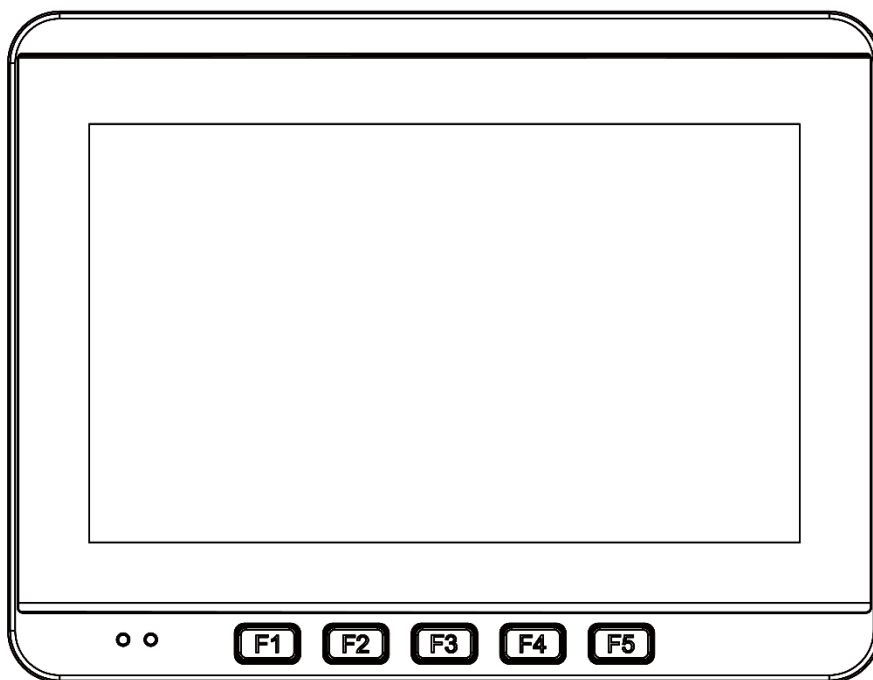


FM07P

7-inch Vehicle Mount Computer

Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz)

Windows® 10 IoT Enterprise



User Guide

Table of Content

Table of Content	2
Read Me First	6
Informations de sécurité (FR)	7
Safety Information (EN)	7
General Guideline.....	7
About This Guide.....	7
Chapter 1: Introduction	8
1.1 Introduction.....	8
1.2 Package Contents.....	9
1.3 Components	10
1.3.1 Front View	10
1.3.2 Rear View	11
1.3.3 Side View	11
1.3.4 Top and Bottom View	12
Chapter 2: Hardware	13
2.1 System Hardware	13
2.1.1 Central Processing Unit.....	13
2.1.2 Input and Output Connectors	13
2.1.3 System Memory.....	13
2.1.4 Audio Interface	13
2.1.5 WLAN	13
2.1.6 WWAN.....	13
2.2 Power Cable Installation	14
2.2.1 Wiring the Power Cable.....	14
2.2.2 Connecting the Power Cable for Testing	14
2.2.3 Connecting the Power Cable for Installation on the Vehicle	15
2.2.4 Vehicle DC Power Supply	16
2.3 Power Control	16
2.3.1 Power Button.....	16
2.3.2 Ignition Control	16
2.4 External Connectors	18
2.4.1 Power Connector.....	18
2.4.2 LAN Connector	19
2.4.3 RS-232 Connector.....	19
2.4.4 DIDO & CANBus Connector.....	20
2.4.5 USB 2.0 Connector.....	21
2.5 Antenna Connections.....	21
2.6 External Vehicle Remote Antenna Installation.....	22
2.7 Function Keys	22
2.8 USB Keyboard/ Mouse	22
2.9 Display.....	22
Chapter 3: Software	23
3.1 Introduction.....	23
3.1.1 Operating System.....	23
3.1.2 Windows 10 IoT Enterprise	23
3.1.3 Setting up Windows for the First Time	23
3.2 Control Panel.....	23
3.2.1 Using the Touch Screen	23
3.2.2 Display.....	24

- 3.2.3 Power Options 24
- 3.2.4 Region and Language 25
- 3.2.5 Sounds 25
- 3.3 Winset Introduction 26
 - 3.3.1 System Information..... 26
 - 3.3.2 Function Buttons..... 26
 - 3.3.3 DIDO Controller 28
- 3.4 Using the Wireless WAN (WWAN) 29
- 3.5 Using Recovery Wizard to Restore Computer..... 29
- Chapter 4: Vehicle Mounting..... 31**
 - 4.1 Vehicle Mount Instruction 31
 - 4.2 VESA Mount Installation 31
 - 4.3 RAM Mount Installation..... 31
 - 4.3.1 Mounting 1 – No Drill Solution 32
 - 4.3.2 Mounting 2 – Drill Solution..... 33
 - 4.3.3 RAM Mount Assembly 34
 - 4.3.4 Mounting 3 – Keyboard Mounting Installation..... 34
- Appendix A: Product Specifications 36**

Copyright

No part of this manual may be reproduced, copied, translated, or transmitted in any form or any means, electronic or mechanical, for any purpose, without the written permission of Winmate Inc.

Trademarks

brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

Wimate Inc. reserves the right to make any product changes without notice, including circuits and/or software described or contained in this manual in order to improve design and/or performance. Wimate Inc. assumes no responsibility or liability for the use of the described product (s), conveys no license or title under any patent, copyright, or mask work rights to these products, and makes no representations or warranties that these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this guide are for illustration purposes only. Wimate Inc. makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

Warranty

Wimate Inc. warrants that each of its products is free from material and workmanship defect for a period of one year starting from the invoice date. If the customer discovers a defect, Wimate Inc. will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

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 Unison)

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

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

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 délai d'inactivité 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

Avertissement Électrique

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

Avertissement Électrique

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 précautions 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 chaleur 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'insère 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 FM07 Vehicle Mount Computer. This User Guide has been developed for a FM07 with Windows® 10 IoT Enterprise operating system.



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 FM07P Vehicle Mount Computer, lists supplied accessories and shows components.

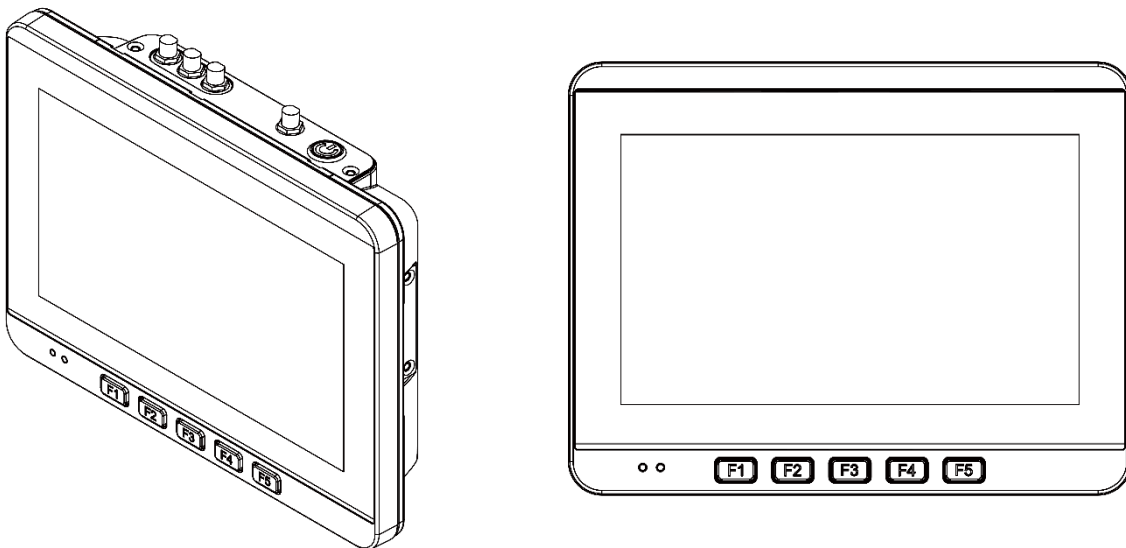
1.1 Introduction

In the warehouse environment, the ability to mount mobile devices and computers to forklifts, trucks, taggers, and inventory pickers, is essential. From inventory management to order fulfillment, asset tracking, and shipping and receiving, the warehouse floor is complex ecosystem that requires high-efficiency technology to keep it running smoothly.

The FM07P is a rugged vehicle mounted computer delivering flexibility and mobility in a vehicle-mount form factor; designed to be easily mounted on a vehicle. The FM07P fits seamlessly into forklifts and other warehouse vehicles. It will help minimize errors, streamline ordering and inventory management, and improve operational efficiencies. The processing power comes from Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz). The computer features a brilliant projected capacitive multi-touch screen, and a 1024 x 600 pixel resolution.

The programmable function keys on the front panel designed for easy access for some of the most important functions or application. For wireless connectivity the tablet comes equipped with SIM card slot, WLAN, WWAN and GPS antennas.

This vehicle-mount computer is built to endure the rigors of the warehouse, and designed to fit seamlessly into forklifts and other warehouse vehicles.

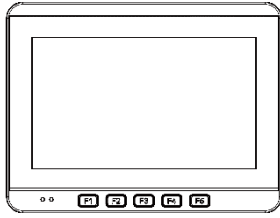
**Note:**

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

1.2 Package Contents

Standard

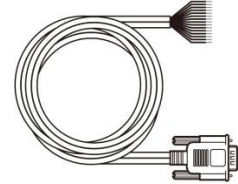
Before using this device, make sure that all the items listed below are present in your package:



