Saturn Series SE-615E



About this Manual

Thank you for purchasing Saturn Series Touch Terminal. This terminal offers highly enhanced features, with easy connection to various optional devices for optimal performance. This user manual describes how to setup and connect your terminal.

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Safety Information



Before you Proceed:

- Read the safety notices and the User Manual carefully before using the product.
- Keep the box and packaging in case the product needs to be shipped in the future.
- Follow the product and warning label instructions.
- Any changes or modifications that do not follow the instructions in this manual will void this
 product's warranty.



Power Supply Safety Notes:

- To avoid electric shocks, disconnect the power cord from the electrical outlet before relocating the system.
- Make sure the voltage of the power outlet conforms within voltage range of the terminal.
 Failure to comply may cause the electric shock or damage to the terminal. If you are not sure of the electricity voltage that you are using, consult your local electricity company.
- To avoid fire or electric shocks, do not overload electric power outlets.
- Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.

Operating Instructions

- Keep this manual for future reference.
- Keep this equipment from moisture and dust.
- Place the equipment on a stable surface before setting it up.
- If there is any of the following situation arise, notify a qualified service technician immediately:

- ♦ The power cord or plug is damaged.
- ♦ The equipment has been dropped and damaged.
- ♦ The equipment does not function normally.
- Do not leave the equipment in a non air-conditioned environment where the storage temperature may go above 70°C (158°F), as this can cause damage to the equipment.

Maintenance

- Gently wipe screen with a clean soft hair lens brush, or a lint-free cloth.
- Do not apply pressure to the screen while cleaning.
- Do not spray any liquid directly onto the screen or the casing of the terminal.
- Chemical cleaners have been reported to cause damage on the screen of the terminal.

Warning and Attention

- The technical descriptions and specifications of the equipment are subject to change without notice
- For safety reasons, wear gloves when assembling the product.
- Risk of explosion if battery is replaced by an incorrect type.
- Dispose of used batteries according to the instructions.

CE Statement

- A Class III equipment with an enclosure made of HB material and using a non-special connector for the a.c./d.c. input has to have a marking stating the following: "Use only power supplies listed in the user instructions" or "For applicable power supplies see user instructions". This statement shall also be in the user-instructions.
- If product with laser module, the class of laser should be mentioned. The warning as attachment.

Federal Communications (FCC Statement)

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

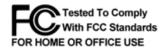
- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesirable operation.

This equipment has been tested and found to comply within the limit of a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by switching the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Warning







WEEE Notice

The WEEE logo (shown at the left) on the product or on its box indicates that this product must not be disposed of or dumped with your other household waste. You are liable to dispose of all your electronic or electrical waste equipment by relocating over to the specified collection point for recycling of such hazardous waste. Isolated collection and proper recovery of your electronic and electrical waste equipment at the time of disposal will allow us to help conserving natural resources. Moreover, proper recycling of the electronic and electrical waste equipment will ensure safety of human health and environment. For more information about electronic and electrical waste equipment disposal, recovery, and collection points, please contact your local city center, household waste disposal service, shop from where you purchased the equipment, or manufacturer of the equipment.



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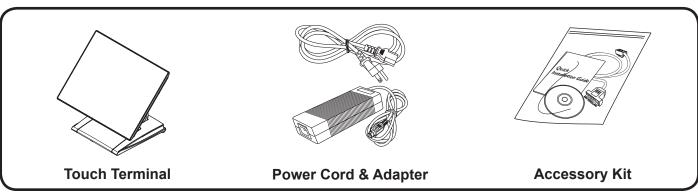
Chapter 1

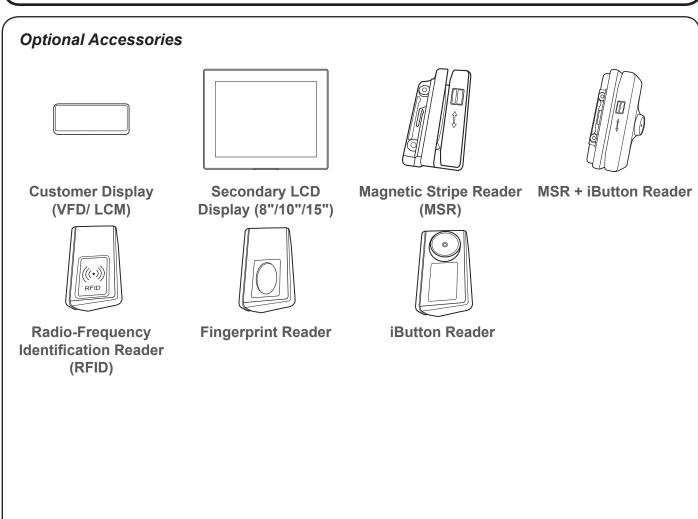
Introduction

Congratulations on your purchase of this Touch Terminal. Your easy-to-use POS terminal is designed to help you enhance your business flexibility by offering superior customer experience.

Package Contents

Before setting up your Touch Terminal, check that the package contains the following items. If any of the items is missing or damaged, contact your vendor immediately.

