to lock the launcher. When the launcher is locked the user can only use one application assigned by the device manager.

3.7.1 Lock Applications Launcher

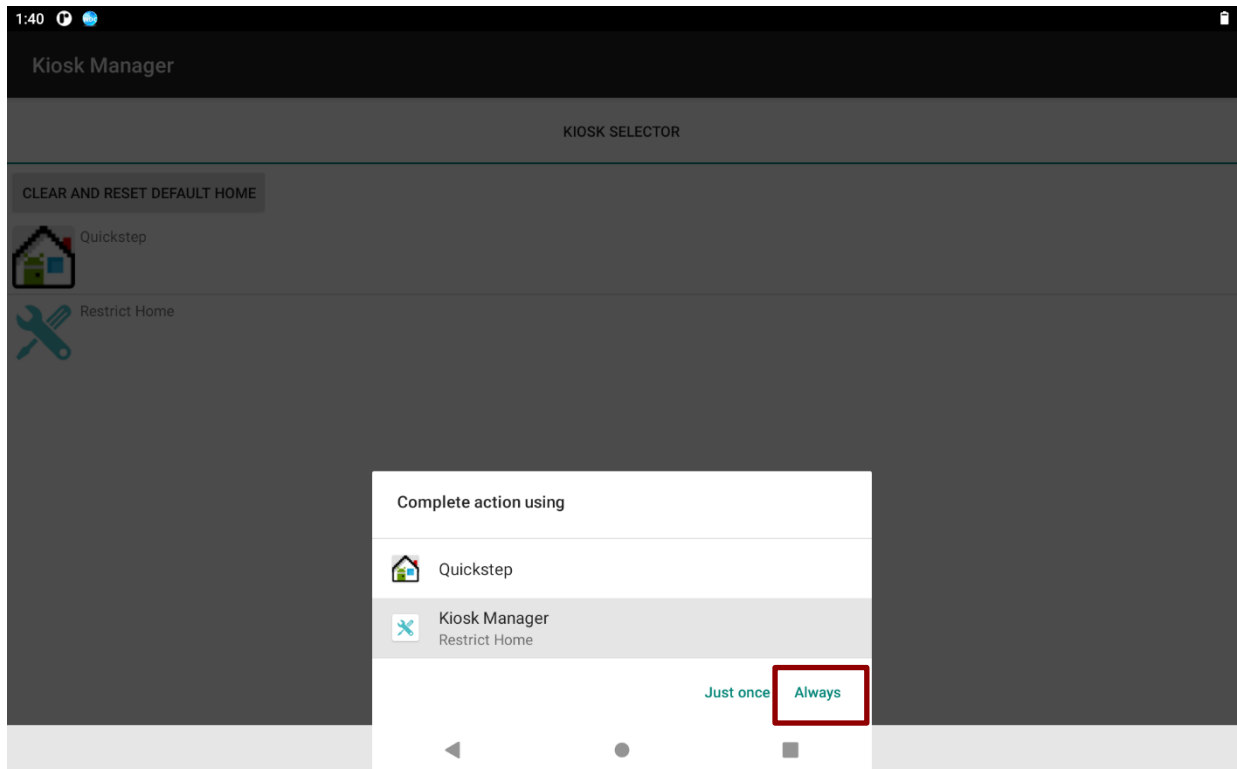
1. In the main APPS window, select the **Kiosk Manager** . Select **Kiosk Manager** to start your settings. Go to **Password Manager** and set your own password for this APP. The default password is “password”.



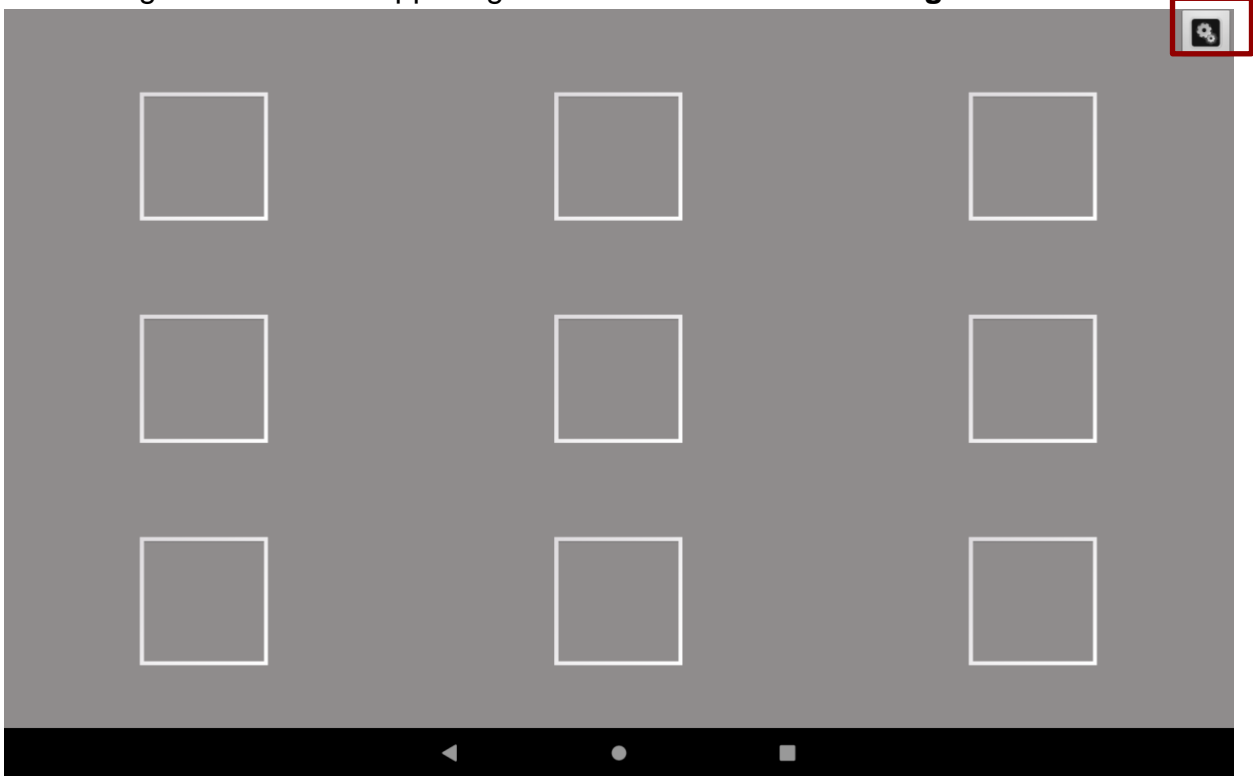
2. Press **Clear and Reset Default Home**.



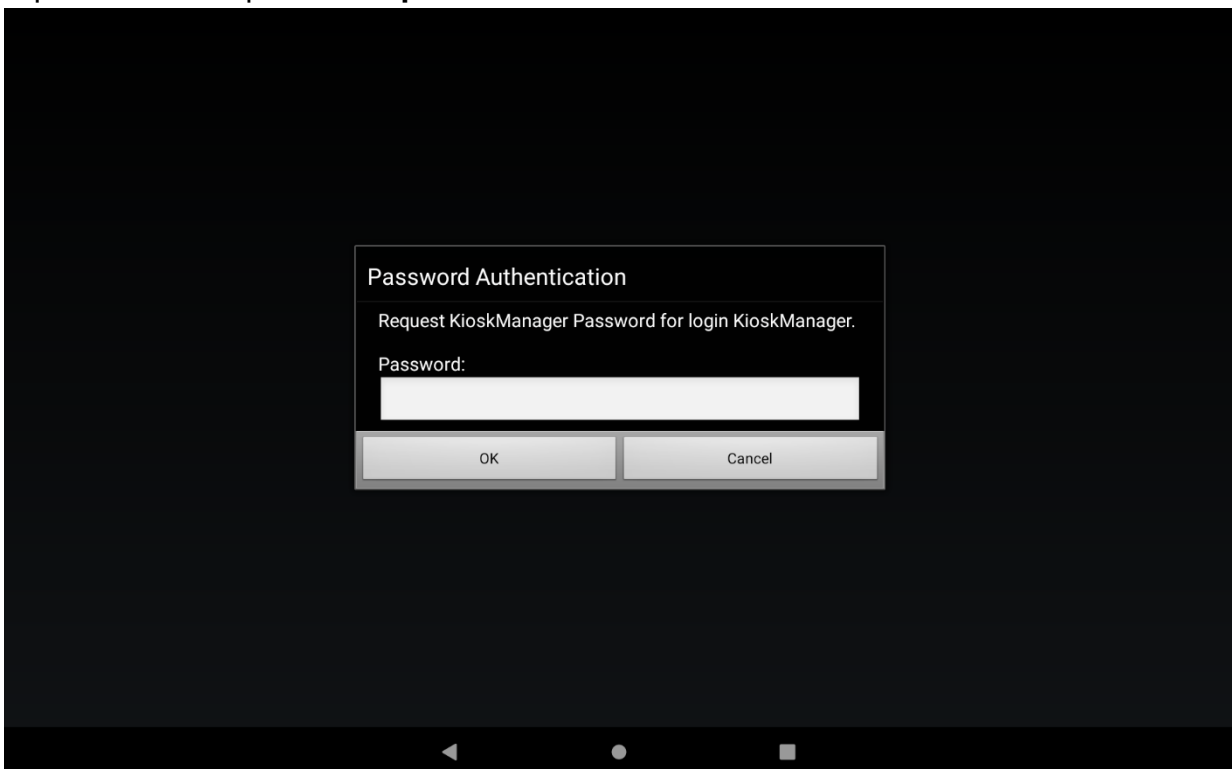
3. Select **Restrict Home** then **Always**. The system will automatically be locked on selected Apps.



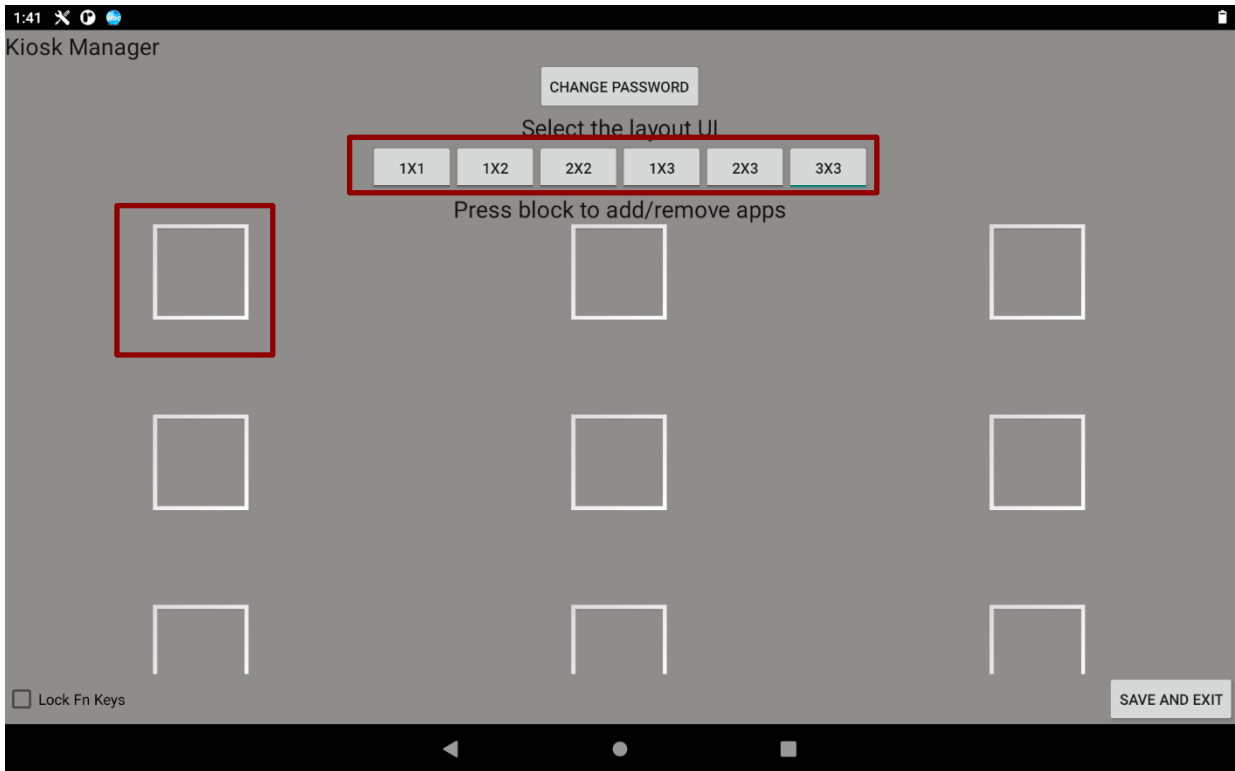
4. Click the gear icon on the upper right corner. Then choose **Change UI**.



