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PÉRIPHÉRIQUES

NINO III



USER MANUAL

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical Power Supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.



This device complies with the requirements of the EEC directive 2014/30/EU with regard to “Electromagnetic compatibility” and 2014/35/EU “Low Voltage Directive”



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

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.



Battery Caution

Risk of explosion if battery is replaced by an incorrectly type.
Dispose of used battery according to the local disposal instructions.



Safety Caution

Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 "Materials for fire enclosure" compliant.

4.7.3.2 Materials for fire enclosures

For MOVABLE EQUIPMENT having a total mass not exceeding 18kg, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2012/19/EU Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.



The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.

To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Revision History

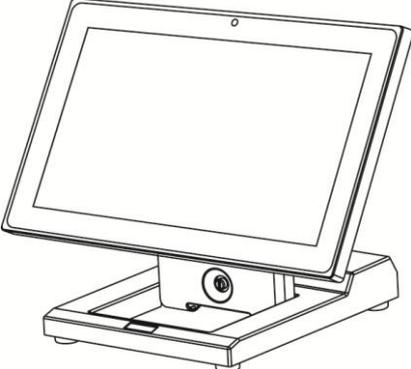
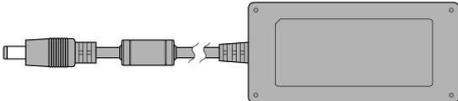
Revision	Date	Description
V1.0	June, 2022	● Release

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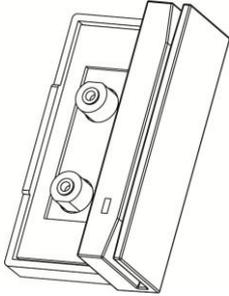
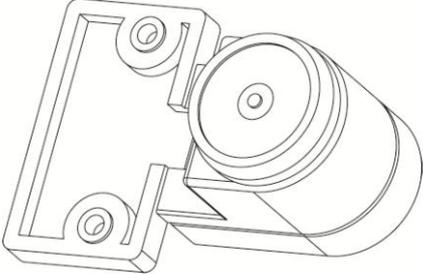
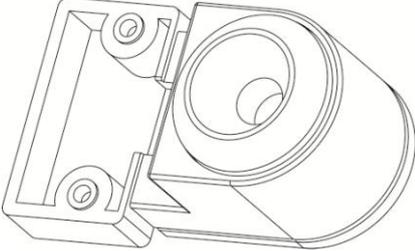
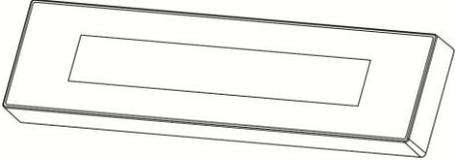
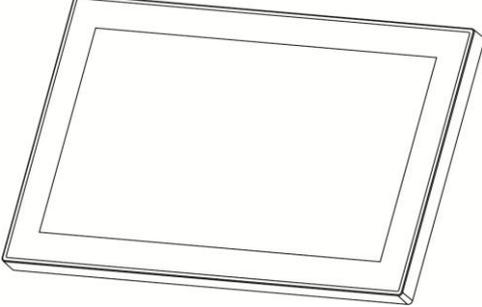
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1 Item Checklist

1-1 Standard Items

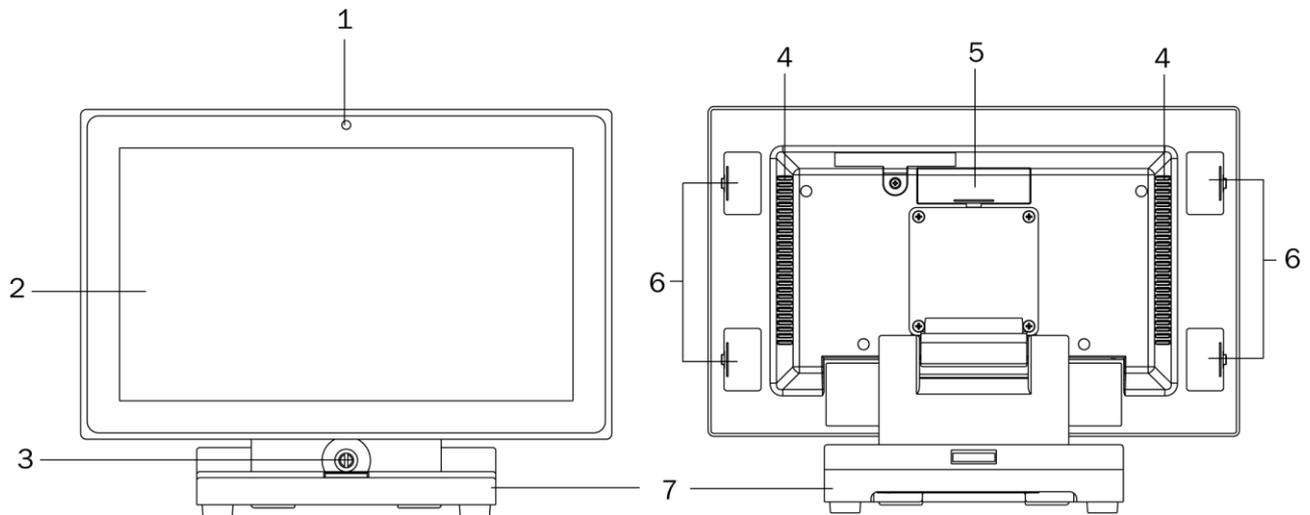
	
a. System	b. Power adapter (65W)
	
c. Power cable	

1-2 Optional Items

	
<p>a. MSR module</p>	<p>b. iButton module</p>
	
<p>c. Addimat reader</p>	<p>d. Customer display (Graphic LCM)</p>
	
<p>e. 2nd display</p>	<p>f. Wall Mount kit</p>
	
<p>g. FeDP to HDMI adapter</p>	<p>h. FeDP to VGA adapter</p>

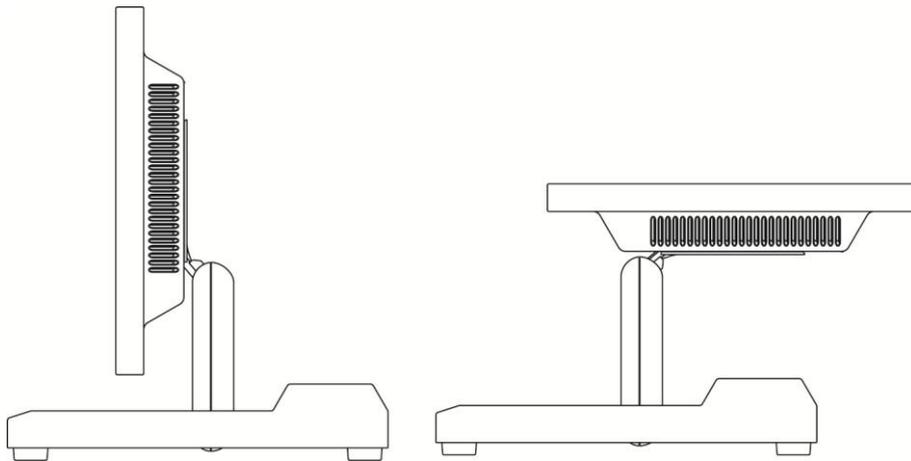
2 System View

2-1 Front View & Rear View

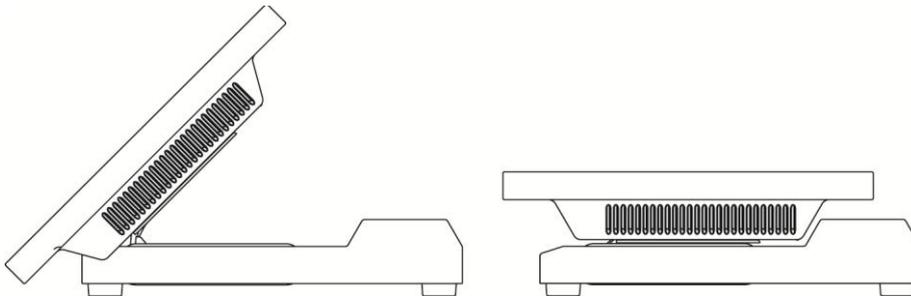


Number	Description
1	LED indicator
2	Touch screen
3	Thumb screw for the cable cover
4	Ventilation hole
5	VFD/2 nd display dummy cover
6	MSR/iButton/Addimat key module dummy cover
7	Swing arm base

