



USER MANUAL

## **Elo Touch Solutions**

**15" X-Series Rev. A All-in-One Touchcomputer**

**17" X-Series Rev. A All-in-One Touchcomputer**

**SW602213 Rev. A**

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## Read this first

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Before using the X-Series All-In-One touchcomputer, read the important safety and handling information (this section), Safety & Maintenance (Chapter 6), Regulatory Notice (Chapter 7), and the Warranty Information (Chapter 8) chapters in this user manual.

This section provides guidance on the safe handling and use of your X-Series. Please read to understand all of the details.

### ENERGY STAR Support information



Your touchcomputer is ENERGY STAR<sup>®</sup> qualified. Elo is a partner in the Environmental Protection Agency's (EPA) ENERGY STAR<sup>®</sup> Program and has designed the computer to meet the latest ENERGY STAR<sup>®</sup> guidelines for energy efficiency.

Your touchcomputer ships with the power management options preset to a configuration that will provide the most stable operating environment and optimum system performance.

To conserve energy, your computer is set to dim the display after 5 minutes of inactivity, and enter the low-power Sleep mode which shuts down the system after 30 minutes of inactivity. We recommend that you leave this and other energy saving features active, so that your touchcomputer will operate at its maximum energy efficiency. You can wake the touchcomputer from Sleep mode by pressing the power button.

When considering additions to your business, purchase products that have earned the ENERGY STAR<sup>®</sup> for all your equipment needs, which can save your money, save energy, and help protect the climate.

Visit <http://www.energystar.gov> or <http://www.energystar.gov/powermanagement> for more information regarding the ENERGY STAR<sup>®</sup> Program.

### Important safety and handling information

To avoid personal injury, property damage, or accidental damage to your Elo X-Series (hereafter referred to as the X-Series), please read through all of the information provided in this section before using the X-Series.

For detailed operating instructions, refer to the X-Series User Manual (this publication).

### Protect your data and software:

Do not delete or change the name of files or directories that were not created by you; as this may prevent the X-Series software from operating properly.

Be aware that accessing network resources can render your X-Series vulnerable to computer viruses, hackers, spyware, and other malicious activities that might damage your X-Series, software, or data. It is your responsibility to ensure that your X-Series have adequate protection in the form of firewalls, antivirus software, and anti-spyware software and keep them up to date.

Keep electrical appliances such as an electric fan, radio, high-powered speakers, air conditioner, and microwave oven away from your X-Series because the strong magnetic fields generated by these appliances can damage the screen and the data on the X-Series.

### **Take precautions with plastic bags:**

The X-Series comes with plastic packaging material.

**DANGER: Plastic bags can be dangerous. Keep plastic bags away from babies and children to avoid danger of suffocation.**

# Chapter 1: Product Overview

This chapter provides an overview of the new Elo Touch Solutions X-Series, including the locations of the connectors and controls, X-Series features, accessories, specifications, and operating environment.

## Product Description

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The new Elo All-in-One Touchcomputers X-Series combines Elo Touch Solutions reliable performance with the latest developments in touchscreen technology and display design. This combination creates a natural flow of information between a user and the X-Series AiO Touchcomputers.

The Elo Touch Solutions X-Series provides a powerful, compact, configurable, touchcomputer in two screen sizes: 15-inch and 17-inch. These models are ruggedized and available with a choice of industry-leading Elo touch technologies: AccuTouch (“micro bezel” resistive) or IntelliTouch Plus (zero-bezel multi-touch surface acoustic wave), IntelliTouch (single-touch surface acoustic wave), IntelliTouch Pro (projective capacitive). This X-Series incorporates a 24-bit color, 1024x768 (15”), 1280X1024 (17”) LCD panel to provide superior display performance for displaying graphics and images and running applications. The X2 models are fan-less — well-suited for environments where noise may be an issue. The X3, X5, and X7 models with the 4<sup>th</sup> generation Intel Core-i3, i5 and i7 processors and HD4600 graphics are fan-cooled and deliver superior performance when needed.

The X-Series touchcomputers have a compact, stylish design, with a choice of configuration and customer- installable peripheral options as well as ease of serviceability. These models feature a powerful line-up of Intel processors, and support multiple memory and storage configurations. Optional accessories are also available for purchase from Elo Touch Solutions.

## Precautions

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Follow all warnings, precautions and maintenance tips as recommended in this user manual to maximize the life of your unit and prevent risks to user safety. See Chapter 6 for more information on safety.

This manual contains information that is important for the proper setup and maintenance of the X-Series All-in-One Touchcomputers. Before setting up and powering on your new X-Series, please read through this manual in detail seriously and carefully.

# X-Series Layout

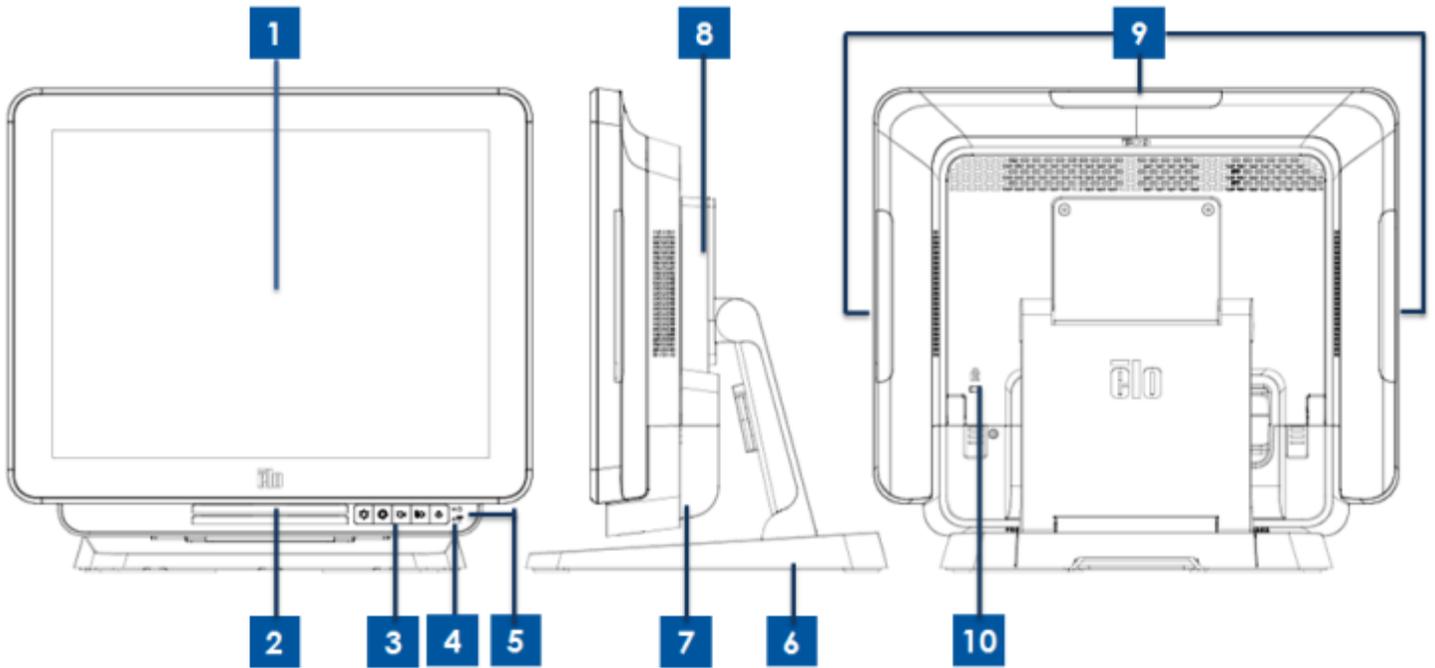


Figure 1. X-Series front view (left), clerk right side view (middle), and back view (right)

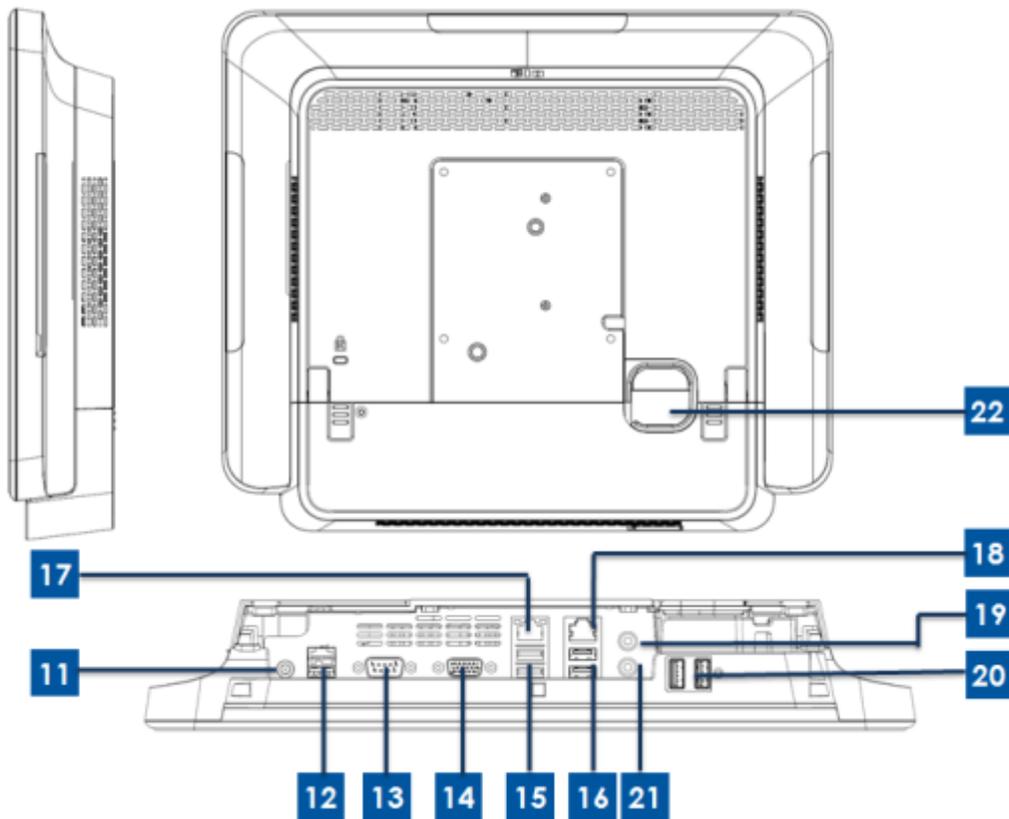


Figure 2. X-Series back view (up) and rear IO view (down)

1	Display w/Touch SRN	12	+24V Power USB Port (X3/X5/X7 only)
2	Speaker (built-in)	13	Serial Port (RS-232)
3	Front OSD Control Buttons	14	VGA Output (D-Sub)
4	Wireless indicator LED	15	USB 3.0 Port
5	Power indicator LED	16	USB 2.0 Port (X2/X3) USB 3.0 Port (X5/X7)
6	Stand Module	17	Ethernet LAN Port
7	Cable Cover	18	Serial Port (RJ-45)
8	Expansion Module (Optional)	19	Audio Port (Line-out)
9	Edge USB port (Accessory KITS)	20	Front USB Port
10	Kensington Lock	21	Microphone (built-in)
11	Power Connector (DC-IN)	22	Cable Exit Hole

## 1. Display w/Touch SRN

The main display with different touch screen solution is made by two different sizes, 15-inch and 17-inch. The touch technology is defined as below touch type for composition of the system.

- AccuTouch (“micro bezel” resistive).
- Intellitouch Plus (zero-bezel multi-touch surface acoustic wave).
- Intellitouch (single-touch surface acoustic wave).
- Intellitouch Pro (projective capacitive).

