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Electronics



# Entuitive Touchmonitors Product Catalog



***Celebrating 30 Years of Touch Industry Leadership***

## Introduction to Touch

Benefits of Touch Interface	4
Touch Is Used in Hundreds of Applications	5
Why an Elo Entuitive Touchmonitor?	6
Elo Custom Solutions	8

## Elo's Touch Technologies

AccuTouch: Five-Wire Resistive Technology	9
IntelliTouch: Surface-Wave Technology	10
SecureTouch: Surface-Wave Technology (Tempered Glass)	11
iTouch: Surface-Wave Technology ("Touch-on-Tube")	12
CarrollTouch: Infrared Technology	13

## Choosing the Right Elo Solution

Guide to Choosing an Elo Touch Solution	14
LCD or CRT—Which Display Type Is Right for Your Application?	16
Elo All-in-One Touchcomputer—Your All-in-One Space-Saving Countertop Touchcomputer	18
Countertop or Full Kiosk Enclosure— Which Kiosk Type Is Right for Your Application?	20
Your Elo Touch Solutions for	
- Industrial	22
- Medical/Healthcare	24
- Kiosk	26
- Hospitality/POS	28
Ten Tips for Developing Effective Touch Applications	29

## Elo Touchcomputers

iMac with iTouch	Mac-based	30
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## LCD Entuitive Touchmonitors

12"	1225L	Desktop	31
12"	1226L	Desktop	32
15"	1525L	Desktop	33
15"	1527L	Desktop	33
15"	1526L	Desktop—Medical	34
18"	1825L	Desktop	35
12"	1246L	Rear Mount	36
15"	1545L	Rear Mount	38
12"	1266L	Panel Mount	40
15"	1566L	Panel Mount	42

## CRT Entuitive Touchmonitors

14"	1425C	Desktop	44
14"	1426C	Desktop	45
15"	1525C	Desktop	46
17"	1725C	Desktop	47
19"	1925C	Desktop	48
21"	2125C	Desktop	49
15"	1545C	Rear Mount	50
17"	1745C	Rear Mount	52
19"	1945C	Rear Mount	54

## Drivers/Accessories

Controller and Cable Options	57
Elo's TouchTools	58
Elo's TouchTools MonitorMice	59

## Information

Glossary of "Touch" Terms	60
Elo Warranty Information	65
Trademark and Copyright Information	65

## About Elo and Elo's Partner Programs

Elo TouchSystems, in Touch with Your Business	66
Elo Partner Programs	67
Elo E-Commerce Services	68
Notes	70
Contact Elo	76

Many years ago, touchscreens were an exotic, expensive interface for demanding applications like air-traffic and nuclear power-plant control. Not anymore! Companies across a broad spectrum of industries have successfully harnessed the power of touch for a wide variety of applications. Yet the essential benefits provided by touch technology remain unchanged.

### **Fast, faster, fastest**

Touchscreens provide fast access to any and all types of digital media, with no text-bound interface getting in the way. It takes time for the user to grab a mouse or use a keyboard or trackball and coordinate it with what needs to be activated on the display. Faster input can mean better customer service in restaurants, hotels, movie theaters, and retail stores, which results in increased customer loyalty. In other cases, such as in-vehicle control or security equipment, being even one second faster can make all the difference.

### **Touch makes everyone an expert**

Reaching out for what you want is an instinctive gesture. Using touch is just as simple: you simply point at what you want. Although some people still shy away from computer keyboards, mice, or track balls, there is no hesitation when they can just touch a screen. Users feel comfortable that they cannot “do anything wrong” they instinctively understand how to use the interface. Touchscreen systems make everyone an “expert user” from the first touch—whether it’s a person consulting a kiosk, a worker controlling an industrial process, a nurse entering a patient’s information, or a waiter entering the order.

### **Reduce costs**

Using a touch interface can effectively increase operator accuracy, reduce training time, and improve overall operational efficiencies, thus keeping costs down. In the retail environment, for example, a properly designed touch interface can improve each operator’s accuracy, while maintaining optimum checkout speeds. Users can respond quickly without making significant errors. Also, touch-based point-of-sale (POS) systems streamline the returns and refunds process by reducing the time it takes a customer to return merchandise; they also improve loss-prevention management. In addition, compared to traditional training methods, using touch screens can drastically reduce training time, since touch technology is intuitive and requires no special skills to learn. Moreover, the flexibility of touch technology can significantly contribute to cost reductions: they create operational efficiencies by simplifying procedures and they reduce the need for additional capital investment.

### **Compact and handy**

Space is valuable, so you want to use it as efficiently as possible. Touchmonitors ensure that no space – on the desktop or elsewhere – is wasted, since the input device is completely integrated into the display. Flat LCD touchmonitors help save even more space. And there are no keyboard or mouse cords in front of the monitor to get tangled or damaged, or gather dust.

### **Durable and easy to clean**

A touchscreen is made of glass or a similar hard-coated surface. So it’s easy to clean and therefore extremely well suited for the typical environments found in restaurants, hospitals, and the food and pharmaceutical industries. All of Elo’s touchscreens can be used with gloves, which is great for applications where hygiene is particularly important or where temperature or workplace safety rules require the use of gloves. We offer touchscreen systems that are not affected by dirt, dust, grease, or liquid droplets. They are even rugged enough to stand up to harsh environments where keyboards and mice often get damaged.

### **When ease of use is required**

Touchscreen-based systems virtually eliminate errors because users select from clearly defined menus. The information on each screen is limited in number and options, thus providing step-by-step, fail-safe sequences to guide the user through complex procedures. This greatly simplifies medical diagnostics applications—for example, where voluminous databases must be accessed quickly and easily. Touchscreens are also useful in simplifying process control applications involving many buttons or switches, and for applications where system contents require protection from unauthorized entry.

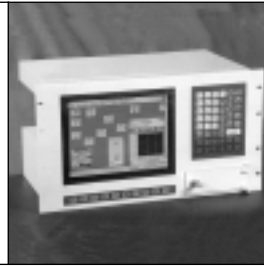
# Touch Is Used in Hundreds of Applications



**point of sale**



**interactive payphones**



**industrial process control**



**transaction kiosks**



**loyalty systems**



**ticket sales**



**multimedia marketing**

Touch input displays can be used for virtually any application. Common touchscreen applications include:

- Point-of-sale terminals
- Point-of-information kiosks
- In-store e-commerce
- Multimedia marketing
- ATMs
- Electronic catalog
- Banking/financial transactions
- Industrial machine control
- Medical equipment
- Office equipment (such as photocopiers and franking machines)
- Computer-based training
- Gaming, lottery, and amusement
- Ticket sales
- Interactive payphones
- In-vehicle and in-flight applications
- Handheld computers



**car diagnostic systems**



**electronic voting**



**home control**

## Why an Elo Entuitive Touchmonitor?

Buying an Elo Entuitive touchmonitor is the surest, fastest way to get your touchscreen application up and running and make sure it stays that way for a long time. Because standard desktop monitor models change frequently—and are seldom designed with touch in mind—it's difficult for typical providers of touchmonitors based on office desktop displays to ensure reliability under the heavy usage experienced by the most successful touch-based systems.

Elo's Entuitive line of touchmonitors gives you the advantage of 30 years of experience in touchmonitor design. We continuously listen to our customers' demands for better touch solutions, and we've implemented these needs into our newest line of touchmonitors—which can truly be called “designed for touch.” In the new Entuitive line, Elo has applied its extensive knowledge of touch technologies, CRTs, and LCDs to the design and manufacture of consistently high-quality, reliable touchmonitors with full agency approvals and Elo's renowned service and support.

### **Elo has it all.**

Elo Entuitive touchmonitors allow you to source a complete touch hardware solution from one vendor rather than three (touchscreen kit, monitor, integration service). So Elo Entuitive touchmonitors save you both time and a potentially high investment in monitor integration (capital equipment, supplies, facilities, expertise, and personnel).

### **You get a touchmonitor designed for touch.**

Not all touchmonitors are created alike. Elo sets monitor specifications that enable the production of high-quality, low-cost monitors optimized for touch. Elo can also provide custom modification, incorporating a variety of cabling, sealing, packaging, and other options, so your touchmonitor is perfectly suited to your application.

### **Off-the-shelf touchmonitors get you up and running quickly.**

Elo and its distribution partners can offer you touchmonitors that are ready to use, right out of the box. Elo's Entuitive touchmonitors for kiosk and industrial applications have fixed outside dimensions. Elo will maintain the model design of its metal-chassis touchmonitors much longer than the average plastic-case monitor manufacturer, thus reducing the need to redesign your application around a monitor component change.

### **You avoid safety risks to yourself or your monitor.**

Everyone knows to avoid electrical shock from high-voltage components inside the monitor, but did you know that it's possible to shorten the life of your monitor if the power tap is installed incorrectly? Or that if a touchscreen is poorly sealed to the monitor interface, it will allow dust to degrade the optics of your touchscreen? With an Elo Entuitive touchmonitor you get assurance of lasting quality and safety.





## Why an Elo Entuitive Touchmonitor?

### Elo provides ruggedized packaging.

To ensure that the touchmonitor makes it to you—and on to your customer—Elo takes special care in securing touch components inside the monitor and using packaging that withstands all industry standard drop tests. Shipment of each box includes a force indicator that warns if excessive force and possible damage occurred during shipping.

### You have all the information you need.

Elo Entuitive touchmonitors ship with an Elo TouchTools CD, which contains drivers for all popular operating systems, technical manuals, and diagnostic software. Drivers, technical information, and product specs are also available 24 hours a day on our Web site, [www.elotouch.com](http://www.elotouch.com).

### Elo Entuitive touchmonitors come with agency approvals.

Elo's standard touchmonitors are re-certified after the addition of touch components (FCC, CE, TÜV, UL, cUL) for ease in certifying your end system. In fact, Elo's standard CRT touchmonitors contain all best-practice recognized features, such as digital on-screen display (OSD) controls; power management (EPA/ENERGY STAR®, VESA/DPMS); and Plug and Play compatibility (VESA DDC1 and 2B compliant).

### Technical Support.

Elo's technical support and application engineering staff bring a wealth of experience to the development and deployment of touch-based systems. With resources throughout the United States, Europe, and Asia, Elo can provide technical support and application engineering assistance almost anywhere in the world—on site if necessary—including guidance in the advanced setup and configuration of Elo software drivers for special needs. Elo offers a variety of online resources to help customers and developers troubleshoot problems. These resources include "Web Tech," which provides step-by-step troubleshooting and online diagnostic tools; "TouchTools Software," offering a complete line of software drivers and development tools for all popular operating environments; and downloadable product manuals and literature.

### Manufacturer's warranty.

Without the agreement of the monitor manufacturer, a monitor's warranty is voided as soon as the monitor is opened. When you purchase Elo touchmonitors, Elo guarantees full customer satisfaction. Every Elo touchmonitor, the world over, comes with Elo's quality service. Elo also offers out-of-warranty repair services for your convenience.



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*Elo TouchSystems provides a broad line of LCD and CRT touchmonitors that meet today's increasing demand for a variety of form factors for touch input capability.*

*There are occasions when a customer requirement falls outside of our standard product range. Elo can meet those requirements with custom solutions.*

### Capabilities for Custom Solutions

**Customer-specific products.** Elo focuses on the custom needs of the OEM. Working from your specifications, we can quickly develop unique touchmonitors that integrate seamlessly into your system. Our staff of experts oversees all the details—from prototyping, through development, to production—to ensure the right touch display for your application.

**Rapid in-house prototyping.** With an in-house mechanical design and prototyping staff, Elo can rapidly design and build prototypes, “proof-of-concept” models, and even short-run production parts within days of beginning a project.

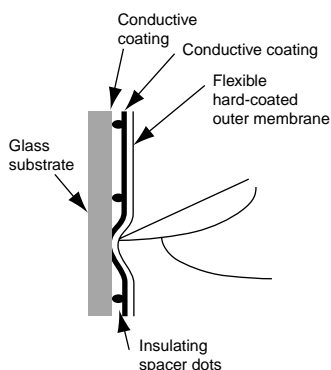
**Touchscreen expertise.** Elo's in-house electronic engineering staff has a broad-based knowledge of electronic design and systems and, most importantly, 30 years of touchscreen technology experience.

**Compliance engineering staff.** Elo's in-house compliance engineering staff is knowledgeable in all compliance issues. Elo has successfully acquired approvals from many major organizations (UL, FCC, CE, TÜV, TCO, VCCI, CB, AAS, DHHS) and for numerous applicable touchmonitor standards.

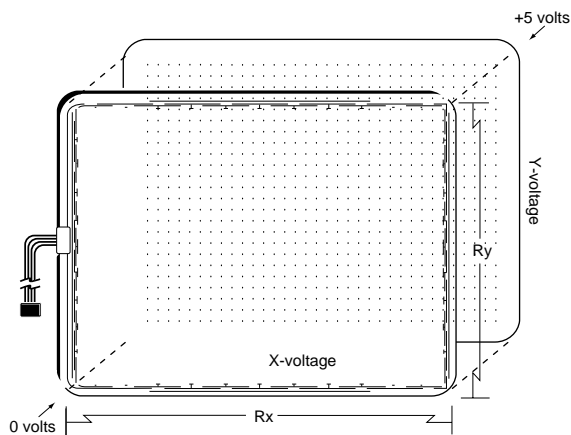
**Unique production requests.** Elo commonly paints monitors, applies static dissipative coatings, adds custom logos, and fulfills many other custom monitor assembly requests. Elo can build most any touchmonitor, fitting virtually all custom touchmonitor applications.

## AccuTouch Technology

Formed to fit the shape of a display, the AccuTouch glass panel has a coating of uniform resistivity. A polyester cover sheet is tightly suspended over the top of the glass, separated from it by small, transparent insulating dots. The cover sheet has a hard, durable coating on the outer side and a conductive coating on the inner side. At a light touch, the conductive coating makes electrical contact with the coating on the glass.



The AccuTouch controller circuit applies a voltage gradient across the resistive surface of the glass. The voltages at the point of contact are the analog representation of the position touched. The controller digitizes these voltages and transmits them to the computer for processing.



## AccuTouch benefits

- Five-wire resistive technology
- Stable, drift-free operation—for touch response that's always accurate
- Highest touchpoint density in the industry
- Fast touch response
- Finger, gloved-hand, and stylus activation
- Durable surface that stands up to harsh contaminants and chemicals
- Gasket sealable
- Flat and spherical touchscreen options for design flexibility
- Sealability—certified to NEMA standards; designed to meet industrial standards

## AccuTouch products—for clerk- or employee-activated applications

- Point-of-sale terminals
- Industrial process control
- Handheld computers
- Medical equipment
- Internet phone
- Office equipment, such as photocopiers and franking machines
- Transportation

## AccuTouch Performance

Accuracy	± 2.03 mm
Response time	<10 ms
Resolution	4096 x 4096 touchpoints
Light transmission	Up to 78%
Operating temperature	–10°C to 50°C
Storage temperature	–40°C to 71°C
Sealability	UL/cUL recognized to NEMA 4/4X/12; designed to meet IP66
Expected life	Tested to over 35 million touches on one spot without failure
Chemical resistance	Tested with acetone, methylene, isopropyl-alcohol, ammonia, and others.

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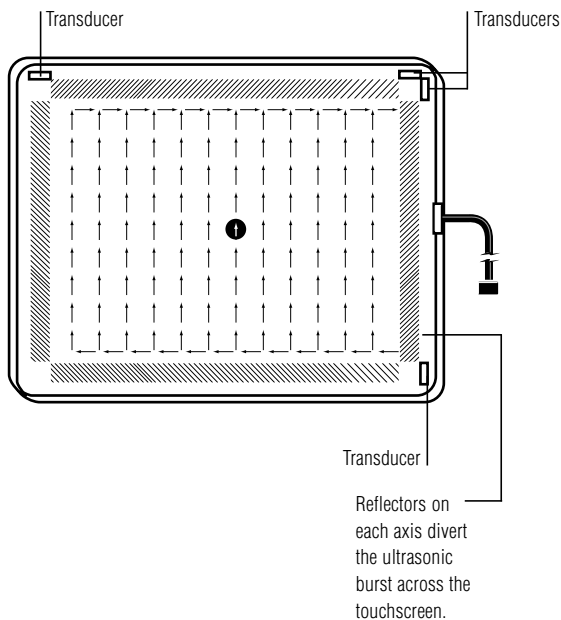


## IntelliTouch: Surface-Wave Technology

### IntelliTouch Technology

The IntelliTouch touchscreen is a glass overlay with transmitting and receiving piezoelectric transducers for both the X and Y axes. The touchscreen controller sends a five-megahertz electrical signal to the transmitting transducer, which converts the signal into ultrasonic waves within the glass. These waves are directed across the front surface of the touchscreen by an array of reflectors. Reflectors on the opposite side gather and direct the waves to the receiving transducer, which reconverts them into an electrical signal—a digital map of the touchscreen surface.

When you touch the screen, you absorb a portion of the wave traveling across it. The received signal is then compared to the stored digital map, the change recognized, and a coordinate calculated. This process happens independently for both the X and Y axes. By measuring the amount of the signal that is absorbed, a Z axis is also determined. The digitized coordinates are transmitted to the computer for processing.