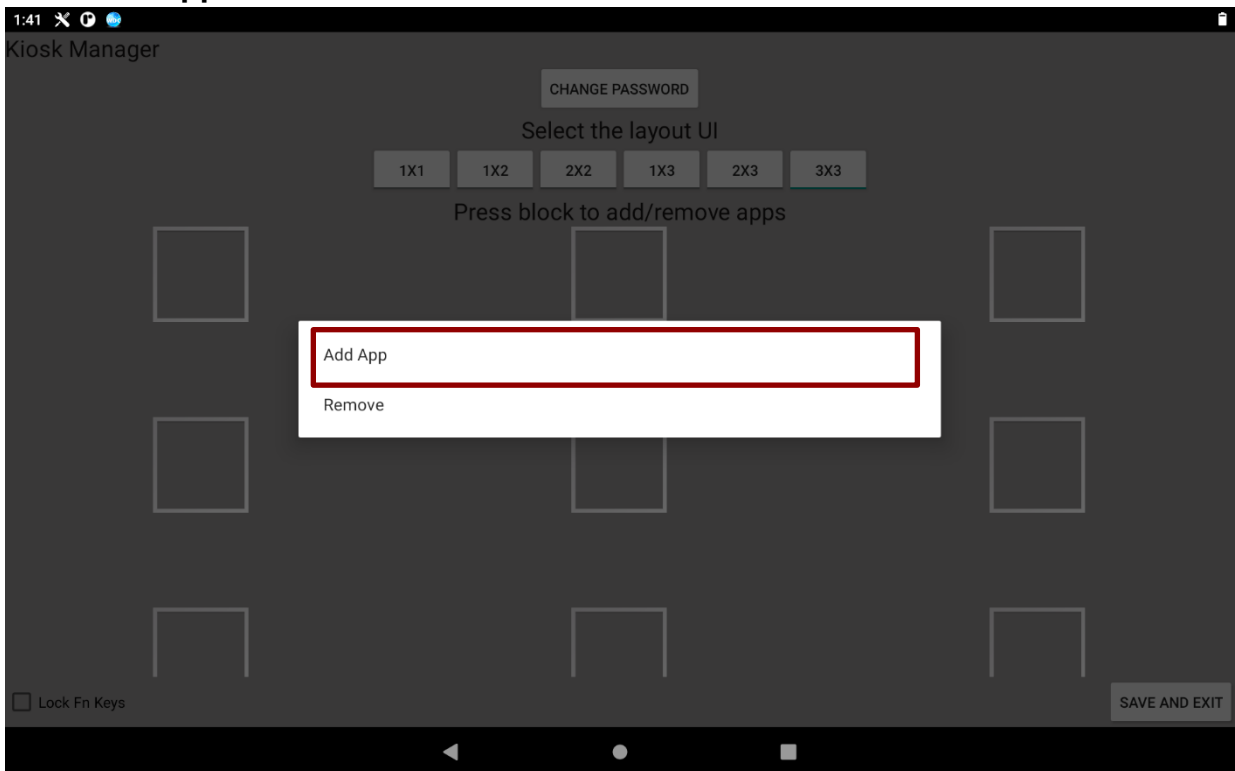
5. Input the default password: **password**



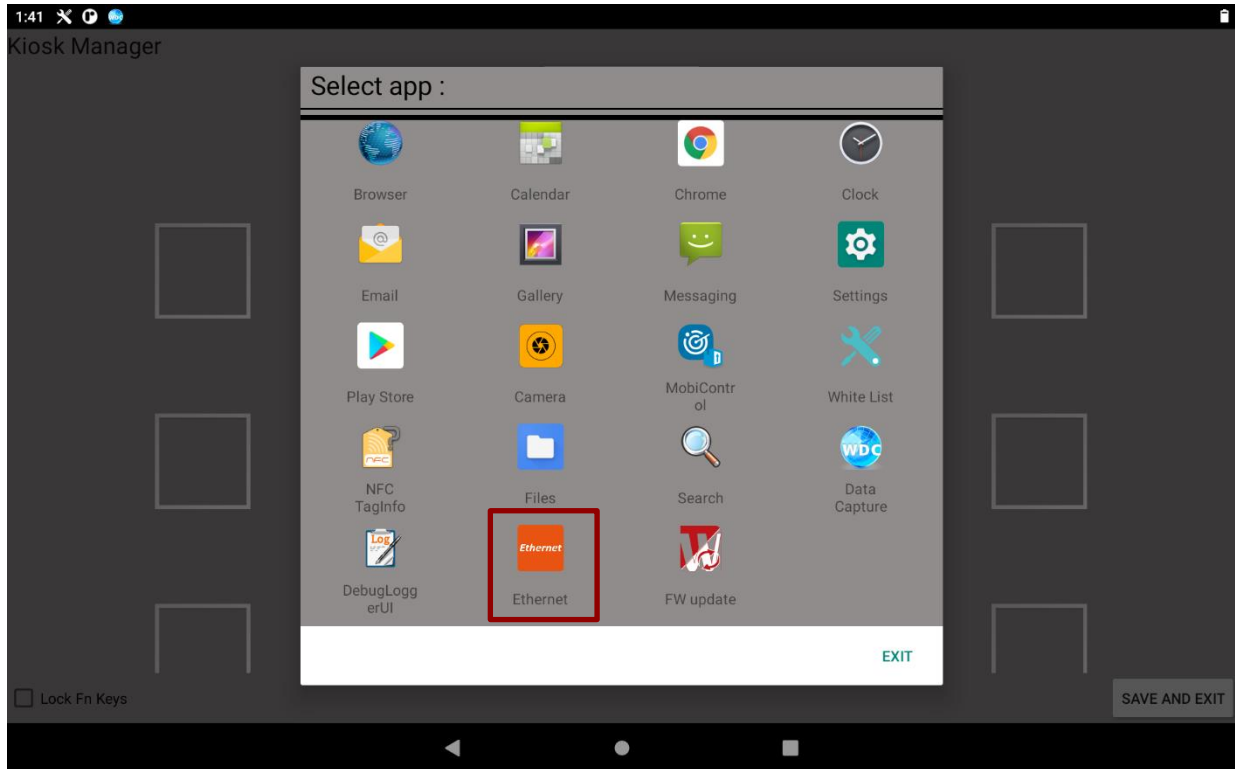
6. Choose the layout UI, then press the empty slot to add/remove apps.



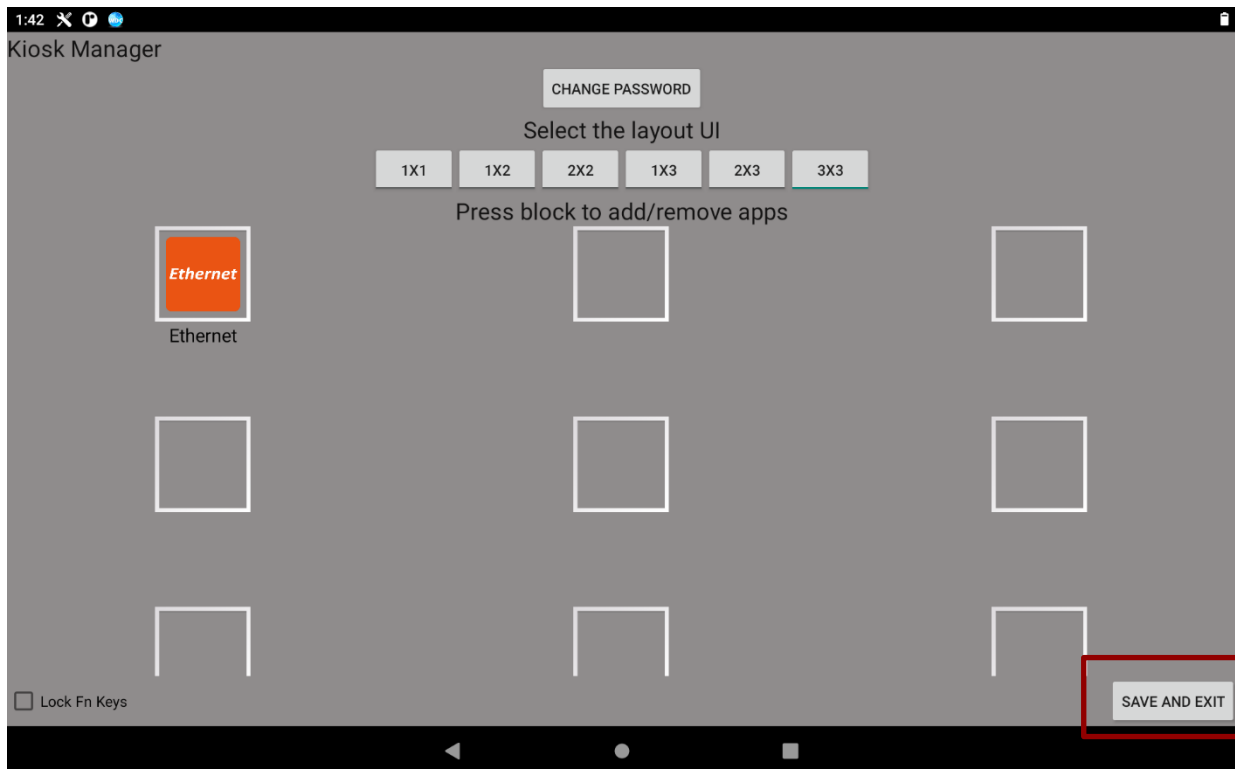
7. Click Add App.