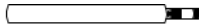
FM07P VMC Computer



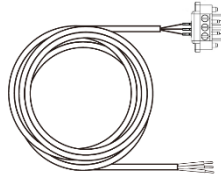
User Guide



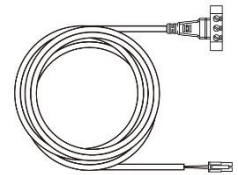
**CANBus+
DIDO Cable, 1.8m**



WLAN Antenna



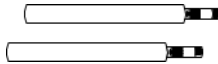
Power Converter Cable



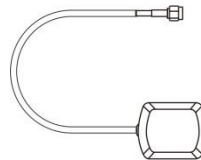
Power Converter Cable

Optional

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



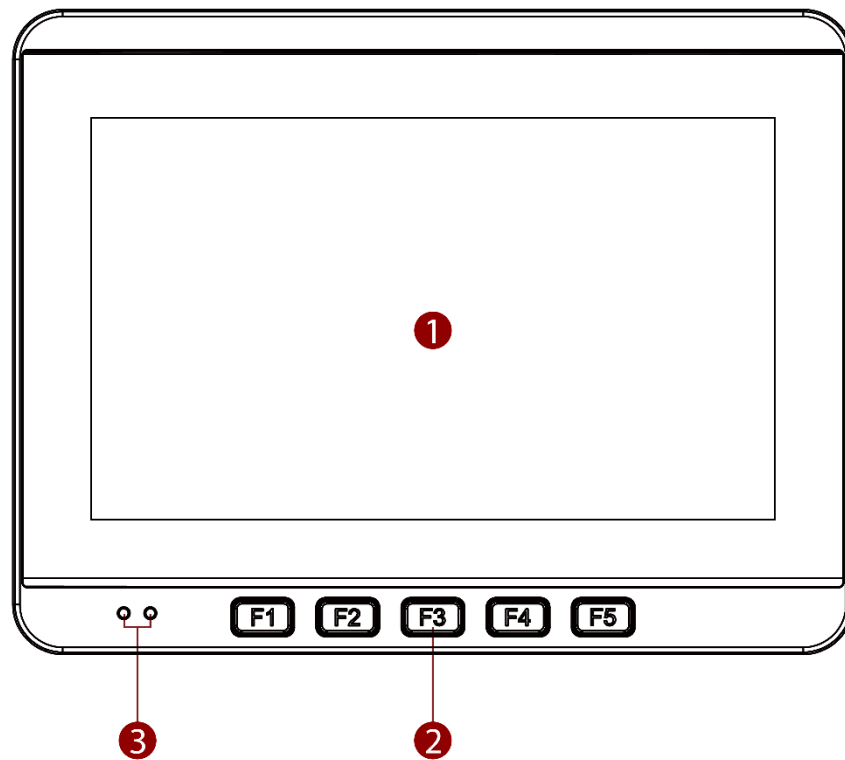
WWAN Antenna x 2



GPS Antenna, 3m

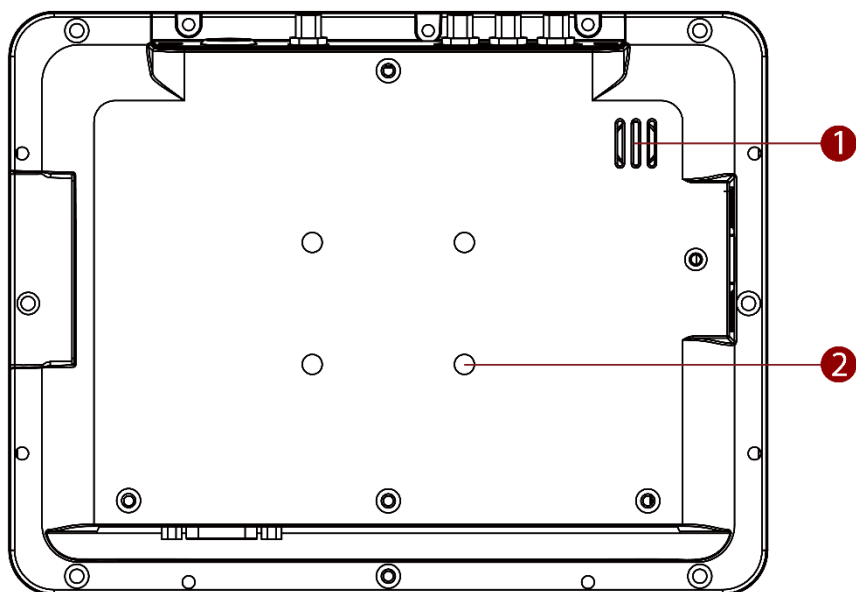
1.3 Components

1.3.1 Front View



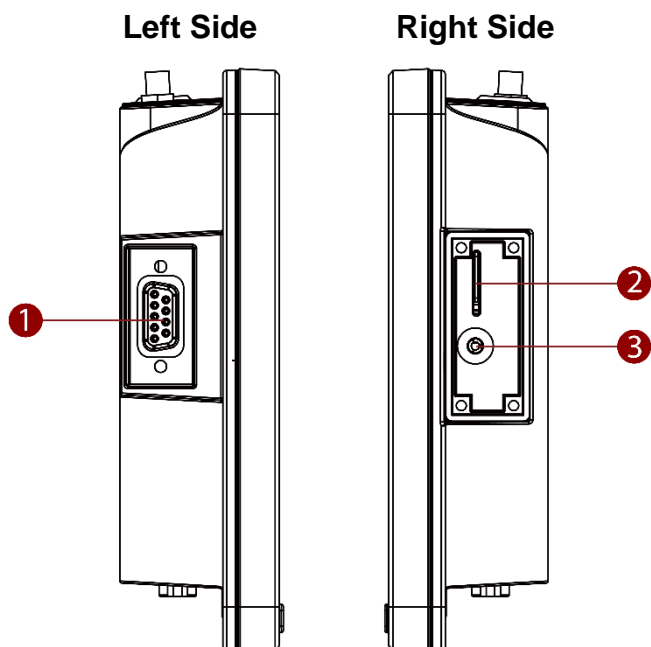
No	Item	Description
1	7-inch Touch Screen	Acts as one of the inputs for the device
2	LED Indicators	Power LED indicator <i>On: Power is on</i> <i>Off: Power is off</i>
		Storage LED indicator <i>Blinking: Data is being read or written</i> <i>Off: System is idle</i>
3	Function Keys	5 programmable function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

1.3.2 Rear View



No	Item	Description
1	1 Watt Speaker	Emits sound
2	RAM Mount	RAM base dimensions : 38.1 x 30 mm. Note: Purchase a VESA Mount Plate as an optional accessory to install the FM07P to VESA compatible mounting solution.

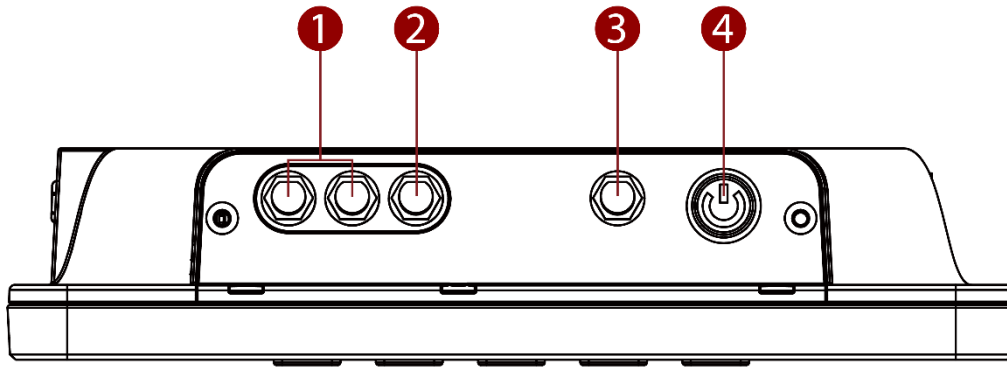
1.3.3 Side View



No	Item	Description
1	COM Port	RS-232 (DB9) connector.
2	SIM Card Slot	SIM Card Slot is located under protection cover secured with 4 screws.
	Audio	Use to connect to audio devices.

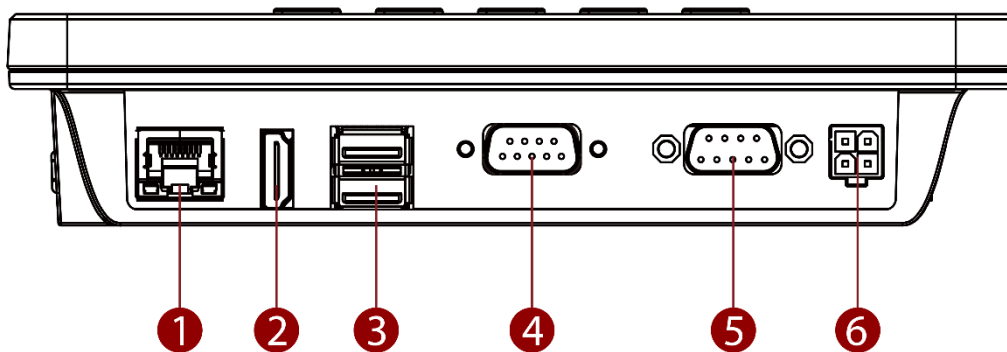
1.3.4 Top and Bottom View

Top Side



No	Item	Description
1	WWAN Antenna	For WWAN antenna (Optional).
2	GPS Antenna	For GPS antenna (Optional).
3	WLAN Antenna (Main)	For WLAN antenna.
4	Power Button	Press power button to start the system.

Bottom Side

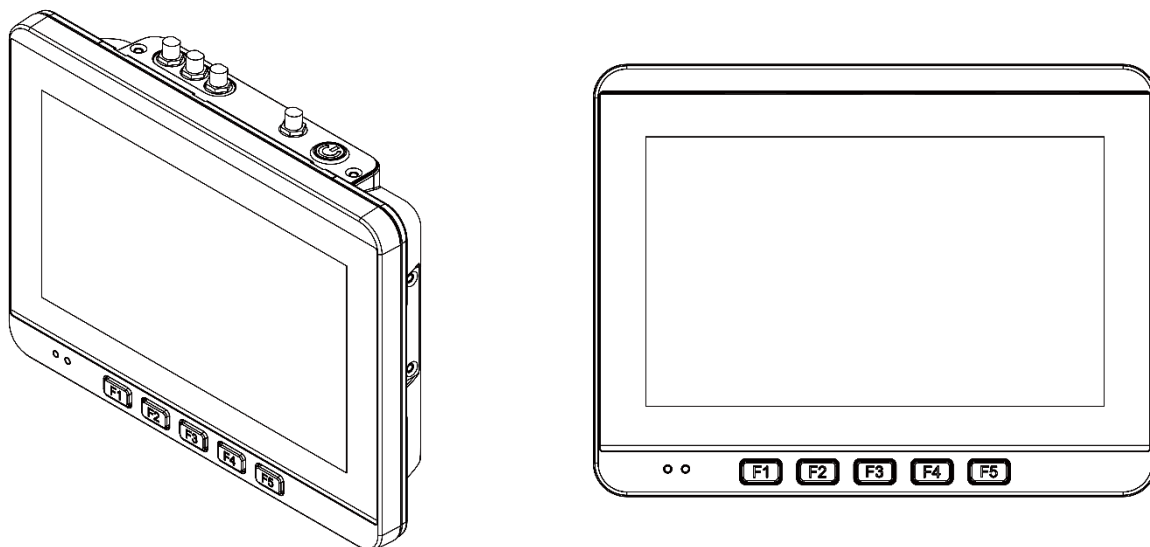


No	Item	Description
1	LAN	Gigabit Ethernet LAN 10/100/100 Mbps.
2	HDMI	HDMI connector for transmitting video data/ digital audio data from an HDMI-compliant source device, such as a display controller, to a compatible computer monitor, video projector.
3	2 x USB	Two USB connectors to connect to USB-compatible devices such as printer, barcode scanner, keyboard etc.
4	COM Port	RS-232 (DB9) connector.
5	DIDO, CANBus, COM Port	DIDO, CANBus, RS-485 (DB15) connector.
6	Power Input	9-36V DC in with Ignition.

Chapter 2: Hardware

This chapter describes system hardware of FM07P Vehicle Mount Computer.

2.1 System Hardware



2.1.1 Central Processing Unit

The FM07P is running on Intel® Celeron® N3350 (2M Cache, up to 2.4 GHz), and the operating system of this device is Windows 10 IoT Enterprise.

2.1.2 Input and Output Connectors

The FM07P device supports the following I/O connectors:

- 2 x USB
- 1 x COM Port
- 1 x Gigabit Ethernet LAN 10/100/100 Mbps
- 1 x COM Port, 2 x CANBus, 3 x DI, 3 x DO
- 1 x Audio Port
- 1 x HDMI
- 1 x SIM Card Slot

2.1.3 System Memory

The main system memory is 1 x SO-DIMM, 4 GB DDR3L 1600 MHz (up to 8GB).