### IntelliTouch benefits

- Surface-wave technology
- Pure-glass touchscreens for superior image clarity, resolution, and light transmission
- Durable, scratch-resistant glass surface—continues to work if scratched
- Stable, drift-free operation—for touch response that's always accurate
- Smart touch response—no false touches
- Finger, gloved-hand, and soft-stylus activation
- Fast touch response
- Flat, spherical, and cylindrical touchscreen options for design flexibility
- Antiglare-glass option
- Sealability—designed to meet national and industrial standards

### IntelliTouch products—for self-service applications

- Point-of-information kiosks
- Electronic catalogs
- Gaming, lottery, and amusement
- Multimedia marketing
- Banking/financial transactions
- Ticket sales
- Public pay phones
- Industrial control rooms
- Computer-based training
- Medical images management

### IntelliTouch Performance

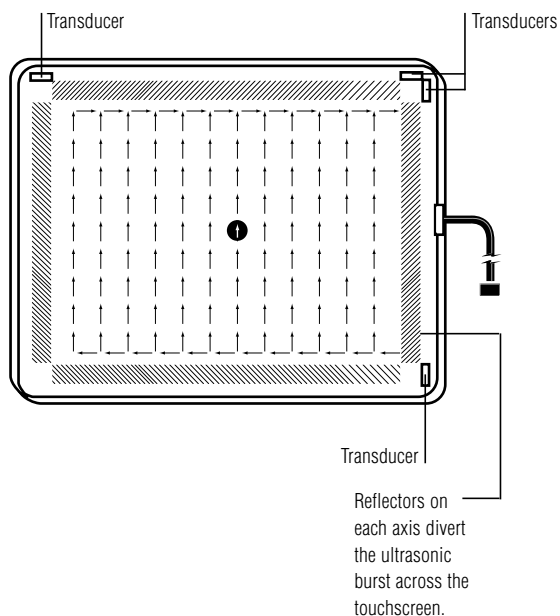
Accuracy	± 2.03 mm
Response time	<10 ms
Resolution	4096 x 4096 touchpoints
Light transmission	Up to 92.5% (glass)
Operating temperature	–20°C to 50°C
Storage temperature	–40°C to 71°C
Sealability	NEMA 3/3R/5/12/12K/13, IP54
Surface durability	Glass (7 on the Mohs scale)

## SecureTouch Technology

SecureTouch products are made of tough, break-resistant glass that inhibits vandalism while providing a fast response to a light touch. SecureTouch touchscreens incorporate the solid-glass, coating-free construction of proven surface-wave technology, so they withstand scratches, abrasions, and impact that would disable other touchscreens.

The SecureTouch system has three main components: a clear solid-glass screen formed to match the shape of a display, an electronic controller, and a software driver.

The controller uses ultrasonic waves on the glass to develop a digital map of the touchscreen surface. A touch on the screen absorbs a portion of the wave traveling across it. The received signal is then compared to the stored digital map, the change recognized, and a coordinate calculated. The digitized coordinates are transmitted to the computer for processing.



## SecureTouch benefits

- Fully tempered glass for 15.1-inch and smaller sizes and heat-strengthened glass for larger sizes
- Heat-strengthened glass on 10.4-inch and larger sizes
- No coatings or overlays to wear, scratch, or tear
- High impact resistance
- Safe break pattern (tempered glass only)
- Sizes from 10.4 inches to 17.0 inches
- Thicknesses of 6 mm and 12 mm
- Antiglare-glass option (6 mm thickness only)
- Sealability—UL/cUL recognized to NEMA 4/4x/12; designed to meet IP66
- Privacy filter option for applications involving sensitive information (such as ATM transactions)

## SecureTouch applications

- Kiosks
- Multimedia demos and marketing
- Ticket sales, vending, and gift registries
- Gaming, lottery, and amusement
- Banking/financial transactions
- Industrial control rooms
- Interactive pay phones

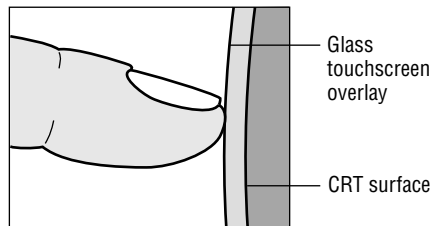
## iTouch: “Touch-on-Tube” Technology

### iTouch Technology

Using surface-wave technology as a foundation, Elo has achieved a breakthrough in touch technology—iTouch. In Elo's new iTouch touch-on-tube technology, surface waves are directed onto the cathode ray tube (CRT) surface for touch sensing, *eliminating any glass overlay on the CRT and delivering the highest-quality image possible.* iTouch also enhances durability—a critical feature for the public-access environment—because the CRT faceplate is several times stronger than a touchscreen overlay.

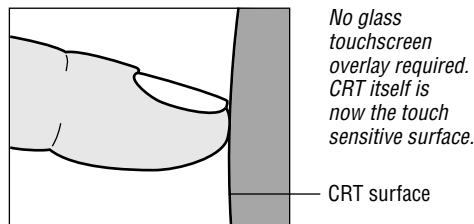
The new iTouch technology enhances brightness and clarity, without jeopardizing the stable, drift-free performance and proven reliability of surface-wave technology. Products in this catalog with iTouch technology are featured on pages 30, 48, 49, 50, 52, and 54.

#### IntelliTouch Touchscreen Overlay



You touch a glass touchscreen overlay.

#### iTouch Touch-on-Tube



You touch directly on the CRT surface.

### iTouch Benefits

- Touch directly on tube—no touchscreen overlay
- Preserves 100 percent of CRT brightness, clarity, antireflection and color properties
- More durable and safer than even bonded touchscreen overlays
- Same fast, accurate, stable performance as surface-wave

### iTouch products—for self-service applications

- Point-of-information kiosks
- Point-of-purchase promotion
- Electronic catalogs
- In-store e-commerce
- Gaming, lottery, and amusement
- Multimedia marketing
- Banking/financial transactions
- Ticket sales
- Industrial control rooms
- Computer-based training
- Education

## CarrollTouch Infrared Technology

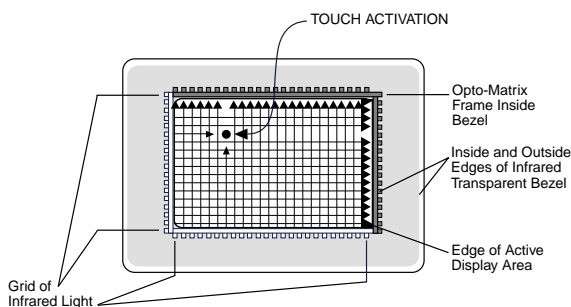
Scanning infrared (IR) technology relies on the interruption of an IR light grid in front of the display screen. The touch frame contains a row of IR-light-emitting diodes (LEDs) and photo transistors, each mounted on two opposite sides to create a grid of invisible infrared light. The IR controller sequentially pulses the LEDs to create the grid of IR light beams. When a stylus, such as a finger, enters the grid, it obstructs the beams. One or more photo transistors detect the absence of light and transmit a signal that identifies the X and Y coordinates.

## Perfect Operation in Direct Sunlight

With CarrollTouch touchscreens, you can have the benefits of infrared technology in direct sunlight. CarrollTouch flat-panel touchscreens are available with unique high-ambient-light circuitry that operates flawlessly even in 10,000 foot-candles of direct light.

## Completely Sealable

CarrollTouch infrared touchscreens offer a built-in filter to protect the surface of the display and to seal the unit up to NEMA 4 or IP65. The touchscreens can be operated with any kind of stylus—including gloved fingers—which is one reason CarrollTouch is the preferred choice in hospital operating rooms around the world. Consistent quality, even in the severest environments, makes CarrollTouch unrivaled for heavy industrial, medical, commercial food preparation and service, and other clean-room applications.



## Benefits of CarrollTouch Infrared

- Withstands severe environments
- Adjusts to changing light conditions, including direct sunlight
- Stable, drift-free calibration performance
- Rugged dependability
- Parallax-free performance for LCD displays
- Sealability—designed to meet national and industrial standards
- Perfect solution for large plasma screens with clip-on frame, requiring no additional agency approvals and no need to add fragile glass that adds weight and can break

## CarrollTouch Applications

- Indoor/outdoor kiosks
- ATMs
- Ticketing machines
- Medical instrumentation
- Process control systems
- Hospital operating rooms
- Commercial transportation
- Commercial food preparation and service

## CarrollTouch Performance

Typical accuracy	1.2 mm
Response time	23 ms
Resolution	4096 x 4096 touchpoints
Light transmission	90 to 100%
Operating temperature	-20°C to 70°C
Storage temperature	-40°C to 85°C
Sealability	NEMA 3/3R/4/5/12/12K/13, IP56

## Guide to Choosing an Elo Touch Technology

### Your application requirements

### Elo technologies

#### Clerk- or employee-activated applications

#### AccuTouch five-wire resistive technology

- Point-of-sale terminals
- Industrial machine control
- Handheld computers
- Medical equipment
- Office equipment  
(such as photocopiers, and fax machines)

#### Public-access applications

#### IntelliTouch surface wave technology

- Point-of-information kiosks
- Electronic catalog
- Gaming, lottery, and amusement
- Multimedia, consumer marketing
- Banking/financial transactions
- Ticket sales/transportation
- Multimedia payphones
- Industrial control rooms

#### When 100% image quality is a must

#### iTouch “touch-on-tube” surface wave technology

#### In a vandal-risky environment

#### SecureTouch vandal-resistant surface wave technology

#### Rugged environments and other special applications

#### CarrollTouch infrared technology

- GPS systems in cars, trucks, and other vehicles
- Train operating systems
- Seatback displays in trains and airplanes
- Ticket vending machines
- Outdoor applications: ATMs, info kiosks, gas station pumps, multimedia payphones, and so on
- Large (>40") multimedia displays

Specific Elo features	Form factor options
<ul style="list-style-type: none"> <li>- Stable, drift-free operation—for touch response that's always accurate</li> <li>- Highest touchpoint density</li> <li>- Fast touch response</li> <li>- Finger, gloved-hand, pen, swipe-card, or any other stylus activation</li> <li>- Durability; tested to over 35 million touches on a single point</li> <li>- Sealability to NEMA 4/4X/12, IP66</li> <li>- Flat and curved touchscreen options for design flexibility</li> <li>- Operation that's not activated by dust or dirt</li> </ul>	<ul style="list-style-type: none"> <li>- Desktop LCD and CRT touchmonitors for most countertop applications</li> <li>- Panel mount, rear mount, and chassis LCD and CRT touchmonitors for easy display and touch solutions</li> <li>- Touchscreen, controller, and chipset components for OEMs</li> </ul>
<ul style="list-style-type: none"> <li>- Pure-glass touchscreen for superior image clarity, brightness, and light transmission</li> <li>- Durable, scratch-resistant glass surface</li> <li>- Operation that's unaffected by static water droplets and deep scratches on the screen</li> <li>- Stable, drift-free operation—for touch response that's always accurate, even in electrically noisy environments</li> <li>- Touch response faster than human perception</li> <li>- Smart touch response—no false touches</li> <li>- Finger, gloved-hand, or any other stylus activation</li> <li>- Flat and curved touchscreen options for design flexibility</li> <li>- Antiglare option</li> <li>- No overlay—for perfect optical performance without parallax</li> <li>- Toughness that exceeds that of bonded overlays</li> <li>- 6-mm and 1-mm strengthened glass overlays that exceed UL-1950 ball drop specifications</li> </ul>	<ul style="list-style-type: none"> <li>- Desktop LCD and CRT touchmonitors for most countertop applications</li> <li>- Panel mount, rear mount and chassis LCD and CRT touchmonitors for built-in installations</li> <li>- Touchscreen and controller components for OEMs and integrators</li> <li>- Desktop and rear mount CRT touchmonitors and iMac with iTouch</li> <li>- Rear mount and chassis LCD touchmonitors for built-in installations</li> <li>- Flat touchscreens and controllers for OEMs</li> </ul>
<ul style="list-style-type: none"> <li>- Shock-resistance</li> <li>- Finger, gloved-hand, or any other stylus activation (&gt;6 mm)</li> <li>- Stable, drift-free operation—for touch response that's always accurate</li> <li>- Flexible design that can incorporate almost any material for display protection</li> <li>- Wide range of available filters</li> <li>- Sealability to NEMA 3/3R/4/5/12/12K/13, IP56</li> <li>- Operation unaffected by direct sunlight</li> <li>- Operation unaffected by splashed liquids</li> <li>- Optional lightweight frames large plasma displays</li> </ul>	<ul style="list-style-type: none"> <li>- "Smart frames" option with completely integrated IR sensor, electronics, and bezel/filter assembly</li> <li>- Optional separate IR sensor, controller, and bezel/filter assembly components</li> </ul>



# LCD or CRT

## Which Display Type Is Right for Your Application?

Once you've decided to enhance your application with touch and have selected a touch technology—resistive, surface-wave, or infrared—you should compare characteristics of liquid crystal displays (LCDs) and cathode ray tubes (CRTs) to determine which display type best suits your application and environment.

Comparing display types based on the following criteria can help you make the best choice for your application.

### Display Life

All displays slowly decline in performance from their new condition by gradually losing brightness. This decline is measured as the period of time required for the display to drop to 50 percent of its original brightness. Displays in touch applications often operate around the clock because many are in public-access settings.

- **LCDs**—The average expected life of an LCD backlight is 25,000 to 30,000 hours. This represents three to four years of use for a display operating 24 hours a day, seven days a week. The backlight of an LCD can often be replaced economically, prolonging the life of the display.
- **CRTs**—The average expected life of a CRT is 12,000 to 15,000 hours. This represents one and a half to two years of use for a display operating 24 hours a day, seven days a week. It is rarely economical to replace the tube within a CRT.

### Footprint, Appearance, and Weight

With its flat screen and slim footprint, an LCD takes up less space than a CRT. In fact, a 15-inch LCD monitor fits into about 40 percent of the space occupied by a 17-inch CRT, yet has approximately the same viewable area. In addition, LCDs can be mounted on a wall to save desktop space and can fit into smaller available spaces inside industrial equipment. Saving space can translate into increased revenue—you can use the extra space for more merchandise in a retail setting, more employees in an office, or more vital equipment in a workshop or factory.

The futuristic look of LCDs increases their appeal for customers who want to associate their company or application with leading-edge technology.

In addition, LCDs weigh much less than comparable CRTs, which can be a consideration for displays mounted on mechanical arms in settings such as hospitals, or when shipping kiosks that use LCDs.



### Advantages of the CRT

- Low purchase price
- Right choice for ultra-high-resolution applications
- Greater viewing angle allows multiple viewers from different angles
- Better for display of full-motion video

# LCD or CRT

## Which Display Type Is Right for Your Application?



### Advantages of the LCD

- Lower lifetime cost
- Smaller footprint for space-saving applications
- Right choice for high-ambient-light environments
- Delivers a flicker-free image
- Consumes up to one-third less power

### Image Quality

- LCDs are available in brightness levels that far exceed those of typical CRTs, which makes them the right choice for environments with high ambient-light levels and for applications, such as public-access kiosks, where a brighter display attracts attention and invites usage. LCDs also deliver a flicker-free image.
- CRTs are the right choice for ultra-high-resolution applications, such as medical imaging. In addition, because the viewing angle of a CRT is greater than that of an LCD, CRTs are preferable for an application where multiple viewers will be looking at a display from different angles. An example is a public access kiosk used by children and adults or by a group of people at one time. CRTs are also ideal for displaying full-motion video.

### Power Consumption and Heat Generation

LCDs consume up to one-third less power than the same-sized CRT monitors, and thus generate less heat than CRTs. This not only saves money, it makes them the right choice for industrial equipment and environments where many displays in a confined space would raise heat levels appreciably and increase HVAC expenses.

### Cost and Total Cost of Ownership (TCO)

A 15-inch LCD touchmonitor has about the same viewing area as a 17-inch CRT touchmonitor, but costs approximately 50 to 100 percent more. However, in comparing the total cost of ownership of an LCD versus a CRT, it's important to also take into account the LCD's longer life span, space-saving ability, and lower power consumption. The cumulative effect of these variables may make the LCD a more cost-effective choice despite its higher purchase price.

### Touch Solutions from Elo

LCD and CRT touchmonitors from Elo are simple, stable, durable solutions for the widest range of touch-input applications. Elo offers several touch technologies: AccuTouch five-wire resistive, IntelliTouch surface-wave, SecureTouch surface-wave, iTouch touch-on-tube, and CarrollTouch infrared. Whichever technology you select, Elo has the right touch solution for your application.

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# Elo All-in-One Touchcomputer

## Your All-in-One, Space-Saving Countertop Touchcomputer

All-in-one, space-saving, countertop touchcomputers are an attractive, versatile interactive display solution for selected public access environments—especially where floor space is at a premium. Elo offers iMac with iTouch for your all-in-one space-saving solution. iMac with iTouch provides a powerful platform for today's interactive multimedia applications and has a built-in connection to the Internet, integrated speakers, a CD-ROM drive, and the option for DVD.

### Small Footprint—Space Savers

iMac with iTouch occupies only a fraction of the space required by a freestanding enclosure, and offers a high-performance personal computer and touch display in the same footprint as a standard 15" Entuitive LCD touchmonitor.

### Attractive Design

iMac with iTouch serves as an attractive mobile selling tool on a countertop or shelf, or as an aisle end cap display. iMac with iTouch has the most popular Indigo color, and an award-winning design that naturally draws attention to the display. The overall attractiveness and simplicity of the user interface encourages the use of Elo's touchcomputer solutions—whether to assist in making sales or to reduce transaction and training time.