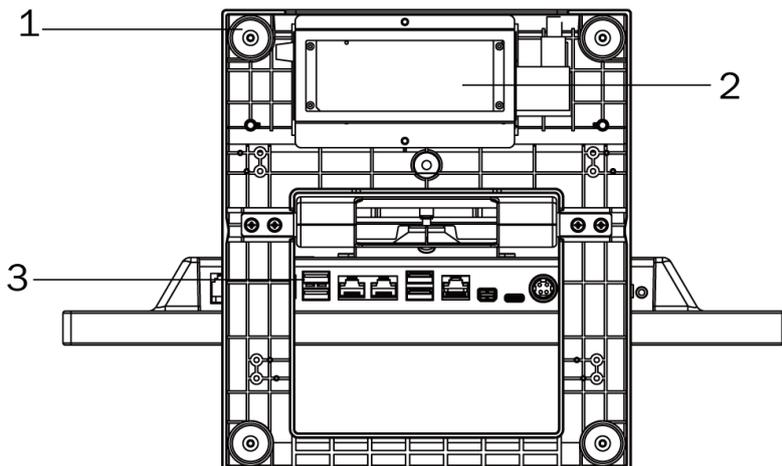
2-2 Side View



Fold down the swing arm base

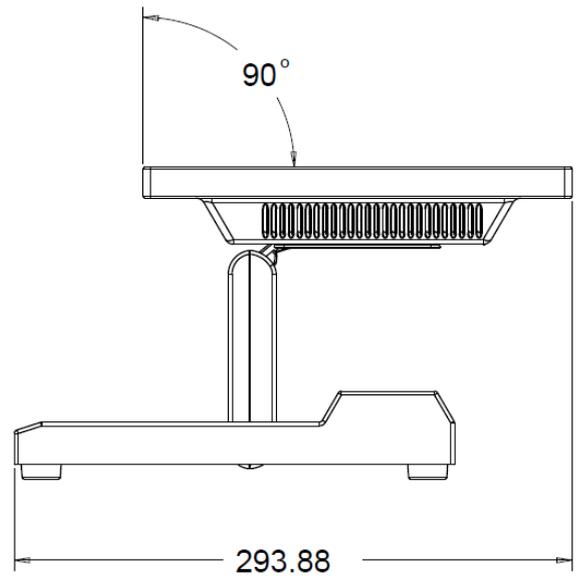
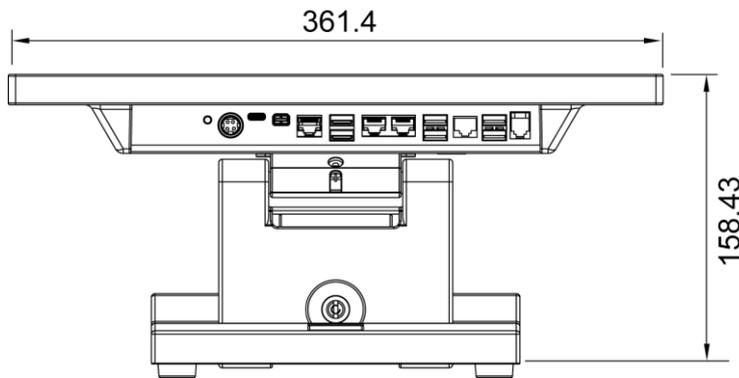
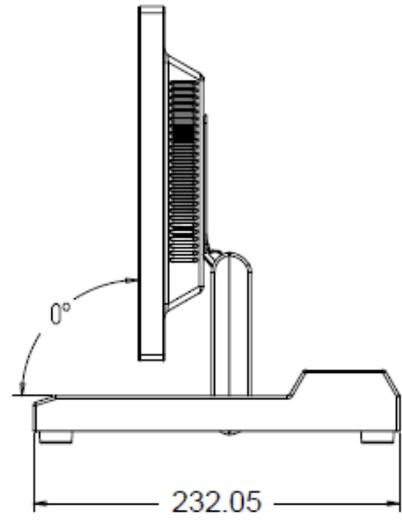
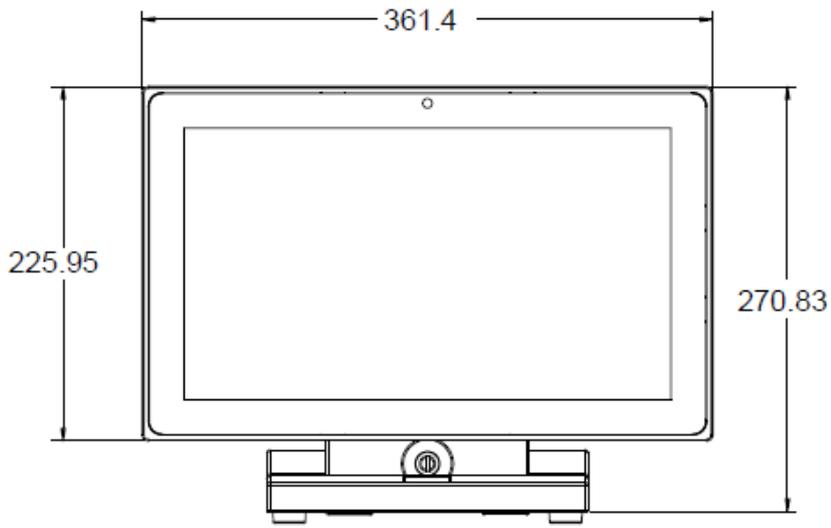


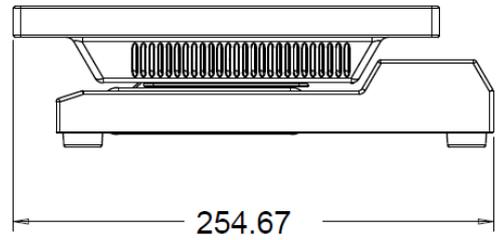
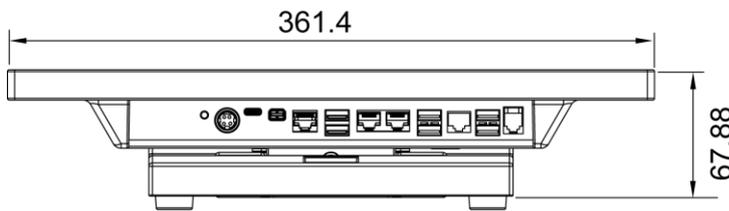
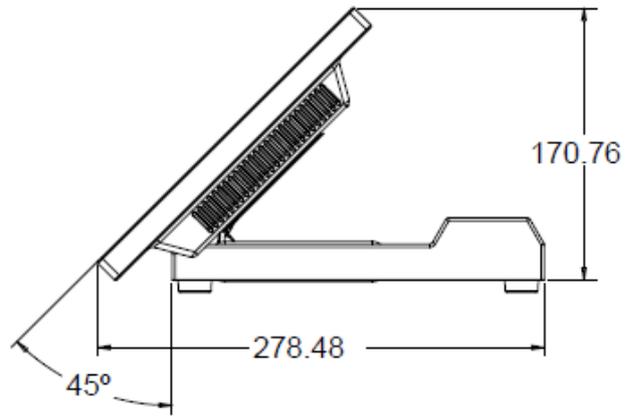
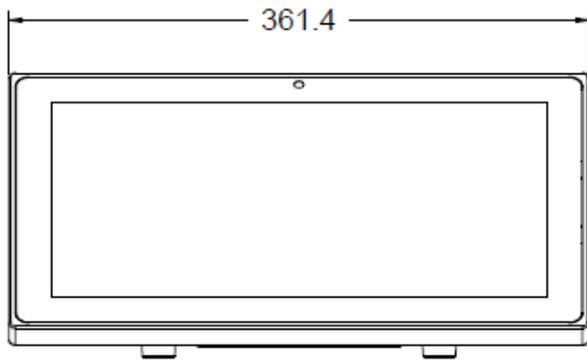
2-3 Bottom View



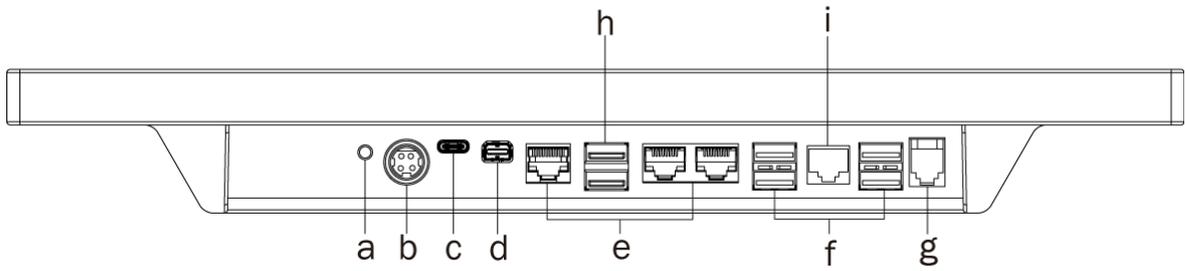
Number	Description
1	Rubber foot
2	Power adapter (with holder bracket)
3	IO ports

2-4 Dimension & View Angle





2-5 I/O View



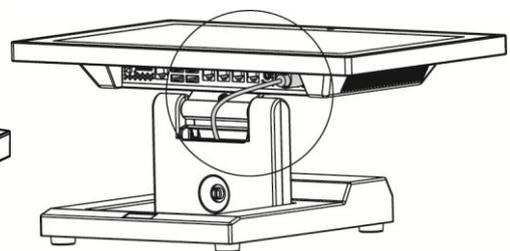
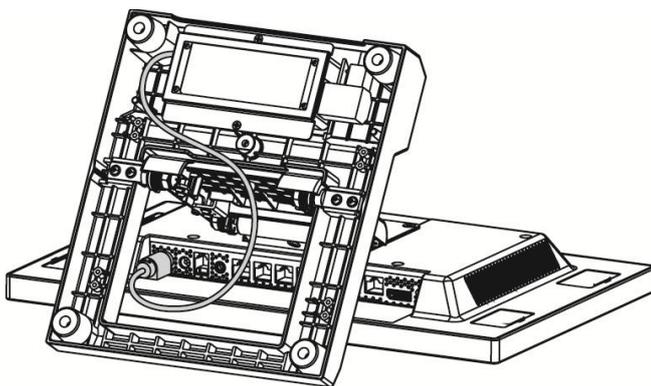
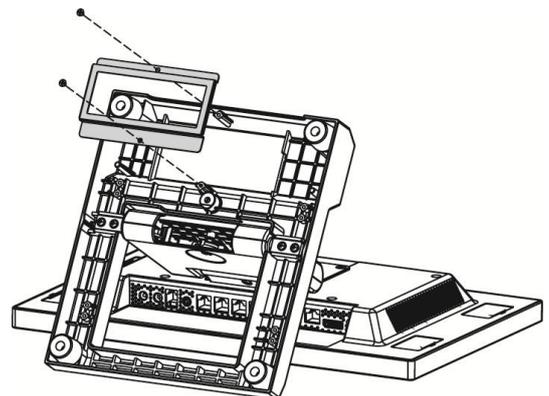
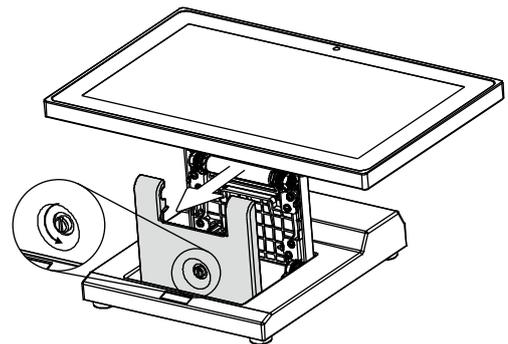
Number	Description
a	Power button
b	DC in 19V
c	USB type C
d	FeDP
e	COM1~COM3 (from right to left)
f	USB 2.0 x 4
g	Cash drawer
h	USB 3.0 x 2
i	LAN

3 System Assembly & Disassembly

3-1 Install the Power Adapter

The system is equipped with a 65W power adapter. Please follow the steps below to install the power adapter.

1. The swing arm base is designed to allow for clean cable management. There is a cable channel through the swing arm base, which has a quick access cover. Please loosen the thumb screw (x1) of the cable cover first.
2. Lay down system to access the bottom of the base. Remove the screws (x2) of the holder bracket.
3. Attach the power adapter and then replace the holder bracket.