8. Select applications you want to lock. For example, **Ethernet**.

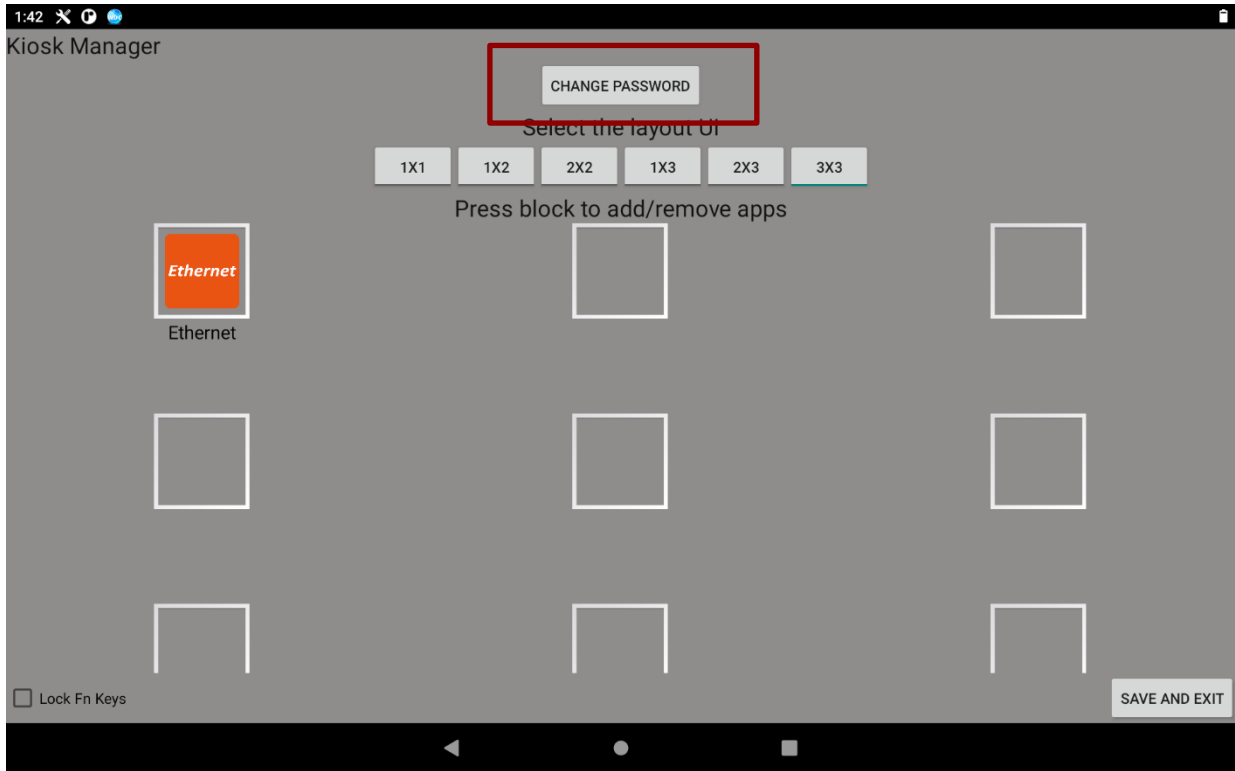


9. Click **SAVE AND EXIT**.

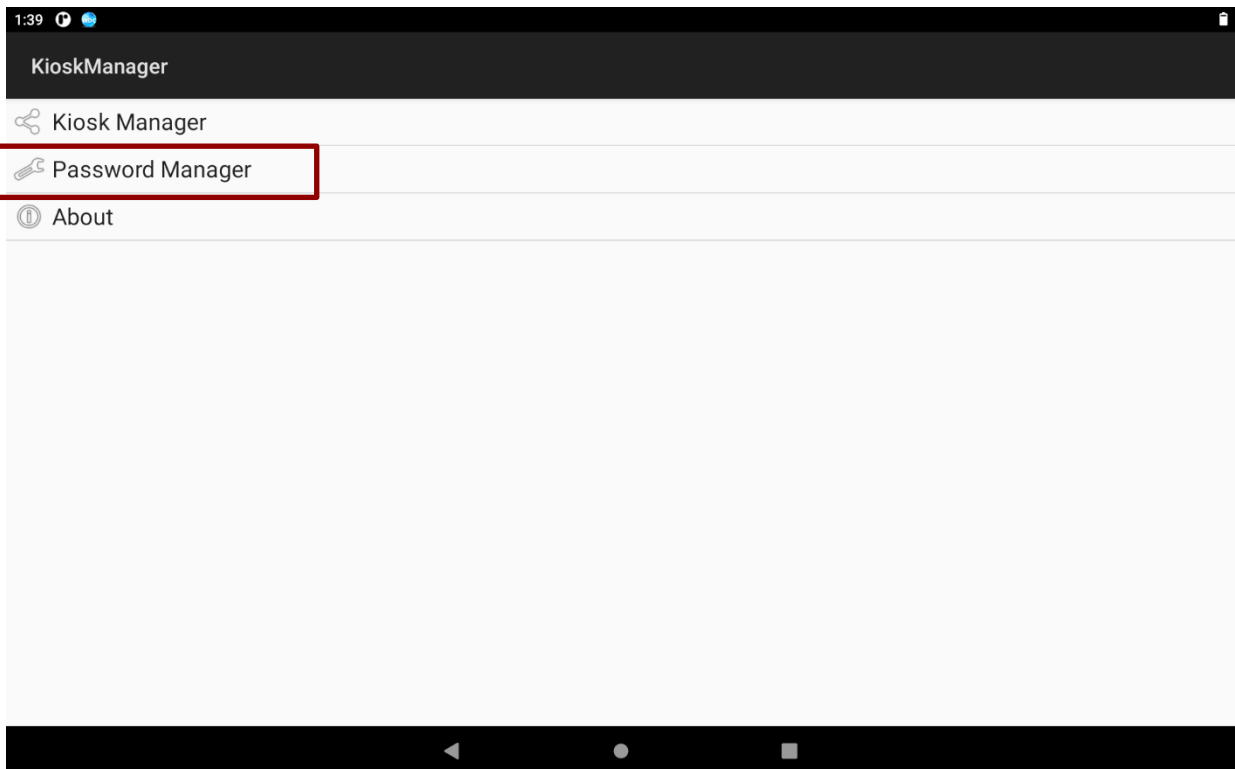


3.7.2 Change Password

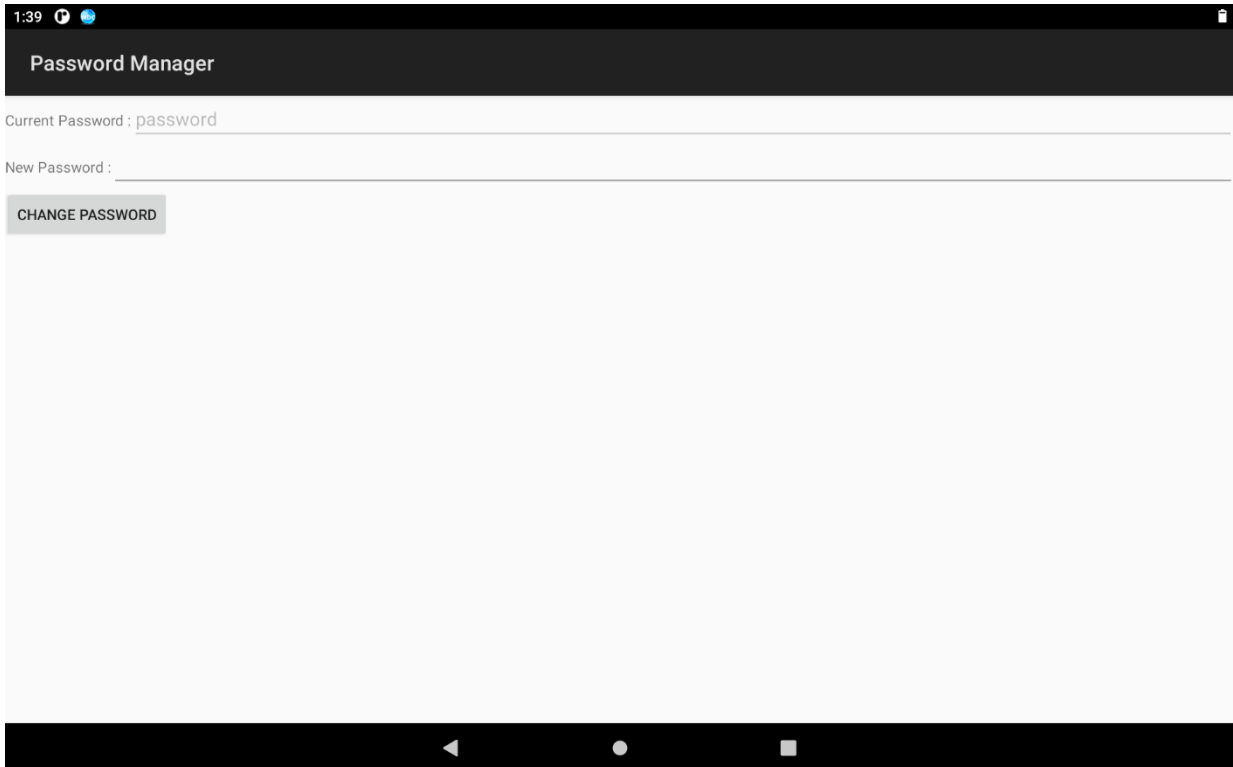
1. In the UI edit page, select the **CHANGE PASSWORD**.



Or, in the main Apps window, select the **Kiosk Manager** . Select **Password Manager** to start your settings.

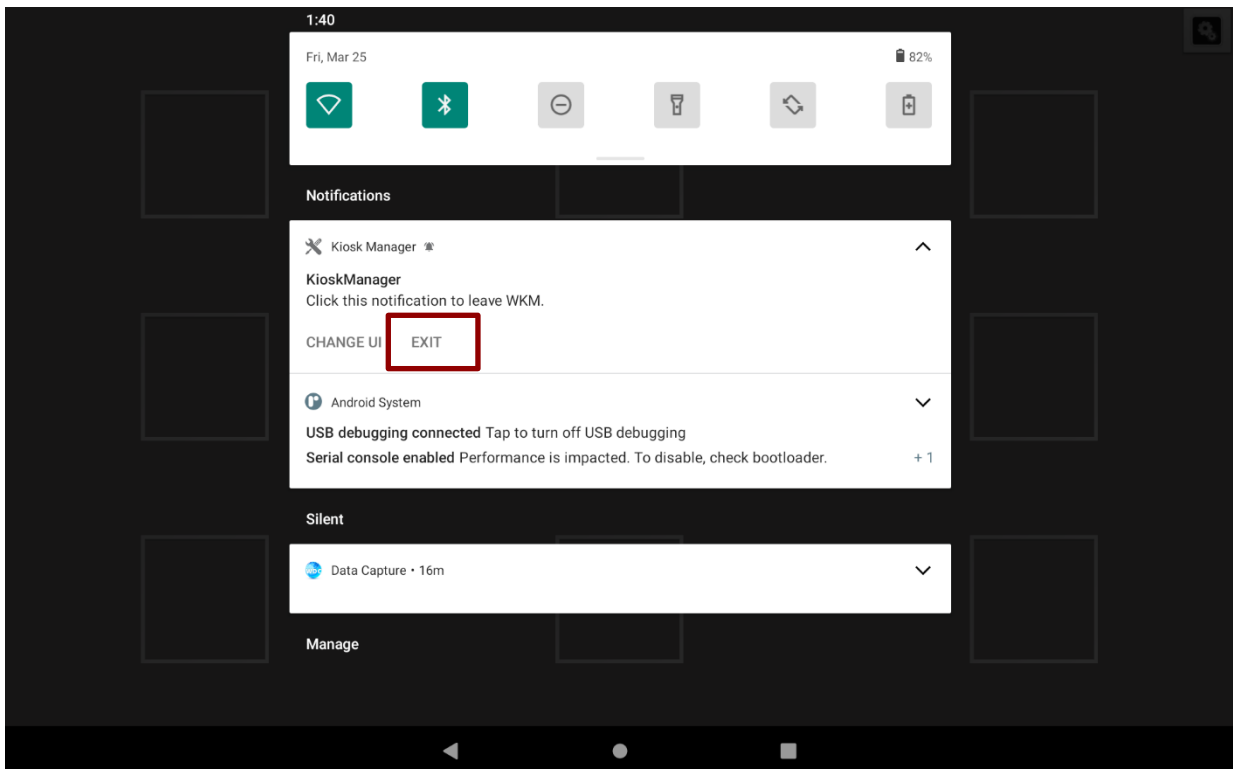


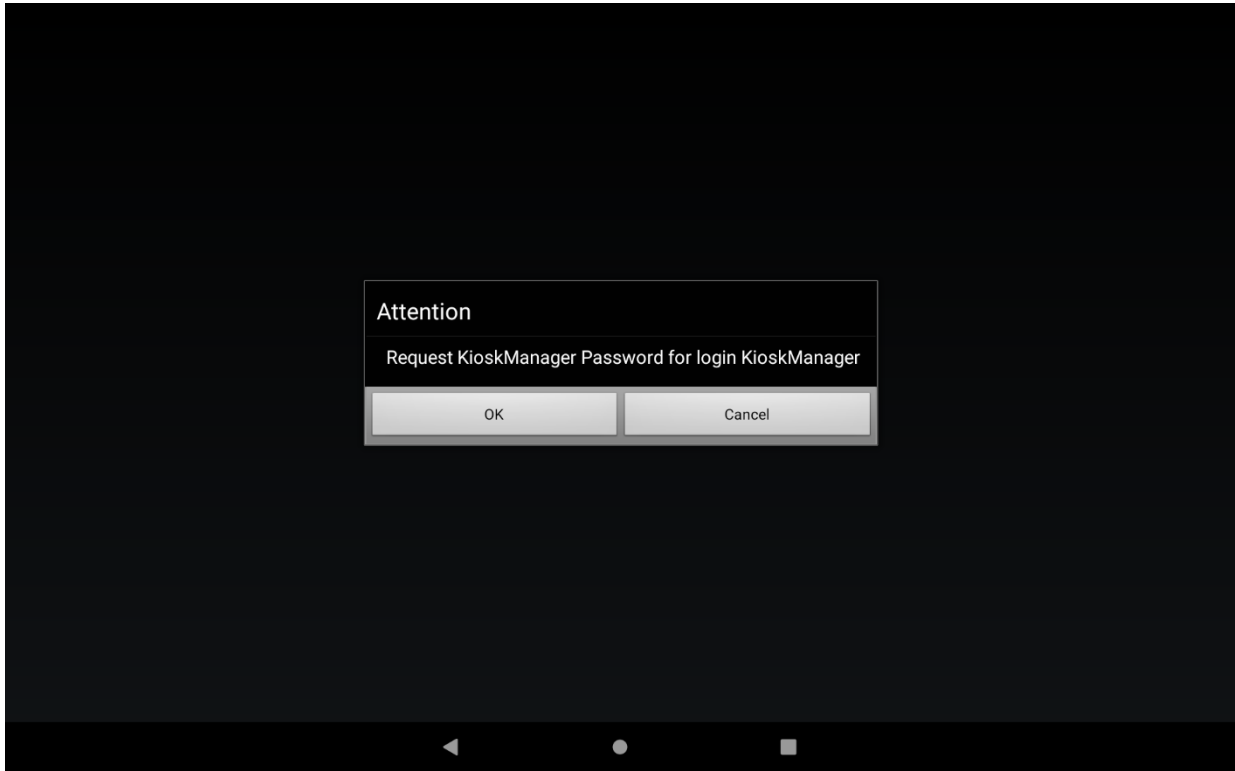
- The default password is “**password**”. Enter a new password in **New Password** field, and then tap **Change Password**.