### High Performance

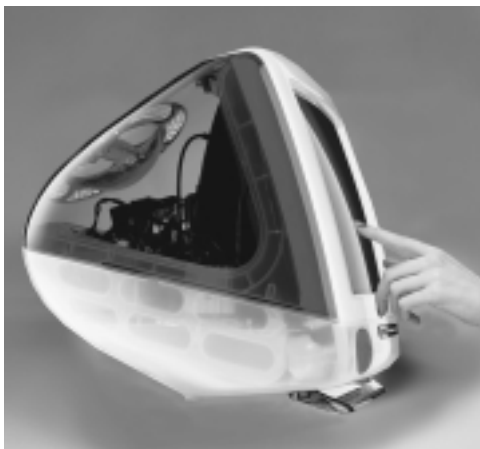
Once the user has been attracted to the display, Elo's surface-wave touch technology provides the clear, bright graphics and reliable, stable, drift-free performance that make interaction a pleasant and productive experience. Using the latest breakthrough in Elo's surface-wave technology, the iMac with iTouch is the perfect vehicle for applications with high graphics content. Elo's iTouch technology turns the CRT itself into a touchscreen, preserving 100 percent of brightness, clarity, and image quality. In addition, iMac's built-in Apple ColorSync ensures true color reproduction, an important factor in many kiosk applications. Extra protection is also achieved with iMac with iTouch because the CRT is more durable and safer than a touchscreen overlay.

### It's Your Choice

Elo's iMac with iTouch all-in-one touchcomputer is the cutting edge of technology for supervised public-access environments. It incorporates an attractive display in a mobile, flexible form factor that is just as productive on the shelf as it is on the counter. In addition to its natural versatility, iMac with iTouch offers fast processing speed for multimedia graphics and movies, and wireless RF technology for flexible location anywhere in the store. The small footprint saves space even when locked down on a countertop, and it is Internet-ready to expand the wealth of information placed at the user's fingertips. Whatever your needs in countertop computing, Elo has the right choice.

# Elo All-in-One Touchcomputer

## Your All-in-One, Space-Saving Countertop Touchcomputer



iMac with iTouch

### Benefits of iMac with iTouch

- Low purchase price
- Touch placed directly on the CRT preserving 100% of brightness, clarity, antireflection, and color properties
- Durability and safety that surpass that of touchscreen overlays
- Same fast, accurate, stable performance as surface-wave technology
- All-in-one design for space saving
- Attractive industrial design that draws attention
- Apple ColorSync for true color reproduction
- High-quality Harman Kardon speakers for a rich multimedia experience
- Fast processing of multimedia graphics and movies
- Wireless RF technology for flexible location anywhere in the store
- "Plug-in" compatibility with TCP/IP networks
- Mac OS 9.X option
- Firewire port for fast data transfer
- Available with 400 MHz G3 processor

# Countertop or Full Kiosk Enclosure

## Which Kiosk Type Is Right for Your Application?

In the interactive public-access environment, Elo is the touchmonitor manufacturer of choice. But should that choice of kiosk be a freestanding enclosure or a countertop interactive display? Elo offers solutions for both.

Elo's line of touchmonitors and touchcomputers includes cathode ray tube (CRT) or liquid crystal display (LCD) displays in a range of sizes and enclosures for countertop or enclosure use. (For help choosing between LCDs and CRTs, see page 16.) A touchcomputer is an all-in-one touchscreen display and high-powered computer. Elo offers iMac with iTouch for your choice. For more information on touchcomputers, see page 18.

### Countertop Interactive Displays: The New Flexible Kiosk

Countertop interactive displays are perfect for a wide range of applications in which cost, mobility, and flexibility are top criteria. Some typical applications include:

- Countertop interactive catalog for e-commerce
- Sales tool for staff
- Video/audio preview of CDs and videos
- Self-service station
- Brand-driven multimedia promotions
- Frequent shopper/affinity programs
- Surveys and market research

### Mobility, Security, and Space

Freestanding enclosures are usually fixed and occupy a dedicated amount of floor space. They lack the mobility of the more compact countertop interactive displays, which can easily be moved around to meet changes in floor space layout.

A freestanding enclosure is ideal for unsupervised public use, providing all the benefits of the application while ensuring equipment security. A freestanding kiosk can be left unattended round the clock, whereas countertop displays are limited to areas that are at least semi-supervised.

Countertop displays can fit into 25 to 50 percent of the footprint of a freestanding enclosure. They come packaged in different form factors designed to be placed on existing retail display fixtures—shelving, countertops, a customer service desk, aisle end cap displays—or incorporated into other merchandising displays to expand interactive opportunities.



### Advantages of Countertop Interactive Displays

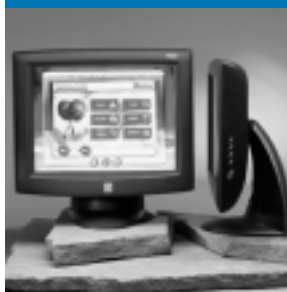
Elo's 1525L 15" LCD Entuitive touchmonitors make the ideal interactive countertop displays:

- Side controls can be locked out in public
- Controls are on the side
- Designed with a base that can be bolted to countertop from underneath
- Stable when touched
- Locking hinge on monitor tilt ensures protection in high-traffic environments
- Cable management design conceals cabling

# Countertop or Full Kiosk Enclosure

## Which Kiosk Type Is Right for Your Application?

Elo offers both full enclosure and countertop kiosk touchmonitors



15" LCD  
page 33

iMac with iTouch  
page 30



17" CRT  
page 47

15" CRT  
page 46



### Branding and Cost

Both the freestanding enclosure and the countertop interactive display attract customers and help increase sales. The fixed nature and size of a freestanding enclosure provide the opportunity to use kiosk graphics and design to incorporate and customize product/company branding. Depending upon the application, the cost of a countertop display can be as little as one-third that of its sturdier, more secure, and more resilient counterpart.

### Advantages of Freestanding Enclosures

- Unattended, secure operation 24 hours a day, 7 days a week
- Durable and resistant to abuse
- Opportunity to reinforced branding through kiosk design and graphics
- Ability to accept peripherals such as bar-code scanner, credit-card reader, or telephone

Elo offers touchmonitors that are designed specifically for kiosk enclosures. Elo has an outstanding set of Kiosk Partners who provide freestanding enclosures (see page 67).

### Advantages of Countertop Interactive Displays

- Mobility and versatility
- Footprint one-quarter to one-half that of a freestanding enclosure, freeing valuable floor space
- Cost one-quarter to one-half that of a freestanding enclosure solution
- Capacity for incorporation into existing product displays or retail fixtures
- In iMac with iTouch solution, wireless option to avoid networking cost
- In iMac with iTouch solution, optional stand that can be bolted down, plus cover controls, CD/DVD slot, and connectors to help prevent tampering

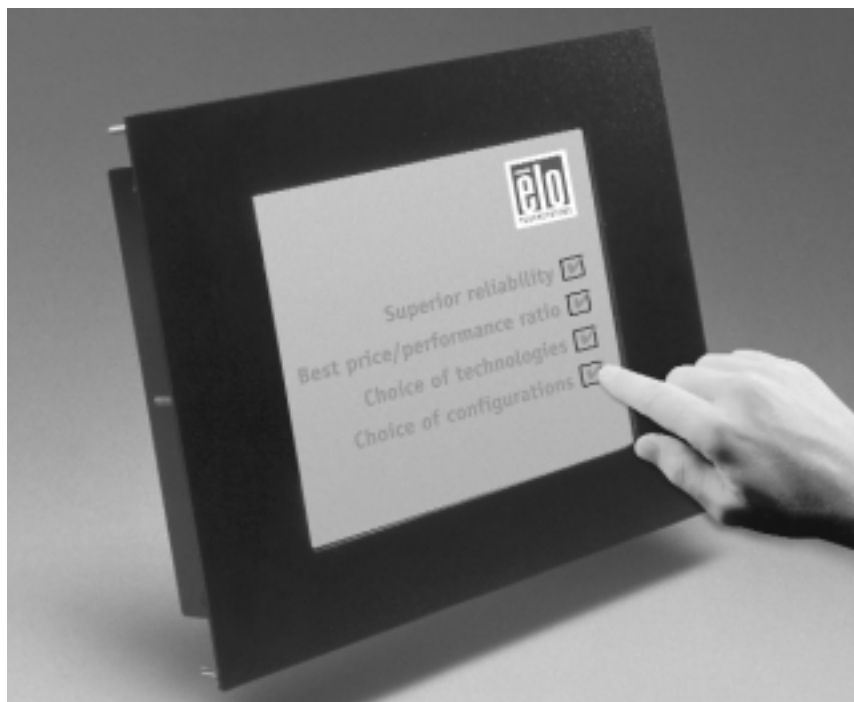
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# Industrial Solutions

## Everything You're Looking for in an Industrial Touchmonitor



Elo Entuitive Touchmonitors for Industrial Applications

### Entuitive Touchmonitors for Built-in Installation

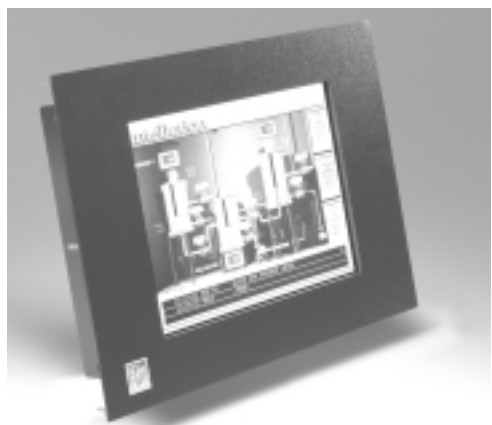
Size	Panel Mount		CRT	Rear Mount		Page
	LCD	Page		Page	LCD	
12"	1266L	40	1246L	36		
15"	1566L	42	1545C	50	1545L	38
17"			1745C	52		
19"			1945C	54		

### Entuitive Touchmonitors—Desktop

Size	CRT		LCD	
	Model	Page	Model	Page
12"			1225L	31
14"	1425C	44		
14"	1426C	45		
15"	1525C	46	1525L/1527L	33
17"	1725C	47		
18"			1825L	35
19"	1925C	48		
21"	2125C	49		

# Industrial Solutions

## Everything You're Looking for in an Industrial Touchmonitor



### Advantages of Elo Entuitive industrial touchmonitors

- Superior reliability
  - Rapid delivery
  - Dedicated technical support
  - Competitive price
  - Choice of touch technologies
  - Choice of configurations
  - Stable, drift-free operation
  - Scratch and abrasion resistance
  - Impact resistance
  - Sealability
  - Agency certification—UL, TÜV, FCC, CE
- The use of touchmonitors in industrial environments continues to grow because they offer the simplest, most direct way for employees to interact with computers. Elo Entuitive touchmonitors, with their many advantages, are the ideal solution for industrial applications.
- Superior reliability—Already well known as a vendor of highly reliable touchscreens, Elo now offers equally reliable products for the industrial market.
  - Rapid delivery—Many products are available from stock, ensuring they can be shipped and put into service quickly.
  - Dedicated technical support—In addition to giving you the benefit of our expertise as a touchscreen manufacturer, we can also help you solve problems with other aspects of touchmonitor technology, including installation and support for applications and software drivers.
  - Competitive price—Elo Entuitive touchmonitors offer the best price/performance ratio. They're rugged enough for the industrial environment, yet not burdened with unnecessarily heavy-duty design features that add cost.
  - Largest selection of touch technologies—Whatever your industrial application or environment, we offer the touch technology to meet your requirements. Choices include AccuTouch five-wire resistive, IntelliTouch surface-wave, SecureTouch surface-wave, iTouch touch-on-tube, and CarrollTouch infrared.
  - Wide selection of configurations—We offer prebuilt panel mount, chassis, rear mount, and desktop configurations to save you time you might spend designing and engineering a custom solution.
  - Stable, drift-free operation with all Elo touch technologies.
  - Scratch- and abrasion-resistant screens—Our IntelliTouch, SecureTouch, iTouch, and CarrollTouch touchscreens are highly scratch-resistant and are not impaired even if scratched with a sharp object.
  - Impact-resistant screen option—Featuring fully tempered glass for 15.1-inch and smaller sizes and heat-strengthened glass for larger sizes, Elo's SecureTouch touchscreens can withstand heavy abuse or accidents that may occur in an industrial environment.

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# Medical/Healthcare Solutions

## Making the Most of Medical and Healthcare Touchmonitors



Elo Entuitive Touchmonitors for Medical/Healthcare Applications

### Entuitive Touchmonitors: Built-in Applications

Size	LCD	Panel Mount Page	CRT	Rear Mount Page	LCD	Page
12"	1266L	40			1246L	36
15"	1566L	42	1545C	50	1545L	38
17"			1745C	52		
19"			1945C	54		

### Entuitive Touchmonitors: Self-Standing

Size	CRT	Desktop Page	LCD	Desktop Page	CRT	Touchcomputer Page
12"			1225L	31		
			1266L	40		
14"	1425C	44				
	1426C	45				
15"	1525C	46	1525L	33	iMac	30
			1526L*	34		
			1527L	33		
17"	1725C	47				
18"			1825L	35		
19"	1925C	48				
21"	2125C	49				

\* Medical grade touchmonitor  
These model numbers are also kiosk-ready

# Medical/Healthcare Solutions

## Making the Most of Medical and Healthcare Touchmonitors



### Advantages of Elo Entuitive Medical/Healthcare Touchmonitors

- Stable, drift-free operation—no recalibration
- Complete sealability
- Drip-proof medical-grade models
- Activation by rubber gloves, fingernails, and pens
- Simplification of complex tasks
- Wide range of sizes, displays and form factors
- “All-in-one” touchcomputers
- Superior reliability
- Rapid delivery
- Dedicated technical support
- Choice of touch technologies
- Scratch and abrasion resistance
- Impact resistance

optical and image quality along with resistance to scratches, breakage, and vandalism. For LCD-based applications, IntelliTouch overlay is widely used, and the SecureTouch touchscreen provides an additional measure of resistance to breakage and vandalism because of its tempered glass construction.

The practical application of Elo Entuitive touchmonitors within the medical and healthcare environment is wide and varied. Used with medical equipment, Entuitive touchmonitors act as an interface, improving the efficiency and accuracy of analytical instruments, sophisticated x-ray and ultrasound machines, and cardiac management machines. Entuitive touchmonitors do not require recalibration, even when the equipment is moved frequently. The new “drip-proof” Entuitive 15-inch LCD flat-panel medical-grade touchmonitor actually sheds water and is safe from liquid drops and spills. It can be sterilized with hospital-grade disinfectants, which makes it the ideal interface in patient-care areas—such as the operating room—where contamination may occur.

In the healthcare arena, Elo Entuitive touchmonitors help medical professionals in the use of electronic patient records, information systems, nursing station control, and hospital bed management systems. They are also the ideal tools for patient education; patients can use the intuitive touch interface to learn about upcoming surgical procedures or future treatments for their medical conditions in a self-paced, non-threatening way.

Medical kiosks provide information and interaction in hospitals and in doctors’ and dentists’ offices. Elo Entuitive touchmonitors are an integral part of the rapid growth of medical kiosk applications because the touch interface is universal and can be used by anyone regardless of language, education, or socioeconomic or cultural background.

Elo Entuitive touchmonitors for medical and healthcare applications offer the largest selection of touch technologies.

- **Medical Equipment:** AccuTouch five-wire resistive is the most widely used touchscreen technology for medical equipment applications because it handles liquid splashing, aggressive cleaning, and other harsh conditions better than any other technology, and at a competitive price. CarrollTouch scanning infrared technology is well suited for those applications—such as x-ray equipment—that demand superior optical performance as well as a seal.
- **Healthcare:** Surface wave is the most widely used touchscreen technology for healthcare applications. If the application is CRT-based, iTouch “touch-on-tube” (no-overlay) technology provides superior

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# Kiosk Solutions

## The Right Choice for Your Kiosk

Elo Entuitive touchmonitors for kiosks are the industry's first sealed touchmonitors designed specifically for kiosk applications.

Touchmonitors are used in the vast majority of kiosks to make interaction intuitive and easy, and Elo Entuitive touchmonitors are the right choice for your kiosk because they are sealed, versatile, durable, and designed specifically for kiosk applications.

### Reduces Your Overall Cost

- **Industry-leading engineering for robust operation.** Elo's well-ventilated metal chassis keeps the CRT cooler, significantly extending its operational life. The flat monitor bezel provides a clean interface with the kiosk enclosure and is sealed to the touchscreen to protect the monitor electronics from splashed liquids, dirt, and dust.

Elo Entuitive LCD touchmonitors for kiosks consume less power and generate less heat than CRTs, making them the right choice for environments where heat generation is a concern.

- **Easy integration into your kiosk design.** With a custom-designed chassis and sealable bezel surface, versatile Elo Entuitive touchmonitors for kiosks—available as CRTs or flat-panel LCDs—integrate easily into your kiosk design. The touchmonitor can be mounted from its front or base (mounting hardware is provided), eliminating the need to spec and purchase brackets and supports.

- **Fixed outside dimensions.** Elo maintains the model design of its kiosk touchmonitors much longer than the average plastic-case monitor manufacturer, reducing the chance you will need to redesign your kiosk around a monitor component change.