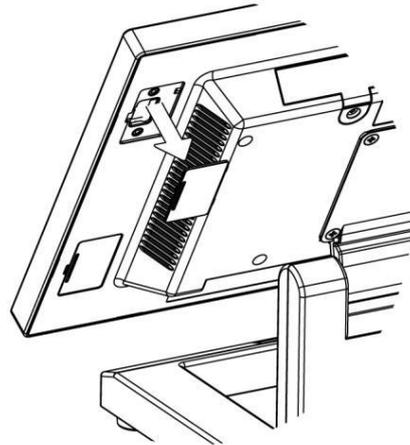
4. Route the cable as shown in the picture.
5. Connect the power adapter to the 19V DC in port.
6. Replace the cable cover.

4 Peripherals Installation

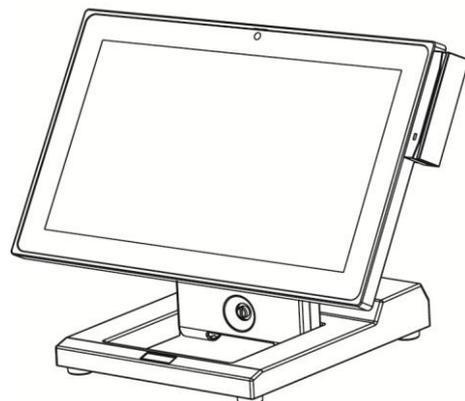
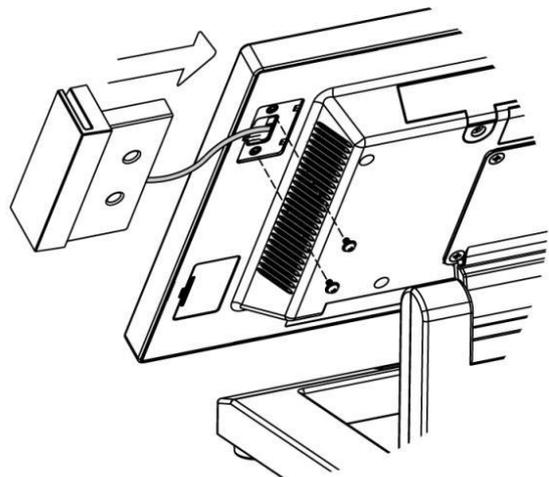
4-1 Install the MSR Module

MSR is installed on the right side of the system. Please make sure the unit is powered down before starting.

1. Remove the dummy cover first.



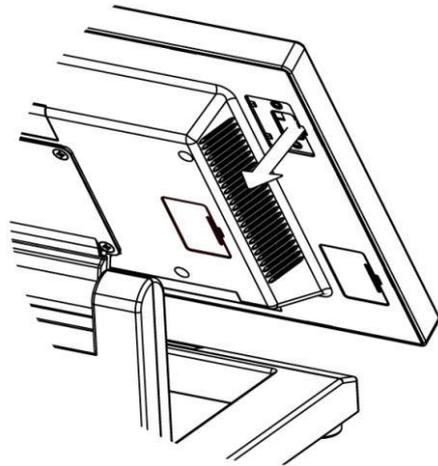
2. Connect the MSR cable (x1) to the connector on the system side.
3. Insert the MSR module in place and fasten the screws (x2) on the back to secure the module.



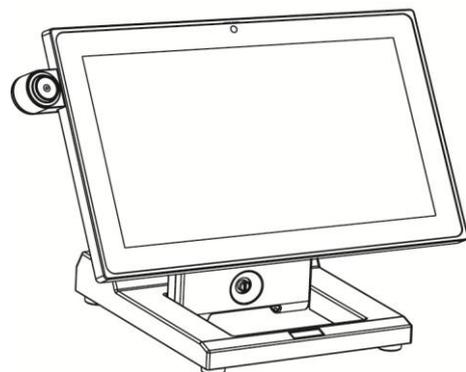
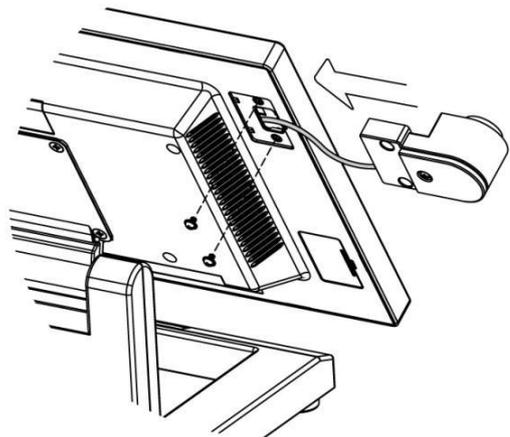
4-2 Install the iButton Module

iButton is installed on the left side of the system. Please make sure the unit is powered down before starting.

1. Remove the dummy cover first and then unfasten the screws (x2).



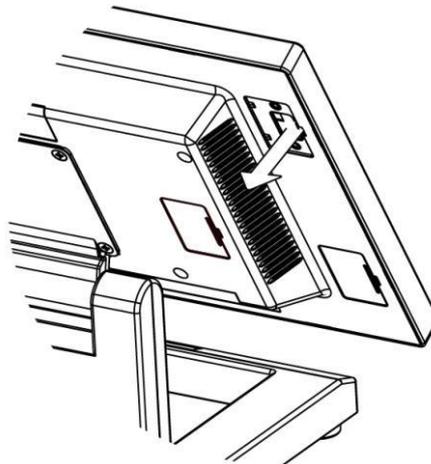
2. Connect the iButton cable to the connector on the system side.
3. Insert the iButton module in place and fasten the screws (x2) on the back to secure the module.



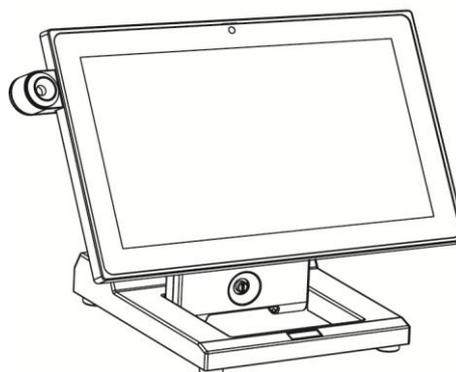
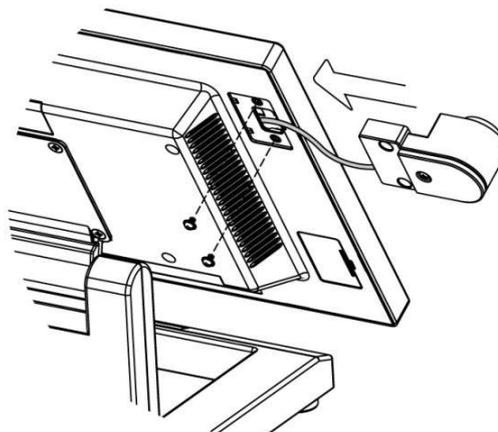
4-3 Install the Addimat Key Reader

Addimat key reader is an option instead of iButton module. It is also installed on the left side of the system. Please make sure the unit is powered down before starting.

1. Remove the dummy cover first and then unfasten the screws (x2).

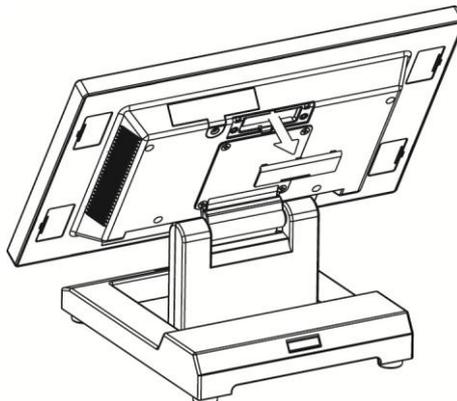


2. Connect the addimat key reader cable to the connector on the system side.
3. Insert the addimat key reader in place and fasten the screws (x2) on the back to secure the module.

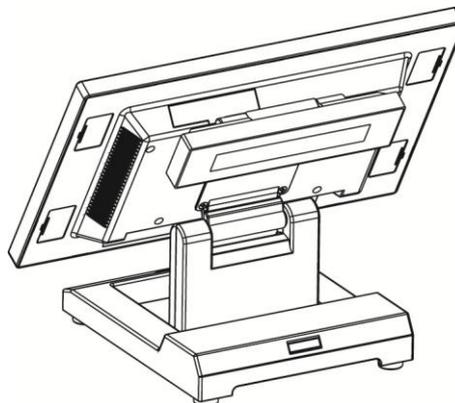
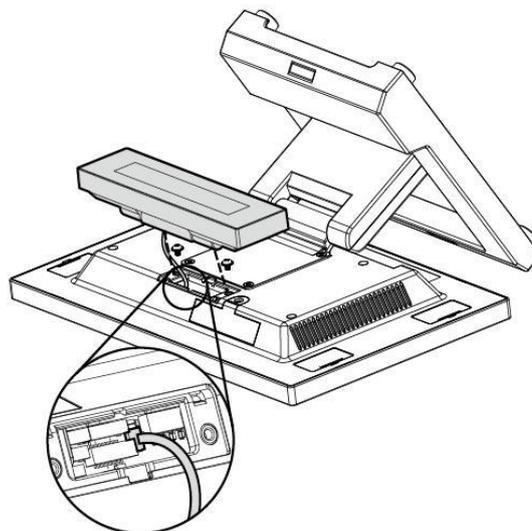


4-4 Install the Customer Display (Graphic LCM)

1. Remove the dummy cover first.



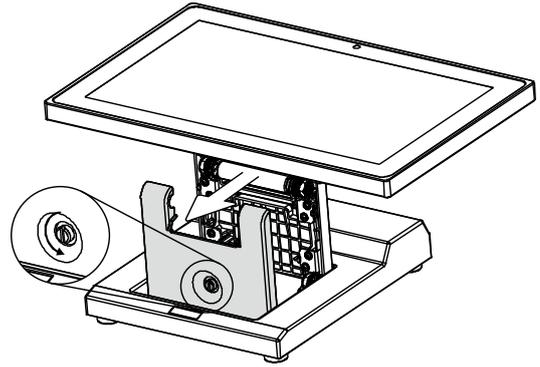
2. After the dummy cover is removed, plug the 8-pin LCM cable into the **CN8 / LCM** connector on the system board.
3. Fasten the screws (x2) to secure the LCM display to the system.