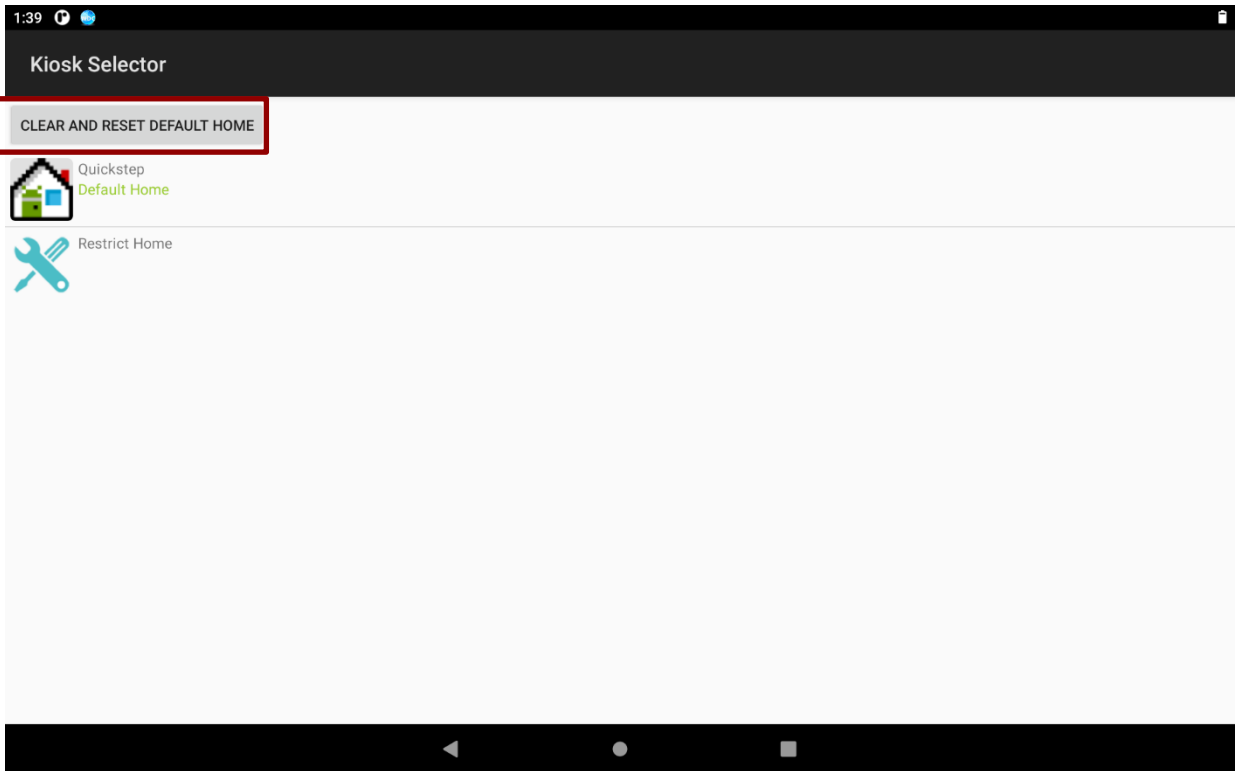
3.7.3 Unlock Applications Launcher

- Slide down the top bar and press **Kiosk Manager** icon, click **Exit** and please enter the password to login (the default password is **password**). Press **Ok**.

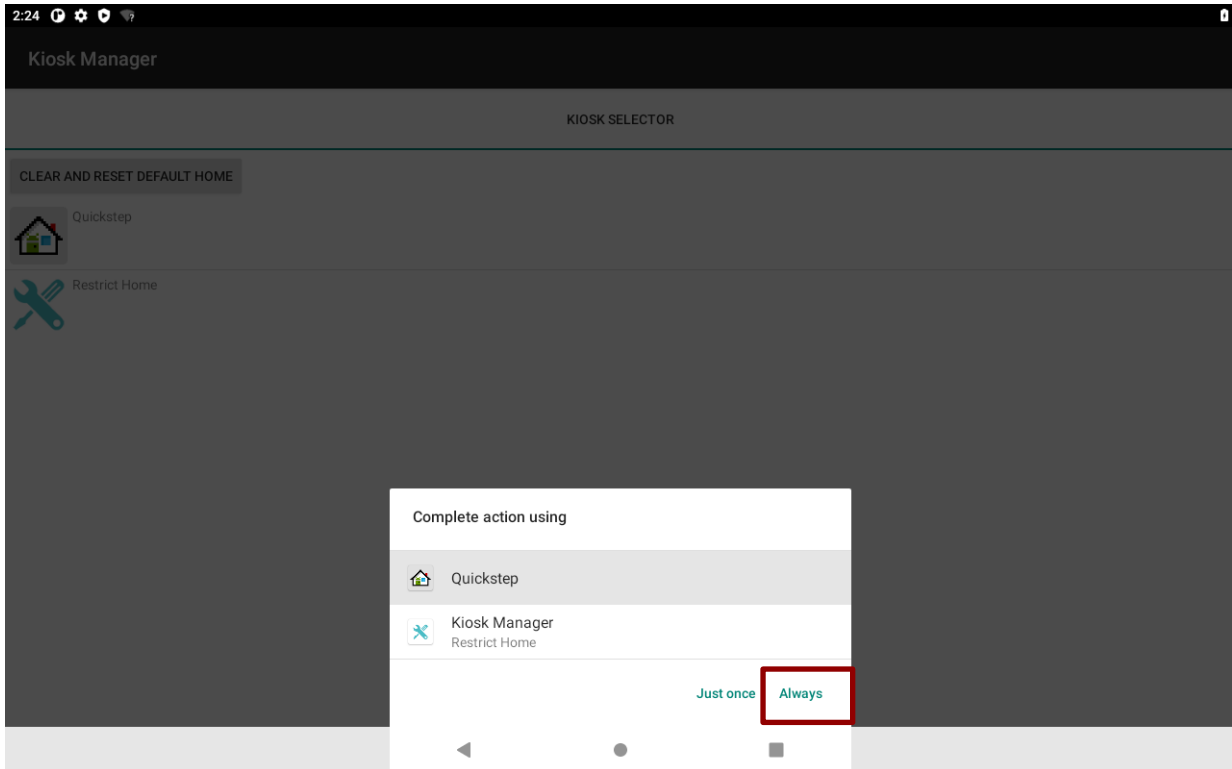




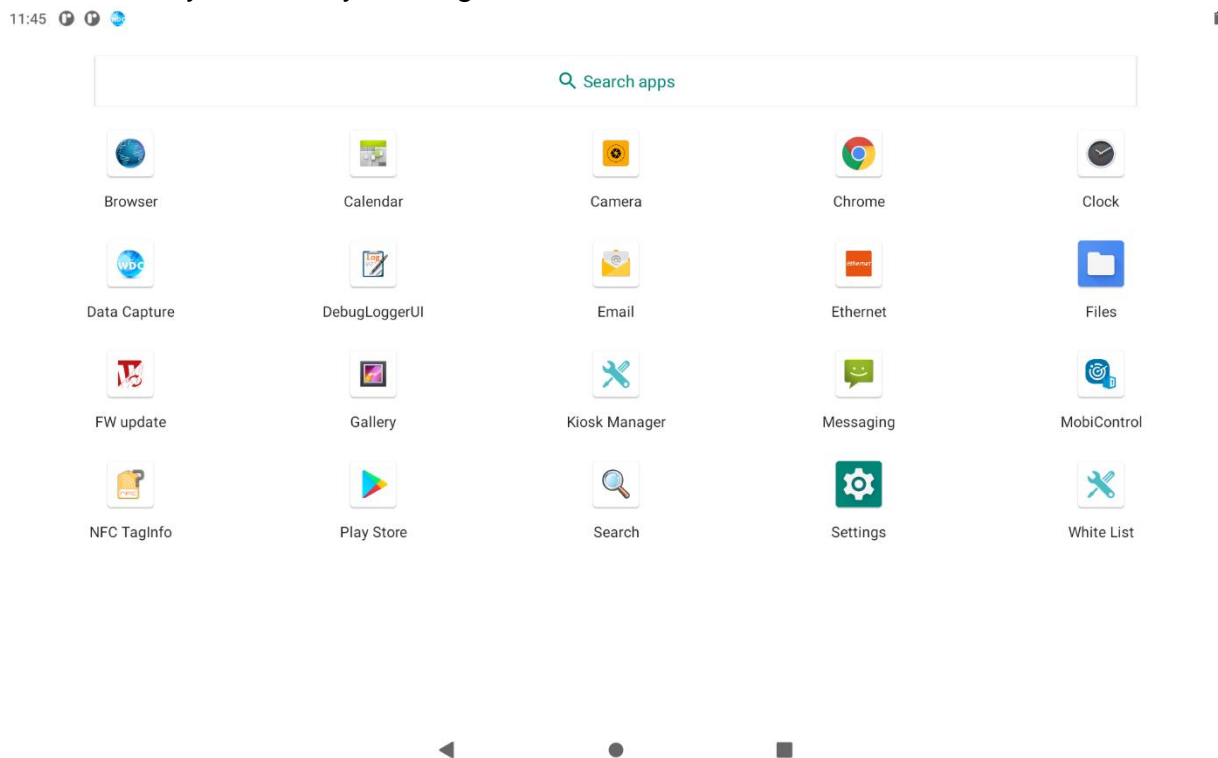
2. Click **Clear and Reset Default Home.**