### Delivers Rugged Performance in Tough Environments

- **Intelligent scratch tolerance.** Elo's surface-wave touch technology continues to operate even with deep scratches. It actually "reprograms" around surface contamination like gum, grease, and dirt. This capability is especially important in public-access kiosks where wear and tear and vandalism can occur.
- **High light transmission for bright, clear graphics.** Elo's IntelliTouch or SecureTouch surface-wave, pure-glass touchscreens are the highest-clarity touchscreens in the industry. Elo Entuitive LCD touchmonitors with IntelliTouch are even brighter than CRT touchmonitors, which makes them an attractive choice for kiosk environments with high ambient-light levels and for applications where a brighter display attracts attention and invites usage. Elo's breakthrough touch-on-tube technology, iTouch, preserves 100 percent of the original CRT brightness and image quality because no overlay is required.
- **Long touchscreen performance life.** Elo's surface-wave technology has been operationally tested to 50 million touches in one location without failure.
- **Break-resistant screens.** SecureTouch touchscreens deliver all the benefits of IntelliTouch screens, plus high impact resistance. SecureTouch products are made of tough, break-resistant glass that inhibits vandalism while providing a fast response to a light touch.

# Kiosk Solutions

## The Right Choice for Your Kiosk

### Low Maintenance, High Quality

- **Reliable, drift-free operation.** This means no recalibration, which will help keep your maintenance costs down. On-screen display capability allows users to make image adjustments without having to open the monitor.
- **Easy worldwide agency approval.** Elo Entuitive touchmonitors for kiosks are UL recognized, and FCC, CE, TÜV-Bauart compliant, making it easier for you to obtain worldwide agency approval for your kiosk.
- **Extensive warranties.** Elo stands behind the reliability, quality, and ruggedness of its kiosks by offering a full manufacturer's warranty on all our touchmonitors.

### More Solutions from Elo

- **Signature-capture products.** Scribex signature pads or special signature kiosk monitors allow you to capture a signature as part of your kiosk application.
- **Kiosk Partner program.** Full-service kiosk providers give you a complete kiosk system (see page 67).
- **TouchReady software developer program.** TouchReady program includes browser overlay solutions and names of multimedia software developers for PC and Macintosh platforms.
- **Kiosk white papers and "Ten Tips for Developing Effective Touch Applications" (see page 29).** These materials and more are available on our Web site ([www.elotouch.com](http://www.elotouch.com)).



Every Elo kiosk touchmonitor, the world over, comes with Elo's quality service and support from Elo's dedicated technical staff.

### Elo Entuitive Touchmonitors for Kiosk Applications

Size	CRT		LCD		CRT		LCD		Touchcomputers	
	Kiosk	Page	Kiosk	Page	Desktop	Page	Desktop	Page	CRT	Page
12"			1246L	36						
15"	1545C	50	1545L	38	1525C	46	1525L	33	iMac	30
17"	1745C	52			1725C	47				
18"							1825L	35		
19"	1945C	54			1925C	48				
21"					2125C	49				



# Hospitality/POS Solutions

## Simplifying Your POS Application with Elo TouchSystems



12" LCD Entuitive Touchmonitor

Restaurant servers use a touchmonitor station to enter orders, communicate with the kitchen, and reconcile tabs.

From its infancy, touch has been popular in point-of-sale (POS) applications for the restaurant and hospitality industry. Today, POS touch applications are becoming more and more popular in the retail, government, and financial industries. Touchscreens simplify cash-register operation, reduce operator error, and significantly reduce training time, which is especially vital in industries with high employee turnover, such as fast food and retail.

Elo's five-wire resistive AccuTouch technology is the most widely used technology in restaurants, retail stores, hotels, and other POS applications where touch is in daily, high-volume use. AccuTouch offers consistent, drift-free operation and a durable surface that stands up to harsh contaminants and is gasket sealable against liquids. Elo provides a wide selection of Entuitive touchmonitors with AccuTouch five-wire resistive touch technology. Elo touch solutions are also available through a network of authorized POS distributors.



**Distributor**  
Elo TouchSystems

**ScanSource**



### Elo Entuitive Touchmonitors for Point-of-Sale Applications

Size	CRT		LCD		Touchcomputers	
	Model	Page	Model	Page	CRT	Page
12"			1225L	31		
			1226L	32		
14"	1425C	44				
	1426C	45				
15"	1525C	46	1525L	33	iMac	30
17"	1725C	47				
18"			1825L	35		
19"	1925C	48				
21"	2125C	49				

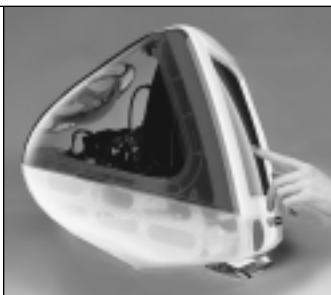
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# Ten Tips for Developing Effective Touch Applications

**Ten simple pointers that can make the difference between success and failure for your touch-activated application.**

- 1 Run your application full screen.** Remove title bars and menu bars so your application can take full advantage of the entire display area.
- 2 Use bright background colors (not black).** Bright backgrounds in your application will hide fingerprints and reduce glare. Dithering or other patterned backgrounds (for example, the “crumpled paper” look) help the eye focus on the screen image instead of reflections, even in areas where there are no icons or menu choices.
- 3 Use a simple point-and-click interface with large buttons.** Dragging, double-clicks, scroll bars, drop-down menus, multiple windows, or other elements can confuse the typical user and detract from user-friendliness and efficiency.
- 4 Turn the cursor off so your user will focus on the entire screen instead of the arrow.** A cursor on the screen makes the user think, “How do I get the arrow to do what I want?” Remove the cursor, and the user’s thinking and actions become direct instead of indirect—thereby unlocking the true power of touchscreens.
- 5 Always give your users feedback as soon as they touch the screen.** Immediate feedback is critical to reassure the user that a touch has registered. Responses can be visual, as 3-D button effects similar to those found on a standard Windows button. Or you can provide an audio response, such as a “click” or other sound output whenever a user touches the screen.
- 6 Make your application fun and fast.** Users will walk away from a sluggish system. You can keep their attention with a quick response to touches. Speedy systems also reduce vandalism. Avoid graphics modes offering excessive colors or high resolution—these will only slow down your system.
- 7 Make the application intuitive, limit choices, and guide the user as much as possible.** Test your application on focus groups. If users pause in confusion—even for a moment—you’ve identified an area that needs improvement.
- 8 Digitized speech can talk users through your application.** Because the human brain can simultaneously process a voice and absorb an image, there is something almost magical about a user interface that provides voice prompts and touch response. The better kiosk applications exploit this knowledge for maximum effect. For example: “Touch the first letter of the company you are looking for.” Click. “Now touch OK.” Click.
- 9 Make your application part of an attractive package.** Animation and large fonts help attract users to kiosk applications. The actual design of the kiosk cabinet should also be attractive and sturdy.
- 10 Keep the following in mind when designing a kiosk cabinet.** Are you using forced-air ventilation? Put your fan at the top, near the monitor’s vents. To minimize airborne dust from footsteps, keep the intake away from the floor. Keep air from entering around the monitor’s face. Point your speakers in the direction of your user’s ears. Use an Elo Entuitive kiosk touch-monitor—otherwise, allow for variations in the physical dimensions of monitor models, as they change frequently. Finally, choose a kiosk finish that does not show fingerprints—avoid polished stainless steel, chrome, or glossy black paint.



## iMac with iTouch

### SPECIFICATIONS

<b>Model</b>	iMac with iTouch
<b>Case/Bezel color</b>	Indigo
<b>Display type</b>	FST CRT
<b>Display size</b>	15.0" (38.1 cm)/13.8" (35.0 cm) viewable
<b>Monitor dimensions</b>	Width 15.0" (38.1 cm)
	Height (including base) 15.0" (38.1 cm)
	Depth (including base) 17.1" (43.5 cm)
<b>Highest recommended resolution</b>	800 x 600 at 95 Hz
<b>Resolution presets</b>	640 x 480 at 117 Hz
	1024 x 768 at 75 Hz
<b>Dot pitch, nominal</b>	0.28 mm
<b>Scanning frequency</b>	Horizontal 47–63 Hz, single phase
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	100 to 260 VAC
<b>Power dissipation</b>	150 W max.
<b>Temperature</b>	Operating 10°C to 35°C; storage –47°C to 47°C
<b>Humidity</b>	Operating 5% to 95%; storage 5% to 95%; noncondensing
<b>Altitude</b>	10,000 feet maximum
<b>Weight (approx.)</b>	Actual 34.7 lb (15.8 kg); shipping 72.0 lb (32.7 kg)
<b>Processor</b>	400 MHz Power PC G3
<b>Backside level 2 cache</b>	512 K
<b>Memory (SDRAM)</b>	64 MB
<b>Hard Disk Drive</b>	10 GB Ultra ATA
<b>Optical Driver</b>	CD-ROM drive
<b>Audio</b>	Built-in microphone for speech recognition; integrated high-performance audio system
<b>Firewire</b>	Two ports
<b>USB</b>	One port available (12 Mbps)
<b>Modem</b>	56 K v. 90
<b>Ethernet</b>	10/100 Base-T
<b>Wireless networking</b>	AirPort ready
<b>Warranty</b>	Monitor Apple one-year warranty
<b>Other features</b>	Speakers; sealing; ENERGY STAR

### ORDERING INFORMATION

<b>Touch Technology</b>	<b>Touch Interface</b>	<b>Surface Treatment</b>	<b>Elo Part Number</b>	<b>Agency Approvals</b>
iTouch	Serial	Antiglare	133086-000	UL, cUL, FCC

- Users should independently evaluate the suitability of the product for their application.
- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
- For Product Agency Certifications refer to our Web site.



Desktop

1225L

entuitive  
Touchmonitors

## 12" LCD Touchmonitor

### SPECIFICATIONS

Model		1225L
Case/Bezel color		Beige
Display type		Active matrix TFT LCD
Display size		12.1" (30.7 cm) diagonal
Useful screen area	Horizontal	9.7" (24.6 cm)
	Vertical	7.3" (18.5 cm)
Monitor dimensions	Width	13.4" (34.0 cm)
	Height (including base)	11.3" (28.7 cm)
	Depth (including base)	6.7" (17.0 cm)
Dimensional drawing number		MS500151 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
Optimal (native) resolution		800 x 600 at 60, 72, or 75 Hz
Other supported resolutions		640 x 480 at 60, 72, or 75 Hz; 640 x 480 at 67 Hz (Mac); 640 x 480 at 56 or 60 Hz (PC 98)
Colors		16.7 million
Brightness	LCD panel	250 cd/m <sup>2</sup>
	LCD panel with touchscreen	AccuTouch: 188 cd/m <sup>2</sup> (typical)
Viewing angle (from center)	Horizontal (left/right)	±30° or 60° total
	Vertical (up/down)	10°/–20° or 30° total
Contrast ratio		100:1
Input video format		Analog (no proprietary video card needed)
Input video signal connector		Mini D-Sub 15-Pin (female); Universal Mac adapter available separately
Scanning frequency		Horizontal 24–50 kHz; vertical 55–85 Hz
Video bandwidth		50 MHz
Power supply		External power supply, 100–240 VAC, 50–60 Hz
Power dissipation		20 W max.
Temperature		Operating 10°C to 40°C; storage –20°C to 60°C
Humidity		Operating 85%; storage 90%; noncondensing
Weight (approx.)		Actual 10.0 lb (5.0 kg); shipping 17.0 lb (8.5 kg)
Warranty	Monitor	1 year
	Touch technology	5 years AccuTouch touchscreen
	Touch controller	5 years
	Backlight lamp life	30,000 hours at full brightness
Other features		Digital on-screen display (OSD); two built-in 1 W speakers; removable base; sealing; VESA mounting

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Serial	Antiglare	870141-001	UL, cUL, FCC, CE, TÜV-GS

- Users should independently evaluate the suitability of the product for their application.
- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
- For Product Agency Certifications refer to our Web site.

**1226L**
**Desktop**


## 12" LCD Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1226L
<b>Case/Bezel color</b>	Gray
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	12.1" (30.7 cm) diagonal
<b>Useful screen area</b>	Horizontal 9.7" (24.6 cm)
	Vertical 7.3" (18.5 cm)
<b>Monitor dimensions</b>	Width 13.4" (34.0 cm)
	Height (including base) 12.8" (32.5 cm)
	Depth (including base) 6.5" (16.6 cm)
<b>Optimal (native) resolution</b>	800 x 600 at 56 or 60 Hz
<b>Other supported resolutions</b>	640 x 480 at 60, 72, 75, or 80 Hz
<b>Colors</b>	262,000
<b>Brightness</b>	LCD panel 100 cd/m <sup>2</sup>
	LCD panel with touchscreen AccuTouch: 75 cd/m <sup>2</sup> (typical); IntelliTouch: 92.5 cd/m <sup>2</sup> (typical)
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±40° or 80° total
	Vertical (up/down) 10°/30° or 40° total
<b>Contrast ratio</b>	120:1
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female); Universal Mac adapter available separately
<b>Scanning frequency</b>	Horizontal 31.5–43.3 kHz; vertical 56–85 Hz
<b>Video bandwidth</b>	50 MHz
<b>Power supply</b>	External power supply, 100–240 VAC, 50–60 Hz
<b>Power dissipation</b>	20 W max.
<b>Temperature</b>	Operating 0°C to 40°C; storage –25°C to 60°C
<b>Humidity</b>	Operating 85%; storage 90%; noncondensing
<b>Weight (approx.)</b>	Actual 10.7 lb (4.8 kg); shipping 13.3 lb (6.0 kg)
<b>Warranty</b>	Monitor 1 year
	Touch technology 10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 25,000 hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); removable base; sealing; VESA mounting

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Serial	Antiglare	392863-000	UL, cUL, FCC, CE, TÜV-GS
IntelliTouch	Serial	Antiglare	495919-000	UL, cUL, FCC, CE, TÜV-GS

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# 1525L Desktop



# 1527L Desktop

## 15" LCD Touchmonitors

**entuitive**  
Touchmonitors

### SPECIFICATIONS

<b>Model</b>	1525L and 1527L	
<b>Case/Bezel color</b>	Dark gray (1525L); beige (1527L)	
<b>Display type</b>	Active matrix TFT LCD	
<b>Display size</b>	15.1" (38.4 cm) diagonal	
<b>Useful screen area</b>	Horizontal	12.0" (30.4 cm)
	Vertical	9.0" (22.8 cm)
<b>Monitor dimensions</b>	Width	15.4" (39.1 cm)
	Height (including base)	15.4" (39.1 cm)
	Depth (including base)	11.0" (28.0 cm)
<b>Dimensional drawing number</b>	MS500104 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )	
<b>Optimal (native) resolution</b>	1024 x 768 at 60, 70, or 75 Hz	
<b>Other supported resolutions</b>	1024 x 768 at 60, 70, or 75 Hz; 800 x 600 at 56, 60, 72, or 75 Hz; 640 x 480 at 60, 72, or 75 Hz; 640 x 480 at 67 Hz (Mac); 640 x 480 at 60 Hz (PC 98)	
<b>Colors</b>	16 million with dithering (unlimited)	
<b>Brightness</b>	LCD panel	200 cd/m <sup>2</sup>
	LCD panel with touchscreen	AccuTouch: 170 cd/m <sup>2</sup> ; IntelliTouch: 185 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right)	±60° or 120° total
	Vertical (up/down)	±60° or 120° total
<b>Contrast ratio</b>	200:1, up to 16 shades of gray	
<b>Input video format</b>	VGA/SVGA/XGA analog video	
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)	
<b>Scanning frequency</b>	Horizontal 24–64 kHz; vertical 56–75 Hz	
<b>Power supply</b>	Universal AC/DC power adapter; 12 VDC @ 3.75 amps	
<b>Power dissipation</b>	45 W max.	
<b>Temperature</b>	Operating 0°C to 40°C; storage 0°C to 60°C	
<b>Humidity</b>	Operating 80% noncondensing	
<b>Weight (approx.)</b>	Actual 16.0 lb (7.3 kg); shipping 19.5 lb (8.9 kg)	
<b>Warranty</b>	Monitor	3 years
	Touch technology	10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller	5 years
	Backlight lamp life	40,000 hours
<b>Other features</b>	Digital on-screen display (OSD); two built-in 1 W speakers; removable base; sealing; VESA mounting	

### ORDERING INFORMATION

	<b>Touch Technology</b>	<b>Touch Interface</b>	<b>Surface Treatment</b>	<b>Elo Part Number</b>	<b>Agency Approvals</b>
Dark gray	IntelliTouch	Serial	Antiglare	704409-000	UL, cUL, FCC, CE, TÜV
	IntelliTouch	USB	Antiglare	507809-000	UL, cUL, FCC, CE, TÜV
	AccuTouch	Serial	Antiglare	361089-000	UL, cUL, FCC, CE, TÜV
	AccuTouch	USB	Antiglare	652885-000	UL, cUL, FCC, CE, TÜV
Beige	IntelliTouch	Serial	Antiglare	250106-000	UL, cUL, FCC, CE, TÜV
	AccuTouch	Serial	Antiglare	750088-000	UL, cUL, FCC, CE, TÜV