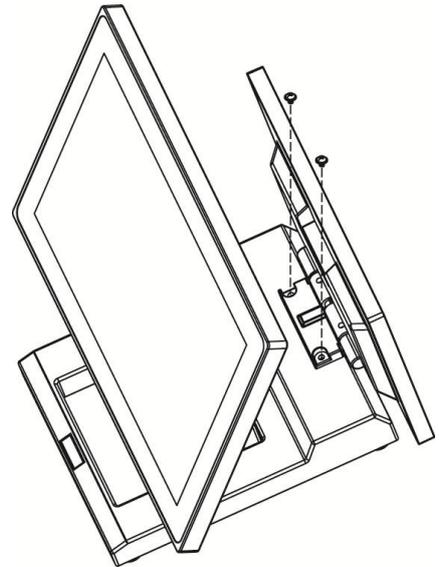
The Customer Display is directly connected to COM4 and uses the following communication parameters: 9600, N, 8, 1.

4-5 Install the 2nd Display

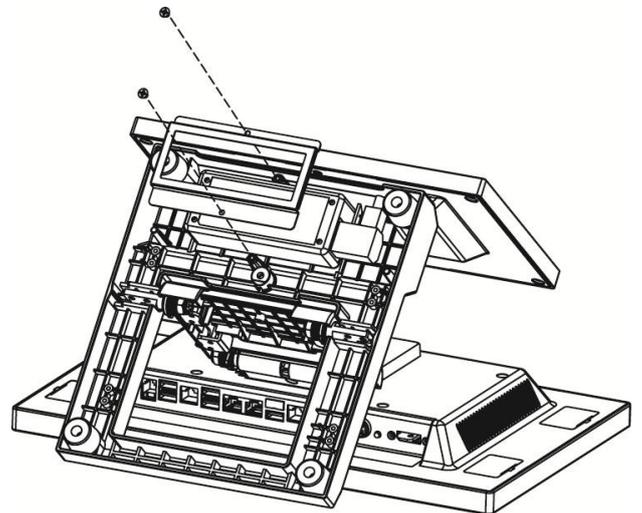
1. Loosen the thumb screw (x1) of the cable cover first.



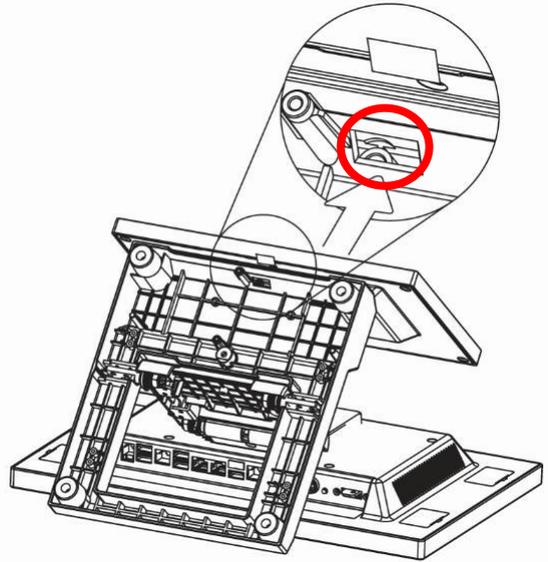
2. Attach the 2nd display on to the swing arm base and fasten the screws(x2) to fix the 2nd display.



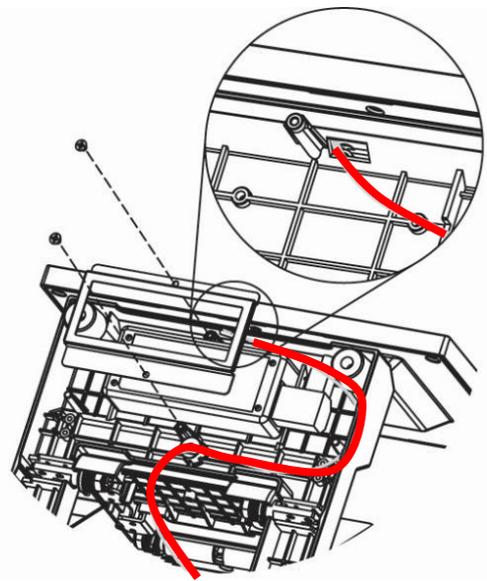
3. Lay down system to access the bottom of the base. Loosen the screws (x2) of the holder bracket to release the power adapter.



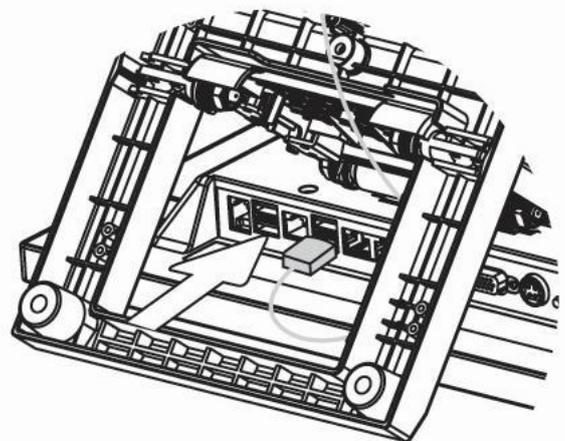
4. After the power adapter is released, a nameplate is attached to the edge of the swing arm base. Remove this nameplate as shown in the picture.



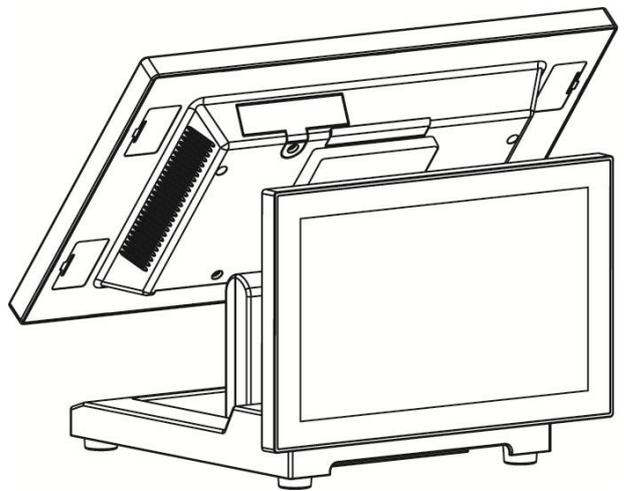
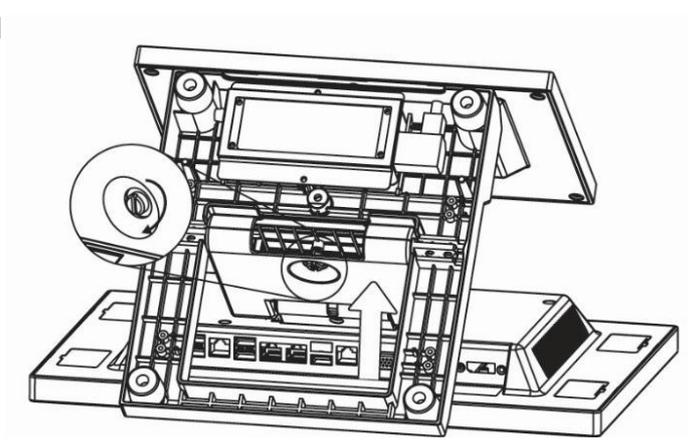
5. After the nameplate is removed, a small hole is revealed. Thread the cable of 2nd display through the hole and then route the cable as shown in the picture.
6. Attach the power adapter and screw the holder bracket.



7. Plug the 2nd display cable to the USB port on the IO panel.



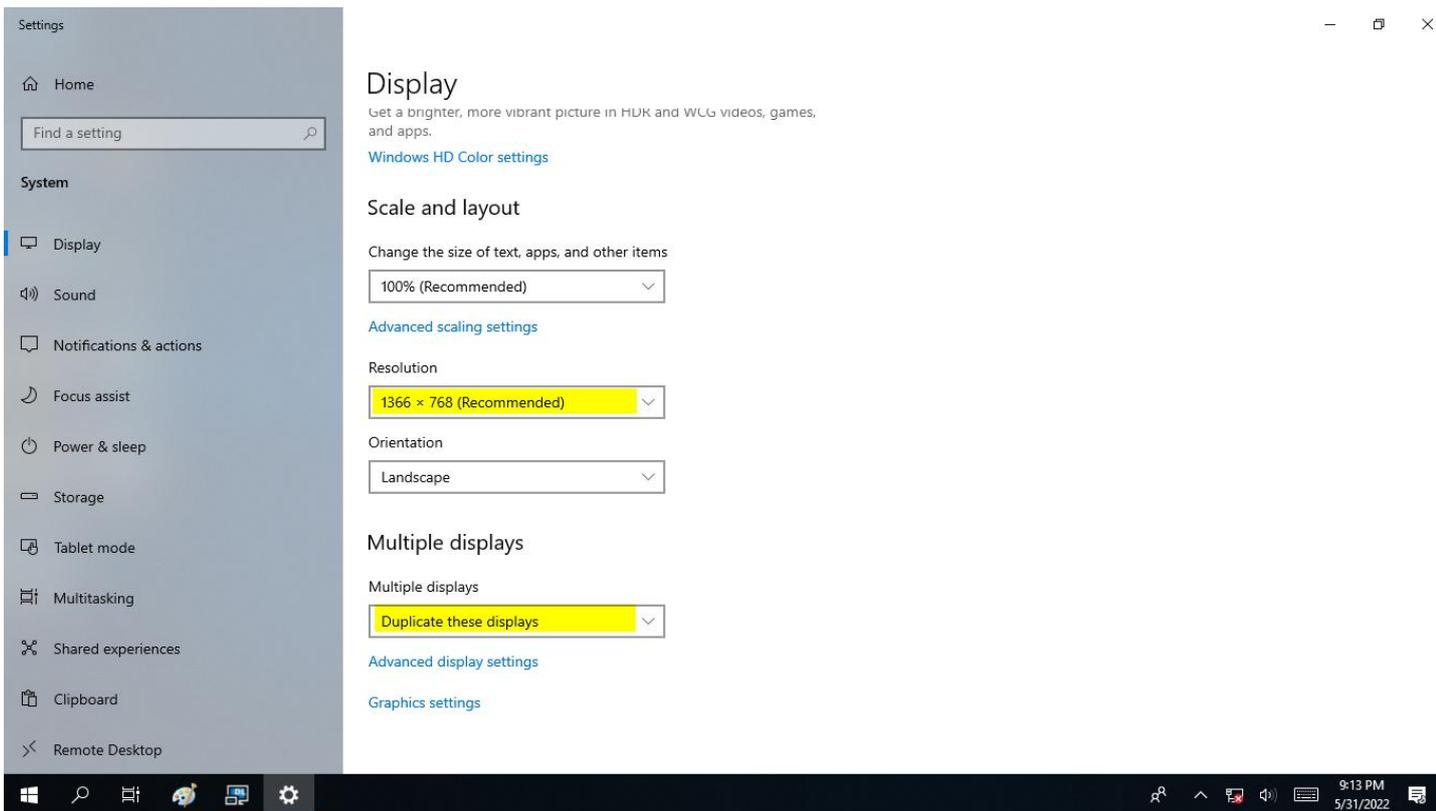
8. Finally put the cable cover back and fasten the thumb screw.