## 2. Speaker (built-in)

The integrated speaker provides audio output for video and music playback.

## 3. Front OSD Control Buttons

The front OSD control buttons provide the OSD functions control.

## 4. Wireless indicator LED

Flashes blue when the X-Series is connected to a Wi-Fi network and flashes blue when the X-Series Bluetooth is on.

## 5. Power indicator LED

The power indicator LED is to show the state of the touchcomputer. The table below shows LED state and corresponding colors.

## 6. Stand Module

The stand module is a strong design to support all 15-inch and 17-inch Elo All-In-One Touchcomputers.

## 7. Cable cover

Open the back cable cover to access the system IO function ports.

## **8. Expansion Module (Optional)**

The expansion module is an option kit for additional functions of X-Series. Pls reference the Expansion Module section for function description in detail below.

## **9. Edge USB Port (Accessory KITS - connection)**

The edge USB port is design for X-Series optional Accessory KITS; the accessory kits can be mounted and fixed at the edge for additional function requirement.

## **10. Kensington Lock**

Kensington Lock is a standard anti-theft device for X-Series to protect and keep the unit safe.

## **11. Power Connector (DC-IN)**

Plug the DC cable of the AC/DC power adapter kit into the power connector to power up the X-Series system.

## **12. +24V Power USB Port (X3 / X5 / X7 only)**

The +24V Power USB Port spec is design for X3/X5/X7 configuration only. The maximum power rating of the +24V Power USB would limit to 24V@2A specification.

## **13. Serial Port (RS-232)**

The serial port is a standard native RS-232 interface for connection.

## **14. VGA Output (D-Sub)**

The X-Series system has a VGA output (D-Sub) to support 2<sup>nd</sup> display monitor.

## **15. USB 3.0 Port**

The X-Series system has a two standard Super Speed USB 3.0 ports at rear IO side.

## **16. USB Port Configuration**

- Two USB 2.0 Ports for X2 / X3 system configuration only.
- Two USB 3.0 Ports for X5 / X7 system configuration only.

## **17. Ethernet LAN Port**

The Ethernet LAN Port has gigabyte speed capability for network of the X-Series.

## **18. Serial Port (RJ-45)**

The serial port is a native RS-232 specification for RJ-45 interface connection.

## 19. Audio port (Line-out)

The audio port is design for headphones (Line-out) can be connected to the X-Series system.

## 20. Front USB Port

The Front USB Ports are two standard USB 2.0 ports for user to easy access the USB function when user fact to the X-series system.

## 21. Microphone (built-in)

The microphone port is built-in design for user can be connected to the X-Series system.

## 22. Cable Exit Hole

The cable exit hole is design for cable routing when the cables connect to rear port for each function. It provides the good cable management experience for X-Series setup.

# X-Series Expansion Module (optional accessory) Layout

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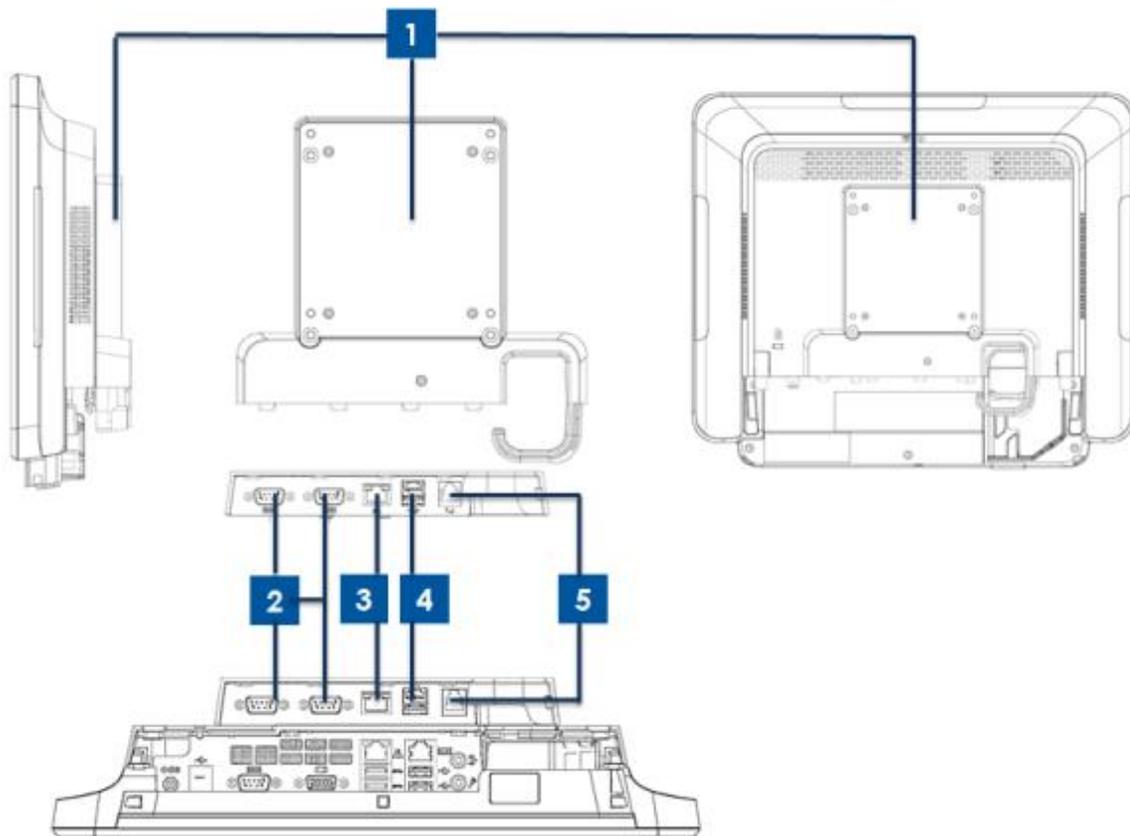


Figure 3. X-Series expansion module clerk right side view (Left), module IO port view (middle), and back view (right).

1	Expansion Module	4	+12V Power USB Port (Green)
2	Serial Port (RS-232)	5	Cash Drawer Port
3	Ethernet LAN Port		-

## 1. Expansion Module

The expansion module is an optional kit for X-Series touchcomputer. It is mounted to the center of the system back cover as a peripheral port for all X-Series system.

## 2. Serial Port (RS-232)

The serial port is a standard native RS-232 interface for connection.

## 3. Ethernet LAN Port

The Ethernet LAN Port has gigabyte speed capability for network of the X-Series.

## 4. +12V Power USB Port

The +12V Power USB Port spec is design for Expansion Module only. The maximum power rating of the +12V Power USB would be limited to 12V@2A specification.

## 5. Cash Drawer Port

The cash drawer port is a RJ-11 interface design and capable for +12V and +24V switchable support. The default setting is at +24V and user can change the setting in system BIOS menu.

# Chapter 2: Getting Started

## Unpacking the X-Series Touchcomputer

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To unpack the X-Series:

1. Open the box.
2. Check that the following items are present and in good condition:
  - X-Series system unit.
  - Quick Install Guide
  - AC/DC Power adapter.
  - Power cable for North America, Europe, and U.K.
  - Cable Cover Locking Screw.
3. Remove the protection bag/cover, desiccant packs, and other packaging materials appropriately. Please take extra caution to ensure they are not accessible by small children.
4. Press the power button to start using the X-Series.

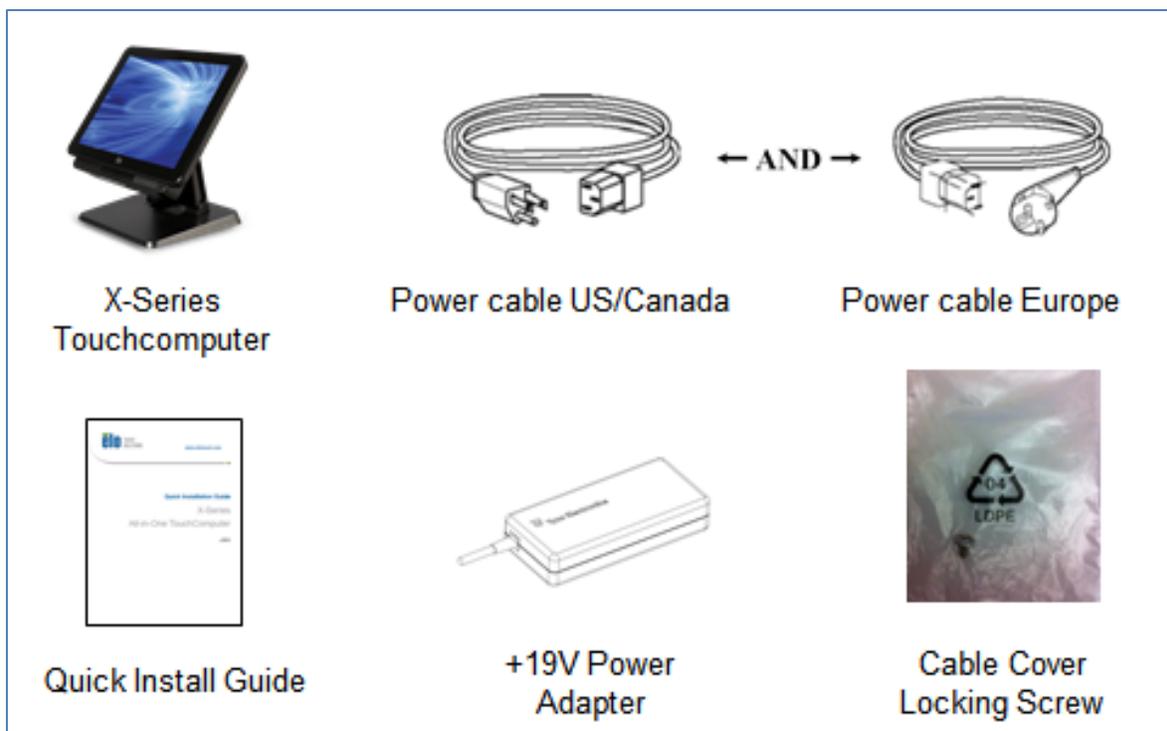


Figure 4. The X-Series system material package.

# Adjusting the X-Series Display Title

The X-Series all-in-one touchcomputer has two title positions for different scenario to use. It can through the two screws of the stand bottom to adjust the low and high position. The title adjust is shown as below.