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**1526L**

**Desktop**



## 15" LCD Touchmonitor—Medical

### SPECIFICATIONS

<b>Model</b>	1526L
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	15.1" (38.4 cm) diagonal
<b>Useful screen area</b>	Horizontal 12.0" (30.4 cm)
	Vertical 9.0" (22.8 cm)
<b>Monitor dimensions</b>	Width 15.4" (39.1 cm)
	Height (including base) 15.4" (39.1 cm)
	Depth (including base) 11.0" (28.0 cm)
<b>Dimensional drawing number</b>	MS500104 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Optimal (native) resolution</b>	1024 x 768 at 60, 70, or 75 Hz
<b>Other supported resolutions</b>	1024 x 768 at 60, 70, or 75 Hz; 800 x 600 at 56, 60, 72, or 75 Hz; 640 x 480 at 60, 72, or 75 Hz; 640 x 480 at 67 Hz (Mac); 640 x 480 at 60 Hz (PC 98)
<b>Colors</b>	16 million with dithering (unlimited)
<b>Brightness</b>	LCD panel 200 cd/m <sup>2</sup>
	LCD panel with touchscreen 170 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±60° or 120° total
	Vertical (up/down) ±60° or 120° total
<b>Contrast ratio</b>	200:1; up to 16 shades of gray
<b>Input video format</b>	VGA/SVGA/XGA analog video
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Scanning frequency</b>	Horizontal 24–64 kHz; vertical 56–75 Hz
<b>Power supply</b>	Universal AC/DC power adapter; 12 VDC @ 3.75 amps
<b>Power dissipation</b>	45 W max.
<b>Temperature</b>	Operating 0°C to 40°C; storage 0°C to 60°C
<b>Humidity</b>	Operating 80% noncondensing
<b>Weight (approx.)</b>	Typical 16.0 lb (7.3 kg); shipping 19.5 lb (8.9 kg)
<b>Warranty</b>	Monitor 3 years
	Touch technology 5 years AccuTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 40,000 hours
<b>Other features</b>	Digital on-screen display (OSD); two built-in 1 W speakers; removable base; sealing; VESA mounting

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Serial	Antiglare	845328-000	UL, cUL, FCC, CE, CB

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Desktop

1825L

entuitive  
Touchmonitors

## 18" LCD Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1825L
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	18.1" (46.0 cm) diagonal
<b>Useful screen area</b>	Horizontal 14.1" (35.9 cm)
	Vertical 11.3" (28.7 cm)
<b>Monitor dimensions</b>	Width 18.7" (47.5 cm)
	Height (including base) 16.7" (42.4 cm)
	Depth (including base) 8.3" (21.1 cm)
<b>Optimal (native) resolution</b>	1280 x 1024 at 60, 70, 75 Hz
<b>Other supported resolutions</b>	1152 x 900; 1024 x 768; 800 x 600; 640 x 480
<b>Colors</b>	16.7 million
<b>Brightness</b>	LCD panel 235 cd/m <sup>2</sup>
	LCD panel with touchscreen IntelliTouch: 220 cd/m <sup>2</sup> ; AccuTouch: 200 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±80° or 160° total
	Vertical (up/down) ±80° or 160° total
<b>Contrast ratio</b>	300:1
<b>Input video format</b>	Dual interface (digital/analog)
<b>Input video signal connector</b>	DVI for digital; 15-Pin HD male for analog
<b>Scanning frequency</b>	Digital: Horizontal 31.5kHz; vertical 56–85 Hz
	Analog: Horizontal 56–85 kHz; vertical 31.5–64 Hz
<b>Power supply</b>	Internal power supply, 100–240 VAC, 50–60 Hz
<b>Power dissipation</b>	65 W max.
<b>Temperature</b>	Operating 0°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 90% noncondensing
<b>Weight (approx.)</b>	Actual 22.8 lb (10.4 kg)
<b>Warranty</b>	Monitor 1 year
	Touch technology 10 years IntelliTouch touchscreen; 5 years AccuTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 25,000 hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); speakers; removable base; ENERGY STAR; VESA mounting; USB hub

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	983760-000	UL, cUL, FCC
AccuTouch	Serial	Antiglare	969270-000	UL, cUL, FCC

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**1246L**

**Rear Mount**



## 12" LCD Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1246L
<b>Case/Bezel color</b>	Black, metal bezel and back
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	12.1" (30.7 cm) diagonal
<b>Useful screen area</b>	Horizontal 9.7" (24.6 cm)
	Vertical 7.3" (18.5 cm)
<b>Monitor dimensions</b>	Width 13.2" (33.5 cm)
	Height (including base) 11.0" (27.8 cm)
	Depth (including base) 2.5" (6.3 cm)
<b>Dimensional drawing number</b>	MS500130 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Optimal (native) resolution</b>	800 x 600 at 60, 70, or 75 Hz
<b>Other supported resolutions</b>	640 x 480 at 60, 70, or 75 Hz
<b>Colors</b>	6-bit, 262,144
<b>Brightness</b>	LCD panel 300 cd/m <sup>2</sup>
	LCD panel with touchscreen AccuTouch: 240 cd/m <sup>2</sup> ; IntelliTouch/SecureTouch: 275 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±60° or 120° total
	Vertical (up/down) +40°/-55° or 95° total
<b>Contrast ratio</b>	200:1
<b>Input video format</b>	VGA/SVGA analog
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Scanning frequency</b>	Horizontal 56-75 Hz; vertical 25-60 Hz
<b>Power supply</b>	100-240 VAC, .4 amp max. 50-60 Hz
<b>Temperature</b>	Operating 0°C to 50°C; storage -25°C to 60°C
<b>Humidity</b>	Operating 90%; storage 90%; noncondensing
<b>Weight (approx.)</b>	Actual 11.9 lb (5.4 kg); shipping 18.4 lb (8.4 kg)
<b>Warranty</b>	Monitor 3 years
	Touch technology 5 years AccuTouch touchscreen, 10 years IntelliTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 50,000 hours at full brightness
<b>Other features</b>	Digital on-screen display (OSD); sealing; remote OSD module

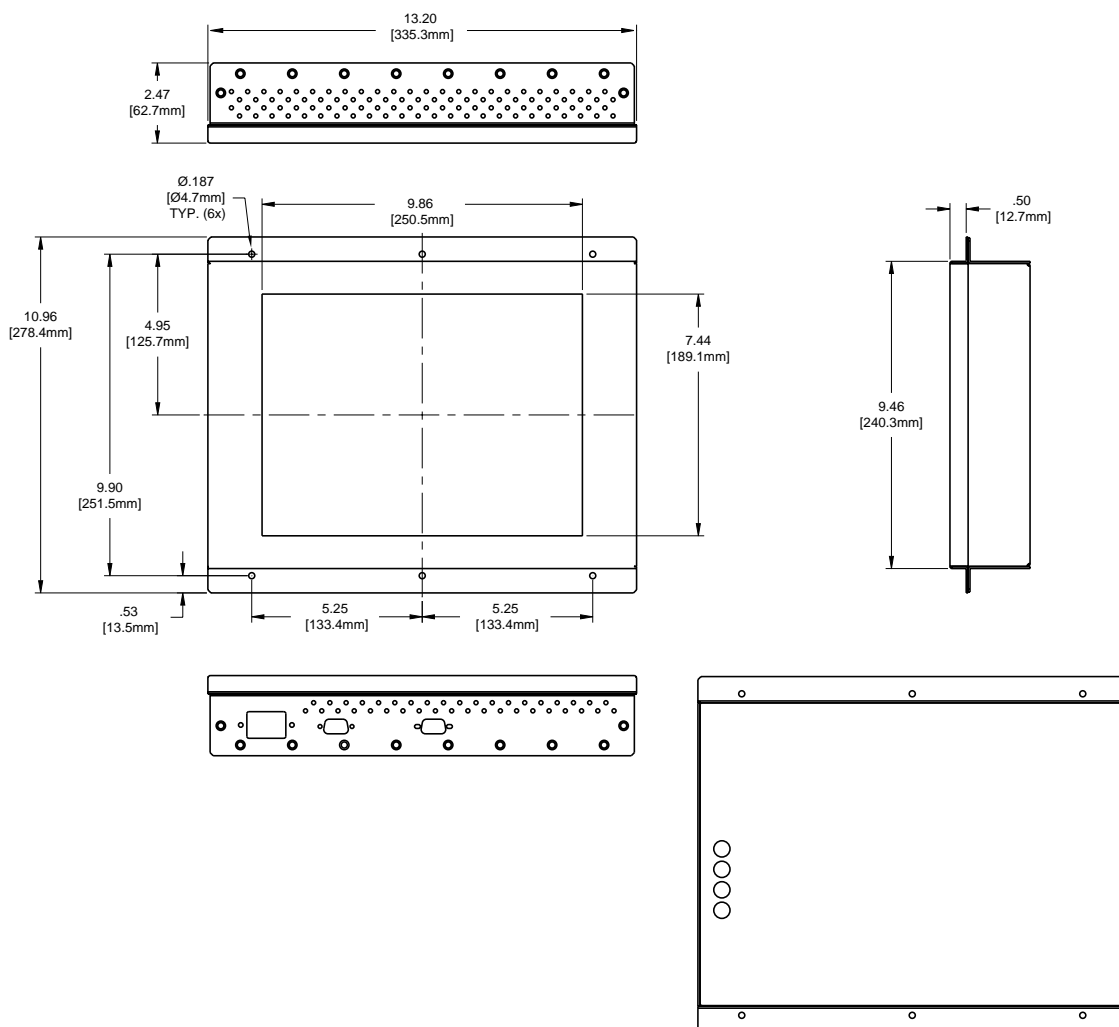
### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	935858-000	UL, cUL, FCC, CE, TÜV
IntelliTouch	USB	Antiglare	644304-000	UL, cUL, FCC, CE, TÜV
SecureTouch 0.25"	Serial	Antiglare	750548-000	UL, cUL, FCC, CE, TÜV
SecureTouch 0.25"	USB	Antiglare	651228-000	UL, cUL, FCC, CE, TÜV
AccuTouch	Serial	Antiglare	851018-000	UL, cUL, FCC, CE, TÜV
AccuTouch	USB	Antiglare	988624-000	UL, cUL, FCC, CE, TÜV

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## 12" LCD Touchmonitor



**1545L**

**Rear Mount**



## 15" LCD Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1545L
<b>Case/Bezel color</b>	Dark gray, plastic bezel with metal back
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	15.1" (38.4 cm) diagonal
<b>Useful screen area</b>	Horizontal 12.0" (30.4 cm)
	Vertical 9.0" (22.8 cm)
<b>Monitor dimensions</b>	Width 15.4" (39.0 cm); with bracket: 17.2" (43.8 cm)
	Height (including base) 12.9" (32.8 cm)
	Depth (including base) 1.3" (3.2 cm); with bracket: 2.7" (6.8 cm)
<b>Dimensional drawing number</b>	MS500108 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Optimal (native) resolution</b>	1024 x 768 at 60, 70, or 75 Hz
<b>Other supported resolutions</b>	1024 x 768 at 60, 70, or 75 Hz; 800 x 600 at 56, 60, 72, or 75 Hz; 640 x 480 at 60, 72, or 75 Hz; 640 x 480 at 67 Hz (Mac); 640 x 480 at 60 Hz (PC 98)
<b>Colors</b>	16 million with dithering (unlimited)
<b>Brightness</b>	LCD panel without touchscreen 200 cd/m <sup>2</sup>
	LCD panel with touchscreen IntelliTouch: 185 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±60° or 120° total
	Vertical (up/down) ±60° or 120° total
<b>Contrast ratio</b>	200:1; up to 16 shades of gray
<b>Input video format</b>	VGA/SVGA/XGA analog video
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Scanning frequency</b>	Horizontal 24–64 kHz; vertical 56–75 Hz
<b>Power supply</b>	Universal AC/DC power adapter; 12 VDC @ 3.75 amps
<b>Power dissipation</b>	45 W max.
<b>Temperature</b>	Operating 0°C to 40°C; storage 0°C to 60°C
<b>Humidity</b>	Operating 80% noncondensing
<b>Weight (approx.)</b>	Actual 16.0 lb (7.3 kg); shipping 19.5 lb (8.9 kg)
<b>Warranty</b>	Monitor 3 years
	Touch technology 10 years IntelliTouch/SecureTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 40,000 hours
<b>Other features</b>	Digital on-screen display (OSD); sealing; VESA mounting; remote OSD module

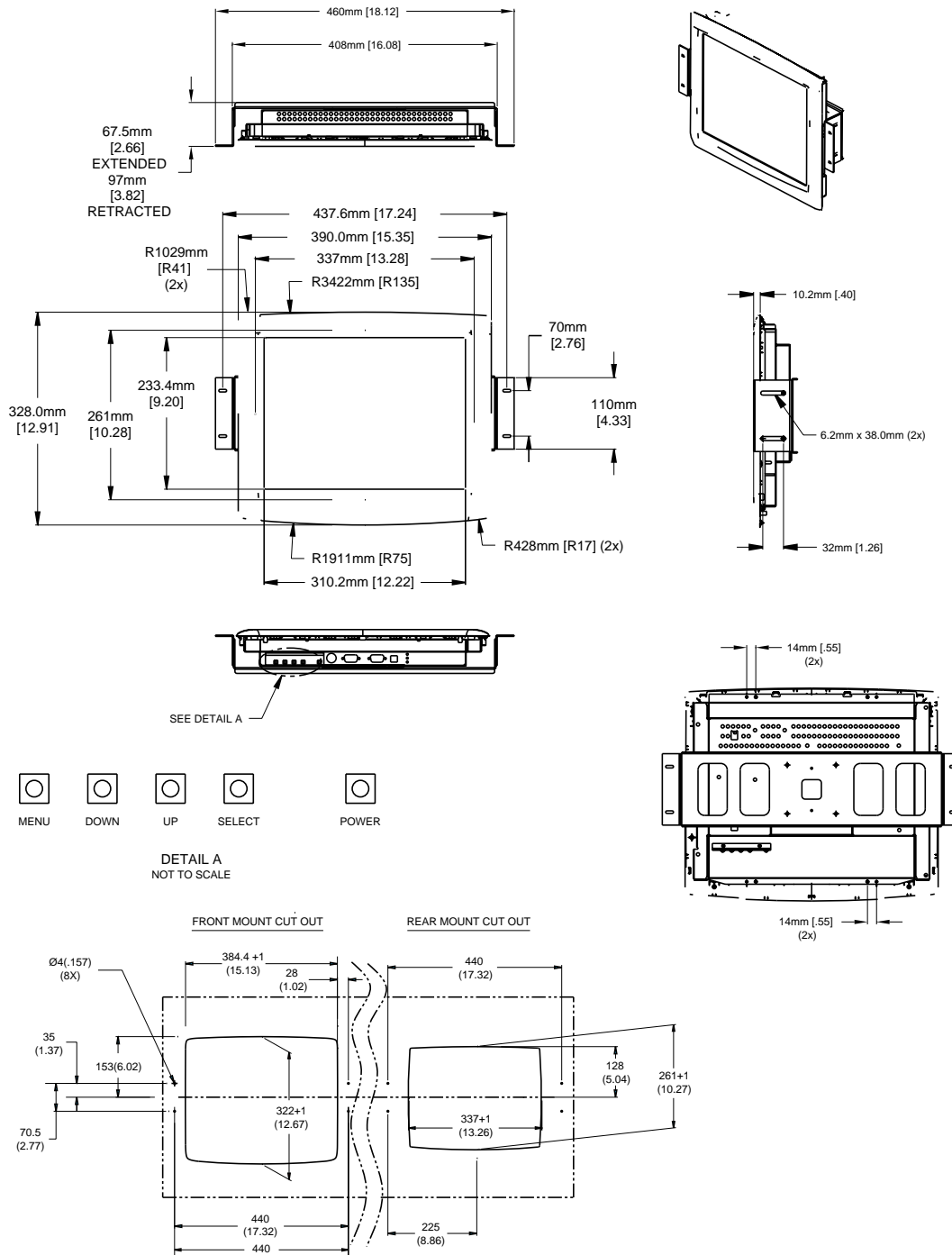
### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	605714-000	UL, cUL, FCC, CE, C-Tick, TÜV
IntelliTouch	USB	Antiglare	130834-000	UL, cUL, FCC, CE, C-Tick, TÜV

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- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
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## 15" LCD Touchmonitor



**1266L**
**Panel Mount**


## 12" LCD Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1266L
<b>Case/Bezel color</b>	Black, metal bezel
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	12.1" (30.7 cm) diagonal
<b>Useful screen area</b>	Horizontal 9.7" (24.6 cm)
	Vertical 7.3" (18.4 cm)
<b>Monitor dimensions</b>	Width 15.2" (38.6 cm)
	Height (including base) 11.4" (29.0 cm)
	Depth (including base) 2.5" (6.3 cm)
<b>Dimensional drawing number</b>	MS500131 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Optimal (native) resolution</b>	800 x 600 at 60, 70, or 75 Hz
<b>Other supported resolutions</b>	640 x 480 at 60, 70, or 75 Hz
<b>Colors</b>	6-bit, 262,144
<b>Brightness</b>	LCD panel 300 cd/m <sup>2</sup>
	LCD panel with touchscreen AccuTouch: 240 cd/m <sup>2</sup> (typical); IntelliTouch/SecureTouch: 275 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±60° or 120° total
	Vertical (up/down) +40°/-55° or 95° total
<b>Contrast ratio</b>	200:1
<b>Input video format</b>	VGA/SVGA analog
<b>Scanning frequency</b>	Horizontal 25–60 Hz; vertical 56–75 Hz
<b>Power supply</b>	100–240 VAC, .4 amp max. 50–60 Hz
<b>Temperature</b>	Operating 0°C to 50°C; storage -25°C to 60°C
<b>Humidity</b>	Operating 90% noncondensing
<b>Weight (approx.)</b>	Actual 11.9 lb (5.4 kg); shipping 18.9 lb (8.6 kg)
<b>Warranty</b>	Monitor 3 years
	Backlight lamp life 50,000 hours at full brightness
<b>Other features</b>	Digital on-screen display (OSD); sealing; remote OSD module