3. Select **Quickstep**, and press **ALWAYS**.



4. Restart the system and you will go back to the normal Launcher.

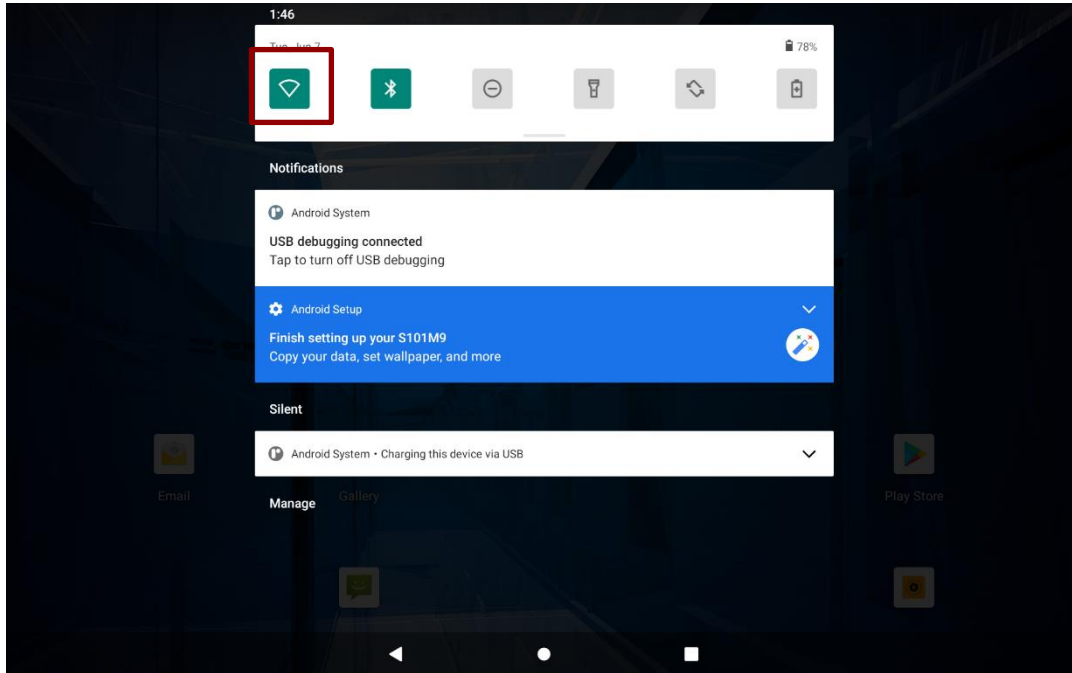


3.8 Connecting to WLAN Networks

Turn On WLAN and Connect to WLAN Network

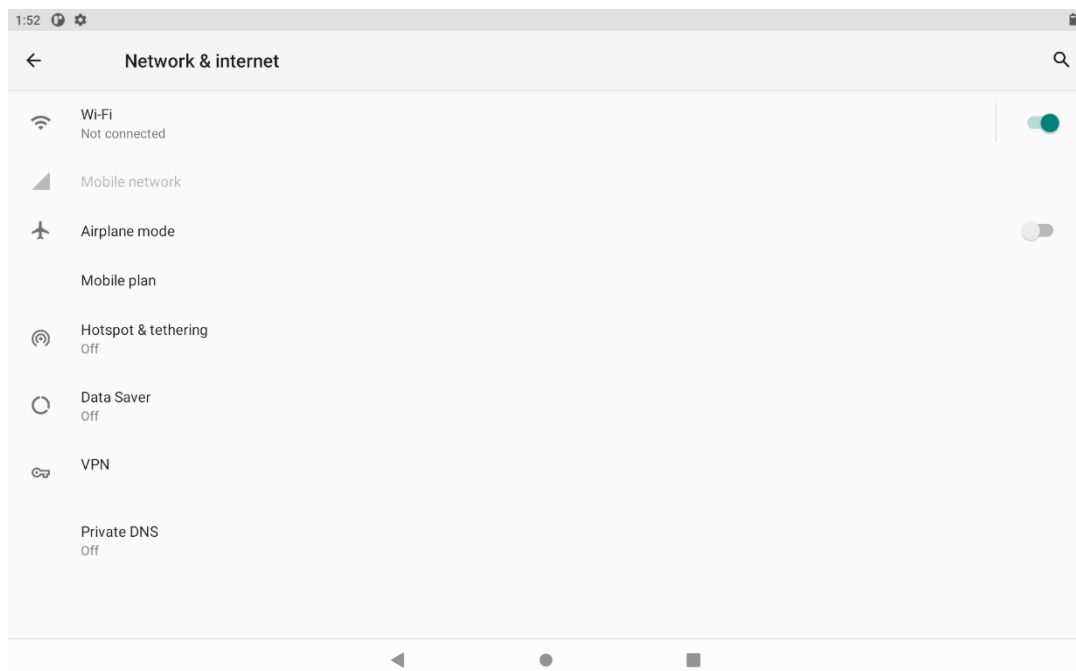
1. Pull down from the right top of the screen to open the status area.
2. Check the status of **Wi-Fi**.

The device scans for available WLAN networks and displays the list of it. Secured networks are indicated with a lock icon. If the device finds a network that you have connected previously, it connects to it automatically.

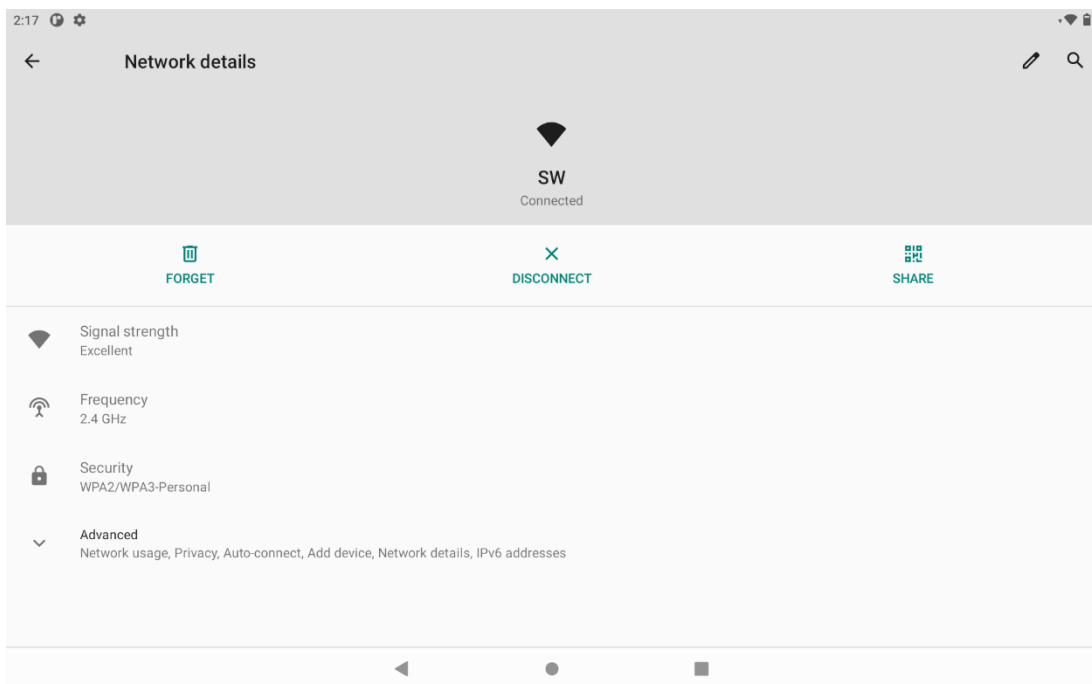
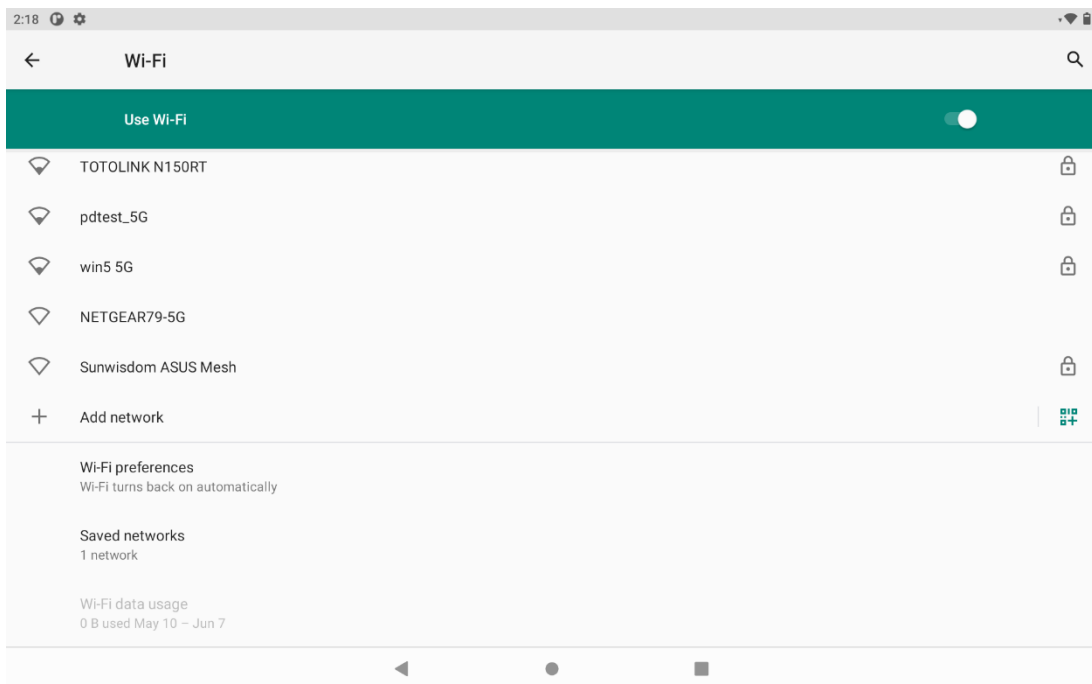


3. Tap a network to connect to it:

- If the network is open, you are prompted to confirm that you want to connect it by tapping **Connect**
- If the network is secured, users are prompted to enter a password or other credentials

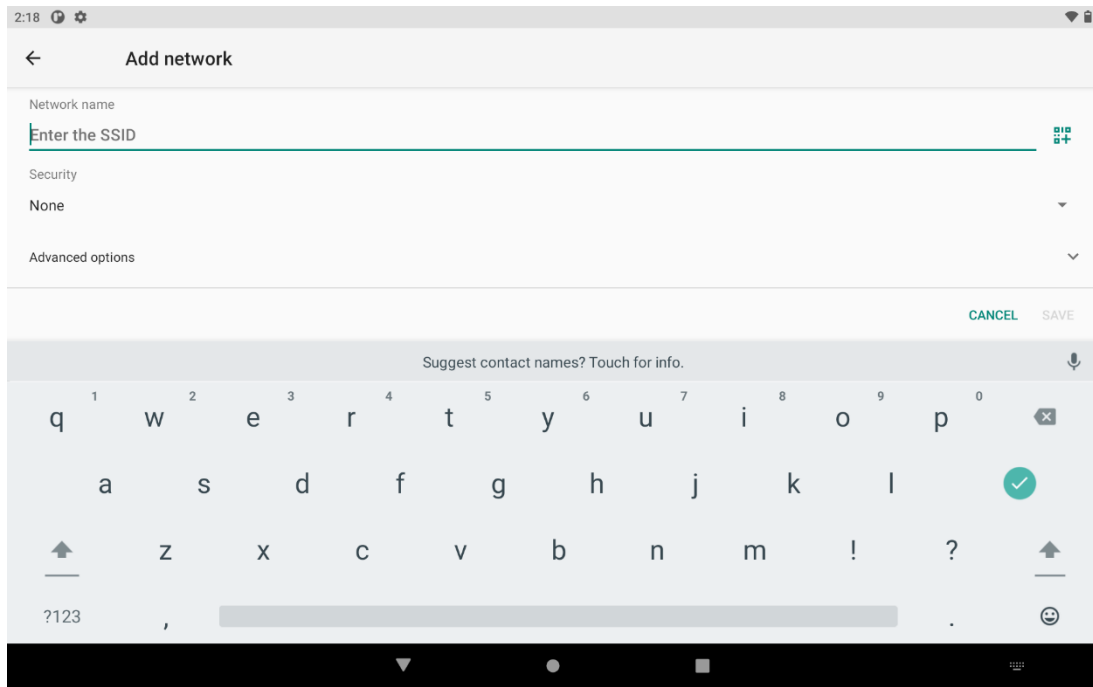


- To check the details about the speed, security, address and related settings, tap its name in the WLAN settings screen.



Adding WLAN Network

- Turn on Wi-Fi, in the Wi-Fi settings screen, tap **+** icon (at the bottom right of the list of discovered networks)
- Input the SSID (name) of the network, if the network is secured, tap the security menu and then tap the type of security deployed on the network.
- Enter any required security credentials.
- Tap **Save**.

**Note:**

When FM07M is connected to other devices by WLAN, the flash light will be ON.

3.9 WWAN (Optional)

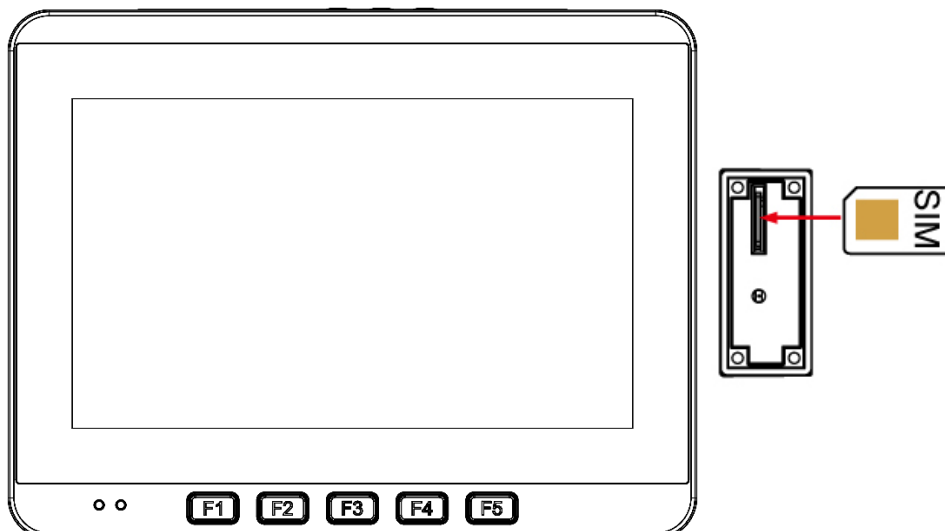
Before using the data connection program, please insert the Micro-SIM card to your vehicle mount computer.