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 supports a WLAN 802.11 a/b/g/n/ac network card that can be used with internal or external antennas.

2.1.6 WWAN

Using a SIM card for network connection, your device supports Wireless Wide Area Networking (WWAN). Notice that WWAN function is an optional feature and may not be available in your device.

2.2 Power Cable Installation

2.2.1 Wiring the Power Cable



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

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

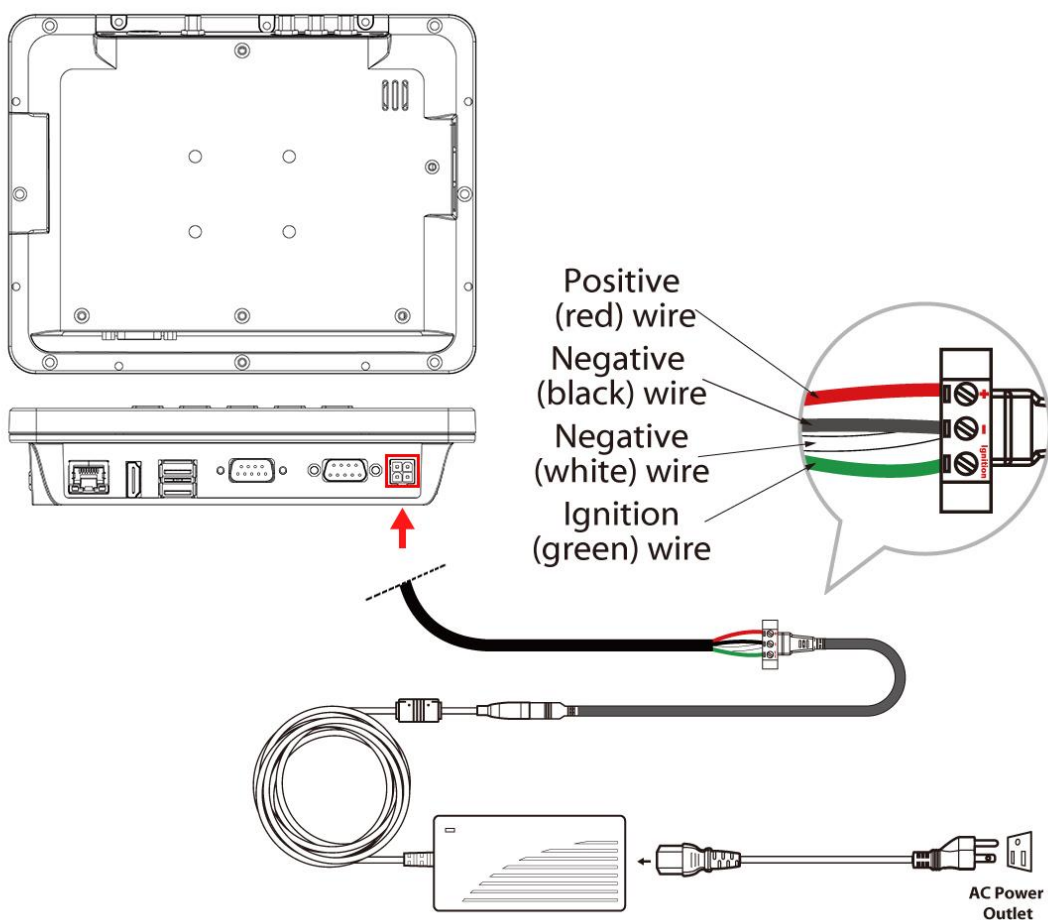
2.2.2 Connecting the Power Cable for Testing



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. Use terminal block to DC jack converter cable to connect the FM07P to the AC Adapter.
3. Connect the other side of the power cable to AC adapter.
4. Connect the AC plug to the electrical outlet.
5. Press the On button, located on the top side of the FM07P.
6. The device is ready for testing.

2.2.3 Connecting the Power Cable for Installation on the Vehicle



WARNING! This power cable should only be used on the 24 or 36 Volt forklifts. Note that, this power cable cannot work for 12 Volt forklifts.

AVERTISSEMENT ! Ce câble d'alimentation ne doit être utilisé sur les 24 ou 36 chariots élévateurs Volt. Notez que, ce câble d'alimentation ne peut pas travailler pour 12 chariots élévateurs Volt.



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

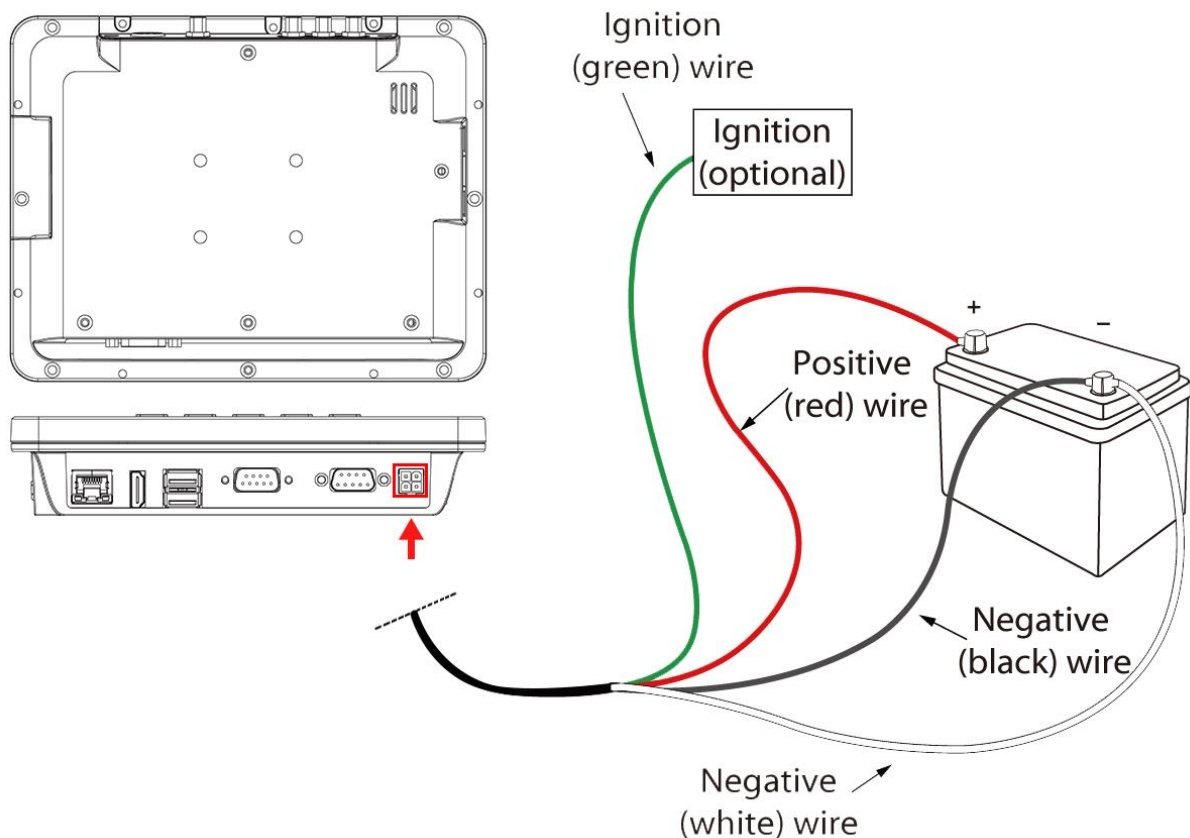
AVERTISSEMENT ! Sélectionnez un emplacement de montage et assurez-vous qu'il ne se trouve pas à l'extérieur du véhicule.



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

AVERTISSEMENT ! 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! Use the supplied M12 power cable for all power wiring.

AVERTISSEMENT ! 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*.

Power Mode		With Ignition Ignition-On mode	Without Ignition AC/DC Mode
Turn On	Auto On	ON	Off
	Trigger On	✓	X
	Power Button	X	✓
On Delay		0 Second (Default) adjustable by AP	N/A
Turn Off	Trigger off	✓	X
	Power Button	✓	✓

2.2.4 Vehicle DC Power Supply

The power input voltage range for the FM07P is between 9 to 36V DC with ignition control.



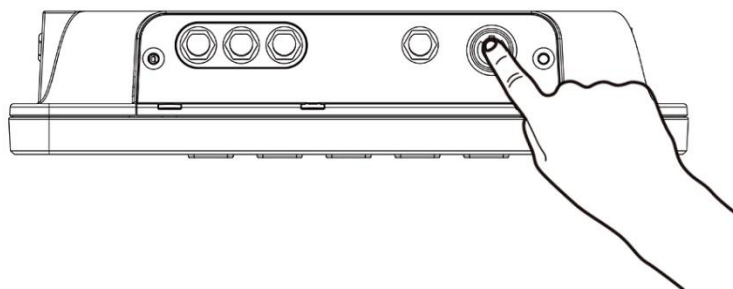
Warning! Longer cable length may cause voltage drop resulting in failure to boot the device, if you are unable to boot the device, please check the line loss of your cable and make sure the power input for power connector of the unit is higher than 9V.

Avertissement ! 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 FM07P is connected to the external power and the power button is ON, the device can be powered on.



2.3.2 Ignition Control

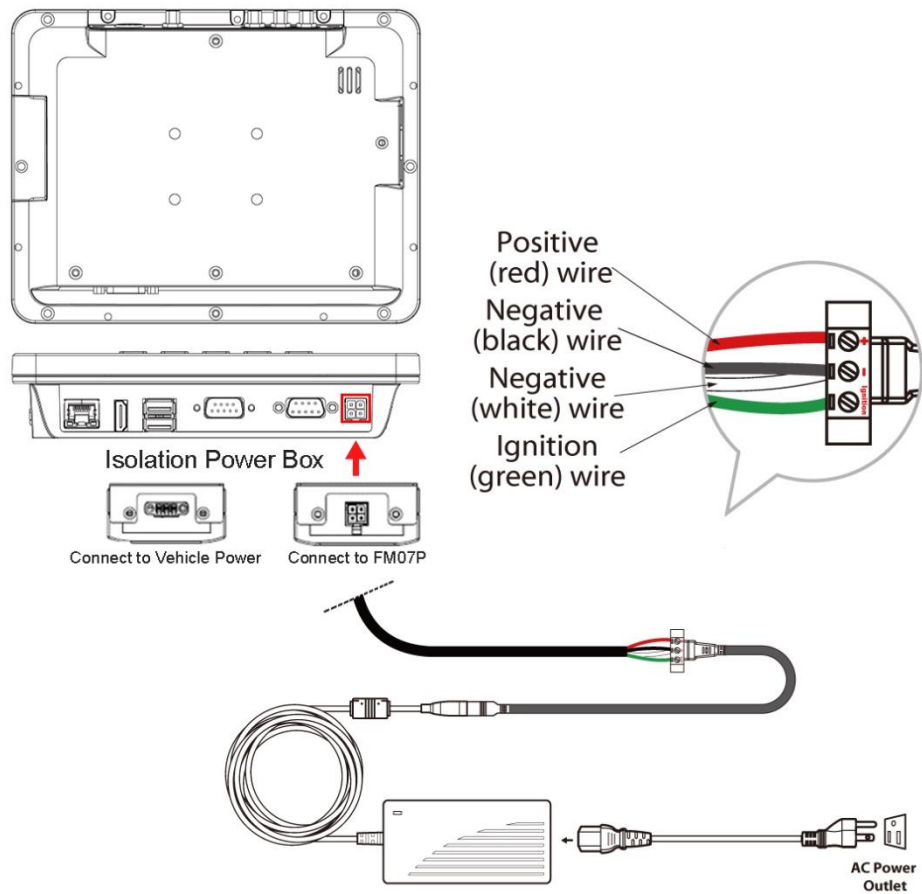
The FM07P supports power ignition function.