### ORDERING INFORMATION

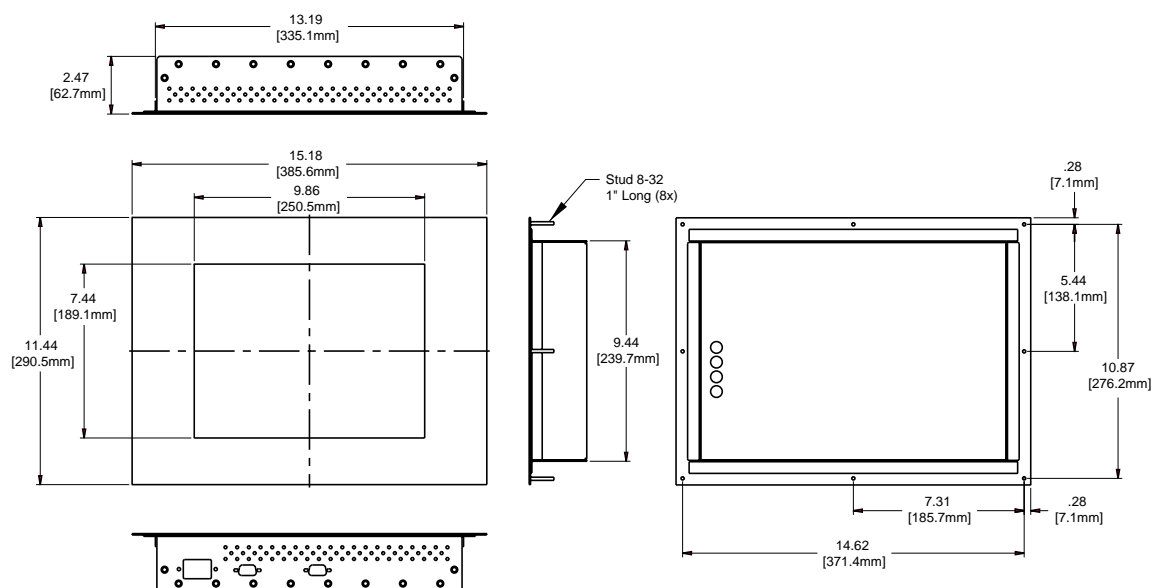
Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	414918-000	UL, cUL, FCC, CE, TÜV
IntelliTouch	USB	Antiglare	692116-000	UL, cUL, FCC, CE, TÜV
SecureTouch 0.25"	Serial	Antiglare	621520-000	UL, cUL, FCC, CE, TÜV
SecureTouch 0.25"	USB	Antiglare	570076-000	UL, cUL, FCC, CE, TÜV
AccuTouch	Serial	Antiglare	499234-000	UL, cUL, FCC, CE, TÜV
AccuTouch	USB	Antiglare	092802-000	UL, cUL, FCC, CE, TÜV

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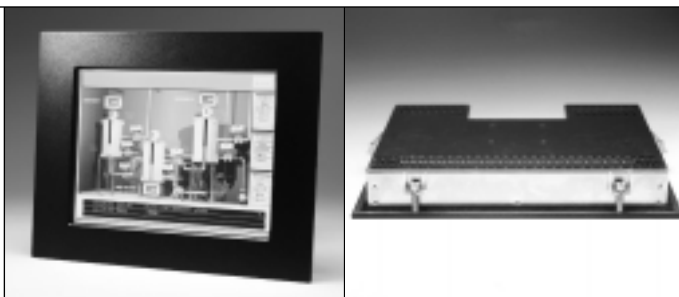
## 12" LCD Touchmonitor



**1566L**

**Panel Mount**

**15" LCD Touchmonitor**



## SPECIFICATIONS

<b>Model</b>	1566L
<b>Case/Bezel color</b>	Black, metal bezel and back
<b>Display type</b>	Active matrix TFT LCD
<b>Display size</b>	15.1" (38.4 cm) diagonal
<b>Useful screen area</b>	Horizontal 12.0" (30.4 cm)
	Vertical 9.0" (22.8 cm)
<b>Monitor dimensions</b>	Width 18.0" (44.8 cm)
	Height (including base) 14.0" (35.6 cm)
	Depth (including base) 2.6" (6.5 cm)
<b>Dimensional drawing number</b>	MS500128 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Optimal (native) resolution</b>	1024 x 768 at 60, 70, or 75 Hz
<b>Other supported resolutions</b>	1024 x 768 at 60, 70, or 75 Hz; 800 x 600 at 56, 60, 72, or 75 Hz; 640 x 480 at 60, 72, or 75 Hz; 640 x 480 at 67 Hz (Mac); 640 x 480 at 60 Hz (PC 98)
<b>Colors</b>	16 million with dithering (unlimited)
<b>Brightness</b>	LCD panel 200 cd/m <sup>2</sup>
	LCD panel with touchscreen AccuTouch: 170 cd/m <sup>2</sup>
<b>Viewing angle (from center)</b>	Horizontal (left/right) ±60° or 120° total
	Vertical (up/down) ±60° or 120° total
<b>Contrast ratio</b>	200:1, up to 16 shades of gray
<b>Input video format</b>	VGA/SVGA/XGA analog video
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Scanning frequency</b>	Horizontal 24–60 kHz; vertical 56–75 Hz
<b>Power supply</b>	100–240 VAC, 50–60 Hz
<b>Power dissipation</b>	40 W max.
<b>Temperature</b>	Operating 0°C to 40°C; storage 0°C to 60°C
<b>Humidity</b>	Operating 80% at 40°C; 90% at 35°C; storage 10% at 60°C; 90% at 35°C; noncondensing
<b>Weight (approx.)</b>	Actual 20.0 lb (9.0 kg); shipping 30.0 lb (14.0 kg)
<b>Warranty</b>	Monitor 3 years
	Touch technology 5 years AccuTouch touchscreen
	Touch controller 5 years
	Backlight lamp life 40,000 hours
<b>Other features</b>	Digital on-screen display (OSD); sealing: UL certified and tested to NEMA 4/4X/12; remote OSD module

## ORDERING INFORMATION

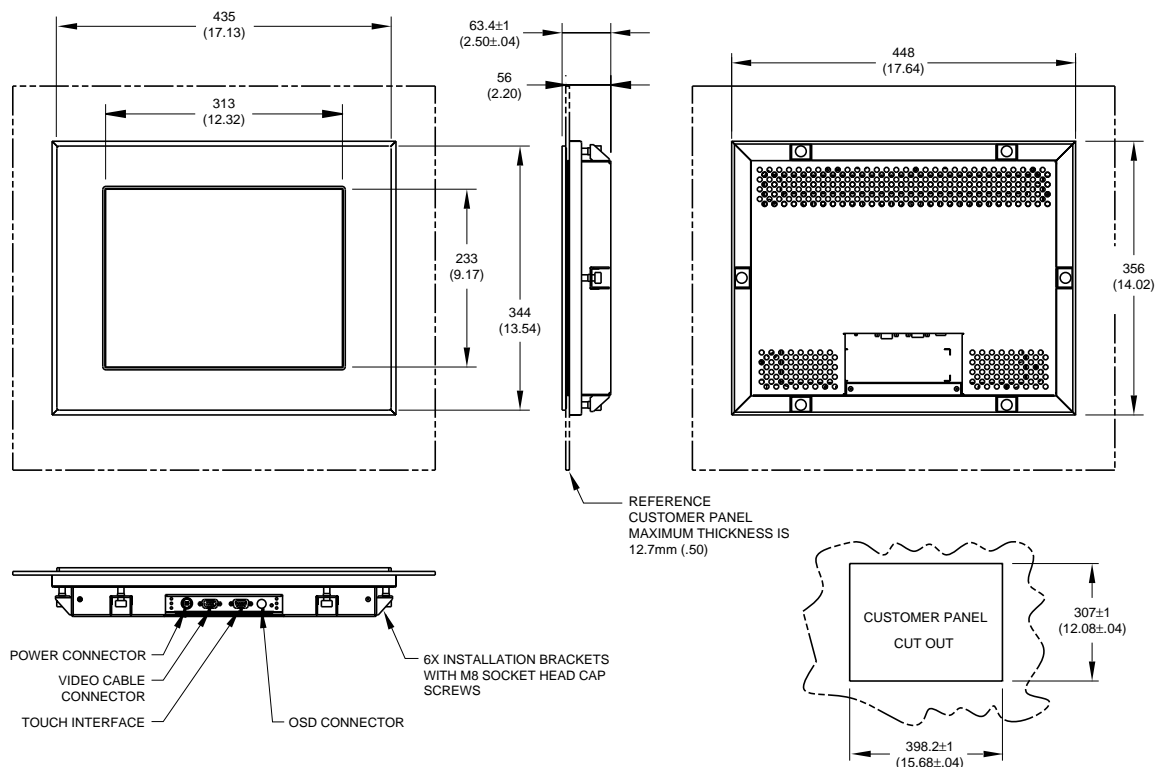
Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Serial	Antiglare	844378-000	UL,* cUL* (NEMA 4/4X/12), FCC-B, CE-B, C-Tick, VCCI, TÜV-Bauart (IP65)

\* ITE recognized component.

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- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
- For Product Agency Certifications refer to our Web site.

## 15" LCD Touchmonitor



**1425C**

**Desktop**



## 14" CRT Touchmonitors

### SPECIFICATIONS

<b>Model</b>	1425C
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 14.0" (35.6 cm)
	Viewable 13.2" (33.6 cm)
<b>Display area dimensions, nominal</b>	Default 9.8" (25.0 cm) H x 7.3" (18.5 cm) V
<b>Monitor dimensions</b>	Width 13.8" (35.0 cm)
	Height (including base) 13.9" (35.3 cm)
	Depth (including base) 14.8" (37.7 cm)
<b>Dimensional drawing number</b>	MS500124 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	800 x 600 at 56, 60, 72, 75, or 85 Hz
<b>Resolution presets</b>	720 x 400 at 70 Hz
	640 x 480 at 62, 72, or 75 Hz
	1024 x 768 at 60 Hz NI or 87 Hz interlaced
<b>Dot pitch, nominal</b>	0.28 mm
<b>Video bandwidth</b>	65 MHz
<b>Scanning frequency</b>	Horizontal 30–54 kHz; vertical 50–120 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female); Universal Mac adapter available separately
<b>Power supply</b>	120–240 VAC, 50–60 Hz
<b>Power dissipation</b>	75 W max.
<b>Temperature</b>	Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 35% to 80%; storage 5% to 90%; noncondensing
<b>Weight (approx.)</b>	Actual 24.0 lb (10.9 kg); shipping 30.0 lb (13.6 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); removable base; sealing; VESA DPMS; VESA DDC 1/2 B Plug and Play

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	704777-000	UL, cUL, FCC, CE, TÜV-GS
IntelliTouch	Serial	Clear	263313-000*	UL, cUL, FCC, CE, TÜV-GS
AccuTouch	Serial	Antiglare	528547-000	UL, cUL, FCC, CE, TÜV-GS
AccuTouch	USB	Antiglare	396665-000	UL, cUL, FCC, CE, TÜV-GS
AccuTouch	External	Antiglare	142389-000*	UL, cUL, FCC, TÜV-GS

\* Part not available in Europe.

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Desktop

1426C

entuitive  
Touchmonitors

## 14" CRT Touchmonitors

### SPECIFICATIONS

<b>Model</b>		1426C
<b>Case/Bezel color</b>		Gray
<b>Display type</b>		FST CRT
<b>Display size</b>	Diagonal	14.0" (35.6 cm)
	Viewable	13.2" (33.6 cm)
<b>Display area dimensions, nominal</b>	Default	9.8" (25.0 cm) H x 7.3" (18.5 cm) V
<b>Monitor dimensions</b>	Width	13.8" (35.0 cm)
	Height (including base)	13.9" (35.3 cm)
	Depth (including base)	14.8" (37.7 cm)
<b>Dimensional drawing number</b>		MS500124 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>		800 x 600 at 56, 60, 72, 75, or 85 Hz
<b>Resolution presets</b>		720 x 400 at 70 Hz
		640 x 480 at 62, 72, or 75 Hz
		1024 x 768 at 60 Hz NI or 87 Hz interlaced
<b>Dot pitch, nominal</b>		0.28 mm
<b>Video bandwidth</b>		65 MHz
<b>Scanning frequency</b>		Horizontal 30–54 kHz; vertical 50–120 Hz
<b>Input video format</b>		Analog (no proprietary video card needed)
<b>Input video signal connector</b>		Mini D-Sub 15-Pin (female); Universal Mac adapter available separately
<b>Power supply</b>		120–240 VAC, 50–60 Hz
<b>Power dissipation</b>		75 W (max.)
<b>Temperature</b>		Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>		Operating 35% to 80%; storage 5% to 90%; noncondensing
<b>Weight (approx.)</b>		Actual 24.0 lb (10.9 kg); shipping 30.0 lb (13.6 kg)
<b>Warranty</b>	Monitor	2 years
	Touch technology	10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller	5 years
	CRT tube life	12,000 minimum hours to half brightness
<b>Other features</b>		Digital on-screen display (OSD); removable base; sealing; VESA DPMS; VESA DDC 1/2 B Plug and Play

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Serial	Antiglare	707421-000	UL, cUL, FCC, CE, TÜV-GS
AccuTouch	External	Antiglare	740161-000*	UL, cUL, FCC, TÜV-GS

\* Part not available in Europe.

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## 15" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1525C
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 15.0" (38.1 cm)
	Viewable 13.8" (35.1 cm)
<b>Display area dimensions, nominal</b>	Default 10.2" (26.0 cm) H x 7.7" (19.5 cm) V
	Maximum 11.0" (27.9 cm) H x 8.5" (21.0 cm) V
<b>Monitor dimensions</b>	Width 14.4" (36.4 cm)
	Height (including base) 14.2" (36.1 cm)
	Depth (including base) 14.8" (37.5 cm)
<b>Dimensional drawing number</b>	MS500139 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	800 x 600 at 85 Hz
<b>Resolution presets</b>	1280 x 1024 at 65 Hz
	1024 x 768 at 75 or 85 Hz
<b>Dot pitch, nominal</b>	0.28 mm
<b>Video bandwidth</b>	110 MHz
<b>Scanning frequency</b>	Horizontal 30–70 kHz; vertical 50–150 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	90–264 VAC, 50–60 Hz
<b>Power dissipation</b>	80 W max.
<b>Temperature</b>	Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 35% to 80%; storage 5% to 90%; noncondensing
<b>Weight (approx.)</b>	Actual 30.8 lb (14.0 kg); shipping 35.2 lb (16.0 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); removable base; sealing; ENERGY STAR; VESA DPMS/Nutek; VESA DDC 1/2 B Plug and Play; ISO 9241/3

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	600190-000	UL, cUL, FCC, CE, TÜV-GS, TCO95, MPR II
IntelliTouch	Serial	Clear	204088-000*	UL, cUL, FCC, CE, TÜV-GS, TCO95, MPR II
IntelliTouch	USB	Antiglare	127350-000	UL, cUL, FCC, CE, TÜV-GS, TCO95, MPR II
AccuTouch	Serial	Antiglare	200616-000	UL, cUL, FCC, CE, TÜV-GS, MPR II
AccuTouch	USB	Antiglare	837156-000	UL, cUL, FCC, CE, TÜV-GS, MPR II
AccuTouch	None	Antiglare	305504-000*	UL, cUL, FCC, CE, MPR II

\* Part not available in Europe.

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**Desktop**
**1725C**
**17" CRT Touchmonitor**
**SPECIFICATIONS**

<b>Model</b>	1725C
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 17.0" (43.2 cm)
	Viewable 15.8" (40.6 cm)
<b>Display area dimensions, nominal</b>	Default 12.0" (30.5 cm) H x 9.0" (22.9 cm) V
	Maximum 12.6" (32.0 cm) H x 9.5" (24.1 cm) V
<b>Monitor dimensions</b>	Width 16.6" (42.1 cm)
	Height (including base) 16.2" (41.0 cm)
	Depth (including base) 17.8" (45.2 cm)
<b>Dimensional drawing number</b>	MS5500140 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	1024 x 768 at 85 Hz
<b>Resolution presets</b>	1280 x 1024 at 65 Hz
	1024 x 768 at 75 Hz
<b>Dot pitch, nominal</b>	0.27 mm
<b>Video bandwidth</b>	108 MHz
<b>Scanning frequency</b>	Horizontal 30–70 kHz; vertical 50–150 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	90–264 VAC, 50–60 Hz
<b>Power dissipation</b>	80 W max.
<b>Temperature</b>	Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 35% to 80%; storage 5% to 85%; noncondensing
<b>Weight (approx.)</b>	Actual 35.2 lb (16.0 kg); shipping 41.8 lb (19.0 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 10 years IntelliTouch touchscreen, 5 years AccuTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); removable base; sealing; ENERGY STAR; VESA DPMS/Nutek; VESA DDC 1/2 B Plug and Play; ISO 9241/3

**ORDERING INFORMATION**

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Serial	Antiglare	573954-000	UL, cUL, FCC, CE, TÜV-GS, TC095, MPR II
IntelliTouch	Serial	Clear	319392-000*	UL, cUL, FCC, CE, TÜV-GS, TC095, MPR II
IntelliTouch	USB	Antiglare	310930-000	UL, cUL, FCC, CE, TÜV-GS, TC095, MPR II
AccuTouch	Serial	Antiglare	408064-000	UL, cUL, FCC, CE, TÜV-GS, TC095, MPR II
AccuTouch	None	Antiglare	709348-000*	UL, cUL, FCC, CE, TÜV-GS, TC095, MPR II

\* Part not available in Europe.