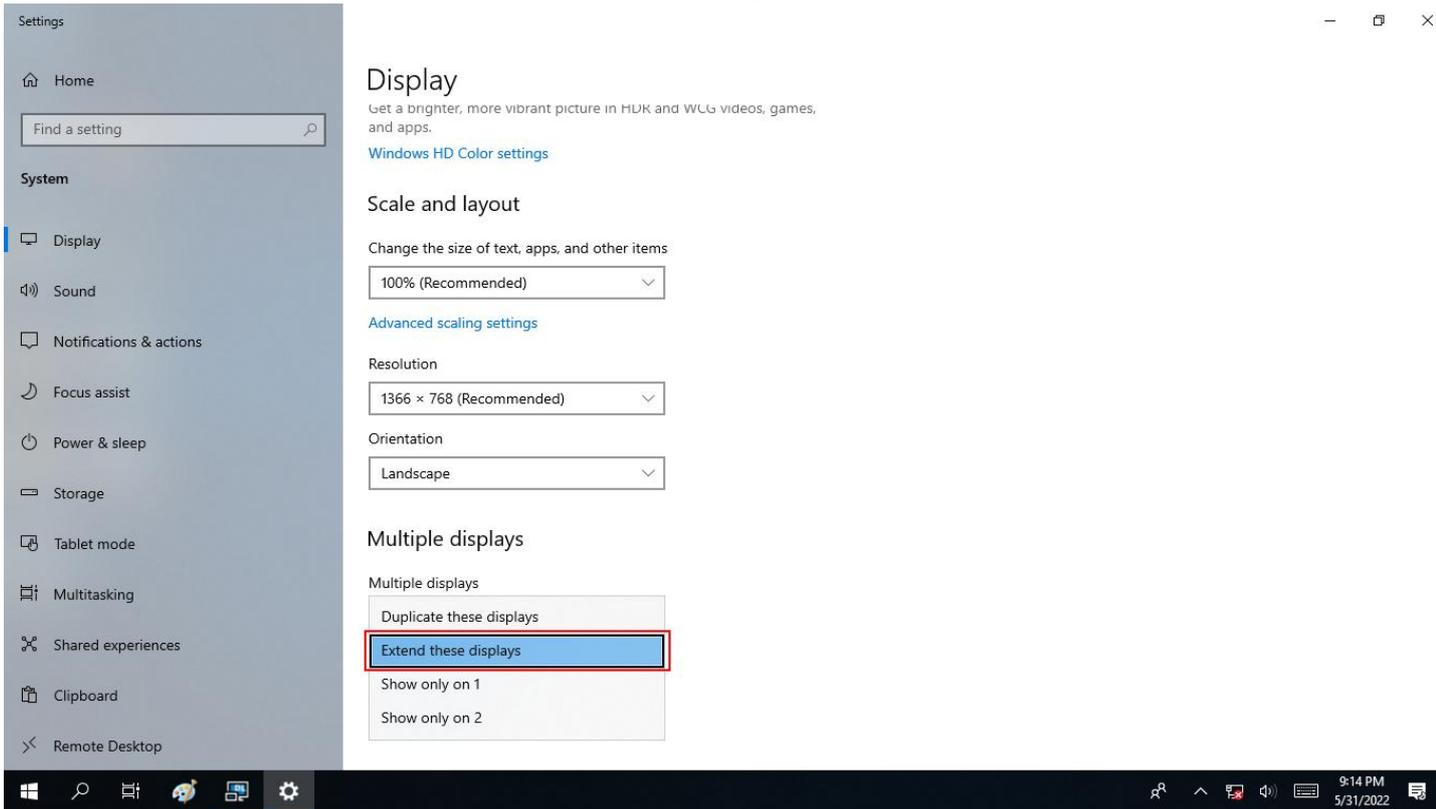
4-5-1 Setting up the 2nd Display

The 2nd Display is a USB device that requires the installation of a separate graphics driver. See **Appendix: Driver Installation** for the drivers download link.

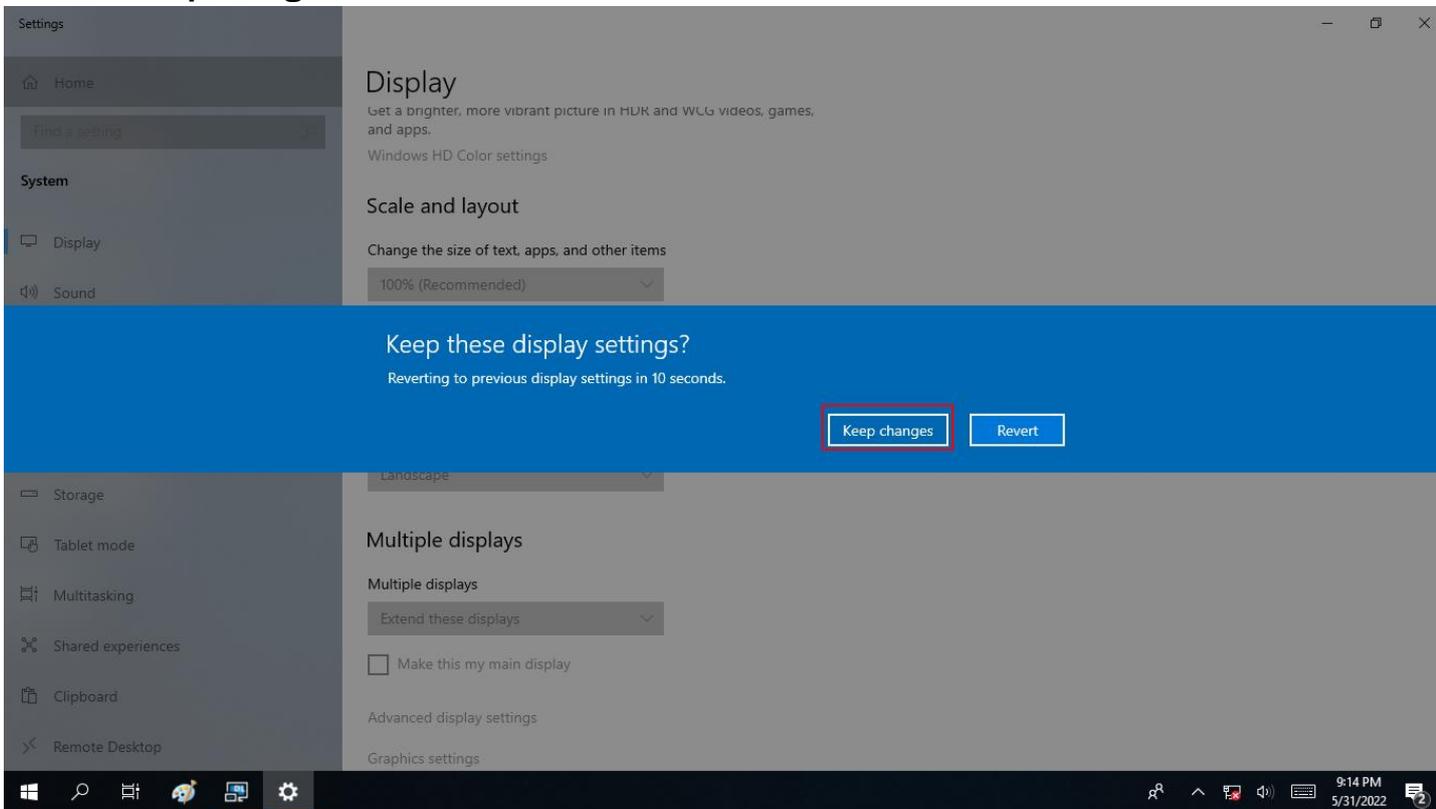
- Make sure the 2nd display cable is connected to a NINÔ III USB port.
- Install the driver and follow the on screen instructions. Once the driver is installed, the 2nd Display will turn on.
- On the last driver installation screen, click on the link **Customize your display**.
- In the Windows Display Settings screen, scroll down to Multiple Displays. The 2nd display will initially be in Duplicate mode, with the same resolution as the main display (1366x768).



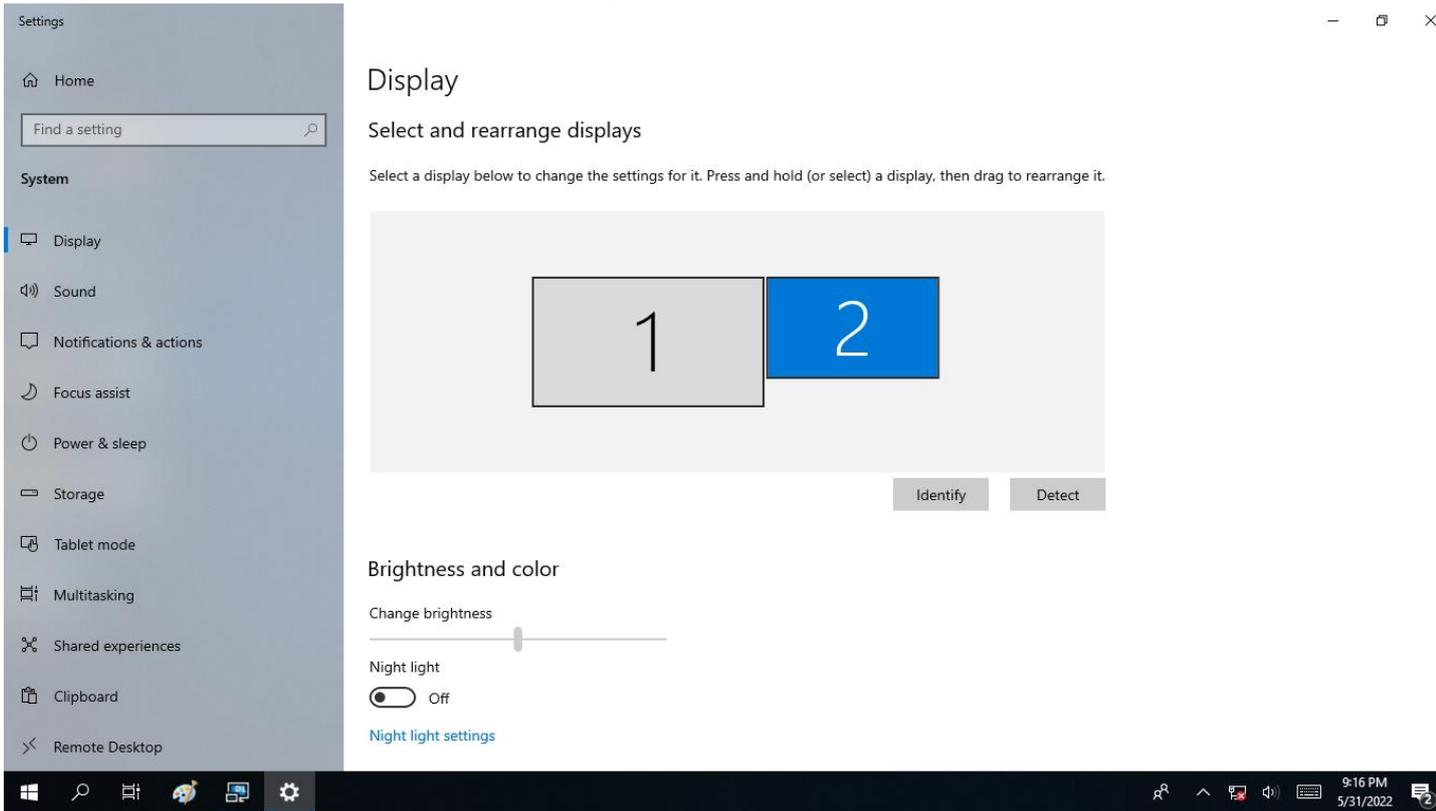
- Select **Extend these displays** in the Multiple Displays drop down box.



