



USER MANUAL

Elo Touch Solutions
Touch All in one computer
i-series 2.0



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Section 1: Introduction

Product Description

Your new i-Series 2.0 Interactive Signage system combines the reliable Elo Touch Solutions performance with the latest developments in touchscreen technology and display design. This combination of features creates a natural flow of information between a user and the i-Series 2.0 system.

This i-Series 2.0 system incorporates an active matrix thin-film-transistor and LCD panel to provide superior display performance. Features that enhance this systems performance are a Projected Capacitive (PCAP) touchscreen, Plug & Play compatibility, Micro-HDMI Out, LAN/Wifi, built-in speakers and headphone output capability (via a USB dongle). A general purpose input/output header is available and Bluetooth 4.1 is supported. 3G/4G LTE (Micro SIM card holder) support is available as an optional peripheral.

Precautions

Follow all warnings, precautions and maintenance as recommended in this user manual to maximize the life of your unit and prevent risks to user safety. See Section 4 for more information on safety.

This manual contains information that is important for the proper setup of the i-series 2.0 system. Before setting up and powering on your i-series 2.0 system, read through this manual, especially Unpacking and Operation, Safety, and Technical Support and Maintenance chapters.

Section 2: Unpacking and Operation

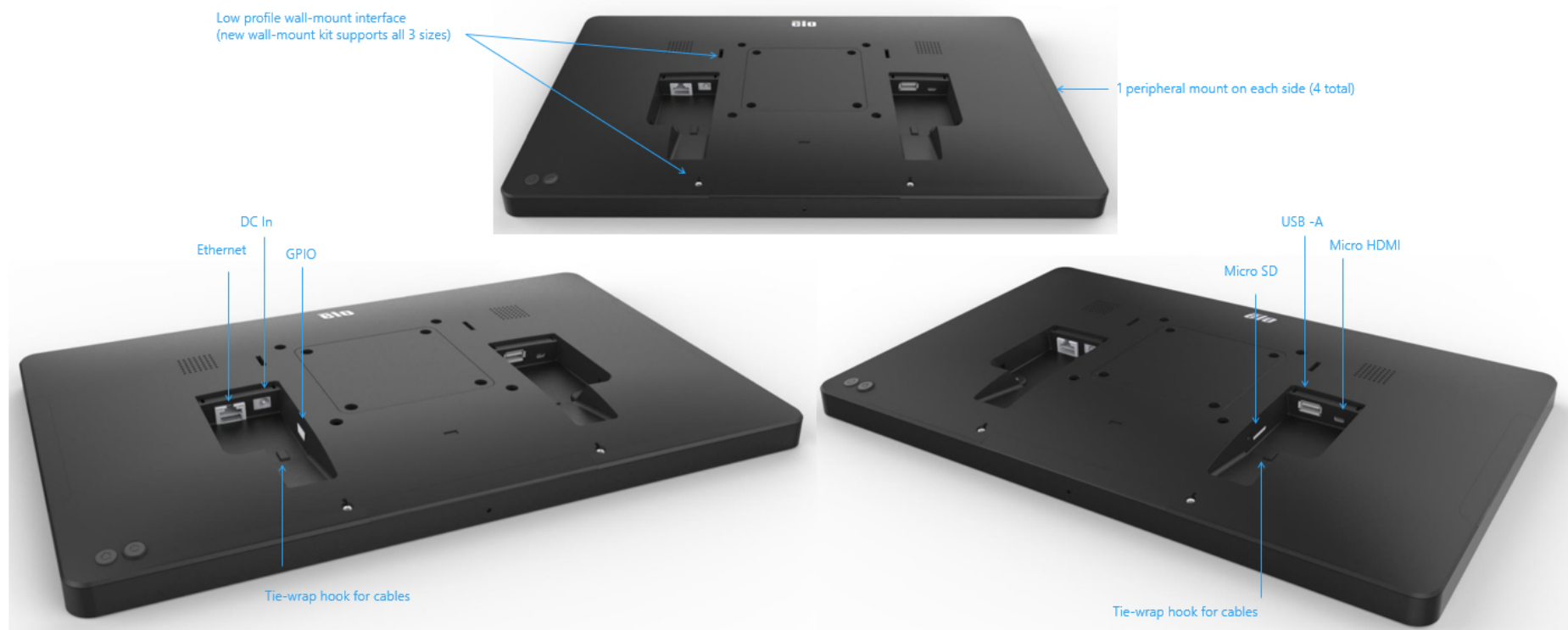
Box Contents

Verify that the box contains:

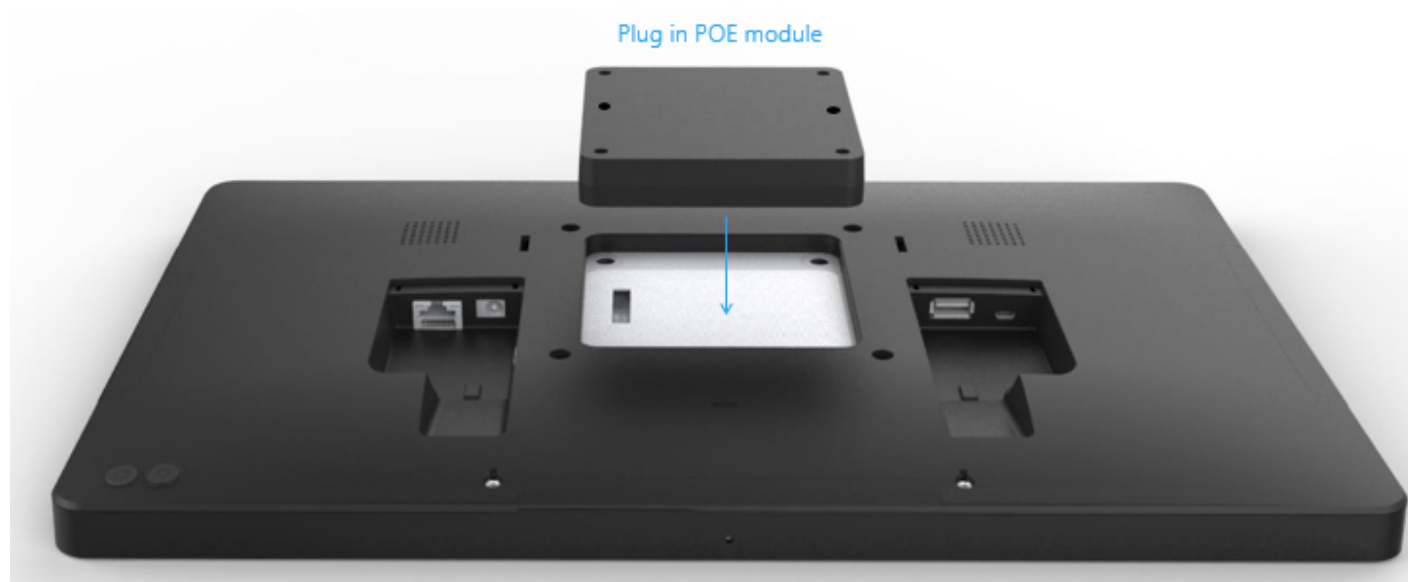
- I-series 2.0 system
- Quick Install Guide
- Power brick
- North American Power Cable
- Europe Power Cable
- Two (2) cable strain reliefs
- Two (2) screws

The connectors are accessed by removing the cable security covers from the rear of the i-Series 2.0 system.

Elo i-series 2.0 Layout



For units with Power over Ethernet Support



i-series 2.0 EloView Engine

The Eloview engine can be mounted to various Elo monitors using the VESA pattern or with optional monitor brackets.



Power

Press the power button to turn the Elo i-series 2.0 on. Press and hold power button when the system is on to bring up the Shut Down option popup.