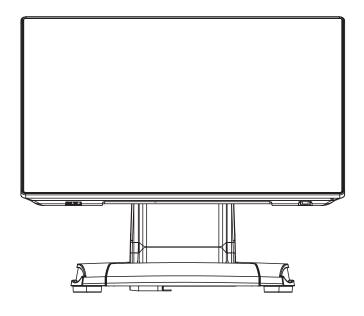




Overview of Saturn Series

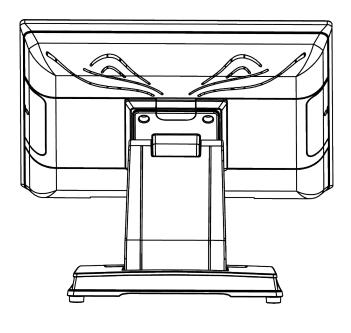
The figures in this section illustrate the components (including input and output ports) located at the front and rear of your Touch Terminal.

Front View



Standard Type

Rear View

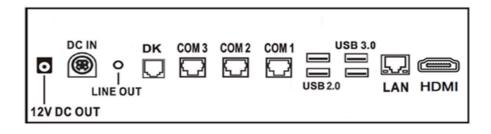


Standard Type

INTRODUCTION

I/O Ports

SE-615E

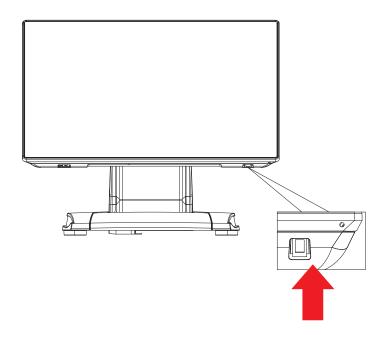


Item	Connector Definition
DC OUT jack	12V DC power output
DC IN jack	24V DC power input
Line Out port	Audio line output connector
DK port	Cash Drawer output
COM ports	COM1/2/3 connectors
USB2.0 ports	USB2.0 connectors
USB3.0 ports	USB3.0 connectors
LAN port	Gigabit LAN connector
HDMI port	HDMI output connector

Powering ON/OFF Saturn POS

Power ON Saturn POS

The power button is located at the bottom side of the back cover. Press down the power button to power on the POS.



Power OFF Saturn POS

In most cases, press the power button of the POS to power the system off. If the terminal fails to turn off the machine for unknown reasons, please be advised to hold the power button more than 4 seconds to force a shutdown of the system.

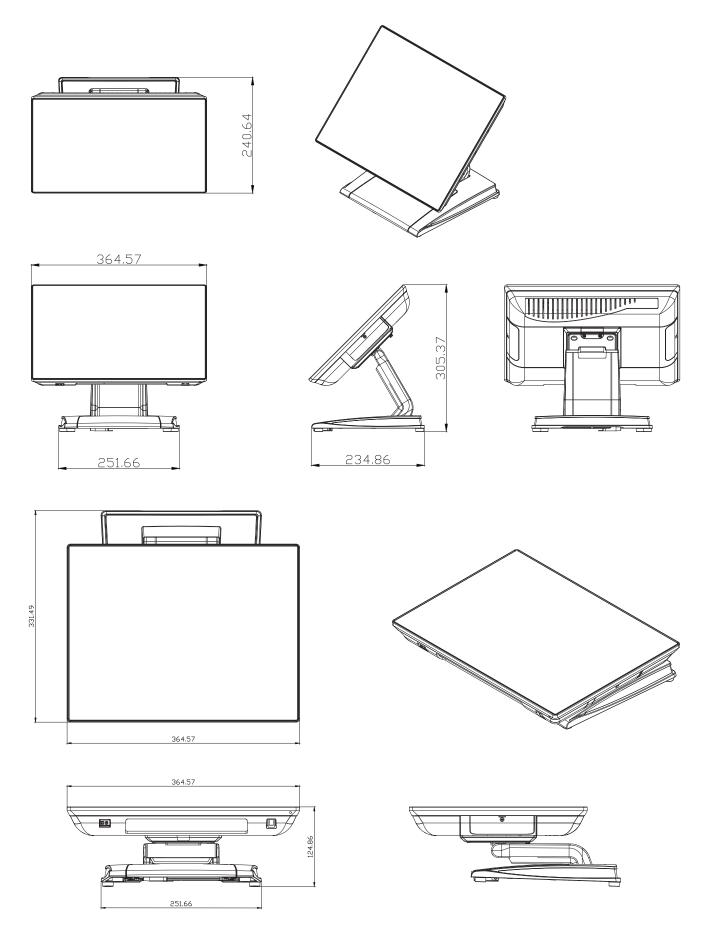
Status LED Indicator

LED status indicator, which is located at the bottom edge of the LCD panel, is mainly responsible for notifying users of the current system status by emitting various LED signals. In the chart provided below, it describes all the possible LED status as a quick reference.

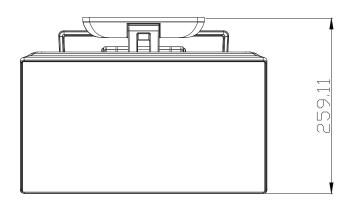
LED Status	System Status	AC power adapter	Description
OFF	OFF	OFF	System power OFF
Green	OFF	ON	System standby
Blue	ON	ON	System power ON