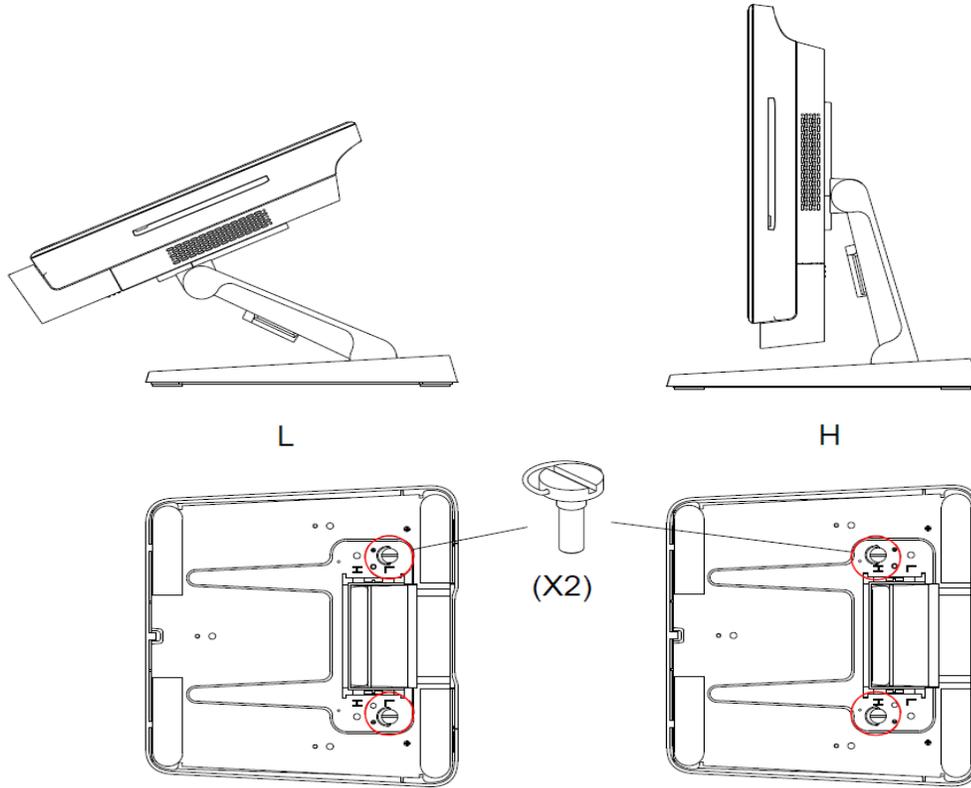
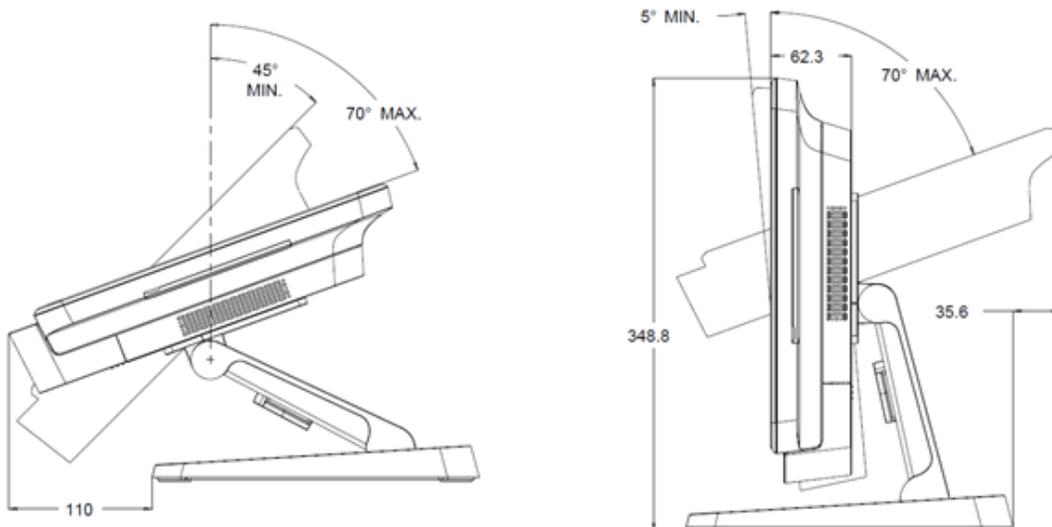
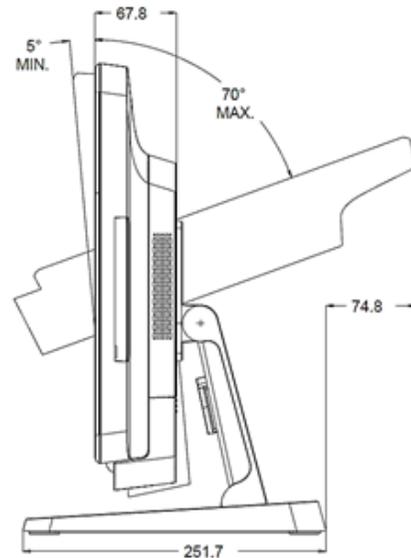
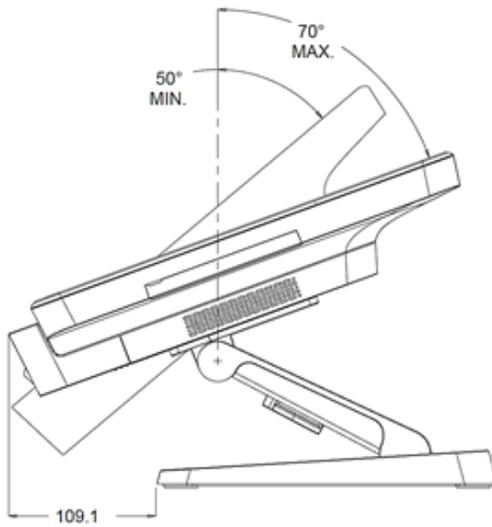


Figure 5. X-Series display angle in low and high position.

- **X-Series 15-inch Display Title Adjustment.**



- **X-Series 17-inch Display Title Adjustment.**



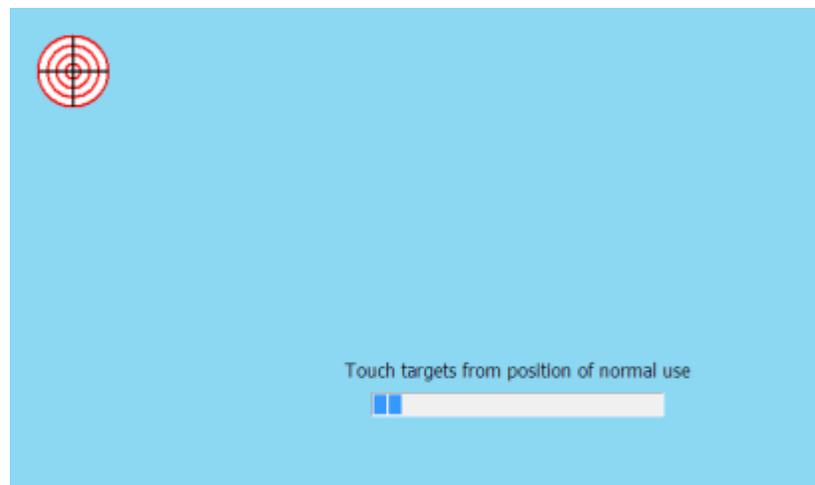
## Touchscreen Calibrating

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The touchscreen is pre-calibrated for accurate touch response.

If for any reason the touchscreen needs to be recalibrated, double-click the Elo Alignment shortcut on the system desktop (for Windows 7)

This launches the calibration program. The window shown below opens. Follow the instructions to calibrate the touchscreen.



**Note: X-Series IntelliTouch Pro (projective capacitive) models are fully HID compliant so they do not need to be calibrated and configured. Therefore, EloConfig tool does not support X-Series IntelliTouch Pro technology.**

# Chapter 3: Operation

## General Information

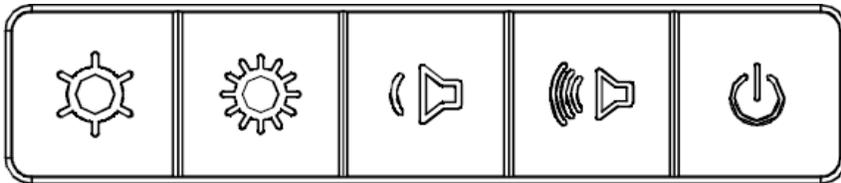
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This chapter describes how to utilize the front OSD control buttons, I/O panel, and other unique features that Elo All-in-One Touchcomputer provide.

All adjustments made to the brightness and volume controls are automatically saved. User settings remain unchanged after powering off/on or in the case of a power failure.

## Front OSD Control Buttons

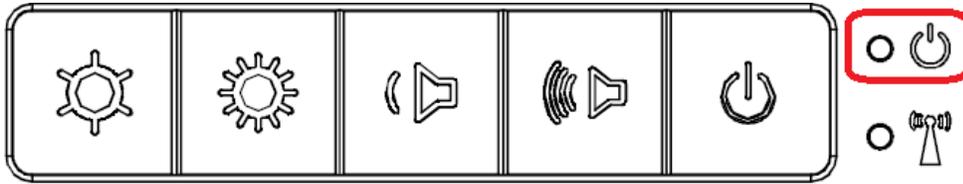
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The control buttons provide the following functions (from left to right).

Feature	Description
Brightness -	Decrease brightness
Brightness +	Increase brightness
Volume -	Decrease speaker volume
Volume +	Increase speaker volume
Power	Power on/off the system
Control Button Locking	To Lock, press “Brightness +” and “Brightness -” buttons together for 3 seconds. To unlock, perform the same procedure for another 3 seconds

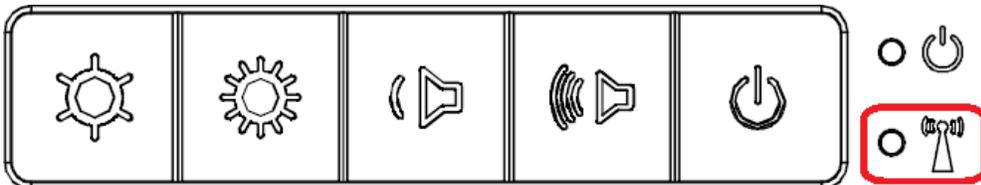
## L.E.D. Functionality – POWER LED



The X-Series has a Power LED indicating the state of the touchcomputer. The table below shows LED state and corresponding color.

LED Color to Observer	State
Off	No input power — Off mode
Red	Input power present — Off mode or hibernation
Orange	Input power present — Standby
Green	Input power present — Power On

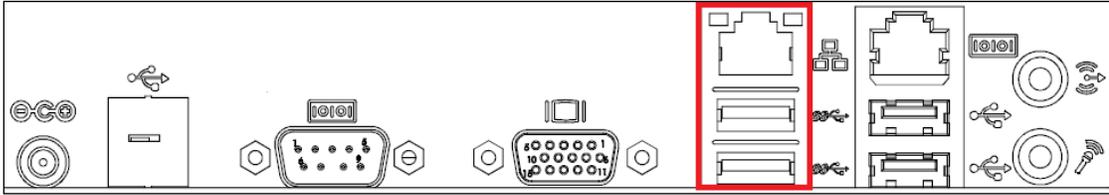
## L.E.D. Functionality – Wireless LAN LED



The X-Series has a Wireless LAN LED indicating the wireless status connection of the touchcomputer. The table below shows Wireless LAN LED state and corresponding color.