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 • All prices, models, and availability subject to change without notice.

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 • For Product Agency Certifications refer to our Web site.





## 19" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1925C
<b>Case/Bezel color</b>	Beige
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 19.0" (48.3 cm)
	Viewable 18.0" (45.6 cm)
<b>Display area dimensions, nominal</b>	Default 13.8" (35.0 cm) H x 10.3" (26.2 cm) V
<b>Monitor dimensions</b>	Width 18.1" (46.0 cm)
	Height (including base) 17.9" (45.5 cm)
	Depth (including base) 17.9" (45.5 cm)
<b>Dimensional drawing number</b>	MS500158 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	1280 x 1024 at 85 Hz
<b>Resolution presets</b>	1600 x 1200 at 75 Hz
	1024 x 768 at 85 Hz
	800 x 600 at 85 Hz
	640 x 480 at 60 Hz
<b>Dot pitch, nominal</b>	0.26 mm
<b>Video bandwidth</b>	160 MHz (–3 db)
<b>Scanning frequency</b>	Horizontal 30–96 kHz; vertical 50–160 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	100–240 VAC, 50–60 Hz
<b>Power dissipation</b>	100 W typical
<b>Temperature</b>	Operating 5°C to 40°C; storage –20°C to 60°C;
<b>Humidity</b>	Operating 20% to 80% noncondensing
<b>Weight (approx.)</b>	Actual 44.0 lb (20.0 kg); shipping 53.0 lb (24.0 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 5 years iTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); removable base; sealing; ENERGY STAR; VESA DPMS; VESA DDC 1/2 B Plug and Play; ISO 9241

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
iTouch	Serial	Antiglare	467828-000	UL, cUL, FCC, CE, TÜV-GS, TCO95, MPR II

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- All prices, models, and availability subject to change without notice.

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- For Product Agency Certifications refer to our Web site.



Desktop

2125C

entuitive  
Touchmonitors

## 21" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>		2125C
<b>Case/Bezel color</b>		Beige
<b>Display type</b>		FST CRT
<b>Display size</b>	Diagonal	21.0" (53.3 cm)
	Viewable	19.9" (50.6 cm)
<b>Display area dimensions, nominal</b>	Default	15.7" (40.0 cm) H x 11.8" (30.0 cm) V
<b>Monitor dimensions</b>	Width	19.2" (48.8 cm)
	Height (including base)	18.9" (48.0 cm)
	Depth (including base)	18.5" (47.0 cm)
<b>Dimensional drawing number</b>		MS500172 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>		1600 x 1200 at 85 Hz
<b>Resolution presets</b>		1280 x 1024 at 85 Hz (SXGA)
		1024 x 768 at 85 Hz (XGA)
		800 x 600 at 85 Hz (VESA)
		640 x 480 at 60 Hz (VGA)
<b>Dot pitch, nominal</b>		0.22 mm
<b>Video bandwidth</b>		230 MHz
<b>Scanning frequency</b>		Horizontal 30–107 kHz; vertical 50–160 Hz
<b>Input video format</b>		Analog (no proprietary video card needed)
<b>Input video signal connector</b>		Mini D-Sub 15-Pin (female)
<b>Power supply</b>		120–240 VAC, 50–60 Hz
<b>Power dissipation</b>		145 W max.
<b>Temperature</b>		Operating 5°C to 35°C; storage –20°C to 60°C;
<b>Humidity</b>		Operating 10% to 80% noncondensing
<b>Weight (approx.)</b>		Actual 62.0 lb (29.0 kg); shipping 68.0 lb (32.0 kg)
<b>Warranty</b>	Monitor	2 years
	Touch technology	5 years iTouch touchscreen
	Touch controller	5 years
	CRT tube life	12,000 minimum hours to half brightness
<b>Other features</b>		Digital on-screen display (OSD); removable base; sealing; ENERGY STAR; VESA DPMS; VESA DDC 1/2 B Plug and Play; ISO 9241/3

### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
iTouch	Serial	Antiglare	167658-000	UL, cUL, FCC, CE, TÜV-GS, TC099, MPR II

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- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
- For Product Agency Certifications refer to our Web site.

**1545C**

**Rear Mount**



## 15" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1545C
<b>Case/Bezel color</b>	Metal/black
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 15.0" (38.1 cm)
	Viewable 13.8" (34.8 cm)
<b>Display area dimensions, nominal</b>	Default 10.2" (26.0 cm) H x 7.7" (19.5 cm) V
	Maximum 10.7" (27.2 cm) H x 8.1" (20.5 cm) V
<b>Monitor dimensions</b>	Width 14.9" (38.0 cm)
	Height (including base) 12.1" (30.7 cm)
	Depth (including base) 15.6" (39.7 cm)
<b>Dimensional drawing number</b>	MS500143 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	1024 x 768 at 85 Hz
<b>Resolution presets</b>	1280 x 1024 at 65 Hz (PC)
	1024 x 768 at 85 Hz (PC)
	1024 x 768 at 75 Hz (Mac)
<b>Dot pitch, nominal</b>	0.28 mm
<b>Video bandwidth</b>	110 MHz
<b>Scanning frequency</b>	Horizontal 30–70 kHz; vertical 50–150 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	90–264 VAC, 50–60 Hz
<b>Power dissipation</b>	80 W max.
<b>Temperature</b>	Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 35% to 80%; storage 5% to 90%; noncondensing
<b>Weight (approx.)</b>	Actual 33.0 lb (15.0 kg); shipping 40.0 lb (18.0 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 5 years iTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); ENERGY STAR; VESA DPMS/Nutek; VESA DDC 1/2 B Plug and Play; ISO 9241/3

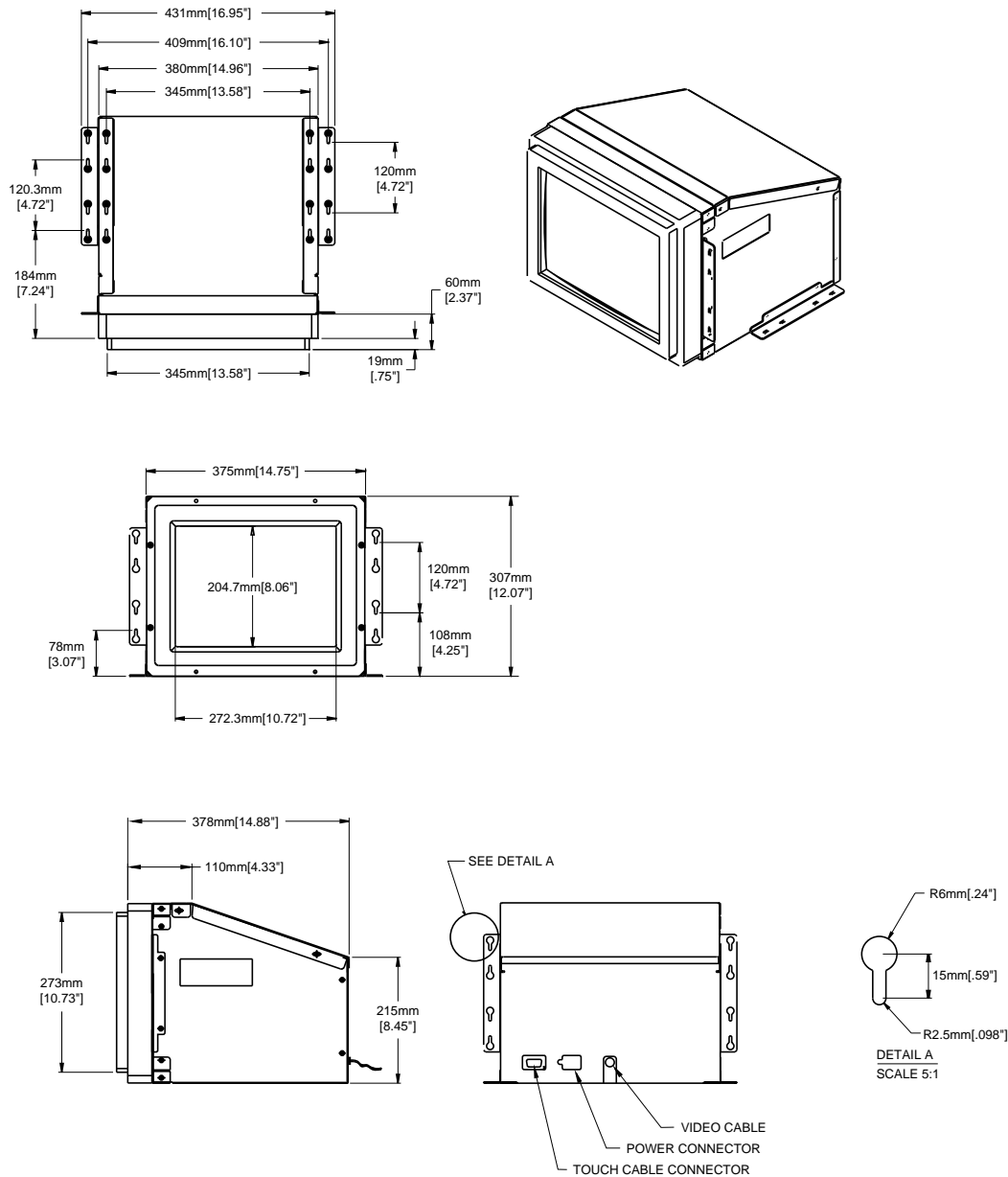
### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
iTouch	Serial	Antiglare	345362-000	UL, cUL, FCC, CE, TÜV-GS, MPR II
iTouch	USB	Antiglare	888-284-000	UL, cUL, FCC, CE, TÜV-GS, MPR II

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## 15" CRT Touchmonitor



NOTE:  
BEZEL IS BLACK, METAL IS CRS PRE-PLATE,  
TOP IS ALUMINUM, ANODIZED.

**tyco**  
Electronics

**elo**  
TOUCHSYSTEMS

**1745C**

**Rear Mount**



## 17" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>	1745C
<b>Case/Bezel color</b>	Metal/black
<b>Display type</b>	FST CRT
<b>Display size</b>	Diagonal 17.0" (43.2 cm)
	Viewable 15.8" (40.1 cm)
<b>Display area dimensions, nominal</b>	Default 12.0" (30.5 cm) H x 9.0" (22.9 cm) V
	Maximum 12.2" (31.1 cm) H x 9.1" (23.0 cm) V
<b>Monitor dimensions</b>	Width 16.5" (42.0 cm)
	Height (including base) 13.2" (33.8 cm)
	Depth (including base) 16.3" (41.5 cm)
<b>Dimensional drawing number</b>	MS500144 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>	1024 x 768 at 85 Hz
<b>Resolution presets</b>	1280 x 1024 at 65 Hz (PC)
	1024 x 768 at 85 Hz (PC)
	1024 x 768 at 75 Hz (Mac)
<b>Dot pitch, nominal</b>	0.27 mm
<b>Video bandwidth</b>	110 MHz
<b>Scanning frequency</b>	Horizontal 30–70 kHz; vertical 50–150 Hz
<b>Input video format</b>	Analog (no proprietary video card needed)
<b>Input video signal connector</b>	Mini D-Sub 15-Pin (female)
<b>Power supply</b>	90–264 VAC, 50–60 Hz
<b>Power dissipation</b>	80 W max.
<b>Temperature</b>	Operating 10°C to 40°C; storage –20°C to 60°C
<b>Humidity</b>	Operating 35% to 80%; storage 5% to 85%; noncondensing
<b>Weight (approx.)</b>	Actual 39.0 lb (18.0 kg); shipping 47.0 lb (21.0 kg)
<b>Warranty</b>	Monitor 2 years
	Touch technology 5 years iTouch touchscreen
	Touch controller 5 years
	CRT tube life 12,000 minimum hours to half brightness
<b>Other features</b>	Digital on-screen display (OSD); ENERGY STAR; VESA DPMS/Nutek; VESA DDC 1/2 B Plug and Play; ISO 9241/3

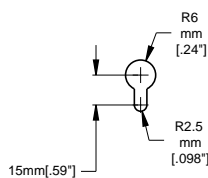
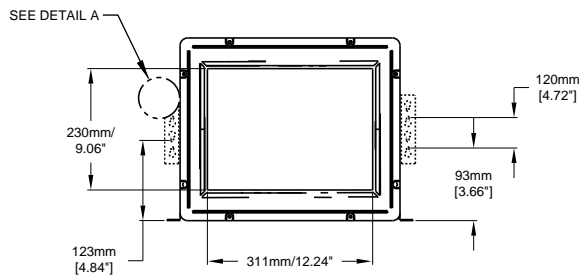
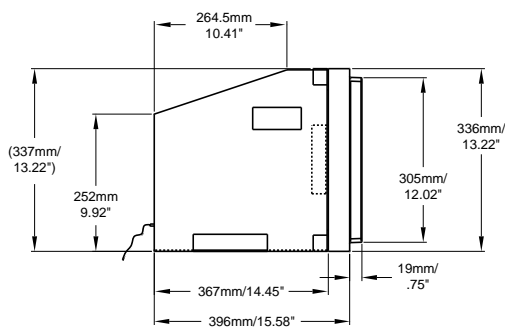
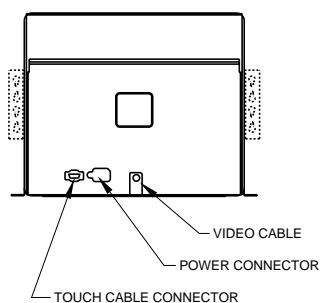
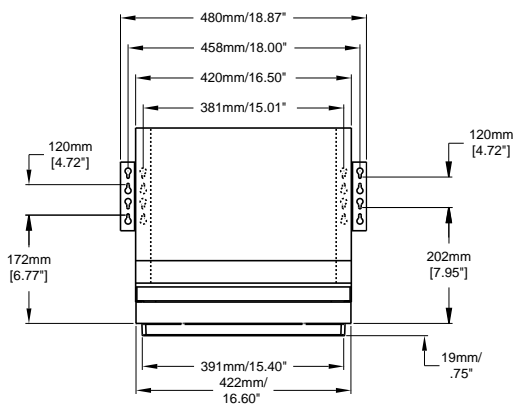
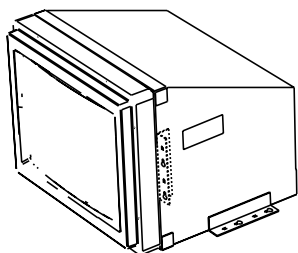
### ORDERING INFORMATION

Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
iTouch	Serial	Antiglare	140926-000	UL, cUL, FCC, CE, TÜV-GS, MPR II
iTouch	USB	Antiglare	453624-000	UL, cUL, FCC, CE, TÜV-GS, MPR II

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- All prices, models, and availability subject to change without notice.