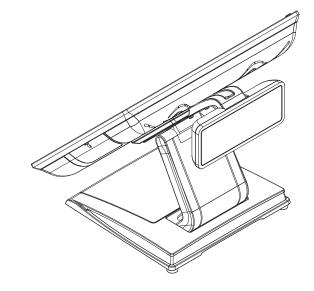
Physical Dimensions

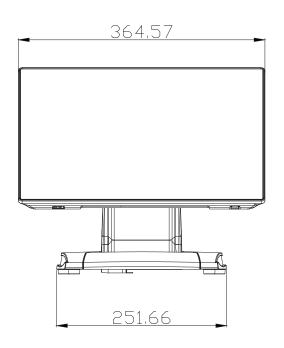
Standard Display

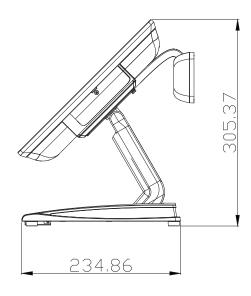


LCM (Liquid Crystal Module) VFD Customer Display

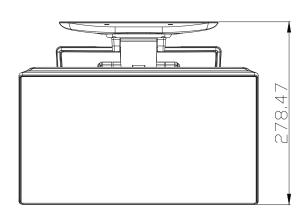


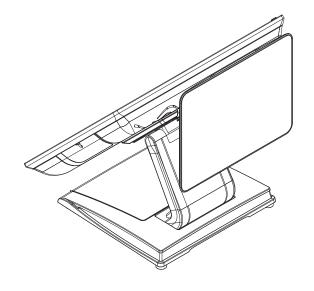


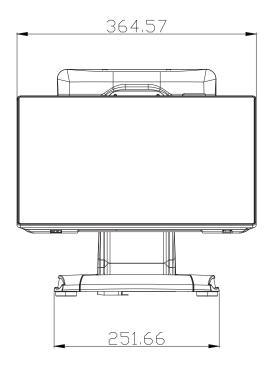


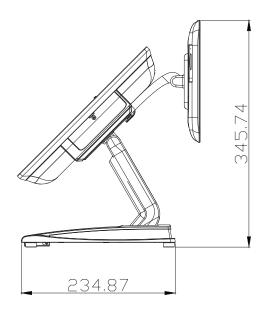


10" Secondary LCD Display

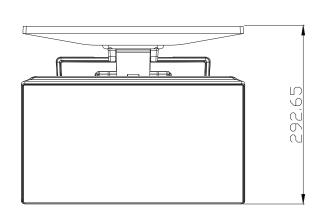


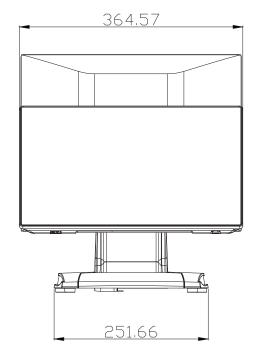


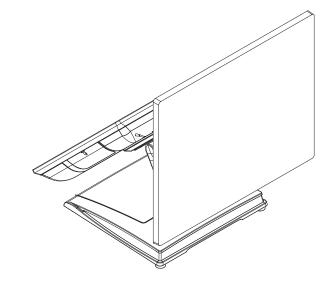


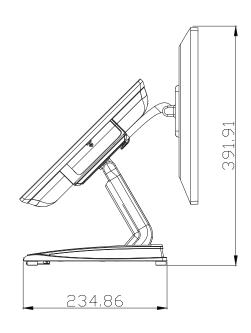


15" Secondary LCD Display









Specifications

Touch Terminal Specifications

Sustain	СРИ	Intel® Celeron® Processor J6412
System	RAM	4G / 8G / 16G
Storage SSD or HDD or M.2		SSD: 64G / 128G / 256G M.2: 64G / 128G / 256G HDD: 500G
os	Operating Systems	Win 10 IoT Enterprise LTSC / Linux
	Туре	15" LED Backlit LCD Display
Display	Resolution	1024 x 768 (4:3)
	Brightness	300 cd/m ²
Touchscreen	Туре	Flat Projected Capacitive Touch
I/O	Standard I/O	2 x USB 2.0 2 x USB 3.0 3 x RJ-50 RS-232 (default 0V; COM1, COM2, COM3 0V/5V/12V by Jumper) 1 x LAN 1 x RJ-11 12V/24V (default 24V for Cash Drawer) 1 x HDMI 1 x Audio Output Phone Jack 1 x DC 12V Out for DC Out 1 x DC 19V In with Lock for DC In
	Buttons	1 x Power On/Off Button
	Extension Kits (Optional)	MSR Card Reader Kit / RFID Reader Kit / i-Button Reader Kit / Fingerprint Reader Kit / 2D Scanner Kit / VFD Customer Display Kit / LCM Customer Display Kit / 10.4" 2nd Display Kit / 15" 2nd Display Kit
Power	Adapter	External DC Power Adapter 65W, 19V 3.43A
Mechanical	Dimensions (W x D X H)	365 x241 x 322 mm (14.37*9.49*12.68 in)
ivieciiailicai	Weight	5.7 kg (12.57 lb)
	Operating Temperature	0°C to 40°C (32°F ~ 104°F)
Environment	Storage Temperature	-25°C to 70°C (-13°F ~ 158°F)
	Safety Certifications	CE / FCC