Wireless State	Wireless LED Status
ON	Blue
OFF	NA

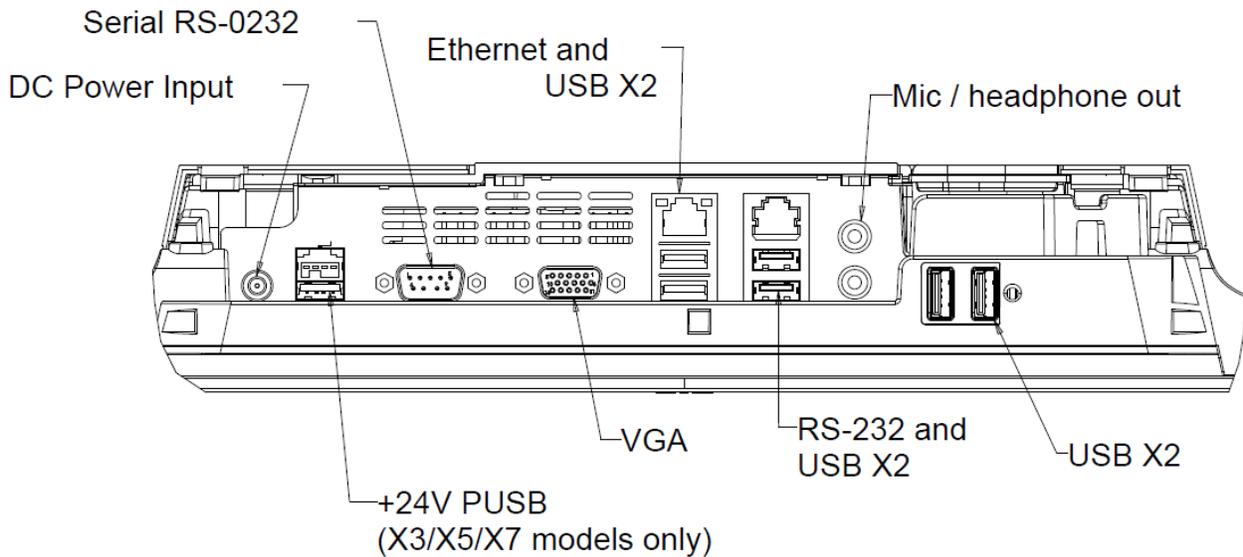
# L.E.D. Functionality – Ethernet LAN LED



LAN Speed State	LAN LED Status
10Mbps	No Color
100Mbps	Orange Color
1Gbps	Green Color
Activity State	ACT LED Status
No Link	No Color
Linked	Solid (Green Color)
Data Activity	Blinking (Green Color)

## Using the Input/output Panel

To access the input/output (I/O) ports, remove the cable cover at the bottom of the unit. A security screw is included and may be used to secure the cable cover to the touchcomputer. Below are the I/O descriptions by model:



X-SERIES (15" / 17") I/O

**Note:** As a safety precaution, always leave the cable cover door attached when the system is powered on.

## Setting Up the Operating System

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If configured with an operating system, the initial setup of the operating system takes approximately 5-10 minutes. Additional time may be needed depending on touchcomputer hardware configurations and connected devices.

To set up the Microsoft® Windows® Operating System for the touchcomputer, turn on the touchcomputer by pressing the power button, and then follow the on-screen instructions.

## Injecting a new language

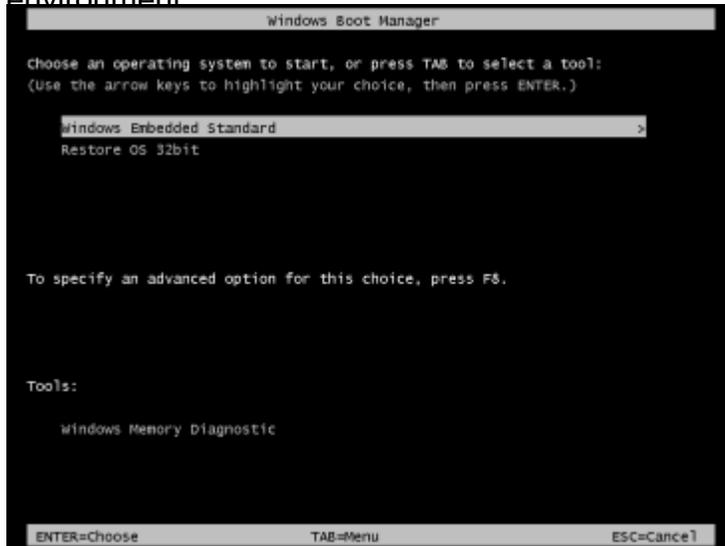
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Windows only allows the use of only one language at one time. But you can use the Elo Touch Solutions language injection feature to modify your language preference. English is set as the default language, but you can change this language to suit your preferences.

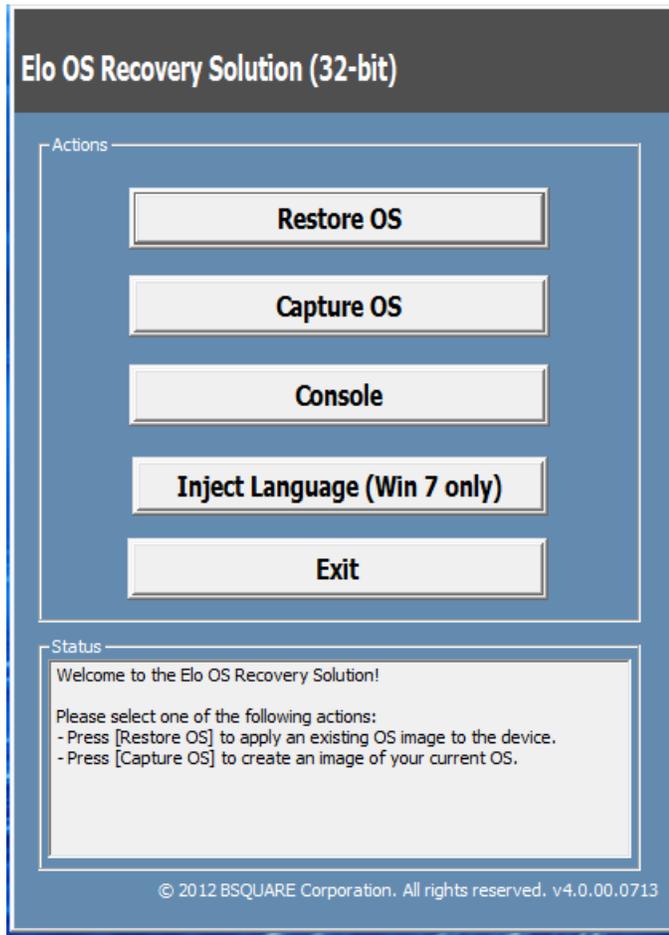
1. Power off your system completely.
2. Power on your system.
3. After the Elo splash screen (shown below), press “↑” or “↓” repeatedly to pause on Windows Boot Manager.



4. Select either **Restore OS 32bit** or **Restore OS 64bit** depending on your OS environment



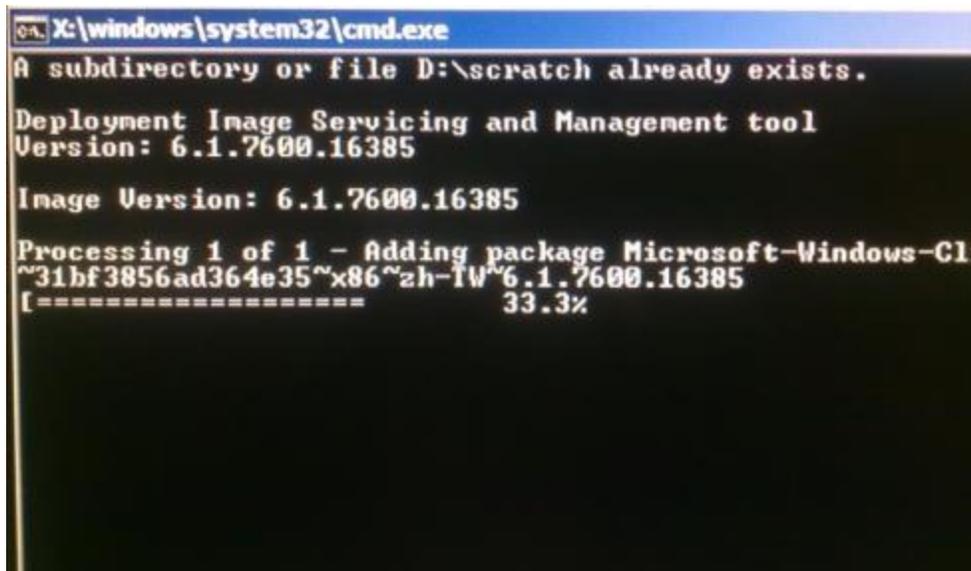
5. The following User Interface (UI) will be presented:



6. Select **Inject Language** and the following UI will be presented.



7. Click the drop-down list and select the preference language.
8. Click **Inject Selected Language**
9. While the injecting process is performing, **DO NOT** use your keyboard or mouse during this time. It may cause an error in the language injection process.



10. After the language package is installed correctly, press any key to exit the window.
11. You should see the new injected language in both **“Selected Language”** and **“Injected Language”**.

12. Click **Cancel** → **Exit**. The system will reboot and new language UI should be presented when the system enters the Desktop.

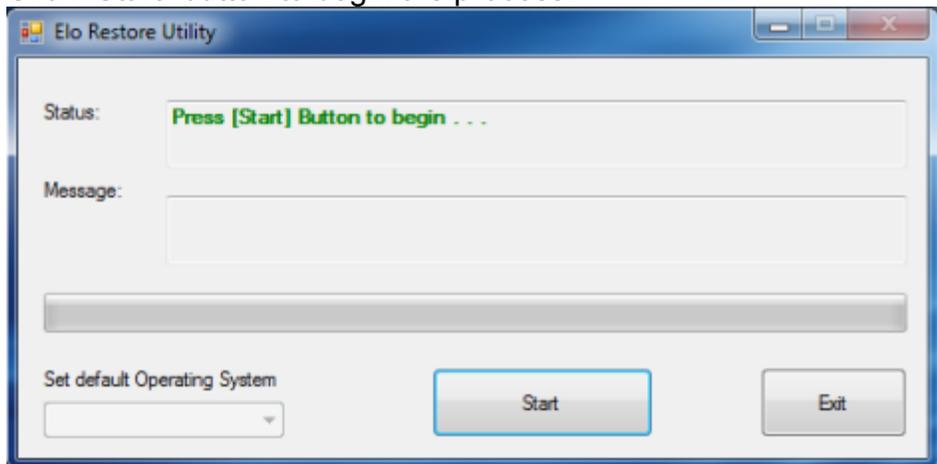
## Creating the Recovery Flash Drive

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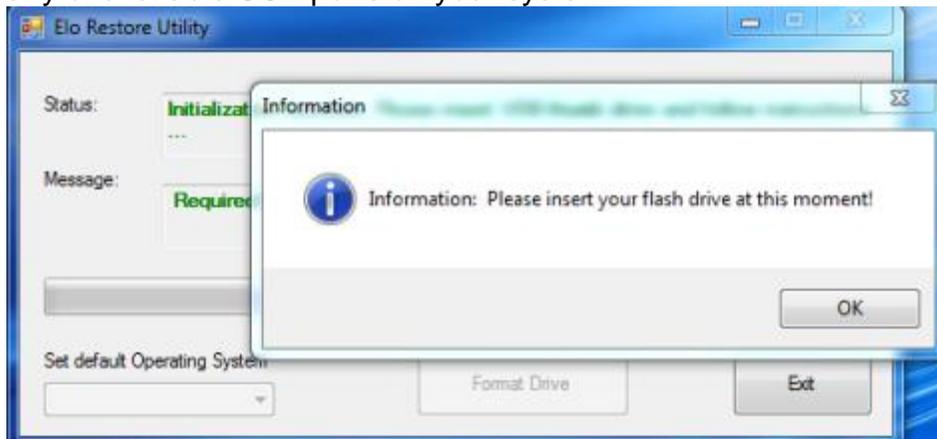
All POSReady 7 and Windows 8.1 touchcomputers come with the built-in Elo Restore Utility on the Windows Desktop. The utility is able to create a recovery flash drive based on the operating system you purchased. **Please create your recovery flash drive immediately.** In the event the HDD/SSD recovery partition is accidentally deleted or becomes inaccessible, you will need to use the recovery flash drive to recover your system.

The following procedures demonstrate how to use the utility to create a recovery flash drive.

1. Right-click the EloRestoreUtility icon on the Desktop and select “**Run as administrator**”.
2. Click “Start” button to begin the process.