Connecting to Power with Isolation Power Box

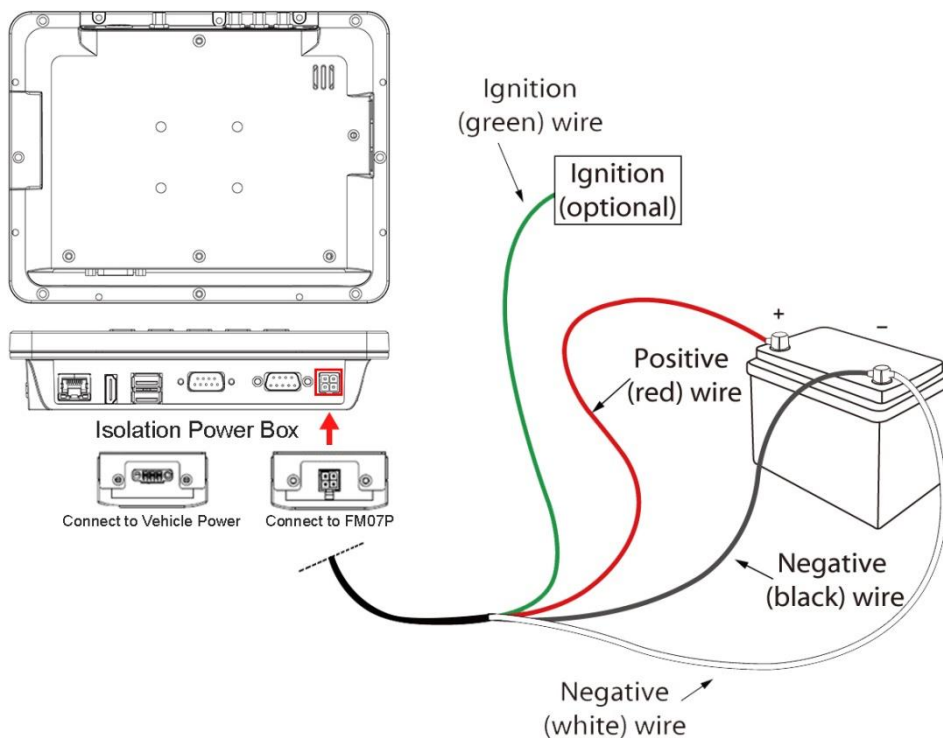
Use a cable to connect the FM07P to Isolation Power Box, and refer to the installation diagram

below to connect the FM07P to the power source.

Connecting the Power Cable for Testing

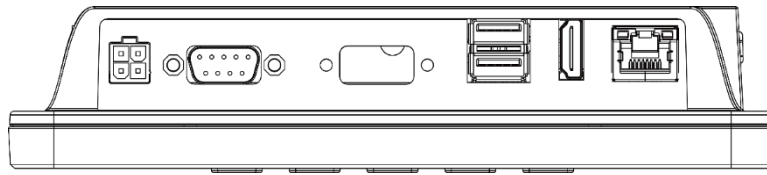


Connecting the Power Cable for Installation on the Vehicle



Refer to section 2.2 *Power Cable* Installation of this User Guide for a detailed installation instruction.

2.4 External Connectors



Power OFF the FM07P before connecting cables to any port.

1. 9-36V DC Power Input with Ignition Control.
2. DIDO & CAN Bus & RS485 connector allows direct linking into vehicle, enable access to wide range of vehicle data.
3. RS-232 connects to a device such as printer or scanner.
4. USB connects to USB devices such as USB flash drive, mouse, keyboard, printer etc. this USB also accept a dongle cable with a USB host port and a USB Client port.
5. HDMI connector for transmitting video data/ digital audio data from an HDMI-compliant source device, such as a display controller, to a compatible computer monitor, video projector.
6. LAN port connects to on access point that provides connection to network.

2.4.1 Power Connector

The FM07P has 4 pin power input connector which accepts 9-36V DC power input. Use power cable (supplied with FM07P) to connect the FM07P to the source of power.

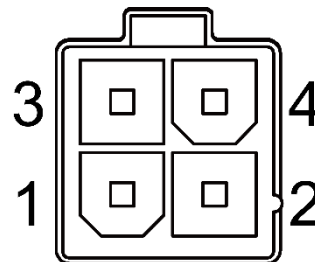


Warning! This procedure requires a trained service personnel only, improper installation can cause serious damage to the vehicle or the device.

Avertissement! 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

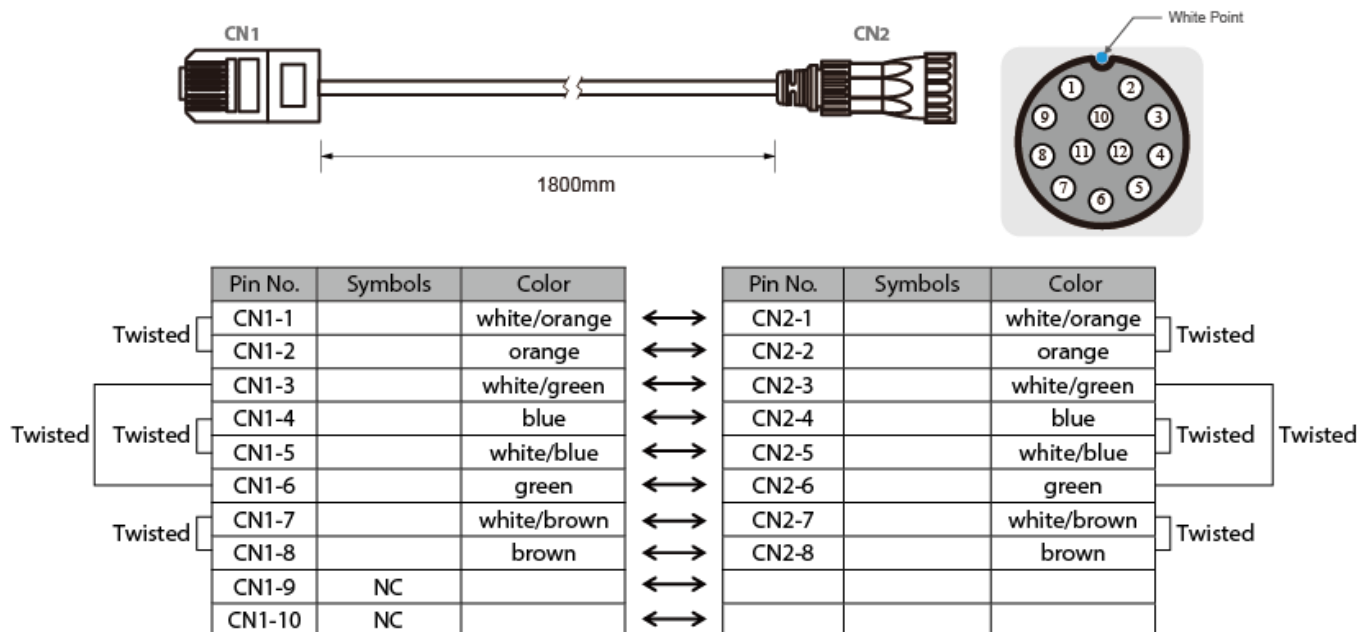
Pin No.	Signal Name
1	IGN_ISO
2	GND
3	NC
4	DCIN



2.4.2 LAN Connector

The FM07P has LAN connector. Use LAN cable to connect the FM07P to the Ethernet.

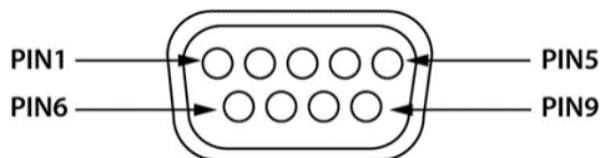
Pin assignment and signal names of LAN cable



2.4.3 RS-232 Connector

The FM07P has DB-9 RS-232 connector. Use serial cable to connect the FM07P 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

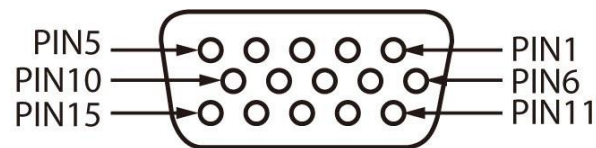
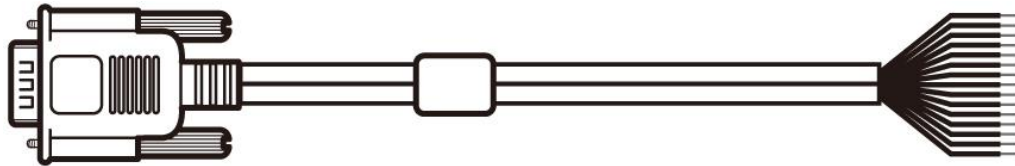
2.4.4 DIDO & CANBus Connector

The DIDO & 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

CN1

CN2



Pin	Signal
CN1-1	12V
CN1-2	12V
CN1-3	DIN0
CN1-4	CAN_L
CN1-5	CAN_H
CN1-6	DIN1
CN1-7	DIN2
CN1-8	CAN_H
CN1-9	CAN_L
CN1-10	DOUT2
CN1-11	DOUT1
CN1-12	DOUT0
CN1-13	TXRX2-
CN1-14	TXRX2+
CN1-15	GND



Pin	Signal
CN2-1	12V
CN2-2	12V
CN2-3	DIN0
CN2-4	CAN_L
CN2-5	CAN_H
CN2-6	DIN1
CN2-7	DIN2
CN2-8	CAN_H
CN2-9	CAN_L
CN2-10	DOUT2
CN2-11	DOUT1
CN2-12	DOUT0
CN2-13	TXRX2-
CN2-14	TXRX2+
CN2-15	GND

2.4.5 USB 2.0 Connector

The FM07P has DB-9 USB 2.0 connector located on the side that can support two USB devices such as printer or scanner.

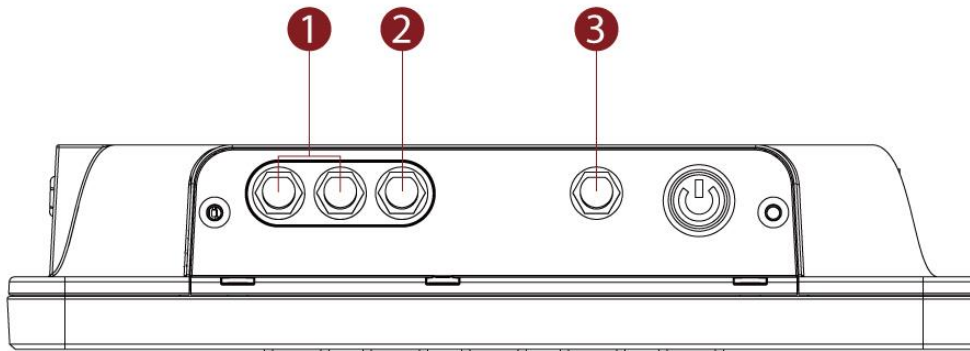
Pin assignment and signal names of USB 2.0 (D-9 Female) connector and cable



Pin	Signal	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 Antenna Connections

The FM07P is equipped with an 802.11 radio and can be ordered with external remote mount antennas. GPS and WWAN require external remote mount antennas.