Peripherals Specifications

2 nd LCD display	Model No.	MN-10B0H	MN-15A0H			
	LCD Panel	10.1"	15"			
	Resolution	1024 x 600	1024 x 768			
	Viewing Angle	140° (H) / 120° (V)	88° (H) / 88° (V)			
// //	Response Time	25ms (typical)	8ms (typical)			
// ///	Brightness		,			
	Video Input	220 nits (typical)	300 nits (typical)			
	Power Supply	HDMI	HDMI			
LCM	Model No.	DC 12V	DC 12V CM3000			
LOM	Polarizer color	White	CINSOOO			
	Backlight color	Blue				
7	Display Capacity	20 characters x 2 lines				
	Character format	5 x 8 dots International (Default) Engl	ish-Russia/English- lana	nese/Traditional Chinese/		
(1011)	Character type	Simplified Chinese (Optional				
	Dot Size	0.93 (W) x 1.11 (H) mm				
	Input power type	5V DC				
	Interface	RS232				
	Can be assembled on the same p	ackage with the system ship	pping			
VFD	Model No.		CM7100			
	Display Method	Vacuum Fluorescent Displa	y (VFD)			
	Polarizer color	Yellow green				
	Backlight color	Black				
7	Brightness	500-1000 cd/m2				
	Display capacity	20 characters x 2 lines				
	Character format	5 x 7 dot matrix, cursor				
13/	Character type	95 Alphanumeric, 32 Interna	ational characters			
-	Dot size	0.55 (W) X 0.75 (H) mm				
	Input power type	5V DC				
	Interface	RS232				
	Can be assembled on the same p	ackage with the system ship	pping			
2 in 1 Identification Reader	Interface		RS232			
	MSR	ISO Track 1/2/3 single/dual Standards7810, 7811 1/5, 7	· · ·			
	MSR + iButton Detector	Dallas DS1990A compliment / With leading / ending programming function. USB HID Keyboard mode interface				
Magnetic Stripe MSR + iButton Reader (MSR) Reader	Can be assembled on the same package with the system shipping					
	Biometric	Digital Personal U. are .U 4	500B (Optical Type / Blu	ie Light) Module		
	Fingerprint	Size: Approx. 57.7mm * 35.		le with USB 1.1 / 2.0 (Full		
(((•)))	Recognizer	Speed). USB HID Keyboard	d mode interface			
Radio-Frequency Fingerprint Identification Reader (RFID)	RFID reader	Frequency 13.56MHz. ISO14443A card type MIFARE® 1K/4K/8K card type Read only. USB HID Keyboard mode interface				
	iButton Detector	Dallas DS1990A compliment / With leading / ending programming function USB HID Keyboard mode interface				
iButton Reader	Can be assembled on the same package with the system shipping					

Chapter 2

Preparing For the Installation

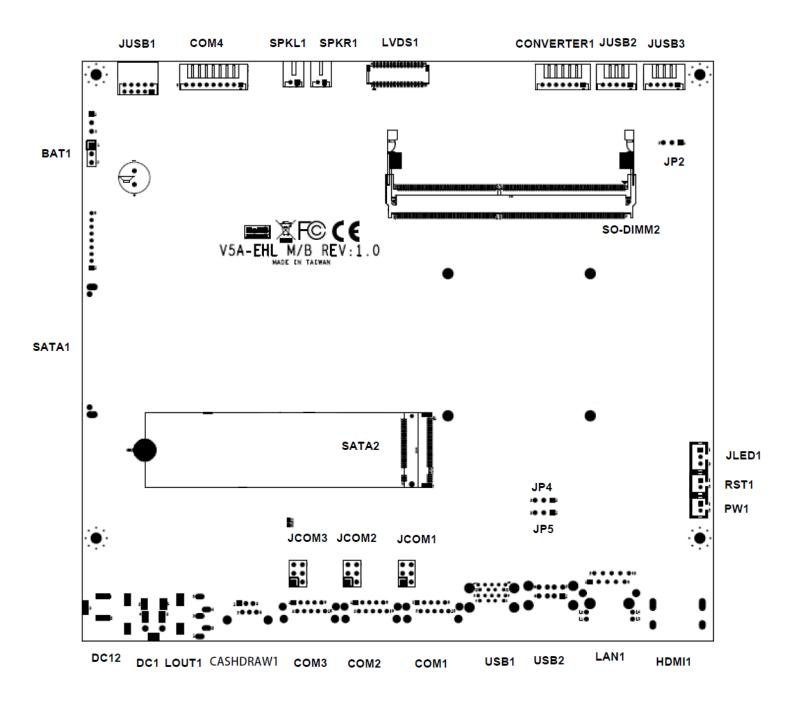
Before you start installing Touch Terminal, read the following instructions.

- SE-615E do not support PCI slot.
- Do not insert or remove any device or component from the SE-615E while the power is turned on.
- If using SE-615E in a dusty environment, clean the Touch Terminal regularly.
- Only USB devices are Hot Swap capable. Be sure to turn off the power of the touch terminal and the device before making any connection or disconnection.
- The spill proof design of SE-615E conforms to IP65 standard (Front panel only).
- Always seek the help of authorized service personnel in disassembling the terminal. The manufacturer will not be held responsible in the event of damage caused by an unauthorized person.
- Before installation or disassembling of the terminal, ensure that the power is turned off. Otherwise, electric shock may occur and may void the warranty.
- For systems preloaded with Windows on the storage(O/S pre-installed as an option), the manufacturer provides recovery image. System Integrator shall take care of software restoration after having an image recovery. A manufacturer-supplied USB interface COMBO drive will be required for such action. Other brands of COMBO drive may require a specific driver. Please use the recovery image for rescue operation only. Using it otherwise may wipe out whatever is stored in the storage. Then follow the instructions from your system integrator for software recovery.