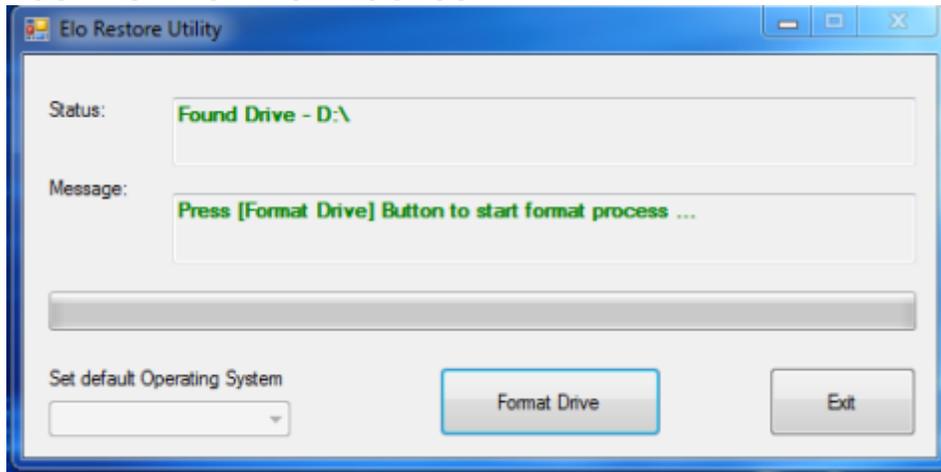


3. Once completed, you shall see a pop-up window to ask to insert a blank flash drive to any of available USB ports on your system.

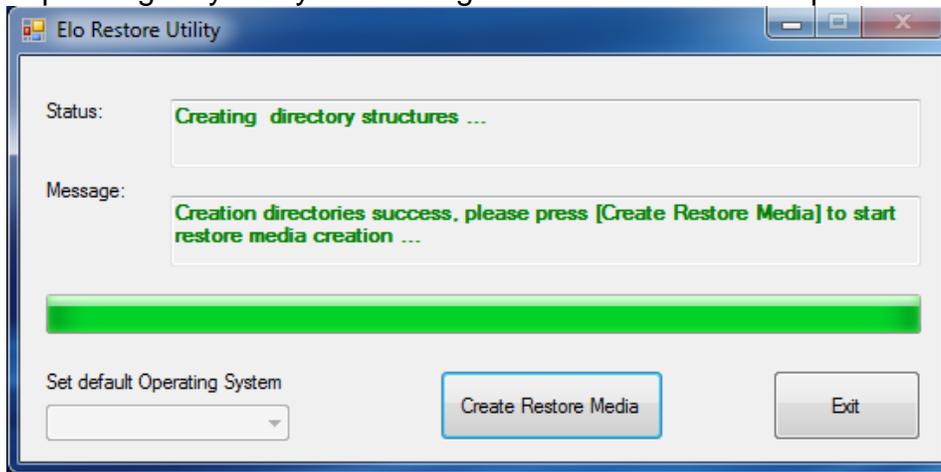


4. After the flash drive is inserted, you shall see a window as shown below. Click “Format Drive” to continue the process. **PLEASE NOTE THAT ALL DATA WILL BE**

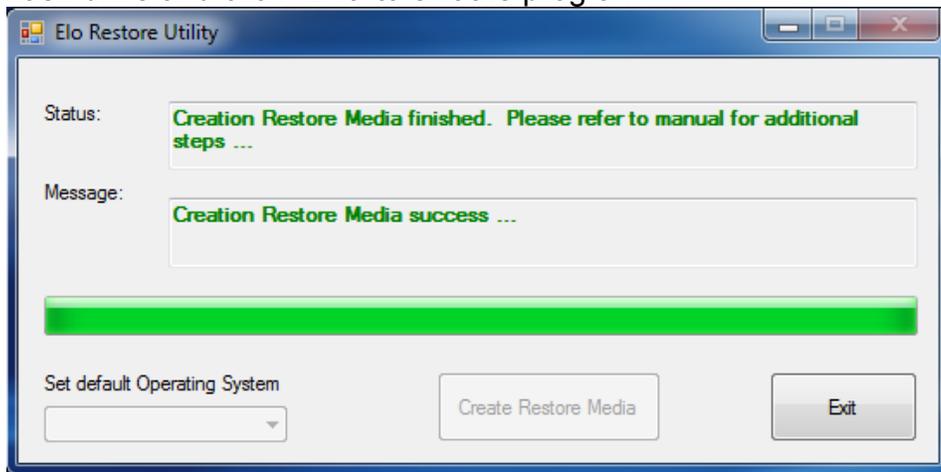
## LOST DURING THIS PROCESS.



5. Click “Create Restore Media” to proceed. This step will take 10-20 minutes depending on your system configurations and flash drive performance.

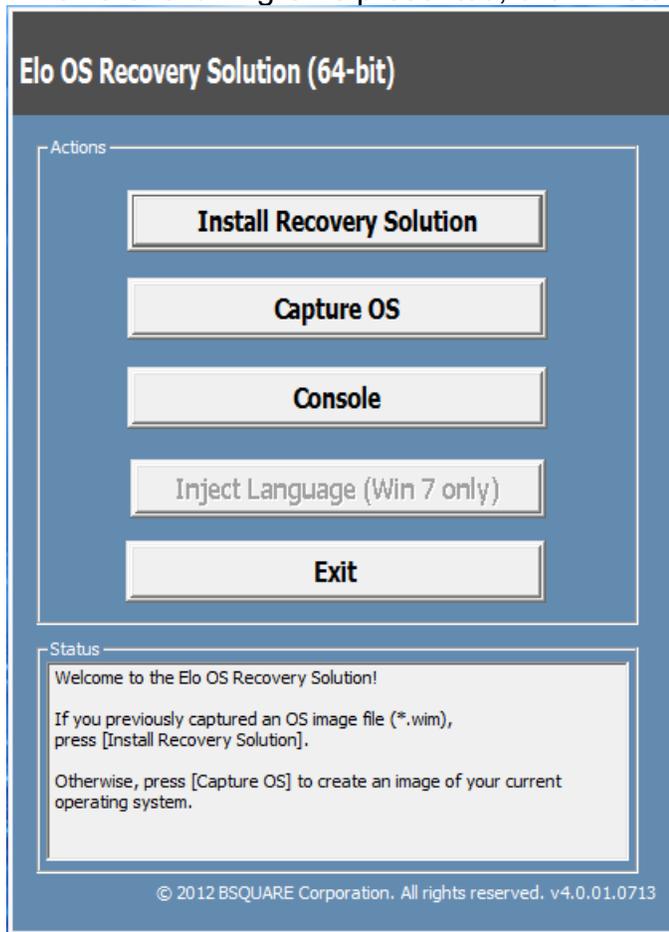


6. Once the message says “Creation Restore Media success...”, please remove the flash drive and click “Exit” to exit the program.



7. In case the system is crashed and you have to use the recovery flash drive, reboot the system and press **F11** several times to enter **Device Boot Menu**. Then, choose boot from flash drive.

8. When the following UI is presented, click “Install Recovery Solution” button.



9. Follow the on-screen instructions to complete the installation process and then exit the program.

Note: All data is deleted during the recovery process. The user must back up files when necessary. Elo Touch Solutions does not accept liability for lost data or software.

*Note: The end user must adhere to Microsoft's Licensing Agreement*

# Recovering the Operating System

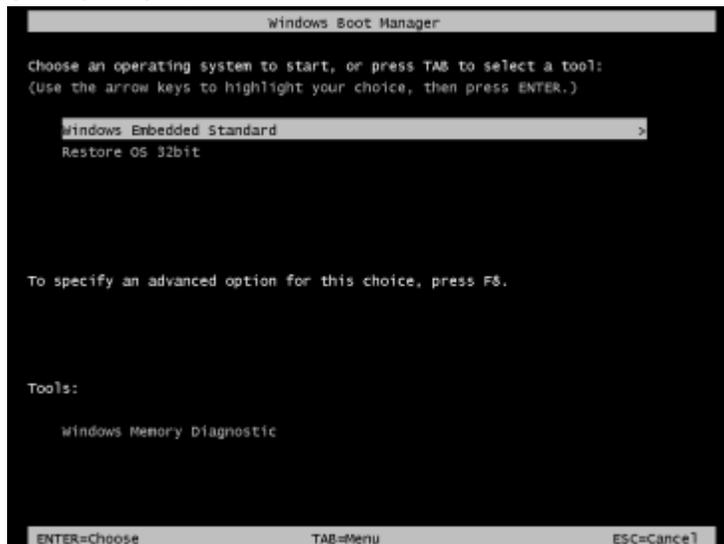
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If for any reason the touchcomputer's operating system needs to be recovered TO FACTORY SETTINGS, you can recover your system by following procedures below. **PLEASE NOTE THAT ALL CUSTOMER SETTINGS AND DATA WILL BE LOST DURING THIS PROCESS.** Please be sure to completely backup all of your data, settings, and customer-installed software before proceeding.

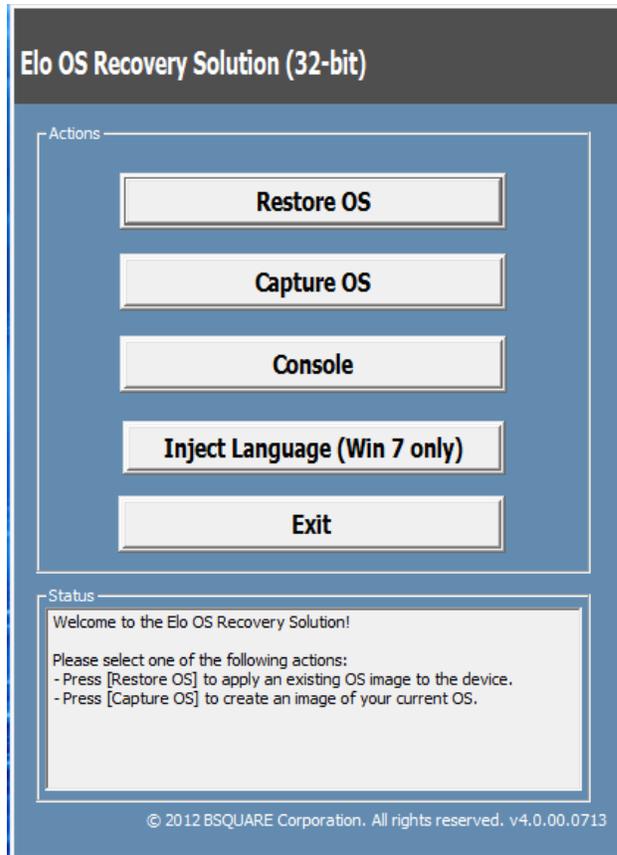
1. Power off your system completely.
2. Power on your system.
3. After the Elo splash screen (shown below), press “↑” or “↓” repeatedly to pause on Windows Boot Manager.