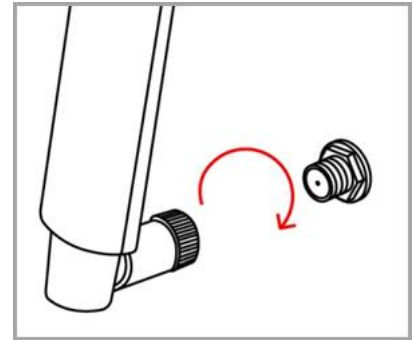


1. WWAN External Antenna Connectors (Optional).
2. GPS External Antenna Connector (Optional)..
3. WLAN 802.11 a/b/g/n/ac External Antenna Connector.

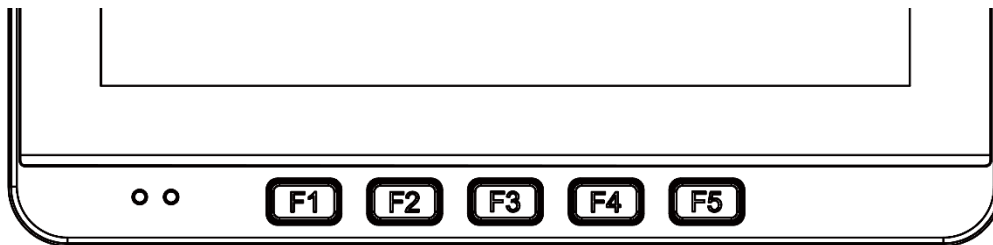
2.6 External Vehicle Remote Antenna Installation

The FM07P 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.



2.7 Function Keys



The integrated keypad contains ten programmable keys, F1~ F5 are user programmable keys. Key Mapping is configured via the Winset utility. See programmable key to remap these keys.

The default values for these keys are:

Press these keys in this order	Default Key Value
Long Press on F1	Call win-set
Long Press on F4	Call RF power
F1+F2	Touch lock
F3+F4	Volume setting
F4+F5	Brightness setting

*Sign plus “+” means that you have to press both function keys at the same time.

2.8 USB Keyboard/ Mouse

A standard USB keyboard or mouse can be attached to the FM07P using the appropriate cable. Attach the cable to the FM07P USB-A type connector.

2.9 Display

The FM07P display measures 7 inches diagonally, display resolution is 1024 x 600 pixel resolution and bonded with projected capacitive touch.

Chapter 3: Software

This chapter describes how to operate FM07P Vehicle Mount Computer.

3.1 Introduction

This section includes the software and hardware installation, the FM07P configuration, the wireless communication, and some other optional features. Since the FM07P 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 FM07P is Windows 10 IoT Enterprise.

3.1.2 Windows 10 IoT Enterprise

We assume the user is very familiar with various features and options of Microsoft Windows OS. Therefore, this section will describe the specific software and utility programs that related to the device usage and the Windows 10 environment.

3.1.3 Setting up Windows for the First Time

This section details how to setup different version of the Windows that may be installed on the vehicle computer for the first time.

3.2 Control Panel





3.2.1 Using the Touch Screen

The touch screen is a touch-sensitive device that allows you to control and make selections on the device by controlling the location of the pointer on the screen.



Note: Do not use sharp or pointed objects on the touch screen. These objects may scratch the screen. Use only the stylus pen or the tip of your finger.

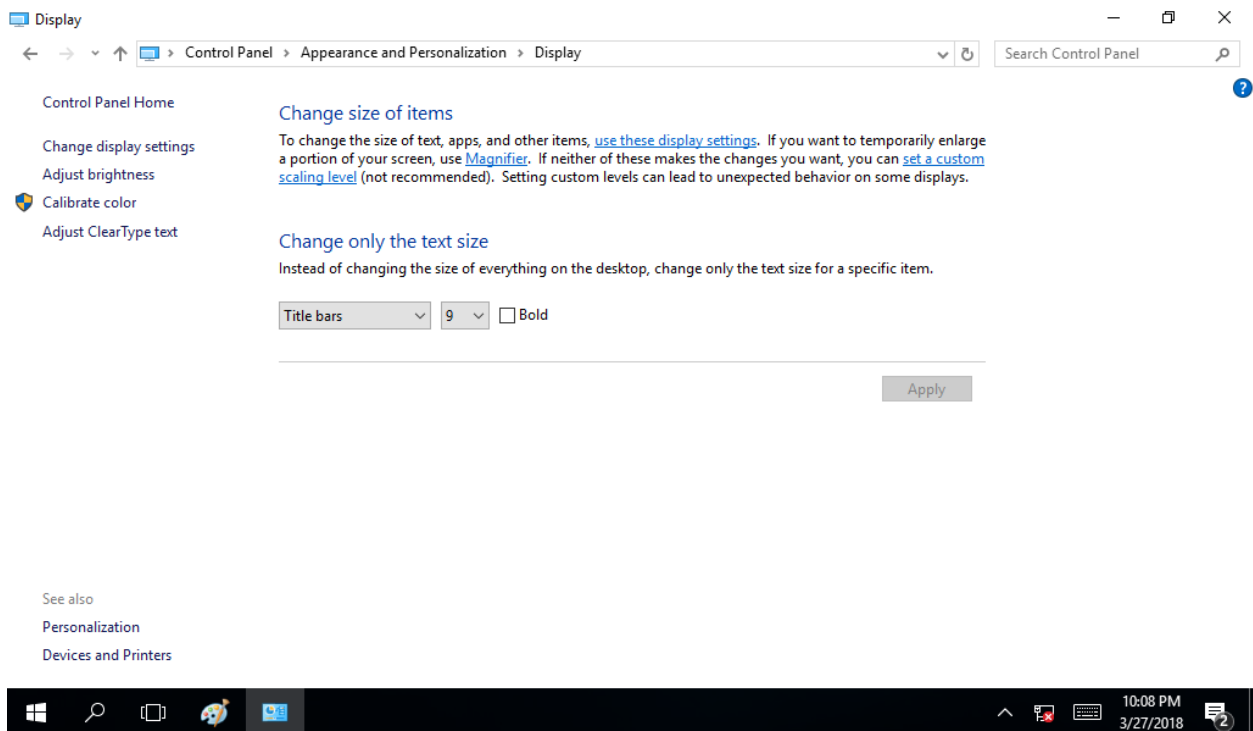
Here are some common terms when using the touch screen.

Gesture	Action	Description
Single Tap		Tap gently on the touch screen to select or open an item. Tapping is the same as clicking the left mouse button of a pc
Double-tap		Rapidly tap twice on the touch screen. This action is similar to double-clicking the left mouse button of a pc.
Press and hold		Press and hold the finger/ stylus lightly on the display. A big circle appears to indicate that a pop-up menu will soon appear. Lift up the stylus and a pop-up menu appears. Select the desired function. This action is similar to a right mouse click on a pc.
Drag		Hold the finger/ stylus on the screen and drag across the screen to select text and images or move icons to a new location.

3.2.2 Display

In the Windows 10 IoT Enterprise, user can adjust the resolution or adjust brightness. All this functions are managed through the control panel.

Start > Control Panel > Appearance and Personalization > Display

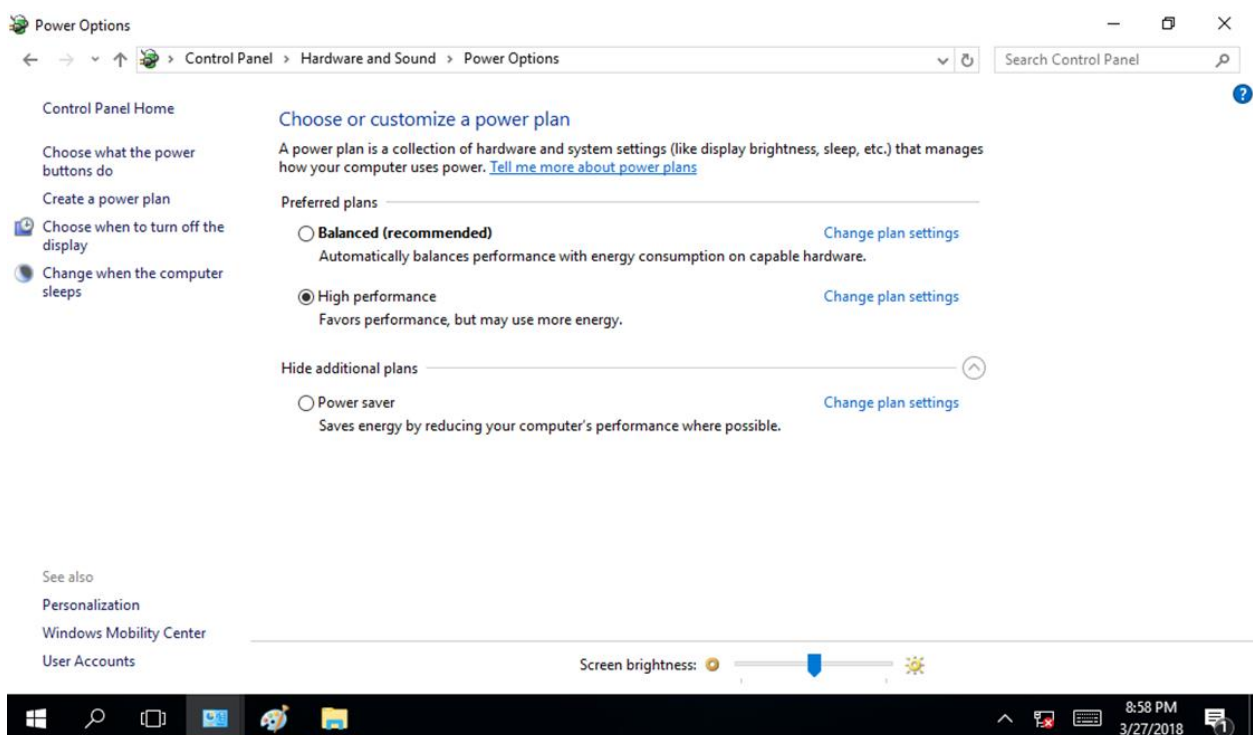


3.2.3 Power Options

Select a Power Plan

Windows 10 IoT Enterprise contains two standard options for power plan: Balanced and Power saver.