Main Board Jumper Setting and Connector Definition

Bottom Side

SE-615E

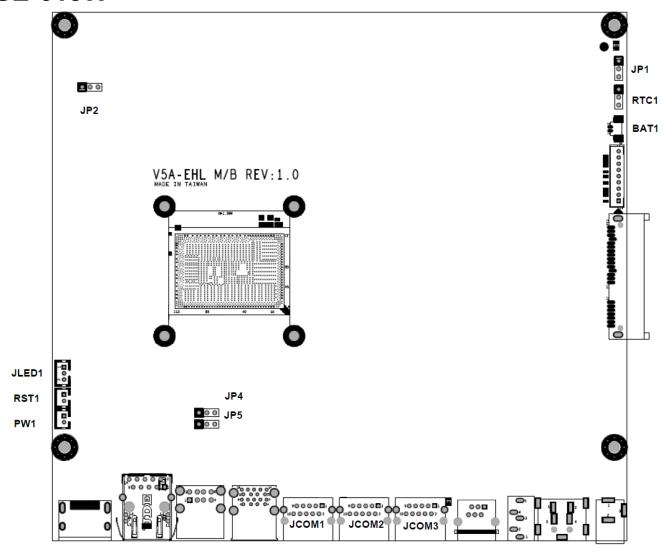


Bottom Side Layout Content List

Connector/Jumper	Description
HDMI1	HDMI output
LAN1	LAN connector
USB1	USB2.0 *2 connector
USB2	USB3.0 *2 connector
COM1	COM1 connector
COM2	COM2 connector
COM3	COM3 connector
CASHDRAW1	Cash Drawer output
LOUT1	Audio line output connector
DC1	DC power input
DC12	12V DC power output
JUSB1	USB port for USB Touch
JUSB2	USB port for POS input device
JUSB3	USB port for POS input device
COM4	COM4 connector for RS-232 POS input device
LVDS1	2x15 LVDS connector
SPKR1	Speaker connector
SPKL1	Speaker connector
CONVERTER1	LED backlight inverter connector
SATA1	SATA Connector
SATA2	M.2 2280 M key
BAT1	Battery Connector
RTC1	Clear CMOS Contents
SO-DIMM2	DDR4 SO-DIMM
JLED1	LED Connector

TOP Side

SE-615W



Bottom Side Layout Content List

Connector/Jumper	Description	
JP1/2/4/5	USB Power Selection	
RTC1	Clear CMOS Contents	
JCOM1 / 2 / 3	COM 1~3 D-SUB PIN9 VOLTAGE SELECT	
PW1	Power Button Connector	
JLED1	LED Connector	

JP1/ JP2/ JP4/ JP5: USB Power Selection

123	Pin 1-2 Short/Closed	5VSB(Default)
	Pin 2-3 Short/Closed	5V

RTC1: Clear CMOS Contents

123	Pin 1-2 Short/Closed	Normal(Default)
	Pin 2-3 Short/Closed	Clear CMOS

System Default Settings

The following is the information on default settings for Touch Terminal serial ports.

Voltage Output De inition

SE-615E

Voltage Output	
Connector Item	Power Support
COM 1 for extension	5V / 12V Select by jumper
COM 2 for extension	5V / 12V Select by jumper
COM 3 for extension	5V / 12V Select by jumper
Cash Drawer	24V / 12V Select by jumper
DC Output	12V
USB 2.0	5VSB
USB 3.0	5VSB

COM Port Setting Definition SE-615E

Item	COM1	COM2	СОМЗ	СОМ4	COM5
I/O Address	3F8	2F8	3E8	2E8	338
IRQ Setting	IRQ4	IRQ3	IRQ5	IRQ6	IRQ7

Cash Drawer Setting Definition SE-615E

COM Port	I/O Address	Baud Rate	Open Command	Respond Command
COM5	338	9600	01h	02h

Chapter 4

BIOS Setup

4-1 SE-615E

Entering BIOS Setup

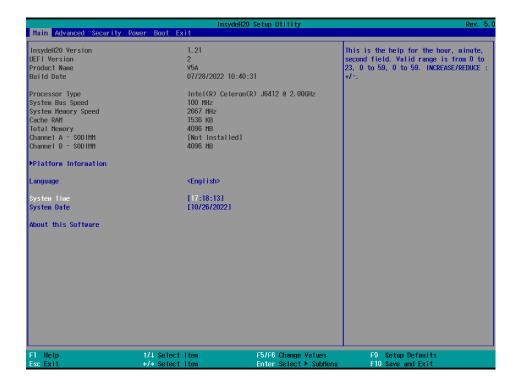
- 1. Connect an alphanumeric USB keyboard to the motherboard.
- 2. Apply power to the motherboard.
- 3. When the motherboard boots, press [F2] to display the BIOS Setup.
- 4. When the motherboard boots, press [F10] to display the Boot Menu.

Selecting Menu Options

- To select (highlight) options and menu screens, use the arrow keys.
- To select a submenu, use the [Enter] key.
- To exit from a submenu, use the [Esc] key.
- To change field values, use the [F5] and [F6] keys.
- To view help information on the possible selections for the highlighted item, select the [F1] key.
- To load optimal default, select the [Exit Menu] and do any of the following:
 - 1. Select [Load Optimal Default], and then press [Enter].
 - 2. Or, press [F9] and then press [Enter].
- To save the changes, select the [Exit Menu] and do any of the following:
 - 1. Select [Exit Saving Changes], and then press [Enter].
 - 2. Or, press [F10] and then press [Enter].