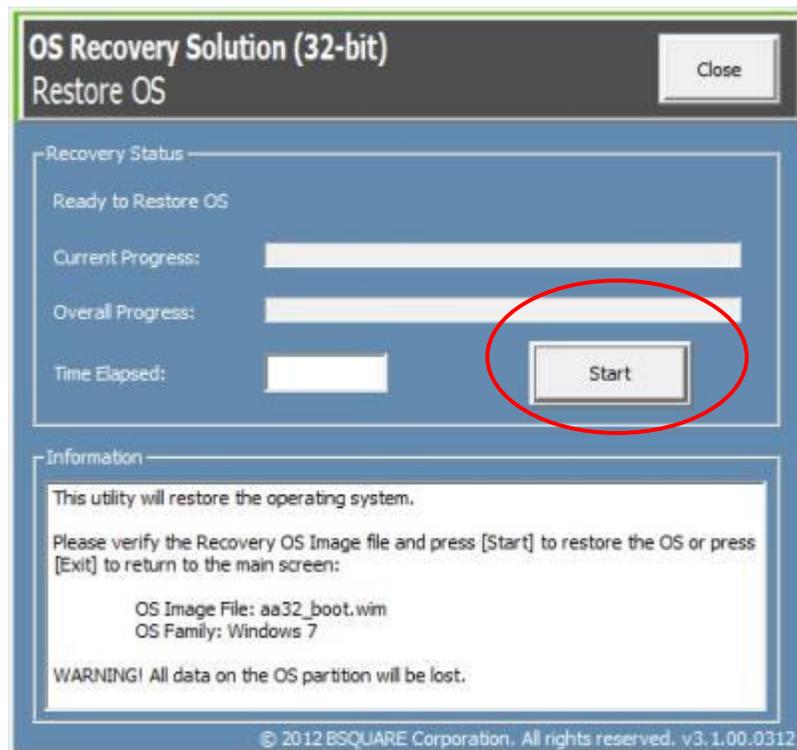
4. Select either **Restore OS 32bit** or **Restore OS 64bit** depending on your OS environment.



5. The following User Interface (UI) will be presented:



6. Select **Restore OS**. System will test your hardware automatically. Once the process completes, click **Start** button to perform the system recovery function.



7. The following process will reformat the primary hard drive. **Please back up your data before performing the recovery process.**



8. Once completed, click the **Close** button. The system will return to the main menu of the Elo Recovery Solution. Then click the **Exit** button to restart your system.

**NOTE:** All data is deleted during the recovery process. The user must back up files when necessary. Elo Touch Solutions does not accept liability for lost data or software.

**NOTE:** The end user must adhere to Microsoft's Licensing Agreement.

# Chapter 4: Options and Upgrades

## Adding Optional Upgrades

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The X-Series had quality below optional upgrades material for different or additional requirement to the system unit. To add the optional upgrades, the complete installation and setup instructions are provided with the field-installable kits.

- 320GB 5400rpm Hard Disk Drive (HDD)
- 500GB 7200rpm Hard Disk Drive (HDD)
- 1TGB 5400rpm Hard Disk Drive (HDD)
- 64GB 2.5" SATA SSD
- 128GB 2.5" SATA SSD
- 2GB DDR3L Memory SO-DIMM
- 4GB DDR3L Memory SO-DIMM
- 8GB DDR3L Memory SO-DIMM

## Optional Peripherals KITS

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The following optional accessories and spare parts are available for purchase from Elo Touch Solutions. Shown in parenthesis is the Elo orderable part number.

- **Biometric Fingerprint Reader KIT (E001001)**
  - Fingerprint reader with USB interface for all X-Series configurations.
- **Magnetic Stripe Reader KIT (E001002)**
  - MSR with USB interface for all X-Series configurations.
- **Rear-Facing Customer Display KIT (E001003)**
  - The vacuum fluorescent display with USB interface for all X-Series configurations.
- **Near Field Communication KIT (E001004)**
  - NFC reader with USB interface for all X-Series configurations.
- **7-Inch LCD Second Display KIT (E807955)**
  - ET-0700L: 7-Inch Rear-facing LCD customer display with USB interface for all X-Series configurations.
- **Expansion Module KIT (E001006)**
  - The expansion module is an optional kit for X-Series touchcomputer. It is mounted to the center of the system back cover as a peripheral port for all X-Series configurations.

- **POLE MOUNT STAND KIT (E038989)**
  - The Pole Mount Stand support 7”~15” customer display and different portable devices w/VSESA mount (75x75mm) spec.
- **WALL MOUNT KIT (E143088)**
  - The WALL MOUNT KIT is design for system can be mounted at wall through two mental frames.
- **Barcode Scanner Reader KIT (E093433)**
  - The Barcode Scanner Reader KIT is design with USB interface for all X-Series configurations.

## Biometric Fingerprint Reader KIT (E001001)

---

You can add a fingerprint reader to the X-Series touchcomputer to any of the three mounting locations located on the display head top, left, and right. Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

C:\EloTouchSolutions\Peripherals

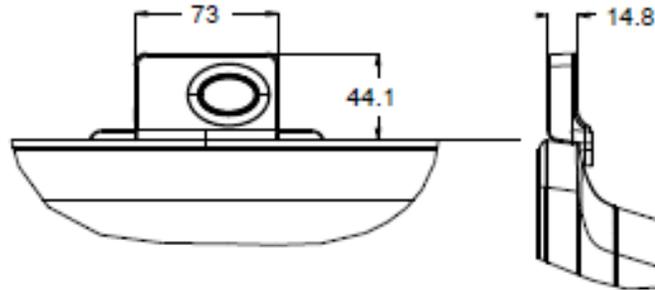
The fingerprint reader is powered by the USB bus. The reader optically scans the fingerprint when the user touches the glowing window. Optical technology gives the highest quality fingerprint scans and reliability.

Fingerprint reader specifications are shown in the table below.

Feature	Spec Description
Power supply	5.0VDC +/- 5%
Power consumption	< 1.0 W
Current draw – scanning mode	< 100 mA
Current draw – idle mode	< 120 mA
Current draw – suspend mode	< 0.5 mA
Image resolution	Up to 512 dpi or higher resolution.
Image color	8-bit grayscale (256 levels of gray)
Scan capture size	14.6mm (nominal width) x 18.1mm (nominal length)
Image capture speed	100 ms or higher.
Interface type	USB 2.0 (Compatible with 1.0 / 1.1)
Operating temperature	0 to 40°C
Storage temperature	-10 to 60°C
ESD Susceptibility	>15KV.

# FPR allocation on X-Series

FINGER PRINT READER,  
P/N E001001



## Testing the FPR

1. Double-click the **Fingerprint Reader Test** icon to start the test application.
2. Place your finger on the fingerprint reader sensor and verify that the image of your fingerprint is displayed on the application window.



# Magnetic Stripe Reader KIT (E001002)

---

You can add a magnetic stripe reader (MSR) to the X-Series touchcomputer to any of the three mounting locations located on the display head top, left, and right. Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

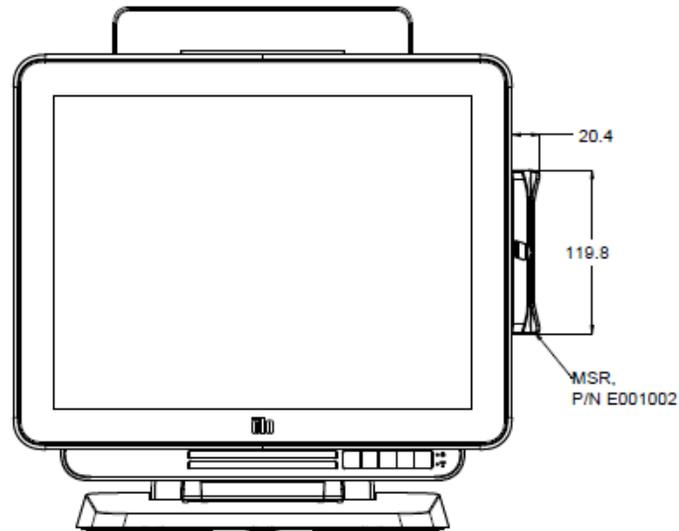
C:\EloTouchSolutions\Peripherals

The MSR is a USB 2.0 device that reads all three data stripes on standard credit cards or driver's licenses conforming to ISO/ANSI standards. The MSR has foreign language capability. The credit card is read by sliding the credit card forward or backward through the MSR, stripe side toward the display. The MSR is powered from the USB port; no external power is needed

The MSR specifications are shown in below table.

Feature	Spec Description
Swipe Speed	4~60 ips (10.1~152.4 cm/sec), Bi-direction
Card Width	0.025 ~0.035 inches
Number of Tracks	3 Tracks
Encryption	Triple DES encryption Device & Host Authentication Tokenization
Power supply	5.0VDC +/- 0.25V
Power consumption	< 2.0 W
Current draw	< 40 mA
Current draw - Suspend mode	< 500 uA
Interface type	Compatible with USB, HID specification
Encrypts security	Level 2
Operating temperature	-20°C to 80°C
Encoded data compliance	ANSI/ISO/AAMVA standards
Reliability	> 1000K times swipes

# MSR allocation on X-Series



## Testing the MSR

### Testing in USB MSR Keyboard (KB) Emulation Mode

1. Open the Notepad application (click **Start > Accessories > Notepad**).
2. Slide the card through the MSR and verify that the data is displayed in the application window.



### Testing in USB MSR Human Interface Device (HID) Mode

1. Double-click the **MagSwipe HID Demo** icon to start the test application.



2. Slide a card through the MSR and verify that the data is displayed in the application window.



3. If the card ID appears in the Reader Output window, the reader is functioning.

## Rear-Facing Customer Display KIT (E001003)

You can optionally add a customer display to the X-Series touchcomputer to any of the three mounting locations located on the display head top, left, and right of the touchcomputer. Software application and drivers can be found in the following directory or on [www.elotouch.com](http://www.elotouch.com)

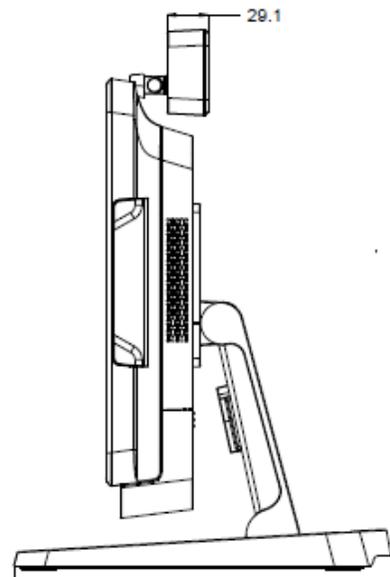
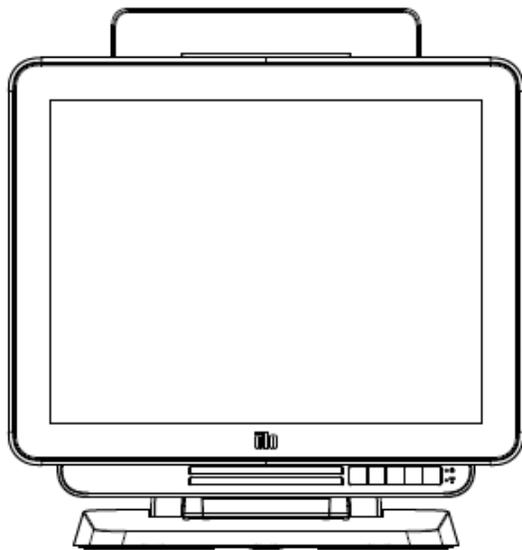
C:\EloTouchSolutions\Peripherals

The Rear-Facing customer display is a USB 2.0 device and compatible design for X-Series all configurations. The display KIT is powered by the USB port; no external power is needed.

The Rear-Facing customer display specifications are shown in below table.