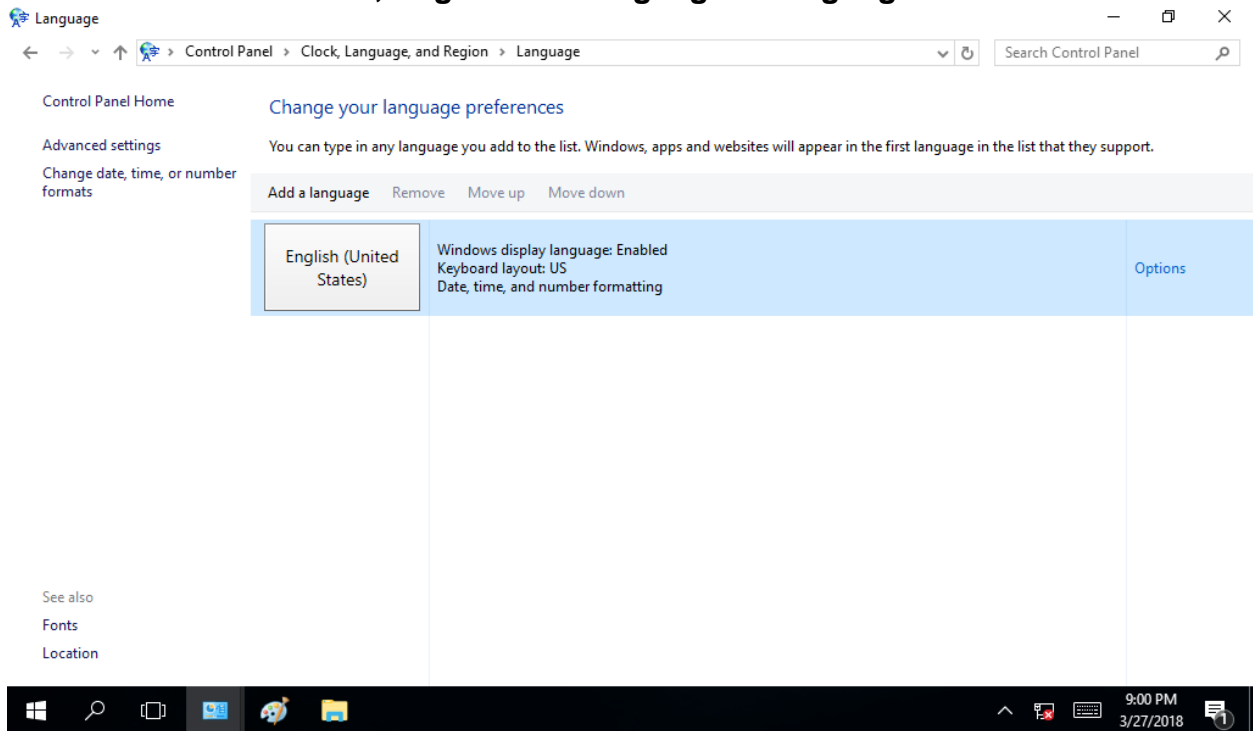
Start > Control Panel > Hardware and Sound > Power options



3.2.4 Region and Language

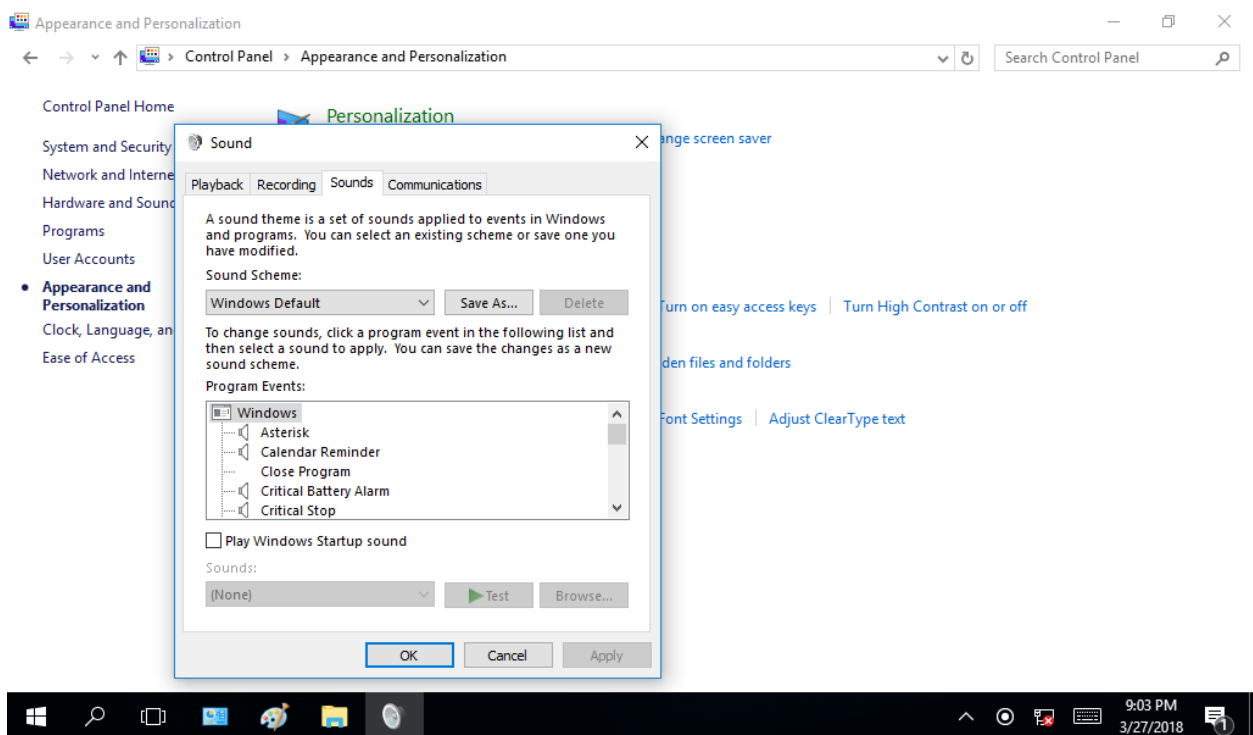
The instruction for installing, changing and uninstalling language in this section are applicable to FM07P with Windows 7 Professional for Embedded System.

Start > Control Panel > Clock, Region and Language > Language



3.2.5 Sounds

Start > Control Panel > Appearance and Personalization > Personalization > Change sound effects



3.3 Winset Introduction

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 BIOS version, EC version, Winset version, OS version, serial number and model name. You can also set up password here.
Function Buttons	Set up function buttons functions.
DIDO Controller	Set up digital input/ output controller.

3.3.1 System Information

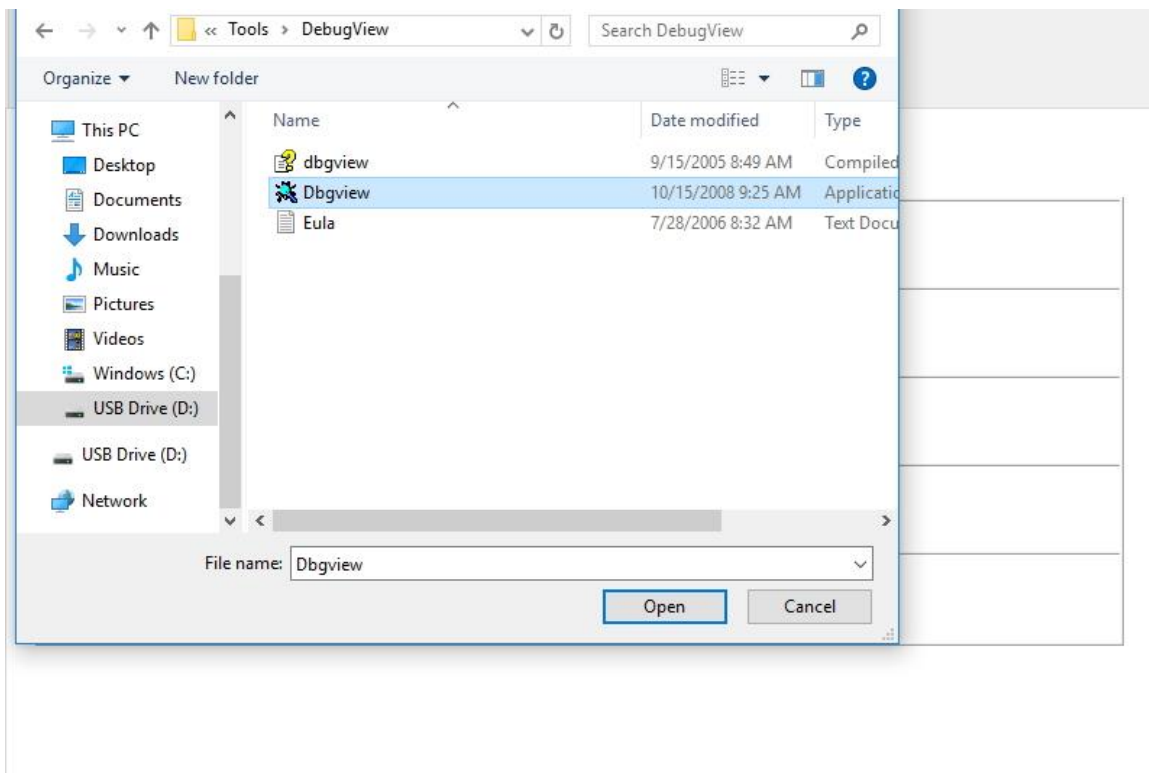
System Information	Function Buttons	DIDO Controller	Exit
PC Information			
BIOS Version	006		
EC Version	006		
Win-Set Version	3.5.1(VMC07)		
OS Version	95Z00000028N_180329		
Serial Number			
Model Name	IP30		
<input type="checkbox"/> Check for update			
Password	<input type="text" value="Set Password"/>		

3.3.2 Function Buttons

Long pressing on F1 button opens a Win-Set ®. In Function Buttons submenu user can set up functions of the function keys F1~F5.

System Information	Function Buttons	DIDO Controller	Exit
Short Press <input type="button" value="1Sec."/> <input type="button" value="2Secs."/> <input type="button" value="RESET"/>			
F1	Empty	<input type="button" value="NEW"/> <input type="button" value="DEL"/>	
F2	Empty	<input type="button" value="NEW"/> <input type="button" value="DEL"/>	
F3	Empty	<input type="button" value="NEW"/> <input type="button" value="DEL"/>	
F4	Empty	<input type="button" value="NEW"/> <input type="button" value="DEL"/>	
F5	Empty	<input type="button" value="NEW"/> <input type="button" value="DEL"/>	

Press the **NEW** button next to F1, user will see the window show up just like the below picture. Then choose a program to be opened by button F1 next time.