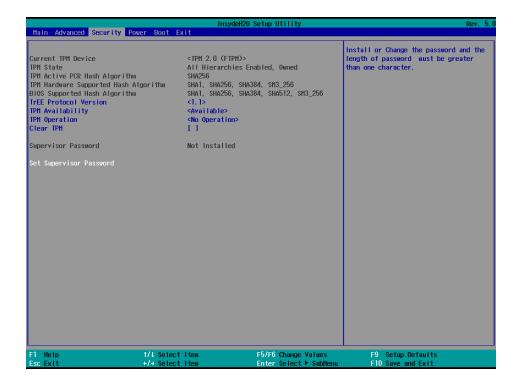
Main Tab

Under <Main>, select < System Time > or <System Date> to change the system date and time.

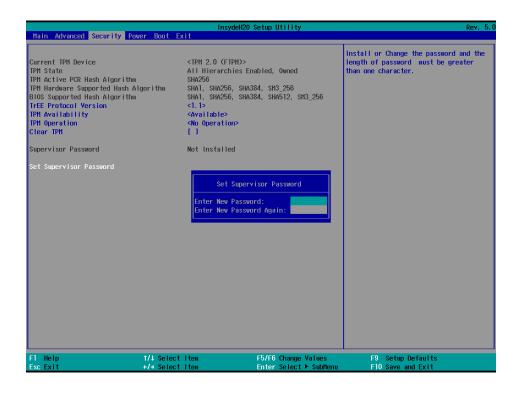


Security Tab for setting Supervisor Password

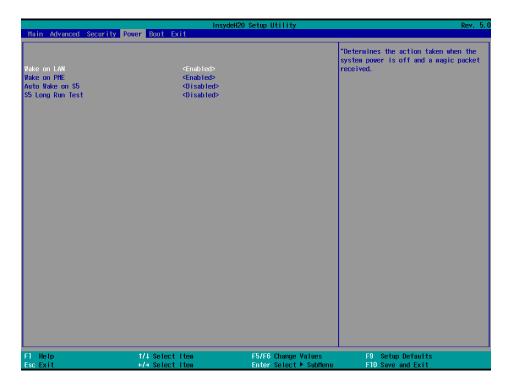
1. Select <Security> and then Set <Supervisor Password>.



2. Enter New Password and then Enter New Password Again and then select [YES].

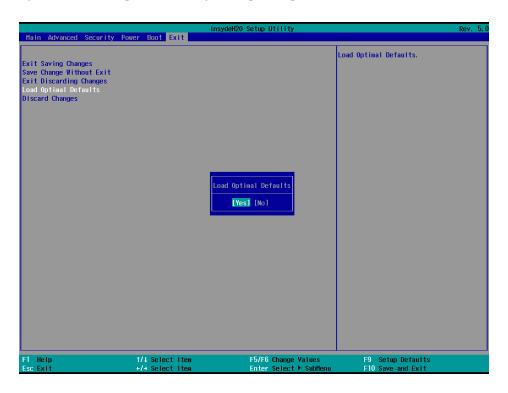


Power Tab

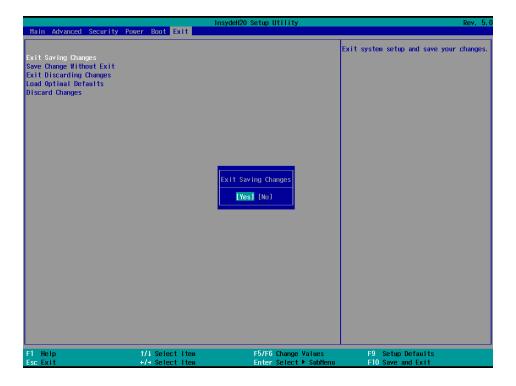


Save & Exit Tab

1. Select [Load Optimal Default], and then press [Enter].



2. Select [Exit Saving Changes], and then press [Enter].

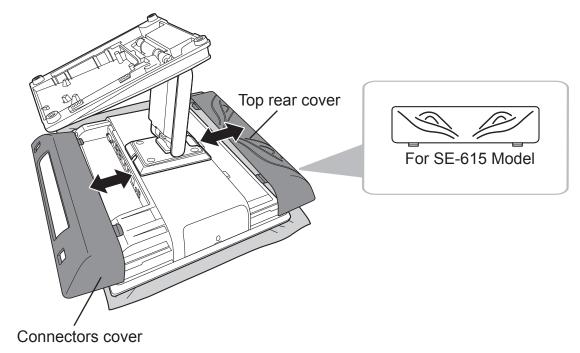


Chapter 5

Hardware Installation

Replacing the Rear Covers

- 1. Place the Touch Terminal on a soft and flat surface, with the LCD panel facing down.
- 2. Slide the top rear cover off the Touch Terminal.
- 3. Replace the top rear cover on the Touch Terminal.
- 4. Repeat steps 1 and 2 to replace the connectors cover.

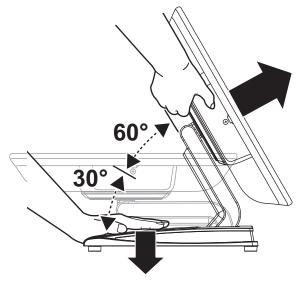


Adjusting the System Stand

CAUTION:

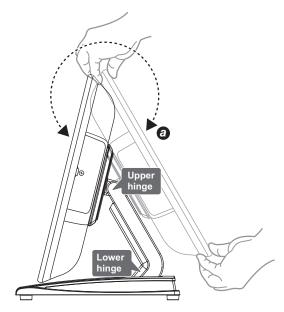
Never open the unit unless it is in the lowest horizontal position. Otherwise, system components may be damaged.