In the event that the system freezes and does not respond, press and hold the power button until the system turns off. If the system does not turn off via the power button, the system will need to be powered down by unplugging the power cord from the wall.

The Elo I-series 2.0 power button is equipped with an LED that indicates the power status of the system, as follows:

Register power status	Led status
OFF (disconnected from wall)	Off
OFF (connected to wall)	Red (Solid)
SLEEP	White (Blinking)
ON	White (Solid)

The system consumes low power when in SLEEP and OFF modes. For detailed power consumption specifications, refer to technical specifications available on the Elo website www.elotouch.com.

To bring the system out of sleep/standby mode, press the power button once. If the system is in sleep mode, touching the screen will wake up the system

If long periods of non-use are planned, turn off and unplug the Elo I-series 2.0 to save power.

The maximum voltage, frequency and current for the systems, are provided in the power ratings table below:

Product	Operating Voltage Range	Operating Frequency Range	Operating Current Range
10.1in	100 - 240Vac	50 – 60 Hz	
15.6in	100 - 240Vac	50 – 60 Hz	
21.5in	100 - 240Vac	50 – 60 Hz	
Eloview Engine	100 - 240Vac	50 – 60 Hz	

Operating System

System comes with Android 7.0.1 pre-loaded.

Touch Technology

The i-series 2.0 uses Projected Capacitance touch screens, 10 simultaneous touches can be reported at one time.

Gesturing Images

For multi-touch monitors, the following gestures are possible:

Dual Touch Gestures and their Functions:

Swipe – The action of moving a finger across the screen.

The ability to swipe through from one picture to another or drag an icon

Pinch-Zoom – Zoom into a picture

- Place two fingers on the screen and move them closer together to zoom in. Move your fingers away from each other to zoom out.



Before zoom



After zoom

Video

An LCD panels native resolution is its width and height measured in number of pixels.

In almost all cases, an image displayed on an LCD monitor will look best when your image resolution matches the LCD panels native resolution.

10.1" is 1280x800, 15.6"/21.5"/Eloview engine operate at 1920x1080.

Audio

Earphone out and Audio In are supported over the USB port using a dongle.

3G/4G LTE Module Information (Optional)

For the units that have 3G/4G LTE built in, the following are the supported bands:

- LTE (FDD) B1/B2/B3/B4/B5/B7/B8/B13/B17/B20
- Penta-band DC-HSPA+/HSPA+/HSPA/UMTS B1/B2/B4/B5/B8
- Quad-band EDGE/ GPRS/GSM 1900/1800/900/850 MHz

Data Transfer Rate:

- WCDMA PS: UL (384 kbps)/ DL (384 kbps)
- DC-HSPA+ :UL (11 Mbps)/ DL (42 Mbps)
- LTE FDD: UL (50 Mbps)/ DL (100 Mbps) @Bandwidth 20M (CAT3)
- GPRS/EDGE: Multi-slot Class 12

Support country list

- US
- Germany

Wi-Fi + Bluetooth

The following protocols are supported for Wi-Fi and Bluetooth:

- Bluetooth 4.1+ BLE, A2DP/ HID(Keyboard/Mouse)/Barcode scanner support
- IEEE 802.11b/g/n/ac; WEP/WPA/WPA2 capable

Near Field Communication (NFC) Functionality (Optional)

The following NFC protocols are supported:

- ISO-14443-A
- ISO-14443-B

Interfaces

- RS232 and USB2.0 interfaces by use of corresponding cables.
- USB 2.0 compliant interface configurable to support USB HID: Keyboard, or USB Virtual COM.
- RS232 data output baud rate up to 115.2K BPS

Payment Applications

- American Express ExpressPay
- Discover ZIP
- MasterCard PayPass/MCHIP
- Visa MSD/qVSDC
- Google wallet
- ISIS wallet

MIFARE Applications

- Read/Write of MIFARE Plus/Classic/Ultralight/DESFire cards
- Support MIFARE higher baud rate up to 424KHz

Barcode Scanner Functionality 1D (Optional)

- Incorporates proximity detector to activate Bar Code Scanner.
- Outstanding scanning performance up to 270 scans per second.
- Below are the supported Bar Code types and settings.