Feature	Spec Description
Display Type	Vacuum Fluorescent Display (VFD)
Display Color	Blue Green
Character font	5 x 7 dot matrix, cursor
Character Size	9.2(W) x 5.5(H) mm
Character Number	20 x 2
Character Type	95 Alphanumeric & 32 International Characters
Dot Size	0.86 x 1.2 mm
Brightness	500~1000 cd/m2
Viewing Angle	Max. 90°
Panel Dimension	220(W) x 50(D) x87(H) mm
Power supply	5.0VDC +/- 0.25V
Power consumption	< 2.0 W
Current draw	< 400 mA
Interface type	USB interface
Operating temperature	0 to 40°C
Reliability/MTBF	30,000 Hours

## Rear-Facing Customer Display allocation on X-Series



## Near Field Communication KIT (E001004)

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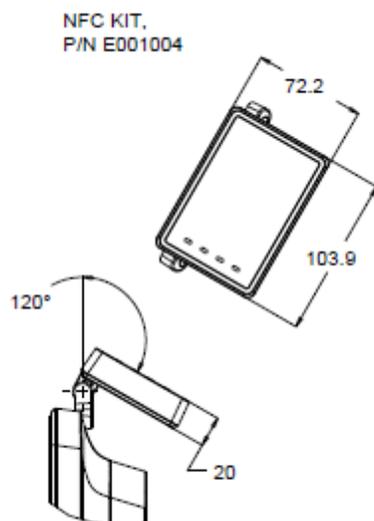
You can optionally add a NFC KIT to the X-Series touchcomputer to any of the three mounting locations located on the display head top, left, and right of the touchcomputer

The NFC KIT is a USB 2.0 device and compatible design for X-Series all configurations. The NFC KIT is powered by the USB port; no external power is needed.

The NFC KIT specifications are shown in below table.

Feature	Spec Description
Standards	ISO 14443 TYPE A and B compliant ISO 18092 compliant
Encryption	Encrypted card data (AES or Triple DES) DUKPT key management with more than 2M keys (model selectable) Authentication with RSA 2048 bit key
Payment applications	American Express ExpressPay Discover ZIP MasterCard PayPass/MCHIP Visa MSD/qVSDC Google wallet (optional) Apple Pay
Contact smart card	Contactless communication at 13.56MHz Supports 2-SAM or 4-SAM board (optional)
Antennas	Build-in direct matching antenna Remote 50 ohm matching antenna (optional)
Interface type	USB2.0 compliant / HID support Standard RS-232 signal level
Power supply	5.0VDC +/- 0.25V
Power consumption	< 330mA (idle mode) < 430mA (operation mode)
Temperature	-20°C to 70°C (Operating) -30°C to 70°C (Storage)
Humidity	10 to 85% (Operating) 10 to 90% (Storage)

## NFC KIT allocation on X-Series



## 7-Inch LCD Second Display KIT (E807955)

You can optionally add a customer display to the X-Series touchcomputer to the back of the touchcomputer. Software application and drivers can be found in the package or on [www.elotouch.com](http://www.elotouch.com)

Note: Requires POLE MOUNT KIT for hold up the second display kit. (Part number E038989).

Feature	Description
Display type	7" diagonal, Active matrix TFT LCD
Aspect Ratio	16x9 Widescreen
Useful Screen Area	<b>Horizontal:</b> 6.0" (154mm) <b>Vertical:</b> 3.4" (87mm)
Brightness	160-180 nits
Colors	16.7 million
Contrast Ratio	500:1
Viewing Angle (typical)	<b>Horizontal:</b> ±70° or 140° total <b>Vertical:</b> -60°/+50° or 100° total
Interface	USB
Part Number	No touch (E807955)

# Expansion Module KIT (E001006)

You can optionally add an expansion module kit to the center of the X-Series touchcomputer to back cover as a peripheral part for all X-Series configurations.

The Expansion Module KIT specifications are shown in below table.

Feature	Spec Description
Serial Port 1	Native RS-232
Serial Port 2	Native RS-232
Ethernet Port	Giga LAN (1G/100MB/10MB)
Power USB Port	+12V Powered USB
Cash Drawer Port	+24/+12V RJ-11 Cash Drawer (switchable by BIOS)
Operating temperature	0 to 40°C
Reliability/MTBF	50,000 Hours

## Expansion Module allocation on X-Series

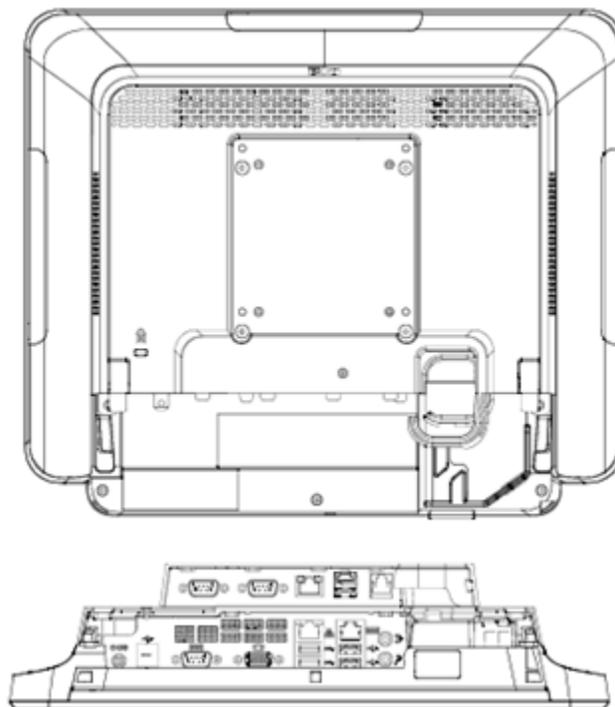


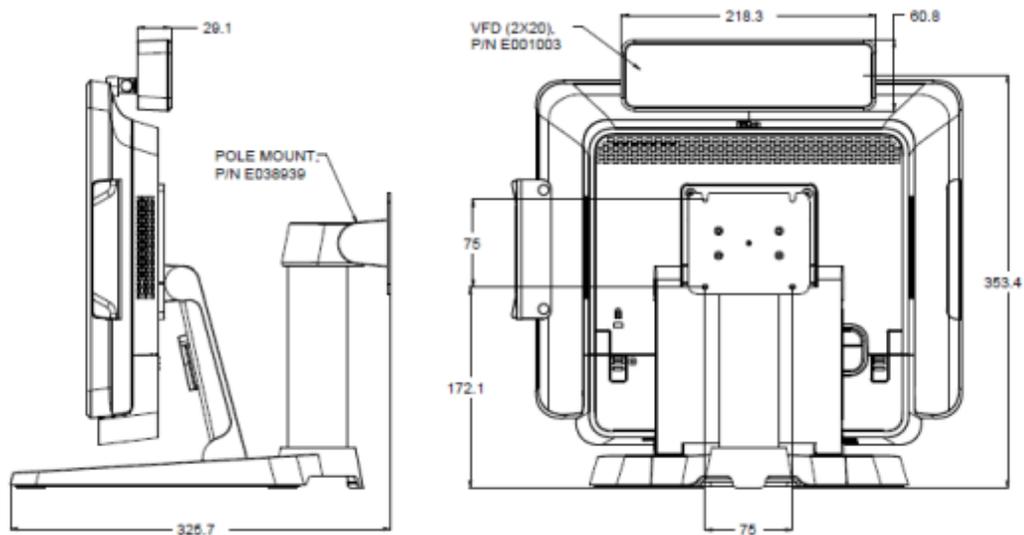


Figure 10-8-1

## POLE MOUNT STAND KIT (E038989)

You can optionally add a POLE MOUNT STAND KIT to combine with stand module of the X-Series touchcomputer for all X-Series configurations. The POLE MOUNT STAND KIT is able to support 7"~15" customer displays and different kinds of portable devices.

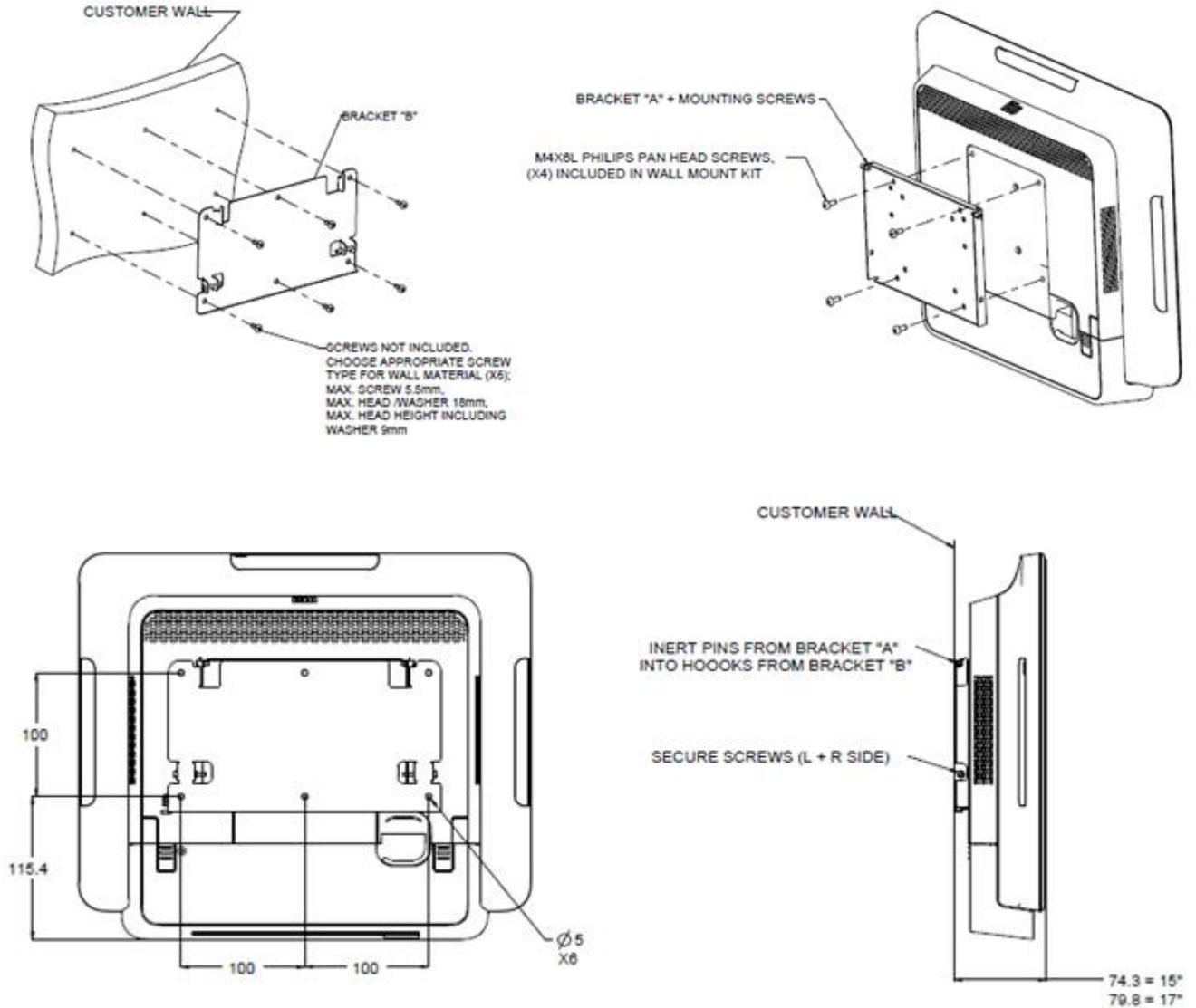
### POLE MOUNT STAND allocation on X-Series



# WALL MOUNT KIT (E143088)

You can optionally add a WALL MOUNT KIT to X-Series touchcomputer at wall through two mental frames for all X-Series configurations.

## WALL MOUNT allocation on X-Series



# Barcode Reader KIT (E093433)

You can optionally add a BCR KIT to the X-Series touchcomputer to any of the three mounting locations located on the display head top, left, and right of the touchcomputer

The BARCODE SCANNER peripheral shall consist of a mechanical housing, which encloses a BARCODE SCANNER electrical module. The BARCODE SCANNER peripheral shall have a USB connection to interface with the X-Series touchcomputer.