1. Support the stand firmly with one hand while pushing the back of the LCD panel backwards with the other hand.



NOTE:

- Carefully tilt the unit backwards, some force is required.
- Lift the head to the 1st detent where the screen will lock in the 30-degree position. Then the 2nd detent will lock in 60-degree position.
- 2. Flip the LCD panel around to face outward.



NOTE:

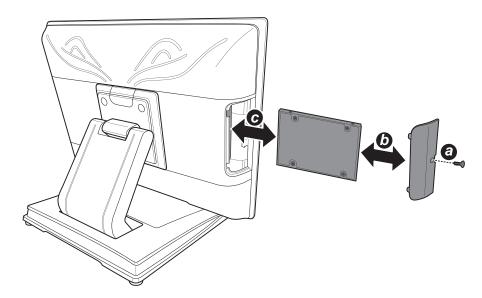
- Because the stand joints are tight, you might need to exert some force to maneuver the Terminal.
- Make sure always rotate around the head to the position "a" before adjusting the upper hinge.

Installing / Replacing the HDD

WARNING:

Be sure to turn off the power of the Touch Terminal before making any connection or disconnection.

- 1. Remove the screw from the HDD/identification reader compartment cover. (a)
- 2. Detach the HDD/identification reader compartment cover. (b)
- 3. Install the HDD into its compartment in the Touch Terminal, making sure the connectors are aligned correctly. (c)
- 4. Replace the HDD/identification reader compartment cover (b) and secure with the screw. (a)



Installing the Customer Display (Optional)

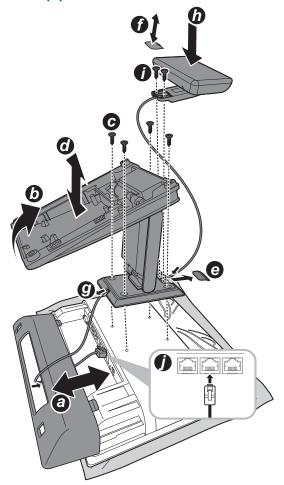
WARNING:

Be sure to turn off the power of the Touch Terminal before making any connection or disconnection.

- 1. Place the Touch Terminal on a soft and flat surface, with the LCD panel facing down.
- 2. Remove the connectors cover. (a)
- 3. Rotate the panel stand to access the screws securing the panel stand to the Touch Terminal. (b)
- 4. Remove the four screws securing the panel stand to the Touch Terminal. (c)
- 5. Detach the panel stand. (d)
- 6. Detach the VESA compartment cover. (e)
- 7. Detach the customer display compartment cover. (f)
- 8. Route the customer display cable through the cable compartment on the panel stand. (g)
- 9. Align and install the panel stand to the Touch Terminal. (d)
- 10. Secure the panel stand to the Touch Terminal with the four screws. (c)

HARDWARE INSTALLATION

- 11. Align and install the customer display into its slot on the panel stand. (h)
- 12. Secure the customer display to the Touch Terminal using the two screws. (i)
- 13. Replace the customer display compartment cover. (f)
- 14. Connect the customer display's interface cable to the corresponding port on the Touch Terminal. (j)
- 15. Replace the connectors cover. (a)

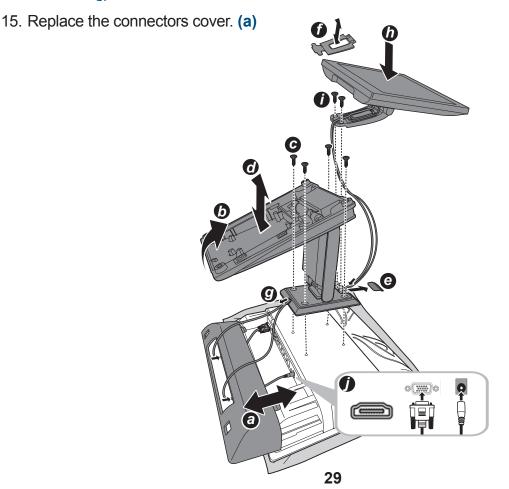


Installing the Secondary LCD Display (Optional)

WARNING:

Be sure to turn off the power of the Touch Terminal before making any connection or disconnection.

- 1. Place the Touch Terminal on a soft and flat surface, with the LCD panel facing down.
- 2. Remove the connectors cover. (a)
- 3. Rotate the panel stand to access the screws securing the panel stand to the Touch Terminal. (b)
- 4. Remove the four screws securing the panel stand to the Touch Terminal. (c)
- 5. Detach the panel stand. (d)
- 6. Detach the VESA compartment cover. (e)
- 7. Detach the secondary LCD display compartment cover. (f)
- 8. Route the secondary LCD display cable through the cable compartment on the panel stand. (g)
- 9. Align and install the panel stand to the Touch Terminal. (d)
- 10. Secure the panel stand to the Touch Terminal with the four screws. (c)
- 11. Align and install the secondary LCD display into its slot on the panel stand. (h)
- 12. Secure the secondary LCD display to the Touch Terminal with the two screws. (i)
- 13. Replace the secondary LCD display compartment cover. (f)
- 14. Connect the secondary LCD display's interface cable to the corresponding port on the Touch Terminal. (j)