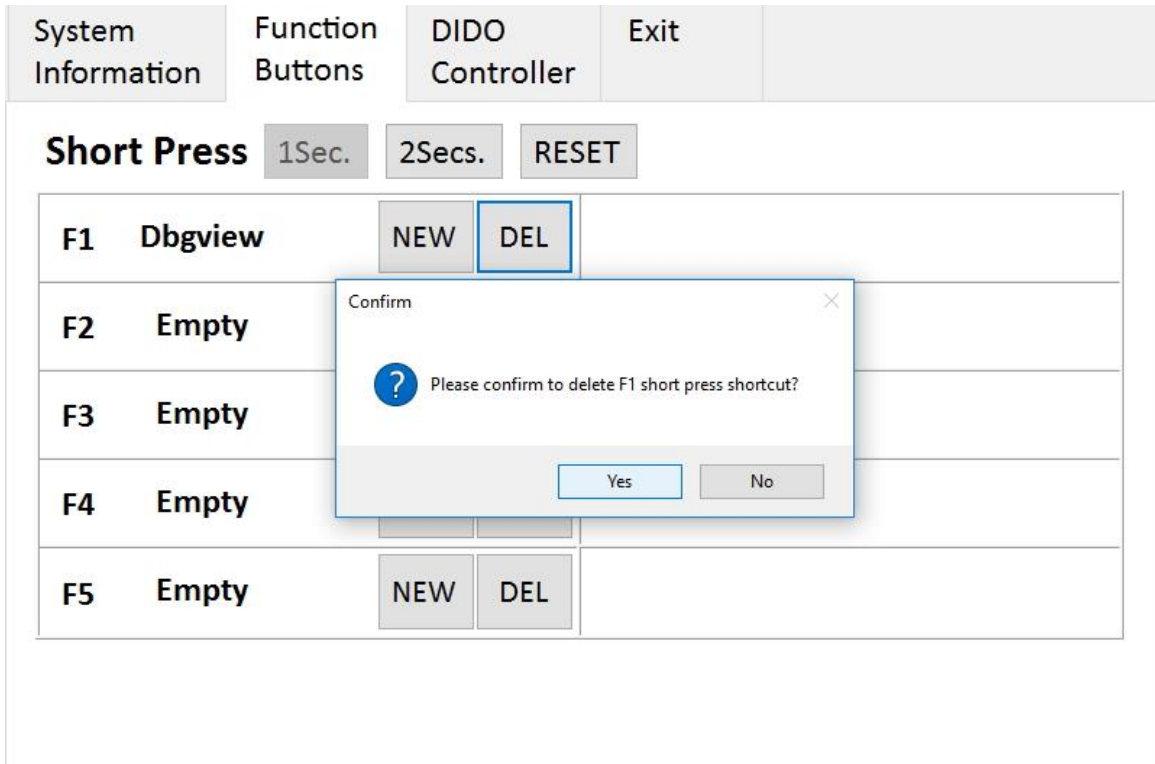


In this example **Dbgview** program will be opened by pressing F1.

If user wants to delete this function, please press the **DEL** button next to F1 in the Win-Set ® Function Buttons menu.

System Information	Function Buttons	DIDO Controller	Exit
Short Press 1Sec. 2Secs. RESET			
F1	Dbgview	NEW DEL	
F2	Empty	NEW DEL	
F3	Empty	NEW DEL	
F4	Empty	NEW DEL	
F5	Empty	NEW DEL	

Then there will be a window show up at the center of the desktop and ask you to confirm whether you want to delete this function or not. Then press Yes to finish this step.



3.3.3 DIDO Controller

- **DO:**

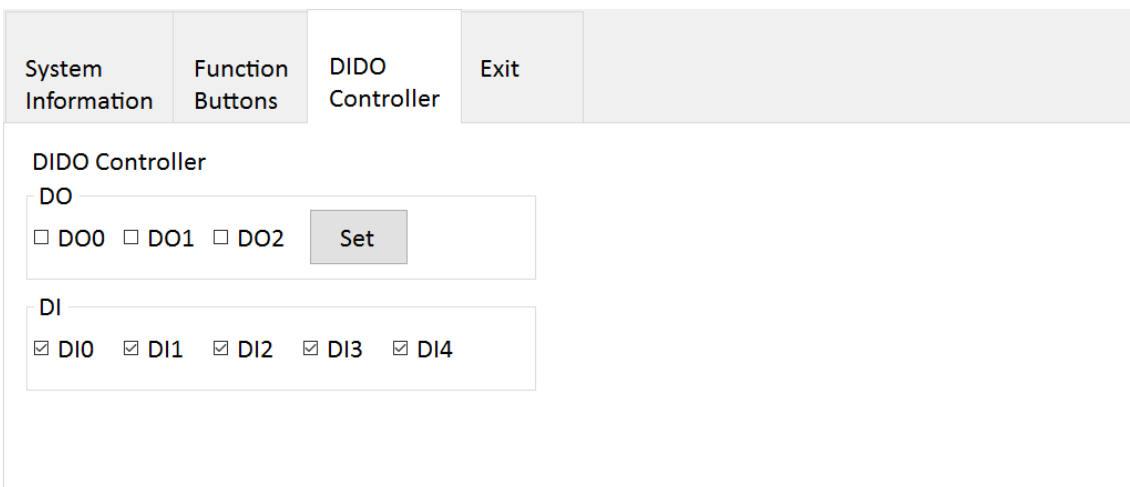
Set the DO status through win-set

1. When DO check, DO voltage is HIGH, it will give 5V signal.
2. When DO uncheck, DO voltage is LOW. (This is Default)

- **DI:**

View DI status through win-set

1. When DI shows check, the DI voltage is LOW. (This is Default)
2. When DI shows uncheck, DI voltage is HIGH. (high active 5~12V)



3.4 Using the Wireless WAN (WWAN)

The FM07P supports data 4G/LTE connection.

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

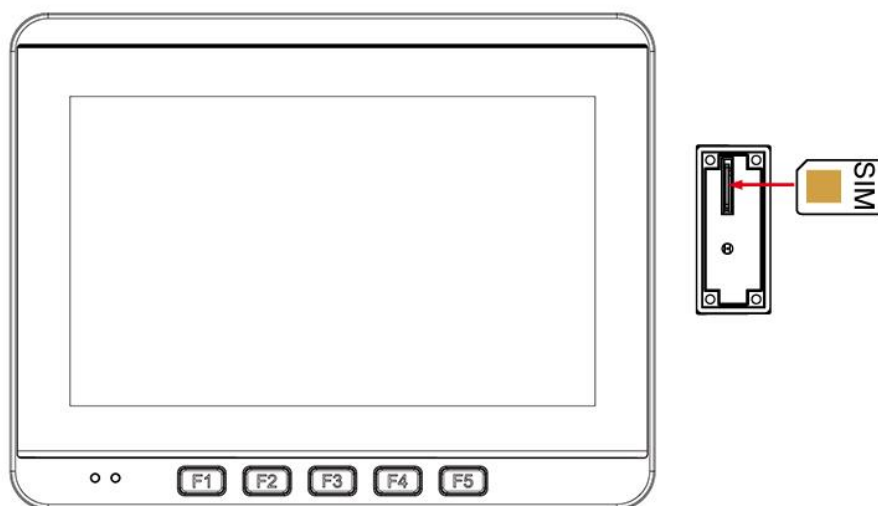


Caution Please power off the tablet before installing the Micro SIM card, or the device might be damaged by the incorrect installation behaviors.

Attention Veuillez éteindre la tablette avant d'installer la carte Micro SIM, sinon l'appareil pourrait être endommagé par des comportements d'installation incorrects.

To insert SIM-card:

1. Power off the FM07P.
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.



3.5 Using Recovery Wizard to Restore Computer

The FM07P Vehicle Mount Computer has a dedicate recovery partition stored on the hard drive of the vehicle computer to enable quick one-key recovery process. This partition occupies about 11 GB of the storage space, and comes built-in to each device.



Important: Before starting the recovery process, make sure to backup all user data. The data will be lost after the recovery process.

To enable quick one-key recovery procedure:

- Plug-in the AC adapter to computer. Make sure the computer stays plugged in to power source during the recovery process.
- Connect external keyboard.
- Turn on the computer, and when the boot screen shows up, press the **F6** button on the keyboard to initiate the Recovery Wizard.
- The following screen shows the Recovery Wizard. Click **Recovery** button to continue.



A warning message about data loss will show up. Make sure the data is backed up before recovery, and click **Yes** to continue.



Wait the recovery process to complete. During the recovery process, a command prompt will show up to indicate the percent of recovery process complete. The system will restart automatically after recovery completed.

Chapter 4: Vehicle Mounting

This chapter describes how to mount the FM07 Vehicle Mount Computer. The FM07 is designed to be mounted inside the vehicle with RAM mount or VESA mount.

4.1 Vehicle Mount Instruction

Make sure that the FM07 does not obstruct the driver's vision and ensures safe driving. The general steps to mount the device on the vehicle are as follows:

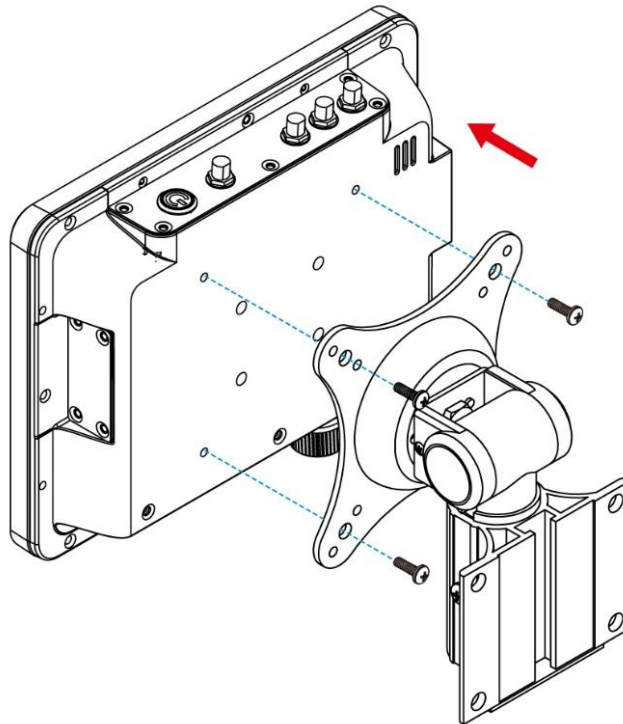
1. Install RAM mount to the vehicle.
2. Adjust the viewing angle of the FM07.
3. Install antennas if necessary.
4. Connect peripheral devices and cables.
5. Connect vehicle power.
6. Secure all cables.

4.2 VESA Mount Installation

The rear cover of the FM07 supports VESA mount (75 x 75 mm).

VESA Mounting Installation Instructions:

1. Attach the VESA Plate to the rear cover of the FM07 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

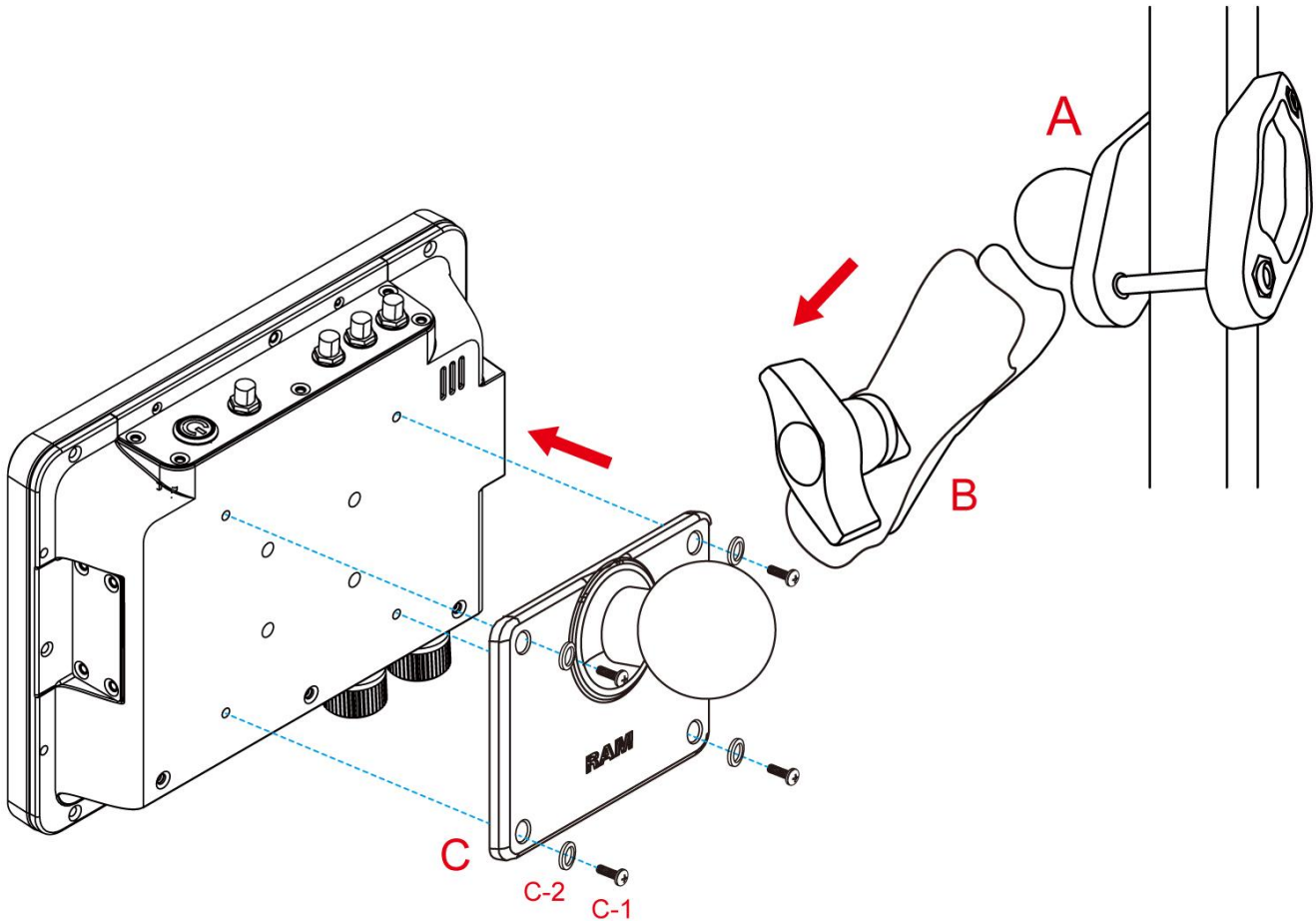


Important:

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

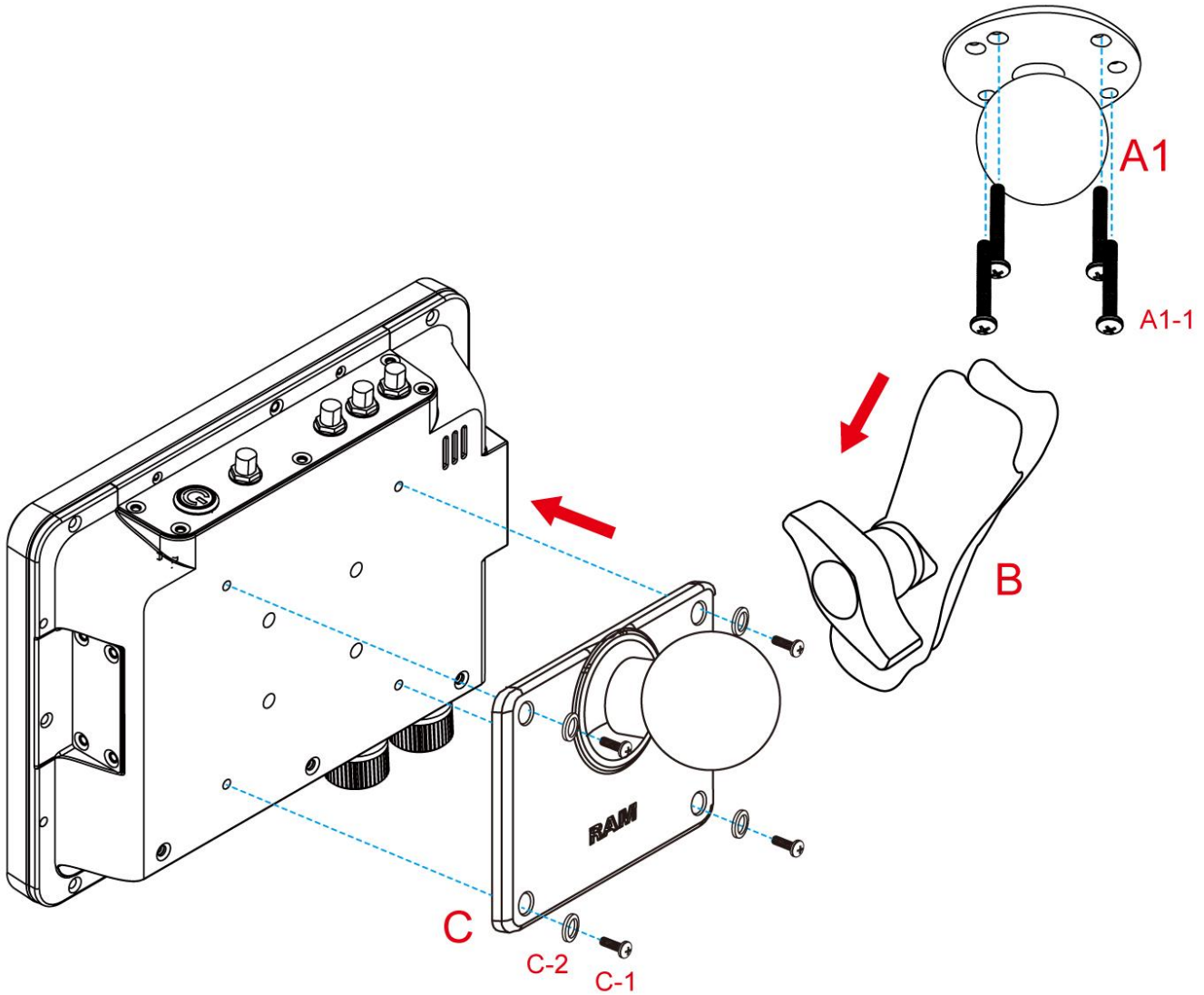
You can order mounting accessories from RAM Mounts.



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.

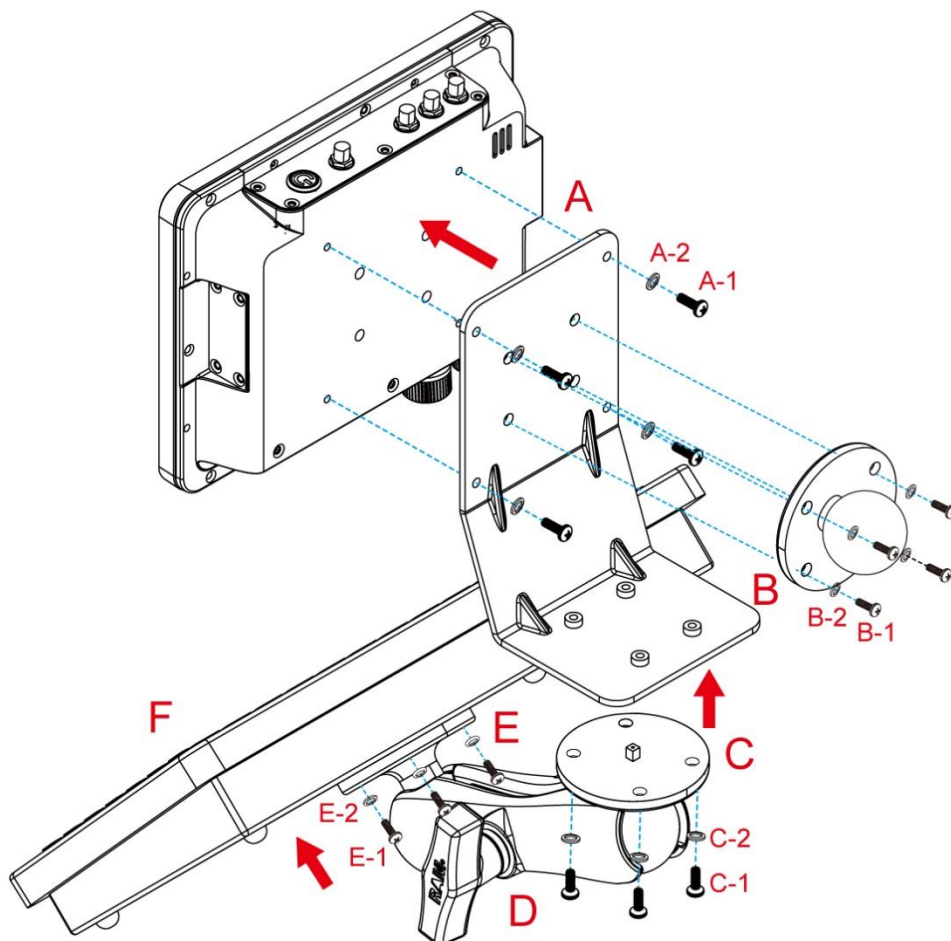
- 3.1 Turn the device off before installing the RAM mount ball.
- 3.2 Locate the VESA mount holes on the back of the device and align it with the holes from RAM Ball base. Fix with four M5 screws.

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 (<i>designed by Winmate</i>)	-	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

FM07P- 7-inch Vehicle Mount Computer	
Item	Specifications
System	
Processor	Intel® Celeron N3350, 2M Cache
System Memory	2GB SODIMM DDR3L-1600 (up to 8GB)
Storage	M.2 2242 SSD 128GB
Operating System	Windows® 10 IoT Enterprise, Ubuntu
Security	TPM 2.0
Display	
Size / Technology	7"
Resolution	1024 x 600
Viewing Angle	-75~75(H) ; -75~70(V)
Brightness	1000 nit
Contrast Ratio	700:1 (typ.)
Touch	Projected capacitive multi-touch (P-Cap)
Interface	
Computer	2 x COM Port 2 x USB 1 x SIM Card Slot 1 x Speaker 1 x Gigabit Ethernet LAN 10/100/100 Mbps 2 x CANBus 1 x DIDO (3XDI ; 3XDO)
Keyboard and Input	
Touch	Projected capacitive
Button	On-screen QWERTY keyboard Front: 5 x function keys function key configured by Winset Utility) Top: 1 x Power Button Side: 1 x Reset Button (located under the protection cover)
LED Indicators	Power, Storage
Wireless Communications	
WLAN	support
GPS	GPS, GLONASS
WWAN	4G/LTE (Optional)
BT	support
Mechanical Specifications	
Dimensions	190 x 146 x 40 mm
Cooling System	Fanless design
Weight	1.25kg
Mounting	RAM Mount, VESA Mount (75x75 mm)
Environment Considerations	
Operating	-20°C to 60°C (-4° to 140° F)

FM07P- 7-inch Vehicle Mount Computer

Item	Specifications
Temperature	
Humidity	10% to 95% RH, non-condensing
IP Rating	IP65
Shock	MIL-STD-810G Method 516.6 Procedure I, 30 g for 18 ms, 300 m/s ²
Vibration	MIL-STD-810G Method 514.6 Procedure I, 1.60/ 1.96/ 2.18 g rms for XYZ/ 5-500 Hz
Power Management	
Power Input	9V-36V DC with ignition control
Standards and Certifications	
Safety	CE, FCC, E-mark



Winmate Inc.
9F, No.111-6, Shing-De Rd., San-Chung District,
New Taipei City 24158, Taiwan, R.O.C
www.winmate.com

Copyright © 2022 Winmate Inc. All rights reserved.