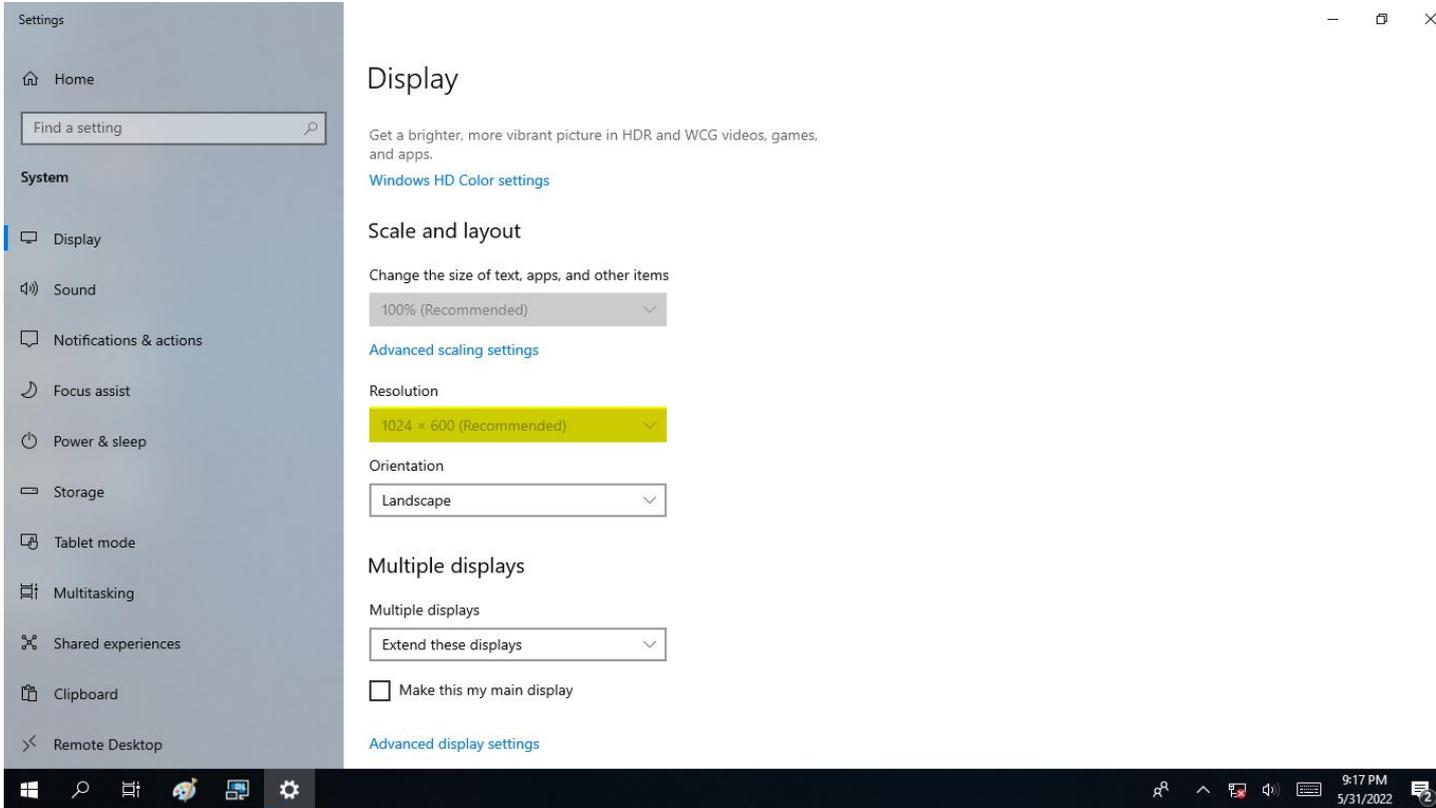
- Click **Keep Changes** to confirm.



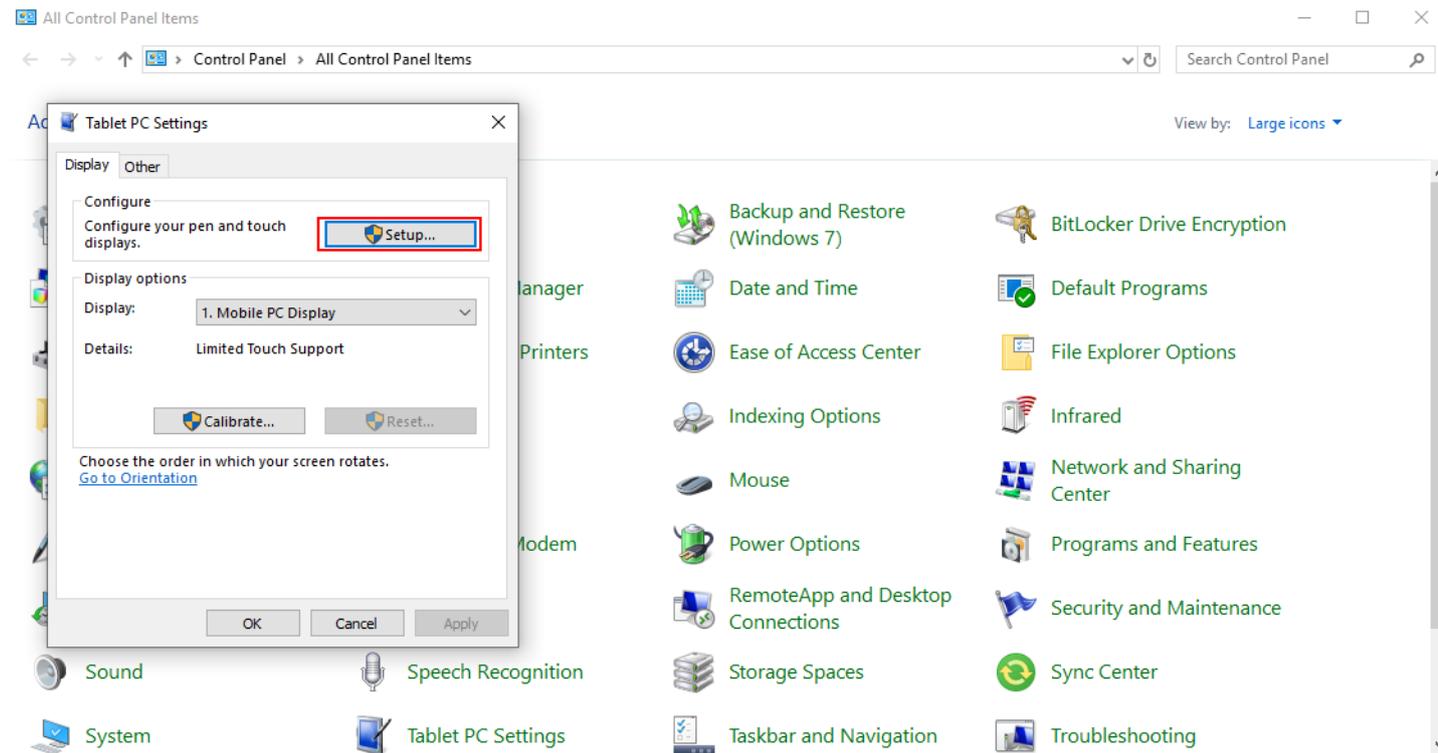
- Click on screen **2** to select the 2nd display.



- The resolution changes to the optimal resolution for this display (1024x600).



- Check that the touch works correctly on the main display. After changing to Extended mode, the display cursor location may not match the finger location on the screen. If this is the case, go to **Tablet PC Settings** in the **Control Panel**, and click on Setup.



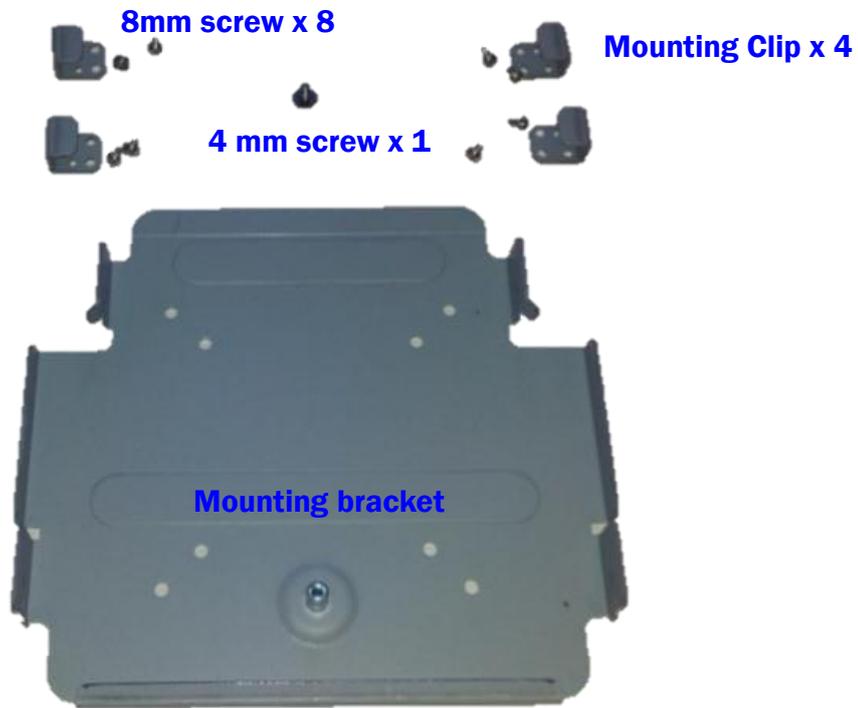
Note: do not click on calibrate, as this may cause problems with the touchscreen. Projected capacitive touch screens do not need calibration.