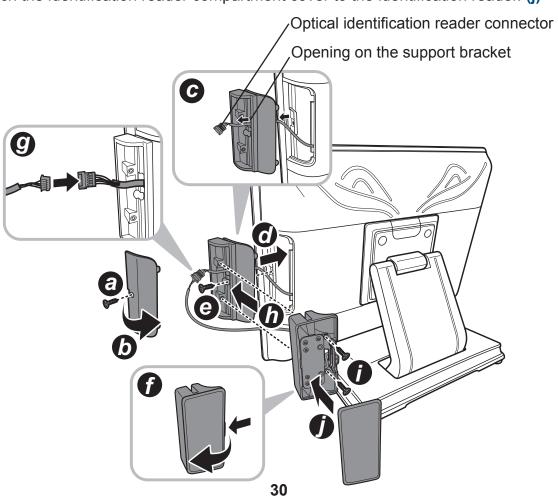
Installing the Identification Reader (MSR/iButton/Fingerprint/RFID/M+i) (Optional)

WARNING:

Be sure to turn off the power of the Touch Terminal before making any connection or disconnection.

NOTE:

- The identification reader can be installed on either side of the Touch Terminal.
- 1. Remove the screw securing the HDD/identification reader compartment cover to the Touch Terminal. (a)
- 2. Detach the HDD/identification reader compartment cover from the Touch Terminal. (b)
- 3. Route the optical identification reader connector through the opening on the support bracket. (c)
- 4. Align and install the support bracket to the Touch Terminal. (d)
- 5. Secure the support bracket to the Touch Terminal with the screw. (e)
- 6. Detach the identification reader compartment cover. (f)
- 7. Connect the identification reader connector with the optional identification reader connector. (g)
- 8. Align by the screw holes and then install the identification reader to the support bracket. (h)
- 9. Secure the identification reader to the support bracket with the two screws. (i)
- 10. Attach the identification reader compartment cover to the identification reader. (j)



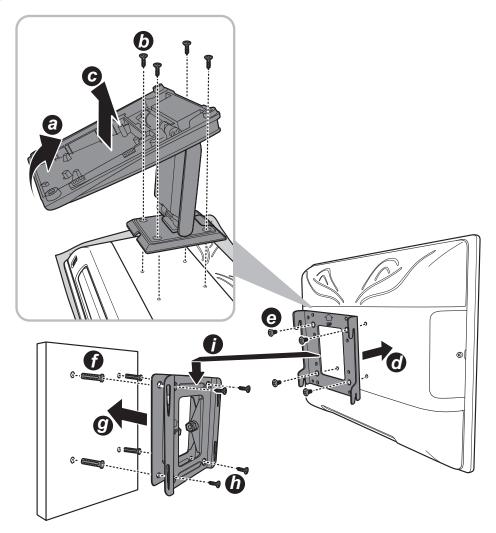
HARDWARE INSTALLATION

Identification Reader	Item Name
	Magnetic Stripe Reader (MSR)
	MSR + iButton Reader
(((•))) RFID	Radio-Frequency Identification Reader (RFID)
	Fingerprint Reader
	iButton Reader

Installing the VESA Mount (Optional)

NOTE:

- Use only wall mount kits approved by the manufacturer. Wall mount kits are sold separately.
- The Touch Terminal device is compatible with a VESA mounting hole pattern of 75x75mm.
- 1. Place the Touch Terminal on a soft and flat surface, with the LCD panel facing down.
- 2. Rotate the panel stand to access the screws securing the panel stand to the Touch Terminal. (a)
- 3. Remove the four screws securing the panel stand to the Touch Terminal. (b)
- 4. Remove the panel stand. (c)
- 5. Align and install the mount bracket on the back of the Touch Terminal. (d)
- 6. Secure the mount bracket to the Touch Terminal with the four screws. (e)
- 7. Drill four small holes on the mounting location and insert the plastic washers into the holes. (f)
- 8. Align by the screw holes and then install the wall bracket on the wall. (g)
- 9. Secure the wall bracket to the wall with the four supplied screws. (h)
- 10. Align and hook the Touch Terminal to the wall bracket, and then push down to secure it into place. (i)



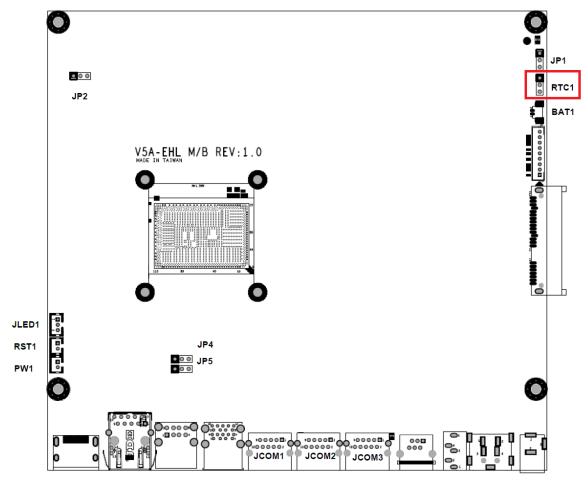
Chapter 6

Frequently Asked Questions (FAQ)

How do I clear CMOS? SE-615E

To clear CMOS, do the following:

- 1. Turn off power and pull out the power cord.
- 2. Insert the JP3 jumper cap to clear CMOS PIN and remove the jumper cap from clear CMOS PIN.
- 3. Switch on the power again.
- 4. Press <F2> to enter CMOS setting and load optimized defaults.



RTC1: Clear CMOS Contents

123	Pin 1-2 Short/Closed	Normal(Default)
	Pin 2-3 Short/Closed	Clear CMOS