Symbologies setting

- Enable



* UPC-A on



* UPC-E on



* EAN13 on



* EAN8 on



* Code39 on



* Codabar on



* Code93 on



* Code128 on



Interleaved 2 of 5 on



Industrial 2 of 5 on



Matrix 2 of 5 on



MSI/Plessey on



Code32 on



Code11 on



Telepen on



GS1 DataBar Omnidirectional on



GS1 DataBar Limited on



GS1 DataBar Expanded on

- Disable



UPC-A off



UPC-E off



EAN13 off



EAN8 off



Code39 off



Codabar off



Code93 off



Code128 off



* Interleaved 2 of 5 off



* Industrial 2 of 5 off



* Matrix 2 of 5 off



* MSI/Plessey off



* Code32 off



* Code11 off



* Telepen off



*GS1 DataBar Omnidirectional off



*GS1 DataBar Limited off



*GS1 DataBar Expanded off

Factory standard default settings

Items	Default setting
Interface	Keyboard Wedge
Language (Keyboard)	English
Reading mode	Good read off
Terminator	CR
RS232 baud rate	9600
Data bits	8 bits
Stop bits	1 stop bit
Parity	None
Code ID	Off
Accuracy	Read 1 time
Emulate external keyboard	Disable
Enable 1D symbologies	UPC-A , UPC-E EAN13, EAN8 Code39, Code93 Code128, Codabar

Check version



Barcode Scanner Functionality 2D (Optional)

Incorporates proximity detector to activate the 2D Bar Code Scanner.
For details, please visit the accessory product page at www.elotouch.com

Magnetic Stripe Reader (MSR) Functionality (Optional)

The MSR shall operate in keyboard mode.
Capable of reading 3 tracks.
Security level and Encryption function: OFF

HDMI Output

I-Series:

I-Series is equipped with an HDMI port that can support secondary monitors with HDMI (1920x1080@60) input. When using an Elo touch monitor as secondary display, enable touch by connecting the touch USB cable to the I-Series 2.0 type A USB port.

EloView Engine:

The EloView Engine, when plugged into an Elo touch monitor, will turn the monitor into an All-in-One Android computer.

General Purpose Input/Output (GPIO) Support

The i-Series supports a GPIO which can be used under the following conditions:

Max Voltage: 5V

Max Current: 200mA

There are two input connections and one output connection.