- Follow the screen instruction. The touch will now work correctly again.



4-6 Install the Wall Mount Kit

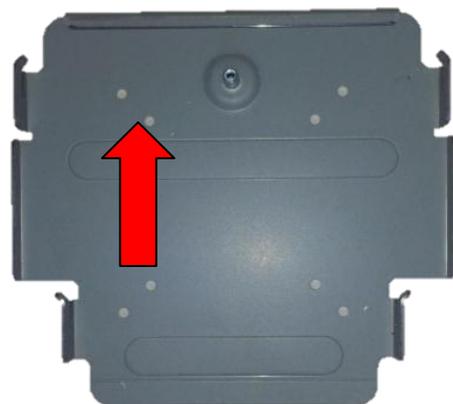
The wall mount come with the following parts:



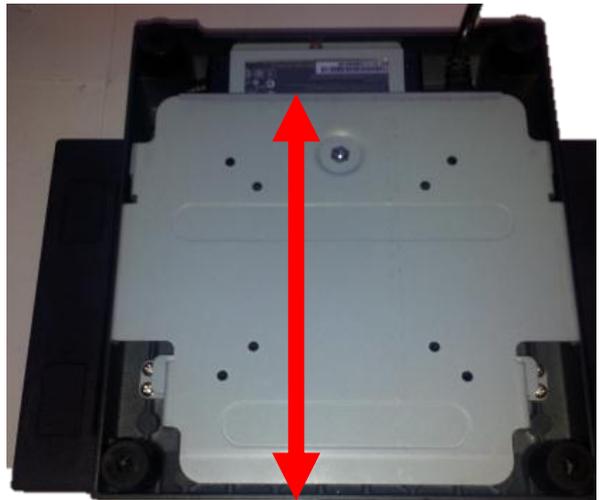
1. First attach the four mounting clips using the 3 mm screws as shown in the picture.



2. Next attach the mounting bracket to the wall or other surface using at least four of the bracket mounting holes. Please note that the bracket has both a 100mm and 75mm hole pattern, so that the bracket can be used with the VESA bracket as well as being directly mounted to a wall.

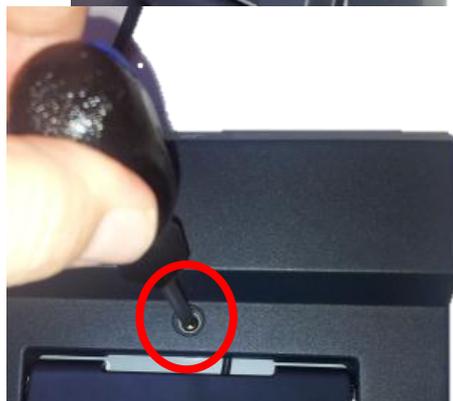


3. Next step is to route any cables you need to go to the system as required. A space is provided just by the power supply for the cable to exit cleanly, assuming they are routed via the swing arm cable channel as in a normal install. Cables can also be routed down as well. Be sure cables are clear or protected of any sharp surfaces. You can remove the system on and off the wall mount bracket as needed to route the cables.

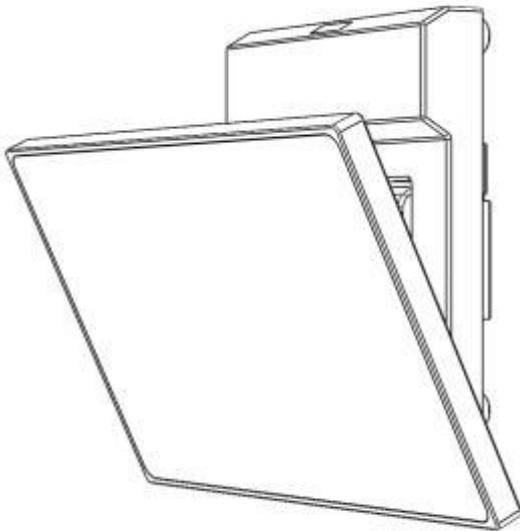
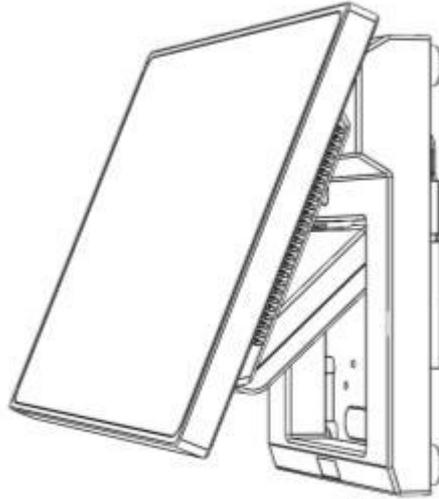
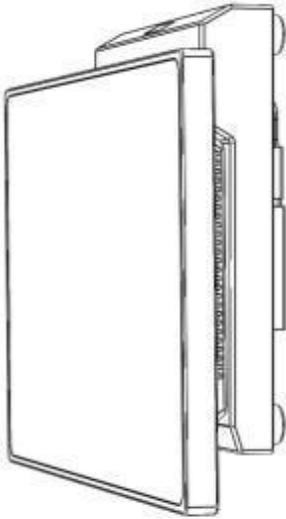


4. Cables can exit the top or bottom when routed between the bracket and system. A wall hole could be used to cover the cables in the power supply area.

5. The final step is to install the locking safety screw. This screw is to insure the system is not knocked off the wall by accident. The 4 mm screw supplied is used for this purpose. First remove the rubber hole plug from the system, then screw in the safety screw. The system is now secure enough and the swing base can be adjusted to the desired viewing angle.



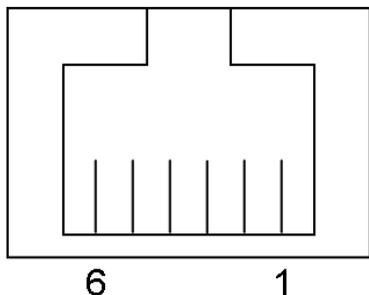
Some possible viewing angles using the wall mount bracket.



4-7 Install the Cash Drawer

You can install a cash drawer through the cash drawer port. Please verify the pin assignment before installation.

Cash Drawer Pin Assignment



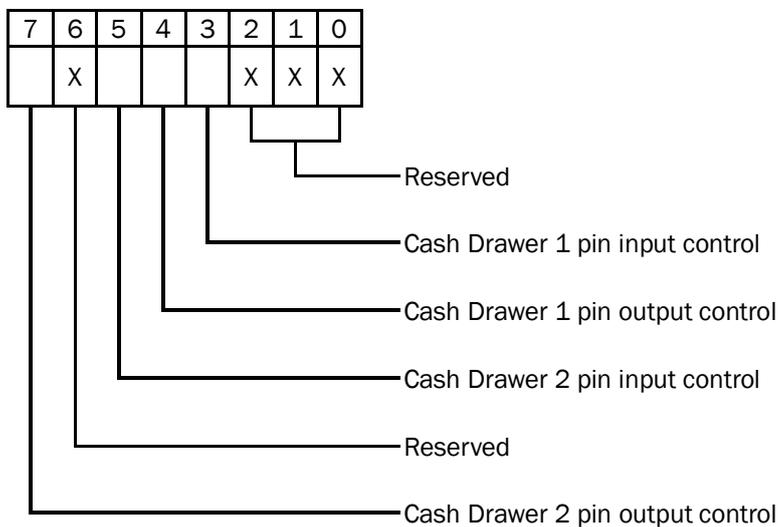
Pin	Signal
1	Cash drawer 2 In
2	Cash drawer 1 Out
3	Cash drawer 1 In
4	12V / 19V
5	Cash drawer 2 Out
6	GND

Cash Drawer Controller Register

The Cash Drawer Controller use one I/O addresses to control the Cash Drawer.

Register Location:	0x482h
Attribute:	Read / Write
Size:	8bit

BIT	BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
Attribute	CD2 Out	Reserved	CD2 In	CD1 Out	CD1 In	Reserved		



Bit 7: Cash Drawer 2 pin output control

Bit 6: Reserved

Bit 5: Cash Drawer 2 pin input control

Bit 4: Cash Drawer 1 pin output control.

= 1: Opening the Cash Drawer

= 0: Allow close the Cash Drawer

Bit 3: Cash Drawer 1 pin input control.

= 1: the Cash Drawer closed or no Cash Drawer

= 0: the Cash Drawer opened

Bit 2: Reserved

Bit 1: Reserved

Bit 0: Reserved

Note: Please follow the Cash Drawer control signal design to control the Cash Drawer.

Cash Drawer Control Command Example

Command	Cash Drawer
0 482 04	Opening
0 482 00	Allow to close
<ul style="list-style-type: none"> ➤ Set the I/O address 482h bit4 =1 for opening Cash Drawer by “DOUT bit0” pin control. ➤ Set the I/O address 482h bit4 = 0 for allow close Cash Drawer. 	

Command	Cash Drawer
I 482	Check status
<ul style="list-style-type: none"> ➤ The I/O address 482h bit3 =1 mean the Cash Drawer is opened or not exist. ➤ The I/O address 482h bit3 =0 mean the Cash Drawer is closed. 	