**Caution/ Attention**

Please power off the tablet before installing the Micro SIM card, or the device might be damaged by the incorrect installation behaviors.

To insert SIM-card:

1. Power off the FM07M.
2. Remove the service window on the side by unscrewing four screws.
3. Insert the SIM card into the slot.
4. Reposition the removed service window and fasten four screws.

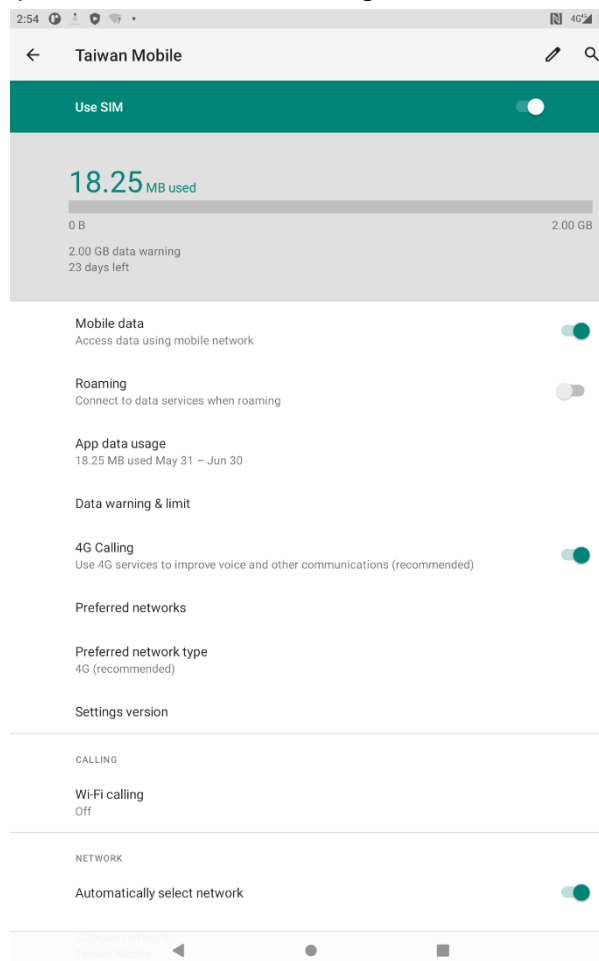


To use the wireless WAN feature to connect to the network, perform the following procedure:

1. Go to **Settings** > **Networks and Internet** > **Mobile Network**



You can check the wireless WWAN connection status through the wireless network connection status icon in the status area. Pull down from the right top of the screen to get the notifications area. The more bars encompassed, the better the signal is.



3.10 Software Update

Follow the software update guide to update the software. All the programming guides can be found in the Winmate Download Center.

You need to download the software to the SD card. Insert SD card to the FM07M device to perform OTA Updates.

3.10.1 Image Tool Download


Download OS Image Tool update guide from Winmate Download Center.

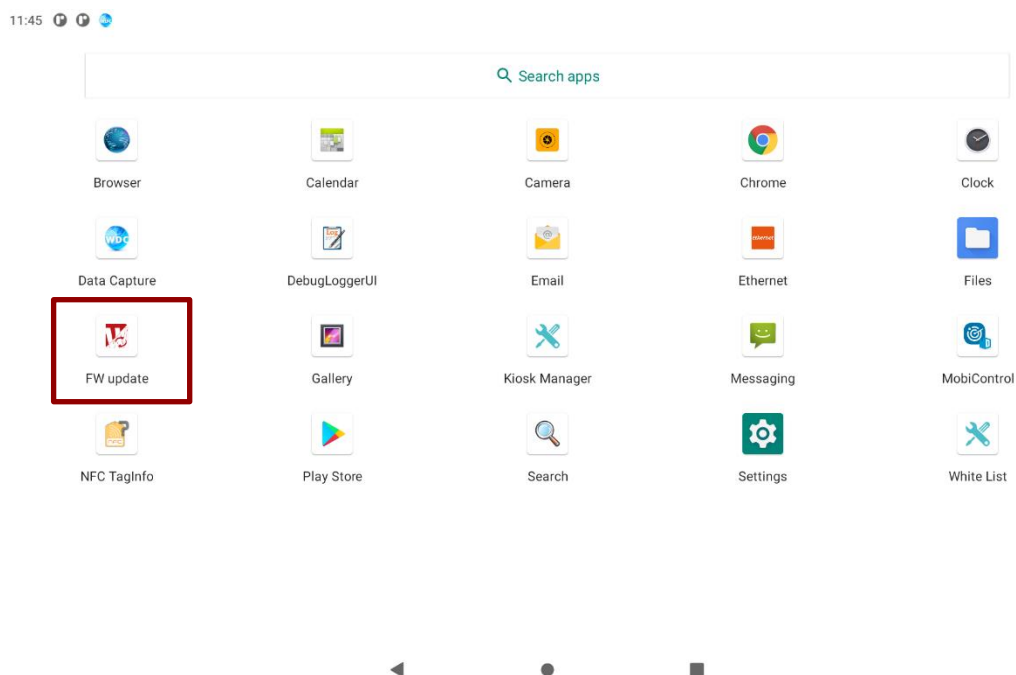
<https://www.wimate.com/> > Support > Download Center

3.10.2 OTA Update Guide

OTA is a tool which can help you to update OS image. To receive Android OS image file contact our sales representatives. Once you get the image file follow the guideline below.

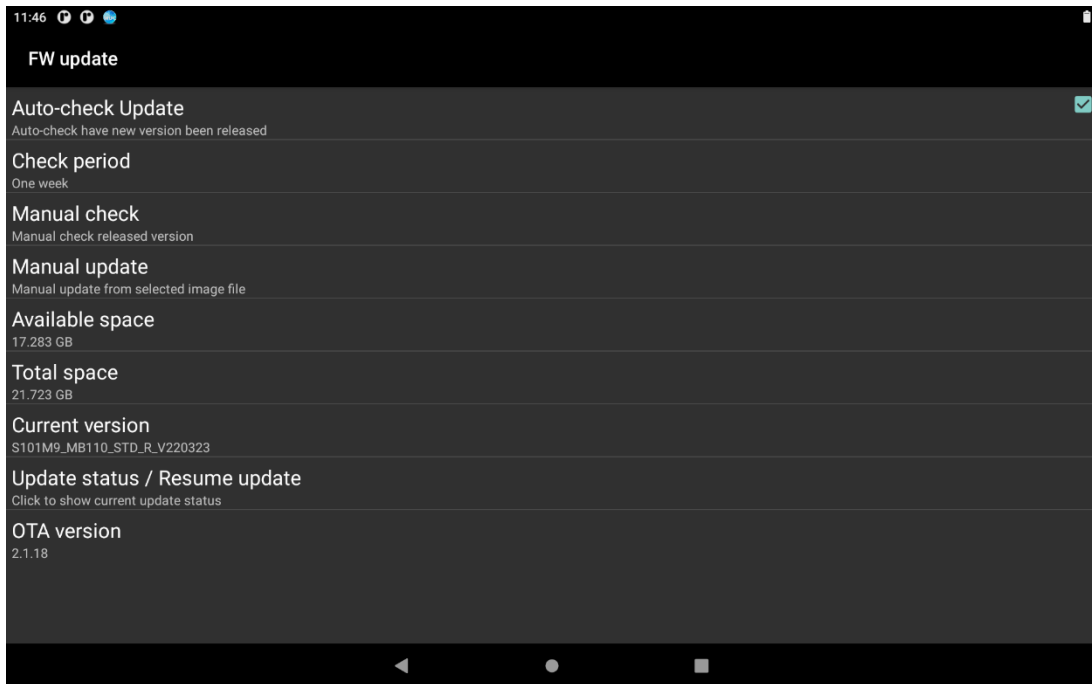
1. Copy image files **ota_IM30A_X_X_X_X.zip** and **IM30A_X_X_X_X.md5** and to micro SD card.
2. Insert micro SD card to the slot in the HMI device.

In the **APPS** menu tap **FW Update** .

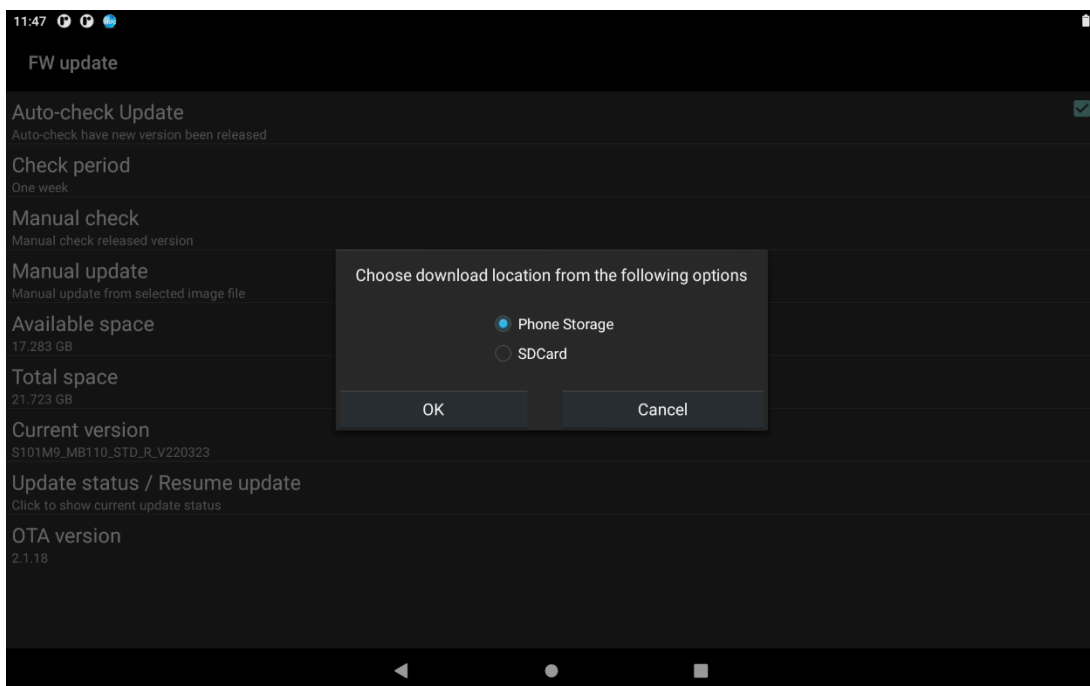


System shows OTA firmware related information.