Pin → 5 Volt output connection

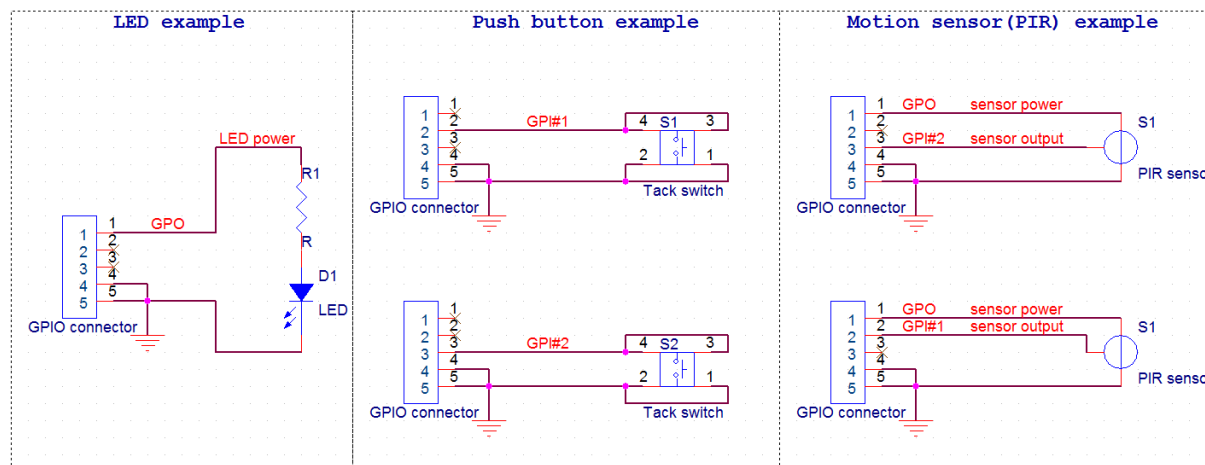
Pin 2 → Input connection 1

Pin 3 → Input connection 2

Pin 4 and Pin 5 are tied to ground

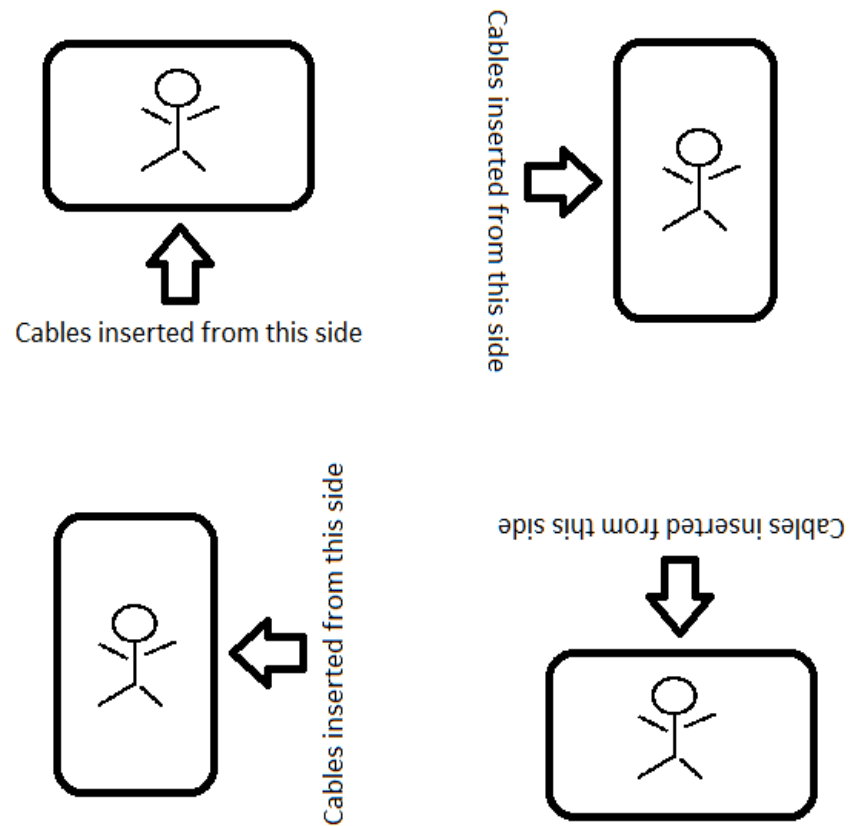
Elo has a cable (PN # E086398) which extends this GPIO connection so that it is easy for users to connect their own peripherals. This cable can be found on the Elo website.

Example Circuit



G-Sensor

All i-series 2.0 units are equipped with an g-sensor and will rotate the video based on the orientation of the device. The simple drawing below illustrates the orientation when the device is rotated.



Consumer Electronic Control (CEC)

The EloView Engine supports CEC functionality over the HDMI port.

Note: CEC functionality is available for monitors that support CEC.

Power Over Ethernet (PoE)

The 10.1 and the 15.6in devices support the Elo peripheral for PoE.

Refer to the PoE quick install guide for installation steps.

Note: when the PoE is connected certain features are disabled in order to maximize available functions.