5 Specification

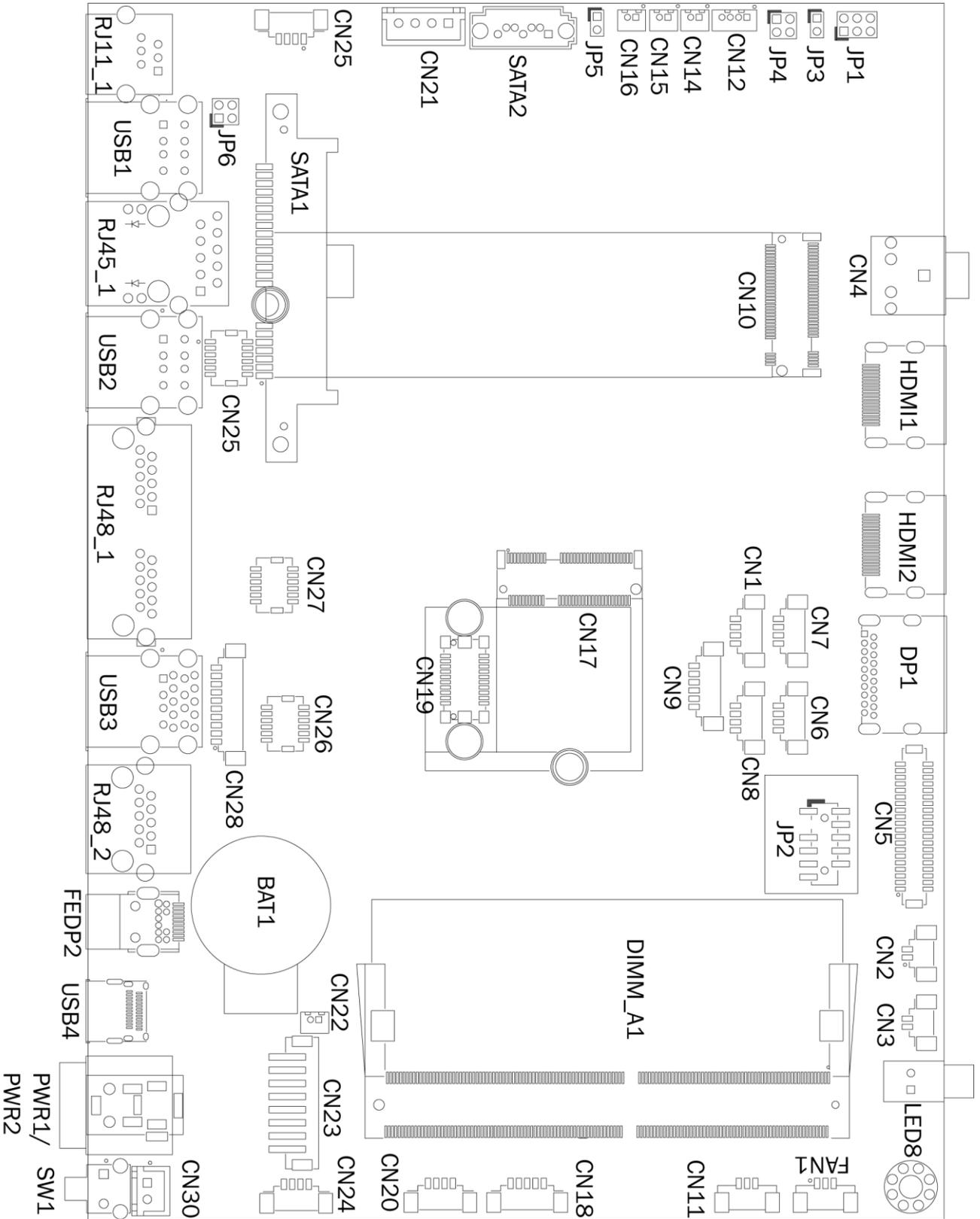
Model Name	NINO III
Motherboard	F36
CPU support	Intel Elkhart Lake CPU J6412 2.60 GHz
Chipset	CPU Integrated
System memory	1x DDR4 2133MHz SO-DIMM (Max 32GB)
Graphic memory	CPU Integrated
LAN controller	Realtek RTL8111H
Audio controller	C-Media HS-100B
I/O controller	ITE IT8786
BIOS	INSYDE UEFI code
TPM2.0	Nuvoton NPCT750A TPM 2.0
Board dimension	185 (W) x 130 (D) mm
LCD Touch Panel	
LCD size	14" LED panel
Brightness	200 nits up
Maximal resolution	1366*768
Touch screen type	True flat projected capacitive (USB)
Tilt angle	0° ~ 90°
Storage	
SSD	M.2 2280 SATA & NVMe SSD
Expansion	
M.2 (E-Key)	1 for 802.11 b/g/n and broadband wireless
Front I/O	
Power LED	1 Green Powered up, Amber in Standby (3-pin power LED connector)
External Rear I/O	
USB 2.0	4
USB 3.0/2.0	2
USB Type C	1 x data only
Serial/COM	3 x RJ50 COM ports (COM1/COM2/COM3 powered COM with power enable/disable by BIOS setting; default 0V)
LAN(10/100/1000)	1
DC jack	1
Cash drawer	1 x RJ12 (12V/24V cash drawer), jumper setting, default 24V
FeDP port	1 (requires optional proprietary FeDP to HDMI or FeDP to VGA adapter)
Power button	1

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Model Name	NINO III
Motherboard	F36
Speaker	
speaker	1 x 3W
Power	
Power adapter	Ext. 65W/19V
Peripherals	
MSR module	MSR 3 track (USB, secured head)
2-in-1 Reader	MSR (USB) + RFID (125KHz USB)
Customer display	2 x 20 LCM Winstar WH2002L-TFH-ET#
2 nd display	10.1" (16:9) LED panel, 1024x600, 200~220 nits, USB interface
iButton Addimat key reader	Connector read head, 2 wire connection to board, controller shared w/ MSR
UPS battery	4S/1P , 4S/2P battery kit (Internal, PSU external)
Communication	
Wireless LAN	Optional, M.2
Certifications	
EMC and Safety	FCC Class A, CE, LVD, UKCA
Environment	
Operating temperature	5°C ~ 40°C (41°F ~ 104°F)
Storage temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Humidity	20% ~ 80% RH non condensing
Dimension (W x D x H)	Head: 346 x 210 x 37.5 mm Base: 186 x 170 x 26 mm System Max. height 268 mm
Weight (N.W./G.W.)	3.7kg / 4.7kg
Mounting	75mm x75mm VESA standard holes
OS support	Windows 10 IoT, Linux
* This specification is subject to change without prior notice.	

6 Configuration

6-1 F36 Motherboard Layout



6-2 Connectors & Functions

Connector	Function
CN1/6/24/25	Internal USB connector
CN2	HDD LED connector
CN3	Power LED connector
CN5	eDP connector
CN10	M.2 M-KEY PCIE/SATA connector
CN11	2 color power LED connector
CN12	Earphone connector
CN14	MIC connector
CN15	Speaker L output
CN16	Speaker R output
CN17	M.2 E-KEY WiFi connector
CN18	EC Debug
CN20	LED & power button board connector
CN21	SATA power connector
CN23	Power BD connector
CN28	COM4 connector
CN30	Power button connector
DIMM_A1	DDR4 SO-DIMM
FAN1	FAN connector
FEDP2	FeDP connector
PWR1/PWR2	DC Jack
SW1	Power button
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
RJ48_1	COM1/COM2 connector
RJ48_2	COM3 connector
USB1/USB2	USB2.0 connector
USB3	USB3.0 connector
USB4	USB-C connector
BAT1	Battery connector
JP2	TPM Header
JP3	Audio Line out setting
JP4	2W/3W speaker select
JP6	Cash drawer power setting

6-3 Jumper Settings

Audio Line out Setting

Function	JP3 (1-2)
Stereo	1  2
▲ Reserved (line out)	1  2

2W/3W Speaker Select

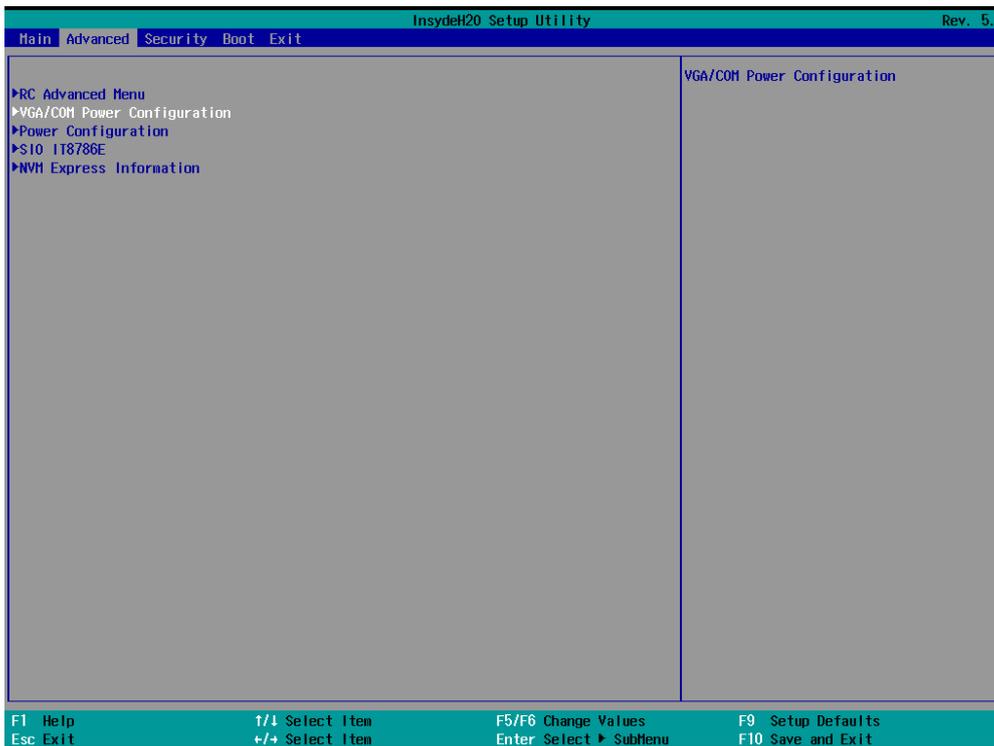
Function	JP4 (1-2) (3-4)
Internal 3W / FeDP 3W	1 3  2 4
▲ Internal 2W	1 3  2 4

Cash Drawer Power Setting

Function	JP6 (1-2) (3-4)
▲ 19V	1 3  2 4
12V	1 3  2 4

COM1/COM2/COM3 Power Setting

COM1, COM2 and COM3 can be set to provide power to your serial device. The voltage can be set to +5V or +12V in the BIOS.



1. Power on the system, and press the key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **VGA/COM Power Configuration** Ports and press <Enter> to go to display the available options.



4. To enable the power, select COM1, COM2 or COM3 Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.

Appendix: Driver Installation

To download the most recent drivers and utilities, and obtain advice regarding the installation of your equipment, please visit the AURES Technical Support Website:

www.ares-support.com (French)

www.ares-support.com/en/ (English)

www.ares.support.com/de/ (German)