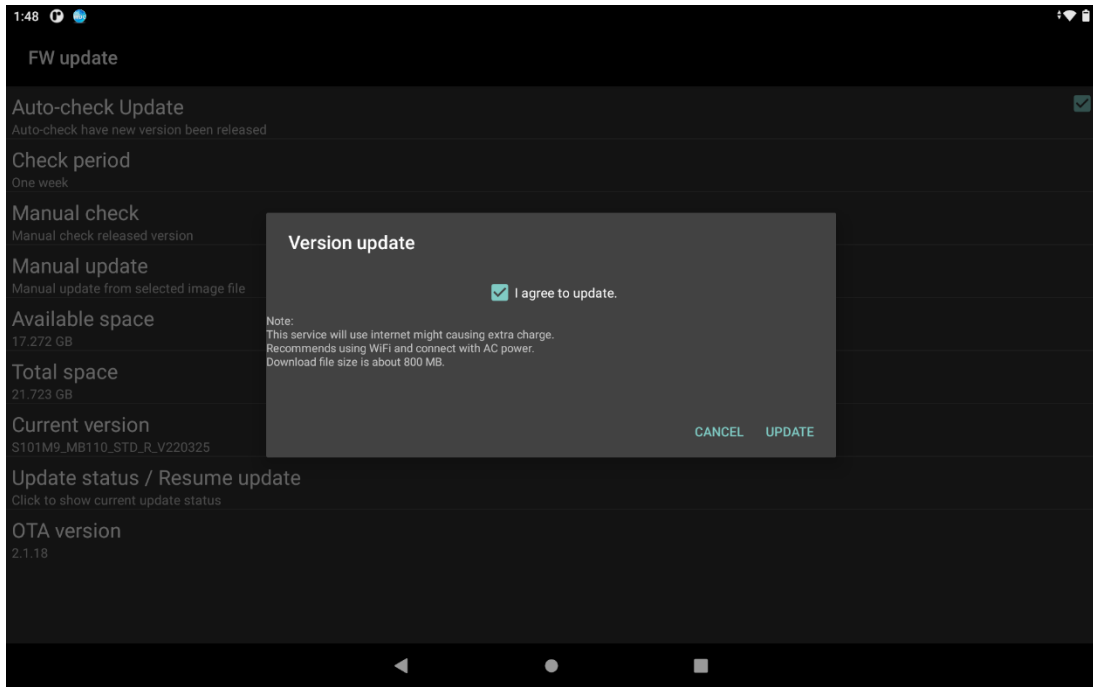
3. Click **Manual Update**. The system is checking OTA File. It may take some time.



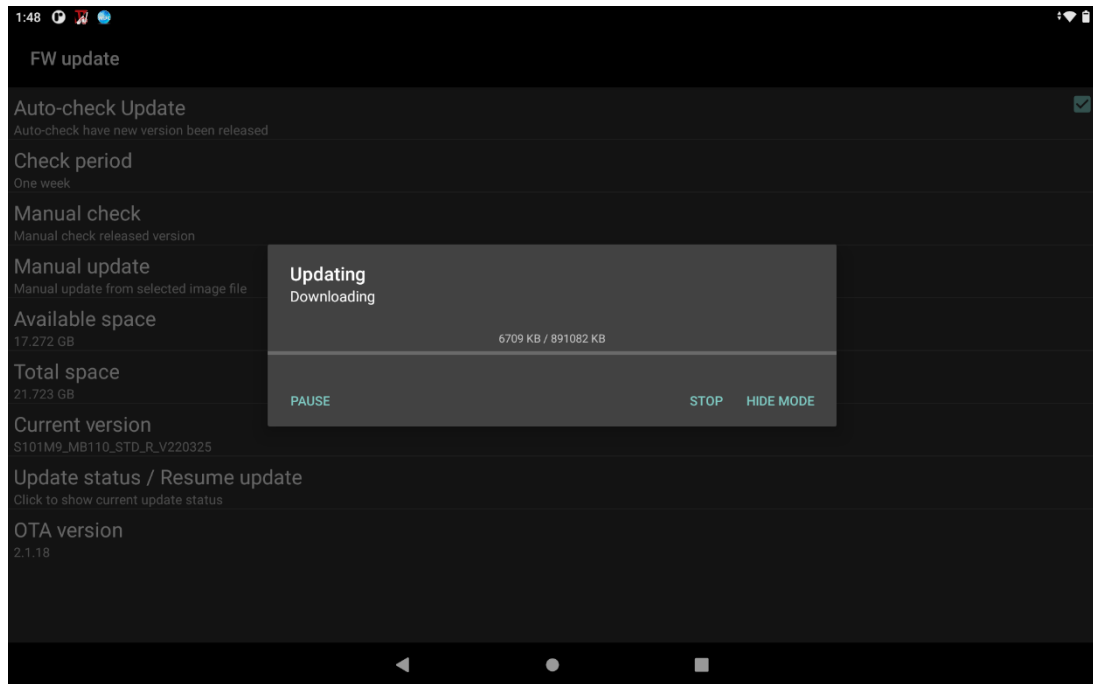
4. Choose download location.



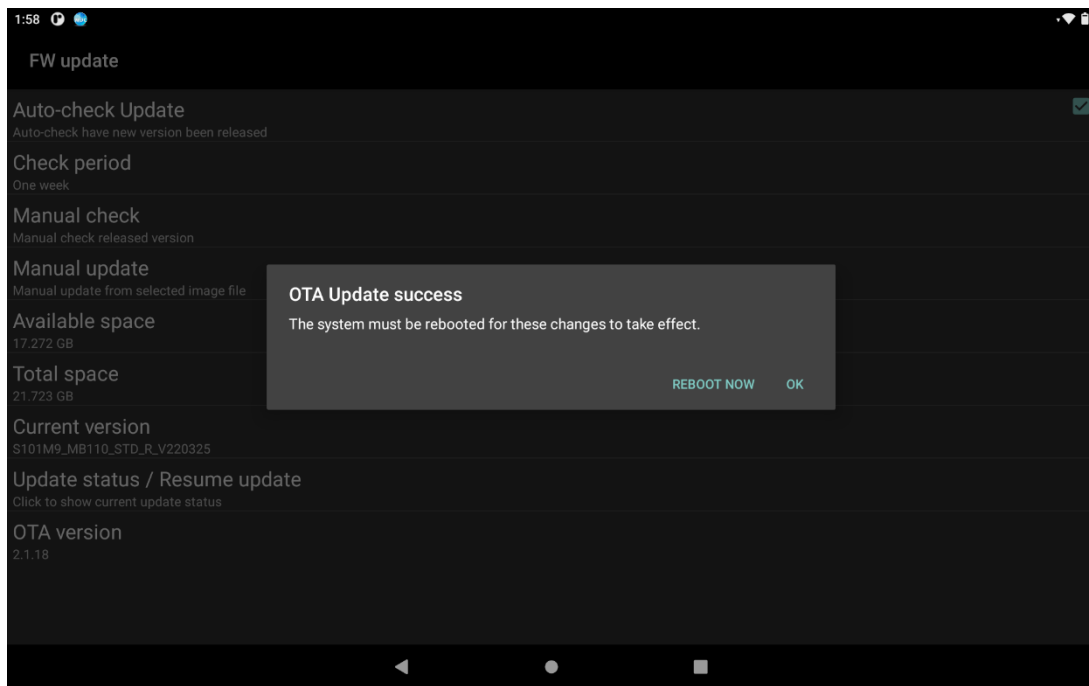
5. Check the **I agree to update**, then click **Update**.



6. Wait for download finish it will take some time.



7. Click **REBOOT NOW**.



8. Wait for OTA to update.



Important: Do not disconnect the power source! Do not remove the battery!

9. When Update finish, the computer opens desk screen.

Chapter 4: Vehicle Mounting

This chapter describes how to mount the FM07M Vehicle Mount Computer. The FM07M is designed to be mounted inside the vehicle with RAM mount or VESA mount.

4.1 Vehicle Mount Instruction

Make sure that the FM07M does not obstruct the driver's vision and ensures safe driving. The general steps to mount the device on the vehicle are as follows:

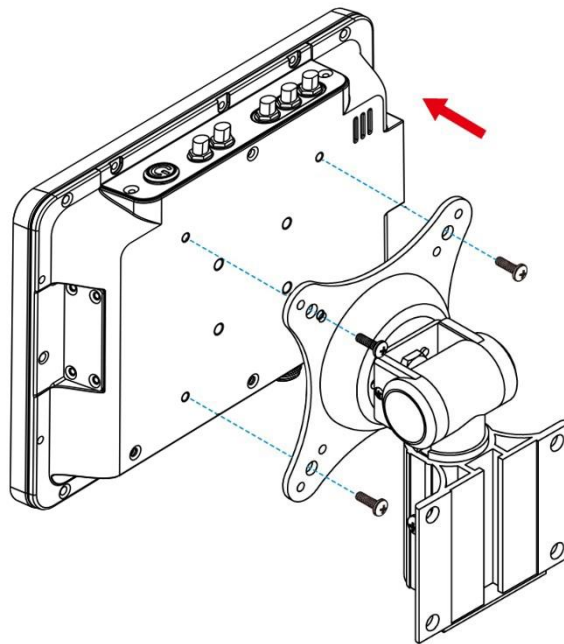
1. Install RAM mount to the vehicle.
2. Adjust the viewing angle of the FM07M.
3. Install antennas if necessary.
4. Connect peripheral devices and cables.
5. Connect vehicle power.
6. Secure all cables.

4.2 VESA Mount Installation

The rear cover of the FM07M supports VESA mount (75 x 75 mm).

VESA Mounting Installation Instructions:

1. Attach the VESA Plate to the rear cover of the FM07M using 4 x M4 mm Phillips screws.
2. Follow instructions provided by VESA mount parts supplier.



4.3 RAM Mount Installation

Winmate recommends using RAM Mounting Parts as part of our device mounting solution. The rear cover of this device is designed to be mounted to RAM Mount solutions, which provides different mounting options to fit any industrial use or vehicle. Please notice that mounting kits are not included in the standard package.

RAM Base Dimensions: 38.1 x 30 mm

Screw: 4 x M5-0.8x10 mm Phillips screws

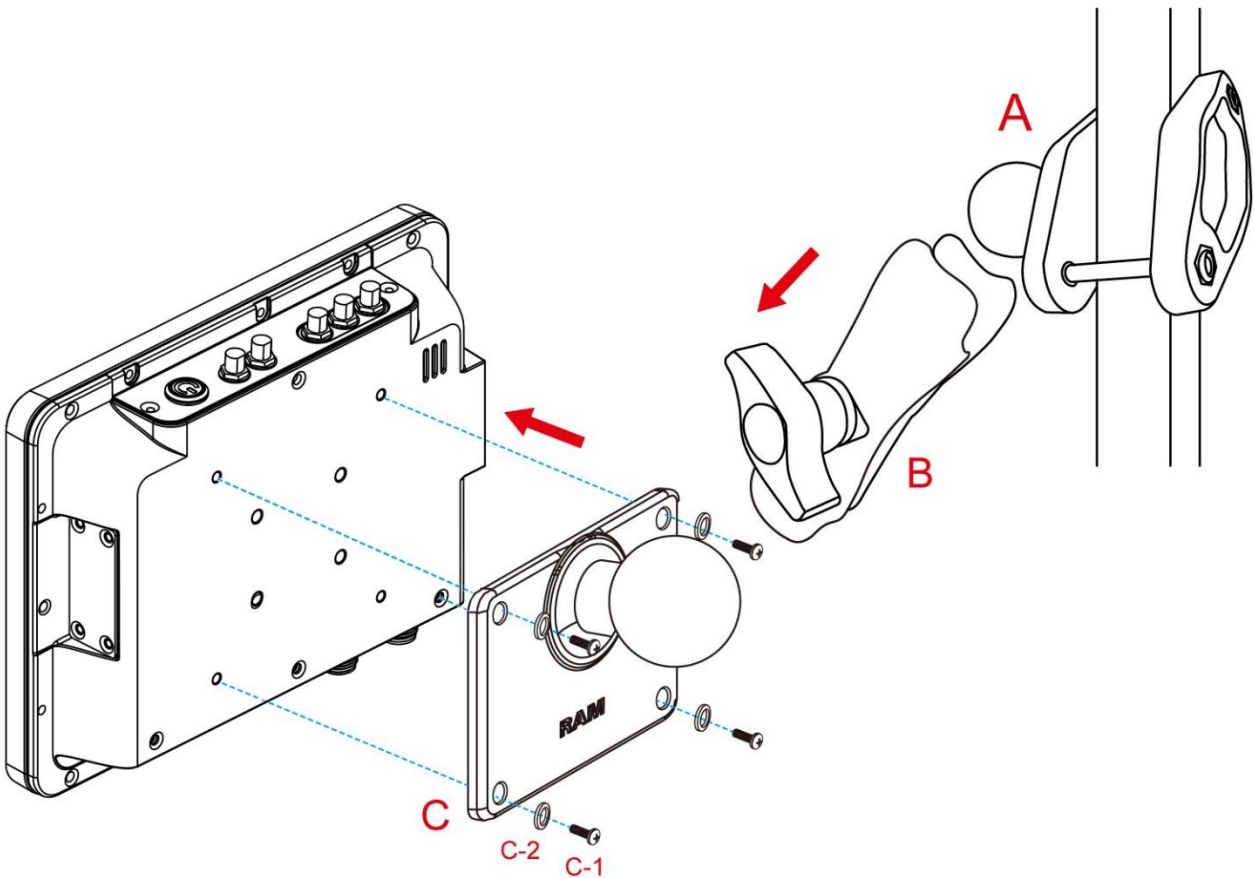


Important:

The information below is just a guideline on how you should mount the Winmate device using RAM Mount. To purchase the RAM parts, please follow the RAM Mounts Part and purchase from your preferred retailer.