Feature	Spec Description
Light Source	660nm visible LED
Optical sensor	2500 pixels Toshiba CCD sensor
Resolution	3 mil
Depth of Field	35 – 320mm
PCS	30% or more
Interface type	USB HID / RS-232 (TTL)/ KBW
Voltage	+ 5V DC $\pm$ 5%
Power	120mA @ 5VDC (typ.)
Standby currents	20 ~ 30 mA
Scanning Speed	Up to 270 scans/sec
Operating temperature	0 °C to 55 °C
Storage temperature	-20 °C to 60 °C
Humidity	10% ~90% RH (non-condensing)
Ambient Light	Works in any lighting conditions, from 0 to 10,000 lux

## BCR allocation on X-Series



# Chapter 5: Technical Support

If you are experiencing trouble with your X-Series, refer to the following suggestions.

If the problem persists, please contact your local dealer or contact Elo Touch Solutions Customer Service.

## Solutions to Common Problems

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Problem	Suggested Troubleshooting
No Power (The X-Series unit can't power on.)	<ol style="list-style-type: none"><li>1. Check that the AC/DC power adapter is properly connected.</li><li>2. Verify the AC power source is functioning.</li><li>3. Power button is destroyed or not?</li></ol>
No Display (Monitor display is blank.)	<ol style="list-style-type: none"><li>1. If the Power Status LED is blinking, the X-Series may be in SLEEP mode. Press the power button to see if the image reappears.</li><li>2. Internal cable loss or electrical part damage.</li></ol>
No Operation System	<ol style="list-style-type: none"><li>1. Confirm the product with OS configuration.</li><li>2. System unit powered on or not?</li><li>3. Hard Driver damage.</li></ol>
Touch function abnormal.	<ol style="list-style-type: none"><li>1. Do the touch calibration by Elo application.</li><li>2. Confirm the touch device work normally in OS.</li></ol>
No Touch Function	<ol style="list-style-type: none"><li>1. Confirm the touch screen is not broken.</li><li>2. Check the touch screen trail connects to touch CTR board well.</li><li>3. Check the touch CTR cable connection well.</li></ol>

## Technical Assistance

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Visit <http://www.elotouch.com/Support/TechnicalSupport/default.asp> for technical support.

Refer to the last page of this user manual for Elo contact information worldwide.

# Chapter 6: Safety & Maintenance

## Safety

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To avoid risk of electric shock, follow all safety notices and do not disassemble the Elo X-Series. The Elo X-Series is not user-serviceable.

Do not block or insert anything into any of the ventilation slots.

The Elo X-Series is equipped with an AC/DC power adapter. Do not use a damaged AC/DC power adapter. Use only the AC/DC power adapter supplied by Elo Touch Solutions for the X-Series. Use of an unauthorized AC/DC power adapter may invalidate your warranty.

Ensure that the system is maintained and runs within the specified environmental conditions listed below.

### **Environmental conditions for operating and storage**

#### Temperature:

Operating	0°C to 35°C
Storage	-30°C to 60°C

#### Humidity (non-condensing):

Operating	20% to 80%
Storage	5% to 95%

#### Altitude:

Operating	0 to 3,048 m
Storage	0 to 12,192 m

# X-Series Power Adapter Support Notice

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The following notice will help on the application when you use the Power USB function of your Elo X-Series:

- For X-Series, the +19V & +19.5V/90W power adapter (E001062/E001063) can't support both +12V PUSB and +24 PUSB at the same time.
- For X-Series, the +19V & +19.5V/150W power adapter (E001059/E001060) can't support both +12V PUSB and +24 PUSB at the same time.
- If you need both function support with your application, please contact with ELO for furthermore support on specify power adapter solution.
- The ELO PNs corresponding power adapter model name list as below table.

Configuration	ELO PN	Part Description	Vendor Model Name
X3/X5/X7	E001059	AIO POWER BRICK , 19V 150W , FSP	FSP150-ABBN2
X3/X5/X7	E001060	AIO POWER BRICK , 19V 150W , DELTA	ADP-150VB BA
X2	E001062	AIO POWER BRICK , 19V 90W , FSP	FSP090-DIEBN2
X2	E001063	AIO POWER BRICK , 19V 90W , DELTA	ADP-90CE BA

## X-Series Care and Handling

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The following tips will help maintain optimal performance of your Elo X-Series:

- Disconnect the power cable before cleaning.
- To clean the X-Series (except touchscreen), use soft cotton or microfiber cloth lightly dampened with a mild detergent.
- It is important that your unit remains dry. Do not get liquids on or inside the unit. In the event that liquid does get inside, have a qualified service technician inspect the unit before you power it on again.
- Do not wipe the screen with a cloth or sponge that could scratch the surface.
- When cleaning the touchscreen, use window or glass cleaner applied to a clean cloth. Never apply the cleaner directly on the touchscreen or Elo X-Series. Do not use alcohol (methyl, ethyl or isopropyl), thinner, benzene, or other abrasive cleaners.

## Waste Electrical & Electronic Equipment

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This product should not be disposed of with household waste. It should be deposited at a facility that enables recovery and recycling. Ensure that product is disposed at the end of its useful life according to local laws and regulations.

Elo has put in place recycling arrangements in certain parts of the world. For information on how you can access these arrangements, please visit <http://www.elotouch.com/AboutElo/ewaste-program/>.

## UL Directive

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X-Series touchcomputer has included a lithium battery on the motherboard. There is a risk of explosion if battery is replaced by an incorrect type. Please dispose of used batteries according the region instructions

# Chapter 7: Regulatory Information

## I. Electrical Safety Information

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Compliance is required with respect to the voltage, frequency, and current requirements indicated on the manufacturer label. Connection to a different power source than those specified herein will likely result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.

There are no operator serviceable parts inside this equipment. There are hazardous voltages generated by this equipment which constitute a safety hazard. Service should be provided only by a qualified service technician.

Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment to mains power.

## II. Emissions and Immunity Information

---

### Notice to Users in the United States:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Caution: Any changes or modifications not expressly approved by the party responsible for

compliance to this equipment would void the user's authority to operate this device.

Canada Compliance Statement:

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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

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

Notice to Users in Canada:

This equipment complies with the Class B limits for radio noise emissions from digital apparatus as established by the Radio Interference Regulations of Industrial Canada.

Notice to Users in the European Union:

Use only the provided power cords and interconnecting cabling provided with the equipment. Substitution of provided cords and cabling may compromise electrical safety or CE Mark Certification for emissions or immunity as required by the following standards:

This Information Technology Equipment (ITE) is required to have a CE Mark on the Manufacturers label which means that the equipment has been tested to the following Directives and Standards: This equipment has been tested to the requirements for the CE Mark as required by EMC Directive 2004/108/EC as indicated in European Standard EN 55022 Class B and the Low Voltage Directive 2006/95/EC as indicated in European Standard EN 60950.

General Information to all Users:

This equipment generates, uses, and can radiate radio frequency energy. If not installed and used according to this manual the equipment may cause interference with radio and television communications. There is, however, no guarantee that interference will not occur in any particular installation due to site-specific factors.

1. In order to meet emission and immunity requirements, the user must observe the following:
  - a. Use only the provided I/O cables to connect this digital device with any computer.
  - b. To ensure compliance, use only the provided manufacturers approved line cord.
  - c. The user is cautioned that changes or modifications to the equipment not expressly

approved by the party responsible for compliance could void the user's authority to operate the equipment.

2. If this equipment appears to cause interference with radio or television reception, or any other device:
  - a. Verify an emission source by turning the equipment off and on. If you determine that this equipment is causing the interference, try to correct the interference by using one or more of the following measures:
    - I. Move the digital device away from the affected receiver.
    - II. Reposition (turn) the digital device with respect to the affected receiver.
    - III. Reorient the affected receiver's antenna.
    - IV. Plug the digital device into a different AC outlet so the digital device and the receiver are on different branch circuits.
    - V. Disconnect and remove any I/O cables that the digital device does not use. (Unterminated I/O cables are a potential source of high RF emission levels.)
    - VI. Plug the digital device into only a grounded outlet receptacle. Do not use AC adapter plugs. (Removing or cutting the line cord ground may increase RF emission levels and may also present a lethal shock hazard to the user.)

If you need additional help, consult your dealer, manufacturer, or an experienced radio or television technician.

### III. EC R&TTE Directive

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This equipment conforms to all the essential requirements of Directive 1999/5/EC. The conformity assessment procedure referred to in Article 10 and detailed in Annex [IV] of Directive 1999/5/EC has been with the involvement of the following notified body:

Identification mark: 0700 (Notified body number)



The relevant technical documentation is held at:  
Elo Touch Solutions, Inc.  
1033 McCarthy Boulevard  
Milpitas, CA 95035-7920  
USA

## IV. Agency Certifications

The following certifications and marks have been issued or declared for the X-Series:

- Europe Union CE
- United States FCC
- United States and Canada UL
- TUV
- CB
- Mexico COC
- Australia C-Tick
- Japan VCCI
- China CCC
- Energy Star®

## V. China RoHS

In accordance to Chinese law (Administration on the Control of Pollution Caused by Electronic Information Products), the section below lists out the name and amount of the toxic and/or hazardous materials that this product may contain.

Component Name	Toxic or Hazardous Substances and Elements					
	Lead(Pb)	Mercury(Hg)	Cadmium(Cd)	Hexavalent Chromium (Cr6+)	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
Plastic Parts	O	O	O	O	O	O
Metal Parts	X	O	O	O	O	O
Wire and Cable Assembly	X	O	O	O	O	O
LCD Panel	X	X	O	O	O	O
Touch Screen Panel	X	O	O	O	O	O
PCBA	X	O	O	O	O	O
Software (CD, etc.)	O	O	O	O	O	O
<p>O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this component is below the limit requirement in SJ/T11363-2006.</p> <p>X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this component is above the limit requirement in SJ/T11363-2006. For items marked with X, exemptions were taken according to EU RoHS.</p>						

### Explanation of Markings

(1). In accordance with the SJ/T11364-2006 requirement, the electronic information products

are marked with the following pollution control logo. The Environment-Friendly Use Period for this product is 10 years. The product will not leak or mutate under normal operating conditions listed below, so that the use of this electronic information product will not result in any severe environmental pollution, any bodily injury, or damage to any assets.

Operating Temperature: 0-35°C / Humidity: 20%-80% (non-condensing).

Storage Temperature: -30~60 °C / Humidity: 5%~95% (non-condensing).



(2). It is encouraged and recommended that this product be recycled and reused according to local laws. The product should not be thrown away casually.



# Chapter 8: Warranty Information

For warranty information, go to <http://www.elotouch.com/Support/warranty.asp>

# Check out Our Website

# www.elotouch.com

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Get the latest...

- Product Information
- Specifications
- Upcoming events
- Press releases
- Software drivers

## Getting in Touch with us

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To find out more about the extensive range of Elo touch solutions, visit our website at [www.elotouch.com](http://www.elotouch.com), or simply call the office nearest you:

### North America

Elo Touch Solutions  
1033 McCarthy Blvd  
Milpitas, CA 95035

Tel 800-ELO-TOUCH

Tel 1-408-597-8000

Fax 1-408-597-8050

[customerservice@elotouch.com](mailto:customerservice@elotouch.com)

### Europe

Tel +32 (0) 16 70 45 00

Fax +32 (0) 16 70 45 49

[elosales@elotouch.com](mailto:elosales@elotouch.com)

### Asia-Pacific

Tel +86 (21) 3329 1385

Fax +86 (21) 3329 1400

[www.elotouch.com.cn](http://www.elotouch.com.cn)

### Latin America

Tel 786-923-0251

Fax 305-931-0124

[www.elotouch.com](http://www.elotouch.com)

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