Standard SKUs:

Wi-Fi/Bluetooth, all USB ports, GPIO and the HDMI out port will be disabled

Value SKUs:

The USB 3.0 port will be disabled

Global Positioning Satellite (GPS)

The i-series 2.0 supports GPS functionality through software where the user can input the longitude and latitude coordinates in order to pin point the specific device. This allows the GPS to function even indoors.

USB Control

The i-series 2.0 provides control for each individual USB port. Any specific USB port can be turned off or on depending on the user.

Intelligent Brightness Control

To extend the life of the panel, Elo incorporates intelligent brightness control which disables the panels backlight during hours when the system is not being used.

The function is fully controllable by the user.

The default for this function is ON and will turn off the backlight during the hours of midnight and 6AM.

Software Section (Download SDK from www.elotouch.com)

Section 3: Technical Support and Maintenance

Solutions to Common Problems

Problem	Suggested Troubleshooting
The Elo I-series 2.0 does not respond when turning on the system.	Check that the power cable is properly connected to the wall. Power button LED will be red when system is properly connected to the wall. OR - Unplug the power cable, re-plug after five seconds, and press the power button to turn on the system. OR - In the case that the power button LED displays solid white light, which suggests that the system is on, there may be an issue with the display or LCD backlight. Please contact Elo Customer Service.
Blank screen	If the power button LED is blinking, the system may be in SLEEP mode. Press the power button to bring the unit out of SLEEP mode.

Technical Assistance

Technical Specifications

visit www.elotouch.com/products
for technical specifications for this device

Support

visit www.elotouch.com/support for technical support

Refer to last page for worldwide technical support phone numbers.

Elo I-series 2.0 Care and Handling

The following tips will help maintain optimal performance of your Elo I-series 2.0:

- Disconnect the power cable before cleaning.
- To clean the unit (except for touch screen), use a 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. Do not use alcohol (methyl, ethyl or isopropyl), thinner, benzene, or other abrasive cleaners.

Section 4: Safety

Waste Electrical & Electronic Equipment Directive (WEEE)



This product should not be disposed of with household waste. It should be deposited at a facility that enables recovery and recycling.



Elo has put in place recycling arrangements in certain parts of the world. For information on how you can access these arrangements, please visit www.elotouch.com/e-waste-recycling-program/.

Caution:

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used battery according to the local laws and regulations.

Section 5: Regulatory Information

Electrical Safety Information

Compliance is required with respect to the voltage, frequency, and current requirements indicated on the manufacturer's 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.

Emissions and Immunity Information

Notice to Users in the United States: This equipment has been tested and found to comply with the limits for a Class A 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.

Notice to Users in Canada: This equipment complies with the Class A 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 Manufacturer's 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 2014/30/EU as indicated in European Standard EN 55032 Class A and the Low Voltage Directive 2014/35/EU as

indicated in European Standard EN 60950-1.

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.