4.3.1 Mounting 1 – No Drill Solution

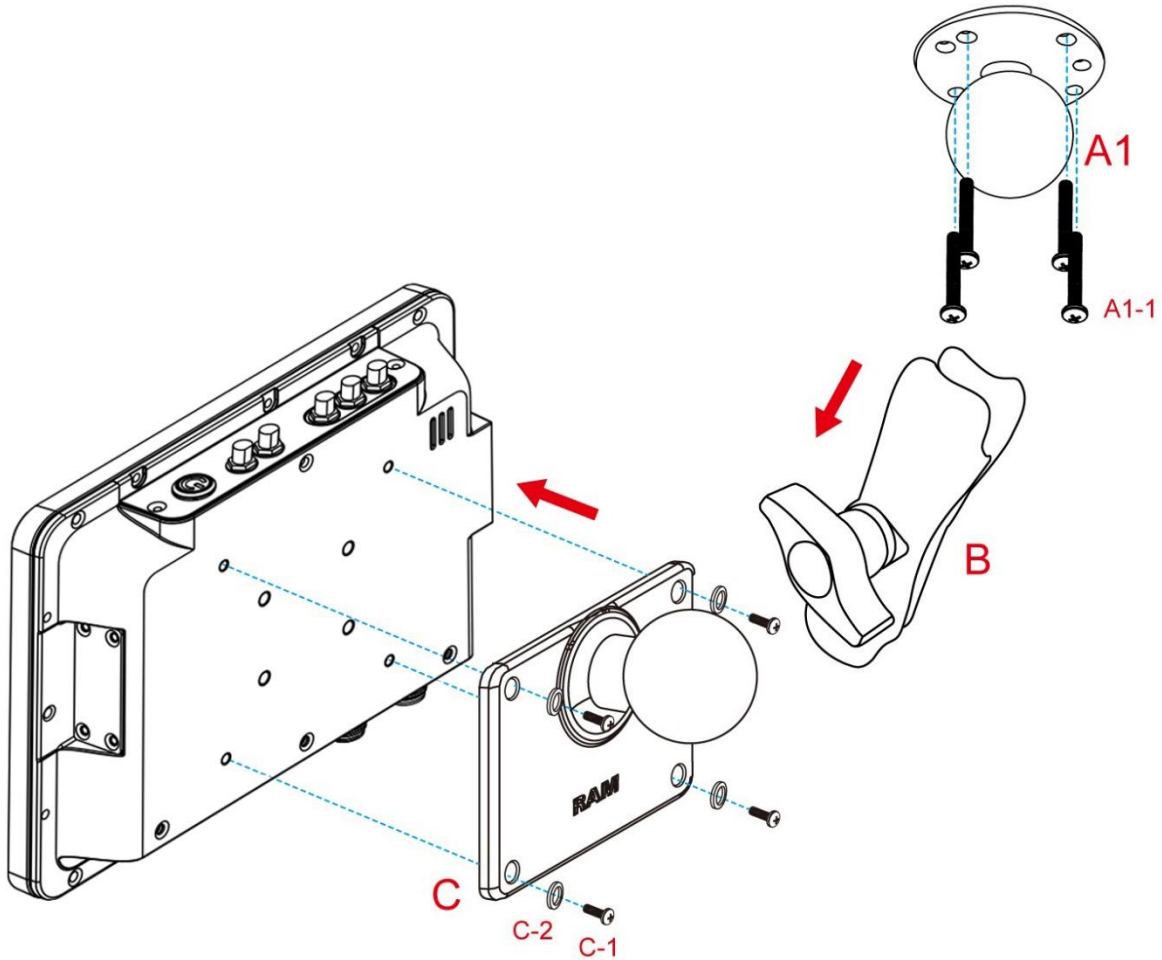
You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A	RAM Clamp Mounts - on the forklift	RAM-D-247U-4	Clamp base with 2.25" Ball	1
B	RAM Arm	RAM-D-201U	Arm for 2.25" Ball(L:8.375")	1
C	RAM Ball on the device side	RAM-D-2461U	75x75mm VESA with 2.25" Ball	1
C-1	Screw	-	SUS304 M4 x 12mm Screw	4
C-2	Washer	-	M4 Washer	4

4.3.2 Mounting 2 – Drill Solution

You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A1	RAM round base mounts - on the forklift	RAM-D-202U	3.68" Round Base with 2.25" Ball	1
A1-1	Screw	-	SUS304 M8 x 40mm Screw	4
B	RAM Arm	RAM-D-201U	Arm for 2.25" Ball (Length:8.375")	1
C	RAM Ball on the device side	RAM-D-2461U	75x75mm VESA with 2.25" Ball	1
C-1	Screw	-	SUS304 M4 x 12mm Screw	4
C-2	Washer	-	M4 Washer	4

4.3.3 RAM Mount Assembly

Step 1 Install RAM Clamp to vehicle or forklift

- 1.1 Determine the position for mounting the RAM clamp mount according to RAM Mounts installation guide and specification.
- 1.2 Place the upper clamp with ball on the beam, insert the bolt.
- 1.3 Place the lower clamp below the beam. Align the bolts with the holes in the lower clamp.
- 1.4 Place the nuts and then tighten it.

Step 2 Install RAM Ball base to vehicle dashboard / another surface.

- 2.1 Please make sure that the surface is flat and rigid.
- 2.2 Attach the RAM ball base to the vehicle and fix it using bolt or fasteners.

Step 3 Attach RAM Mount Ball to the device docking.

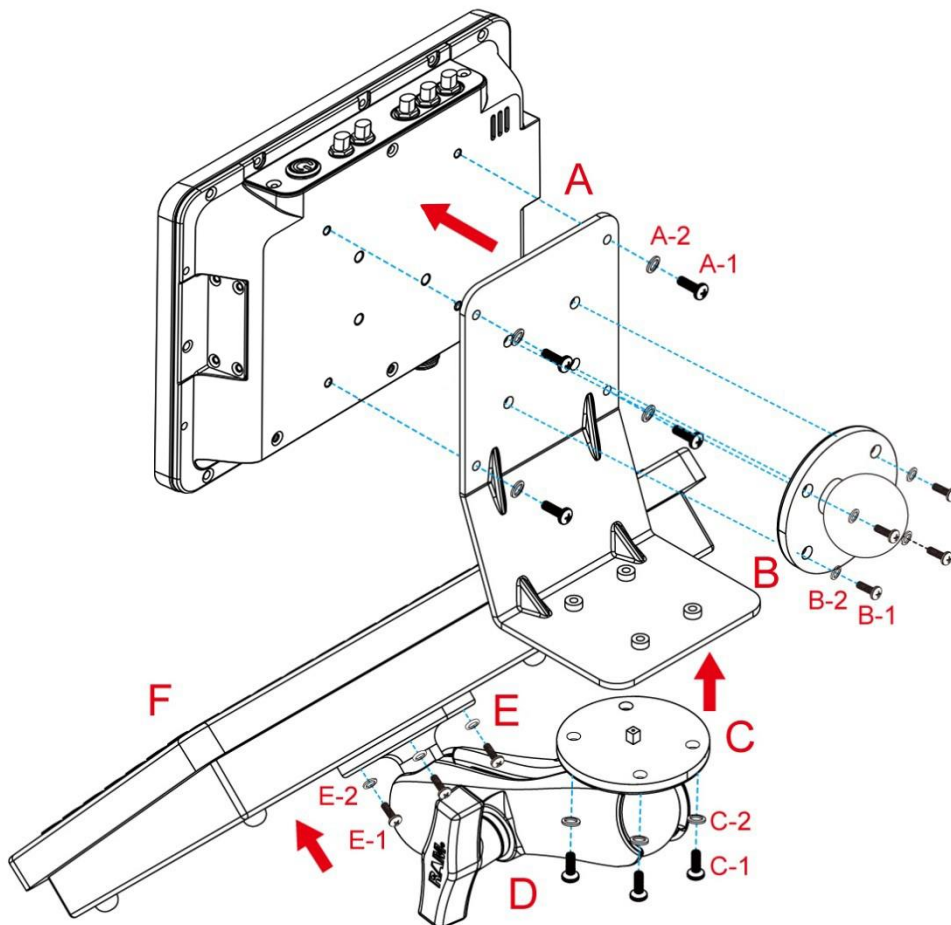
- 3.1 Turn the device off before installing the RAM mount ball.
- 3.2 Locate the VESA mount holes on the back of the device and align it with the holes from RAM Ball base. Fix with four M5 screws.

Step 4 Attach the device to RAM arm.

- 4.1 Insert the RAM arm over the ball on the vehicle RAM mount (shown here).
- 4.2 Insert the ball on the dock into the RAM arm and tighten the knob.

4.3.4 Mounting 3 – Keyboard Mounting Installation

You can order mounting accessories from RAM Mounts.



No	Component	RAM Mount Part Number	Description	QTY
A	Winmate Keyboard Adapter Plate (designed by Winmate)	-	4 VESA Holes on the plate to device and 4 AMPS holes to RAM Ball	1
A-1	Screw	-	SUS304 M4 x 10 mm Screw	4
A-2	Washer	-	M4 Washer	4
B	RAM Ball on the sloped part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
B-1	Screw	-	SUS304 M5 x 16 mm Screw	4
B-2	Washer	-	M5 Washer	4
C	RAM Ball on the bottom part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
C-1	Screw	-	SUS304 M5 x 12 mm Screw	4
C-2	Washer	-	M5 Washer	4
D	RAM Arm	RAM-201U	Arm for 1.5" Ball (Length:5.6")	1
E	RAM Ball on the sloped part of the keyboard adapter plate	RAM-202U	2.5" Round Base with 1.5" Ball	1
E-1	Screw	-	SUS304 M5 x 12mm Screw	4
E-2	Washer	-	M5 Washer	4
F	Keyboard	-	-	1

Appendix A: Product Specifications

FM07M- 7-inch Vehicle Mount Computer	
Item	Specifications
Display	
Size / Technology	7"
Resolution	1024 x 600
Viewing Angle	75, 75, 75, 70
Brightness	1000 nit
Contrast Ratio	700:1
Touch	Projected capacitive multi-touch (P-Cap)
System	
Processor	ARM A53 Quad Core 2.0GHz
System Memory	4GB LPDDR4
Storage	32GB eMMC
Operating System	Android 11
WLAN	support
GNSS	GPS/GLONASS
WWAN	4G/ LTE (Optional)
RFID	NFC (Optional)
Interface	
Computer	<ul style="list-style-type: none"> 1 x RS-232 1 x Gigabit ethernet (M12 type) 1 x CANBus/ Digital IO 1 x Power input 9-24V DC with ignition control 1 x SIM card slot (Optional) 1 x SD card slot 2 x USB for DB9 1 x micro USB OTG WLAN/BT antenna GPS antenna (Optional) WWAN antenna (Optional)
Audio	1 x speaker
Control	
Button	1 x Power Button, 5x Function Button (Programmable Function Key Configured by Winset)
Mechanical Specifications	
Dimensions	189.93 x 145.93 x 39.8 mm (7.47 x 5.75 x 1.56 inches)
Cooling System	Fanless design
Weight	1.25 kg
Mounting	RAM Mount, VESA Mount (75x75 mm)
Environment Considerations	
Operating Temperature	-20°C to 60°C (-4° to 140° F)

FM07M- 7-inch Vehicle Mount Computer	
Item	Specifications
Humidity	10% to 95% RH, non-condensing
IP Rating	IP65
Shock	MIL-STD-810H Method 516.6 Procedure I
Vibration	MIL-STD-810H Method 514.8 Procedure I
Power Management	
Power Input	9V-24V DC with ignition control
Standards and Certifications	
Safety	CE, FCC

NOTE:

1. Accessories and Integrated Options may vary depending on your configuration. The product shown in this document is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.
2. All specifications are subject to change without prior notice.



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