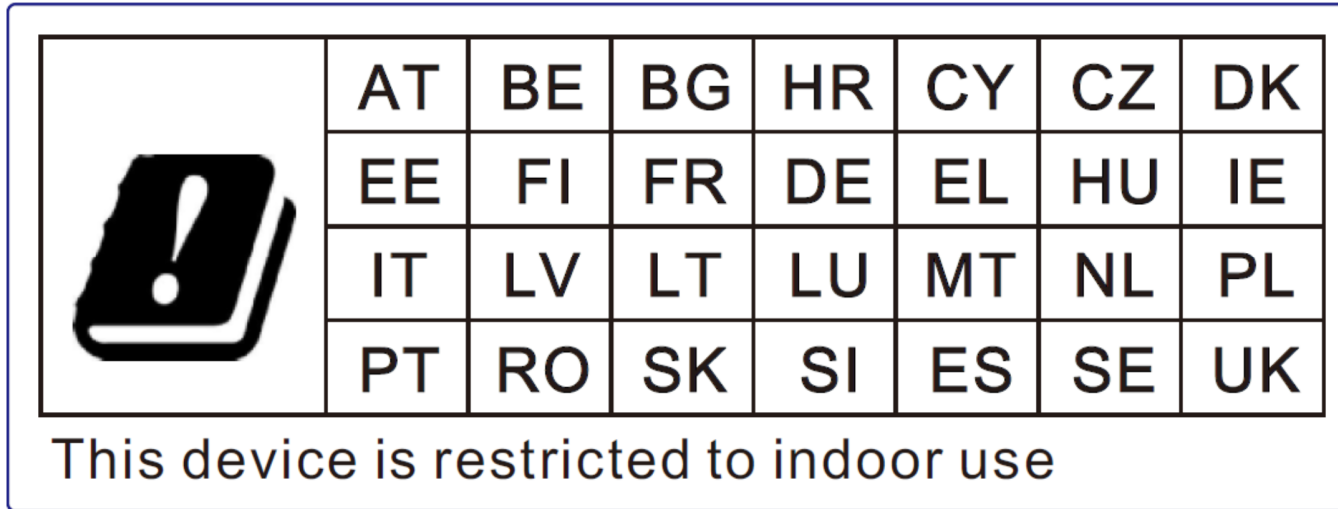
1. In order to meet emission and immunity requirements, the user must observe the following:
 - a. Use only the provided I/O cables to connect this digital device with any computer.
 - b. To ensure compliance, use only the provided manufacturer's approved line cord.
 - c. The user is cautioned that changes 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 as 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.

Radio Equipment Directive

Elo hereby declares that the radio equipment type, i-series 2.0, is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.elotouch.com

This device is designed and intended for indoor use only.



Operation frequency and radio-frequency power are listed as below:

- o WLAN 802.11b/g/n/a
 - 2400 - 2483.5MHz < 17 dBm EIRP
 - 5150 - 5250MHz < 18 dBm EIRP
- o BT 2400-2483.5MHz < 11 dBm EIRP

ECC/DEC/(04)08:

The use of the frequency band 5 150-5 350 MHz is restricted to indoor operation because of the protection requirements of satellite services

FCC:

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This equipment should be installed and operated to ensure a minimum of 20 cm spacing to any person at all times.

IC:

This device complies with Industry Canada's licence-exempt RSSs. 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."

This equipment should be installed and operated to ensure a minimum of 20 cm spacing to any person at all times.

Agency Certifications

The following certifications and marks have been issued or declared for this peripheral:

- FCC/IC
- CE
- UL/cUL/CB
- Japan MIC
- VCCI
- China CCC
- China SRRC

中国 RoHS (China RoHS)

根据中国法律《电器电子产品有害物质限制使用管理办法》，以下部分列出了产品中可能包含的有害物质的名称和含量。

中国电子电气产品环境信息

触控一体机	有害物质					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联 苯 (PBB)	多溴二苯 醚 (PBDE)
电缆组件	X	O	O	O	O	O
玻璃外罩	X	O	O	O	O	O
液晶面板	X	O	O	O	O	O
金属框架	X	O	O	O	O	O
塑胶盖	O	O	O	O	O	O
印制线路板	X	O	O	O	O	O
本表格依据 SJ/T 11364 的规定编制。 O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。						

标志说明

根据 SJ/T11364 的要求, 电子信息产品标有以下污染控制标识。此产品在 10 年内不会对环境产生影响。



Power Specifications

Electrical Ratings	
Input	120/240VAC

Operating Conditions	
Temperature	0°C - 40°C
Humidity	20% to 80% (non-condensing)

Storage Conditions	
Temperature	-20°C - 50°C
Humidity	10% to 95% (non-condensing)

Section 6: Warranty Information

For warranty information, go to <http://support.elotouch.com/warranty/>

www.elotouch.com

Visit our website for the latest

- Product Information
- Specifications
- Upcoming Events
- Press Releases
- Software Drivers

To find out more about our extensive range of Elo touch solutions, go to **www.elotouch.com**, or call the office nearest you.

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