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## 17" CRT Touchmonitor



DETAIL A  
SCALE 5:1

NOTE:  
OSD CONTROLS ACCESSED  
FROM BOTTOM OF UNIT

**tyco**  
Electronics

**elo**  
TOUCHSYSTEMS

**1945C**

**Rear Mount**



## 19" CRT Touchmonitor

### SPECIFICATIONS

<b>Model</b>		1945C
<b>Case/Bezel color</b>		Metal/black
<b>Display type</b>		FST CRT
<b>Display size</b>	Diagonal	19.0" (48.3 cm)
	Viewable	17.9" (45.6 cm)
<b>Display area dimensions, nominal</b>	Default	13.8" (35.0 cm) H x 10.3" (26.2 cm) V
<b>Monitor dimensions</b>	Width	18.8" (47.7 cm)
	Height (including base)	15.6" (39.6 cm)
	Depth (including base)	17.2" (43.8 cm)
<b>Dimensional drawing number</b>		MS500150 (available at <a href="http://www.elotouch.com">www.elotouch.com</a> )
<b>Highest recommended resolution</b>		1280 x 1024 at 85 Hz
<b>Resolution presets</b>		1600 x 1200 at 75 Hz
		1024 x 768 at 85 Hz
		800 x 600 at 85 Hz (VESA)
		640 x 480 at 60 Hz (VGA)
<b>Dot pitch, nominal</b>		0.26 mm
<b>Video bandwidth</b>		160 MHz (–3 db)
<b>Scanning frequency</b>		Horizontal 30–96 kHz; vertical 50–160 Hz
<b>Input video format</b>		Analog (no proprietary video card needed)
<b>Input video signal connector</b>		Mini D-Sub 15-Pin (female)
<b>Power supply</b>		100–240 VAC, 50–60 Hz
<b>Power dissipation</b>		100 W typical
<b>Temperature</b>		Operating 5°C to 40°C; storage –20°C to 60°C;
<b>Humidity</b>	Operating	20% to 80% noncondensing
<b>Weight (approx.)</b>		Actual 51.0 lb (23.1 kg); shipping 60.0 lb (27.3 kg)
<b>Warranty</b>	Monitor	2 years
	Touch technology	5 years iTouch touchscreen
	Touch controller	5 years
	CRT tube life	12,000 minimum hours to half brightness
<b>Other features</b>		Digital on-screen display (OSD); sealing; ENERGY STAR; VESA DPMS; VESA DDC 1/2 B Plug and Play; ISO 9241; Flexible mounting options on the side, the bottom, and the back

### ORDERING INFORMATION

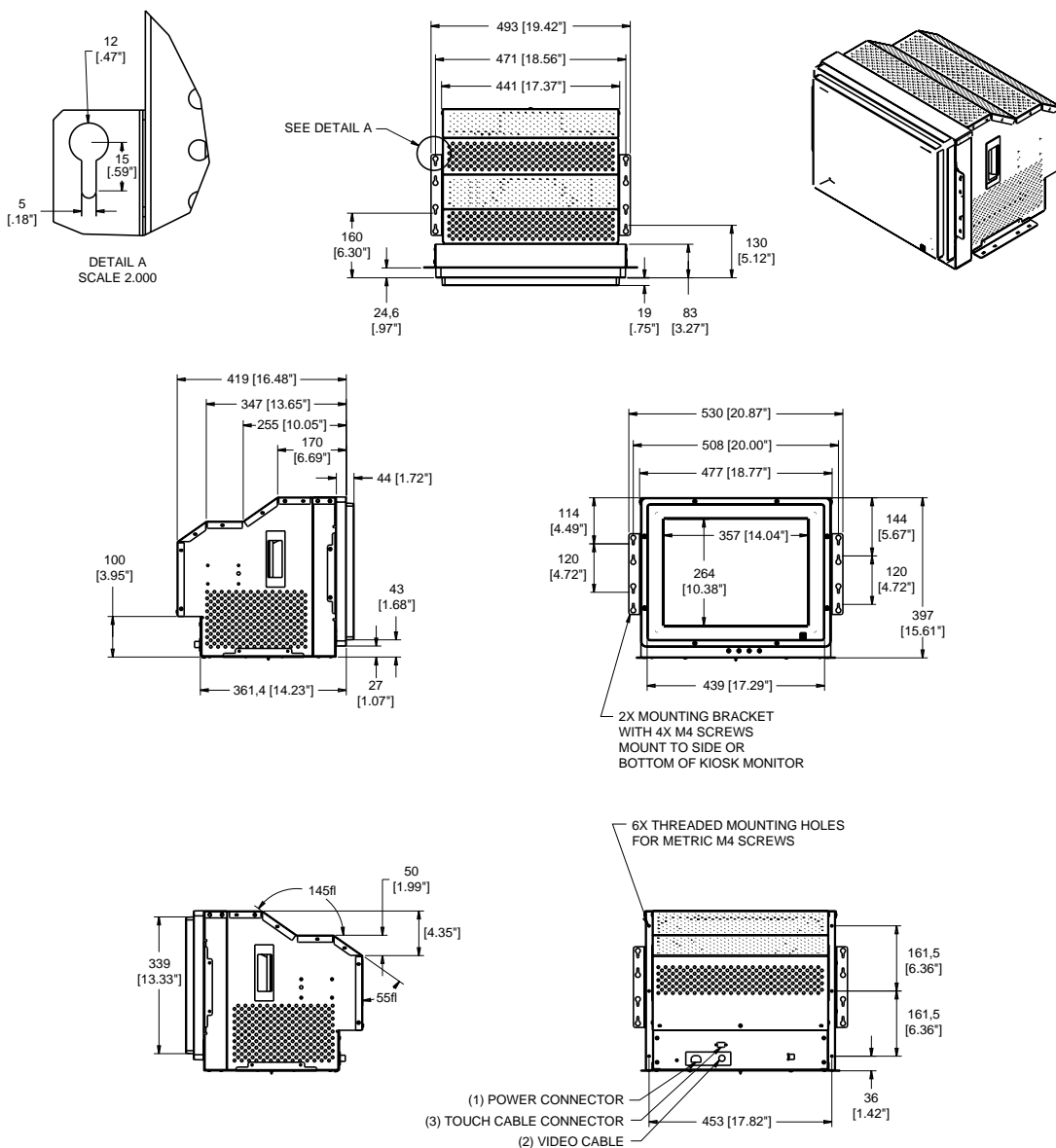
Touch Technology	Touch Interface	Surface Treatment	Elo Part Number	Agency Approvals
iTouch	Serial	Antiglare	459284-000	UR, cUR, FCC, CE, TÜV-Bauart, TC095, MPR II

- Users should independently evaluate the suitability of the product for their application.
- All prices, models, and availability subject to change without notice.

- Stock quantities may be limited. Larger quantities are available within one week.
- For Product Agency Certifications refer to our Web site.



## 19" CRT Touchmonitor



## 19" CRT Touchmonitor

### Notes:

#### 1 Power Connector

Connector Blade Left to Right:

Blade	Function/Color
1	AC Line (Brown)
2	Earth Ground (Green)
3	AC Neutral (Blue)

IEC 320 Power Connector

Supplied with 120V Power Cord

Order 220V Power Cord for Europe

#### 2 Video Cable

Connector Pin-Out:

Pin #	Signal
1	Red Video
2	Green Video
3	Blue Video
4	Digital Ground
5	Digital Ground
6	Red Video Return
7	Green Video Return
8	Blue Video Return
9	No Pin
10	Digital Ground
11	Digital Ground %%
12	SDA
13	Horizontal Sync
14	Vertical Sync
15	SCL

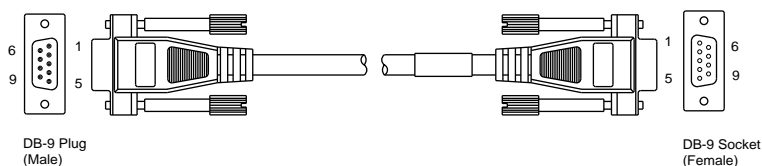
- Connector Type:

Mini D-Sub, 15-Pin Female

- Cable Length: 6' (1829 mm)

#### 3 Touch Cable: P/N 454173-000

— Connector Type: 9 Pin D-Sub, Male  
to 9 Pin D-Sub, Female  
— Cable Length: 6' (1829 mm)



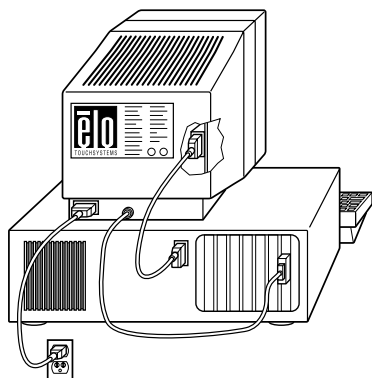
#### Connector Pin-Out

Pin #	Signal
1	BCD
2	RXD
3	TXD
4	DTR
5	GRD
6	DSR
7	RT3
8	CT3
9	NC

#### Connection Chart

DB-9 (Male)	DB-9 (Female)
Shell	Shell
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

## Controller and Cable Options

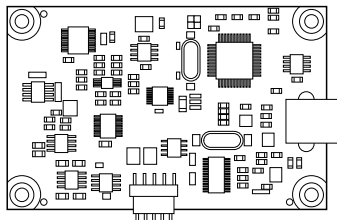
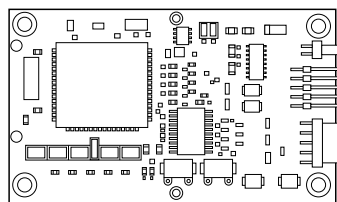


### AccuTouch Internal Serial or USB Controller

For PC-based computers, cables are included with purchase of the touchmonitor.

For Apple Macintosh computers, additional serial cables must be purchased separately:

632851-000      VGA to Macintosh video  
084037-000      DB-9 to 8-pin mini-DIN



### AccuTouch Serial and USB Controller

Order the AccuTouch serial controller card: 055165-000

Options:

734849-000      Internal mounting kit

Order the AccuTouch USB controller card: 608244-000

Options:

310900-000      Cable pack  
882670-000      Mounting adapter plate

### IntelliTouch Serial and USB Controller

Order the IntelliTouch serial controller card: 351077-000

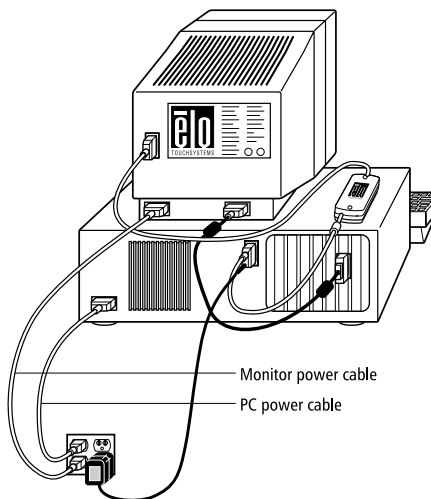
Options:

750345-000      Cable pack

Order the IntelliTouch USB controller card: 714259-000

Options:

748578-000      Cable pack

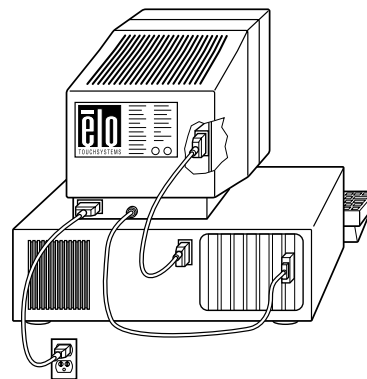


### AccuTouch External Serial Controller

Order the AccuTouch RS-232 external serial controller card, external unit: 462337-000.

Order one of the following power supplies:

877989-000      Standard keyboard power tap  
073089-000      PS/2 keyboard power tap  
370187-000      Wall-mount power kit, domestic  
460987-000      Wall-mount power kit, international  
520467-000      Internal monitor power



### IntelliTouch Internal Serial or USB Controller

For PC-based computers, cables are included with purchase of the touchmonitor.

For non-USB Apple Macintosh computers, additional serial cables must be purchased separately:

632851-000      VGA to Macintosh video  
084037-000      DB-9 to 8-pin mini-DIN

## Elo's TouchTools

### MonitorMouse touchscreen drivers

Elo's industry-leading touchscreen driver software is included with the hardware. When ordering, please specify your operating system(s).

Driver updates are free for Elo customers and may be downloaded from our Web site: [www.elotouch.com](http://www.elotouch.com).



### ORDERING INFORMATION

Driver Software	Elo Part Number
<b>Elo TouchTools CD-ROM (includes all software drivers, manuals, and documentation)</b>	<b>450261-000</b>
MonitorMouse for DOS & Windows 3.x Driver Guide/Diskette, which contains the following: <ul style="list-style-type: none"> <li>DOS driver (ELODEV)</li> <li>DOS and Windows mouse emulator (MonitorMouse for DOS &amp; Windows 3.x)</li> <li>Keystroke emulator (TouchBack)</li> </ul>	191763-000
MonitorMice for Windows 95/98 diskette	628029-000
MonitorMice for Windows 2000 serial driver	071525-000
MonitorMouse for Windows NT diskette	027657-000
MonitorMouse for Windows CE developer kit	Elo Web site
MonitorMouse for OS/2 diskette	292761-000
MonitorMouse for Macintosh diskette	524471-000
DOS Programmer's Toolkit—includes TouchUp and TouchBack	678995-000
MonitorMice for Windows NT 4.0	835625-000
Windows 98/2000 USB driver	824029-000
Macintosh USB driver CD-ROM	850030-000

### Technical Manuals

Up to 24 hardcopy manuals are provided free upon request with hardware orders. Electronic copies and manuals are downloadable from [www.elotouch.com](http://www.elotouch.com). Also, 3.5" diskettes are available upon request.

Manuals	Elo Part Number
AccuTouch Product Manual	821615-000
IntelliTouch Ultra Product Manual	201077-000
SmartSet Technical Reference Controller Manual	676553-000
Stylus	Elo Part Number
IntelliTouch stylus	395699-000
AccuTouch stylus	442187-000
IntelliTouch armored stylus	853831-000



Elo's MonitorMice software provides a multi-user touch interface from one PC running Windows NT 4.0.

### MonitorMice software

Elo TouchSystems' newest software breakthrough provides a multi-user touch interface from a multi-user operating system, Windows NT 4.0. System costs are significantly reduced for a range of markets and applications:

- Point-of-information kiosks
- Process control
- Financial
- Education and training
- Point-of-sale terminals

Using Elo's patented MonitorMice software and multiport video, you can spread one Windows desktop across two or more monitors and have a separate application running in a window on each monitor. The end result can be as many as 32 independent, touch-activated applications running simultaneously on one PC under Windows NT 4.0.

The new multi-user software is an extension of Elo's MonitorMouse line that allows a touchscreen to work like a mouse on each touchmonitor. Until now, each touch-screen has required its own PC.

### Multi-user mode

In this mode the screen responds to a touch as it would to a single mouse click. Simultaneous touches on multiple monitors are recognized and processed without perceptible delay.

A single PC running Windows on multiple displays can be used in many applications:

- Kiosk "clusters" at airports, trade shows, and cyber cafés, to allow several people to use the kiosk software at the same time
- Factories, to operate and control manufacturing processes from multiple locations
- Employment offices, to provide simultaneous job-search capabilities from several stations
- Fast-food restaurants, to allow order-taking at multiple stations

### Single-user mode

Drag-and-drop, double-clicking, and pull-down menu functions can be activated by touch when MonitorMice software is operated in single-user mode. For example:

- A financial trader working with three or four monitors can touch an item on one screen, then touch a second screen to which the item should be moved. When the finger is lifted from the first screen, the object automatically moves to the second.
- In a doctor's office, a single computer can drive monitors located in different patient rooms. The doctor can pull up patient records, billing data, and medical histories from any of these locations. Previously, a computer with a network connection would have been required in each room.

### **actual image size**

The size of the display on the screen is dependent upon the signals provided by the video card. The displayable diagonal measurement can vary, depending on how the graphics mode is generated and how the monitor responds to the characteristics of the video signal.

### **aperture grille**

Aperture grille technology employs a series of thin, closely spaced vertical wires to isolate pixels horizontally. The pixels are separated vertically by the nature of the scan lines (beams) used to compose the image.

### **bandwidth**

A measure of the display performance of a monitor. Expressed in MHz, bandwidth is the number of dots that can be displayed in a line per second. More strictly, it is the frequency response of the system between points where the signal level falls to a specified percentage of its maximum value (usually 50% or 75%). In principle, the greater the bandwidth, the better the monitor—although the quality of the picture tube is often the limiting factor affecting display performance, and for many standard monitors there is little point in increasing the bandwidth beyond a certain point. Typical bandwidths for monitors (Spring 2001) are as follows:

VGA monitors: 18 MHz  
FGA+ monitors: 35 MHz  
CAD monitors: 100 MHz

### **Bauart**

Component products can be Bauart certified by TUV for expected safety concerns, meaning evaluation to German and European Union standards for building in to other equipment. Typical component products are touchscreens, controllers, and kiosk or frame touchmonitors.

### **brightness**

Light output measured at the faceplate of the CRT; typically measured in footlamberts (fL). A minimum brightness level of 20 fL when viewing a full-sized page is considered acceptable.

### **CD-ROM**

Compact Disc Read-Only Memory. A CD-ROM is any compact disc that contains computer data. "ROM" means that you cannot save information onto these discs. These discs can hold huge amounts of data (up to 640 megabytes). If there is a large amount of data on a CD-ROM, then it is usually impractical to copy the data onto the hard disk; in this case, you must insert the disc into the drive whenever you want to use the data. CD-ROM may also refer to the drive used to read these discs.

### **CE**

The CE (Conformite Europeene) marking on end products indicates compliance with all applicable directives. For

information technology equipment (ITE) this typically means Low Voltage Directive 73/23/EEC (LVD), and the EMC Directive 89/336/EEC. Typical end products are desktop touchmonitors.

Components typically do not carry the European Union's CE marking. Properly applied, they will comply with the LVD and EMC Directives. Typical component products are touchscreens, controllers, and kiosk touchmonitors. Refer to the product Declaration of Conformity (DOC) for test levels.

### **contrast**

The ratio between the maximum and the minimum brightness of the display.

### **contrast control**

A manual gain control for a monitor, affecting both luminance and contrast.

### **C-Tick**

A trademark registered to the Australian Communications Authority, indicating compliance with the electromagnetic radiation emissions limits of Australia and New Zealand.

### **CRT**

Cathode ray tube. Also known as picture tube or screen. A picture tube in a TV is also a CRT.

### **DDC**

Display Data Channel. A VESA standard for communication between a monitor and a video adapter. Using DDC, a monitor can inform the video card about its properties, such as maximum resolution and color depth. The video card can then use this information to ensure that the user is presented with valid options for configuring the display.

### **DDC2B**

VESA standard bidirectional digital data channel between the display and the host. The host initiates data transfer by reading the EDID from a memory location in the display. *See also DDC and EDID.*

### **digital control**

Microprocessor-based digital control of picture parameters and video modes for complete control of picture settings and modes and instant recall of all settings at the push of a button. This very advanced feature allows the user to switch to any required mode at any moment without having to spend time readjusting the picture.

### **dot pitch**

The distance between one phosphor dot (i.e., red, green, or blue) and the nearest phosphor dot of the same color in the line above or below.

# Glossary of “Touch” Terms and Related Technical Terminology

## **DPMS**

Display Power Management Signaling. A VESA standard that ensures that monitor and video card manufacturers produce power-saving products that work together.

## **drive**

Any data storage device including CD-ROM drive, floppy disk drive, and hard disk drive.

## **EDID**

Extended Display Identification Data. A VESA standard for data structures containing the display identity and the basic display specifications.

## **electronic radiation standards**

International standards established to limit electromagnetic emissions from monitors. There are currently two important standards, both derived from regulations originally established by the Swedish authorities. *See also* **MPR II** and **TCO**.

## **EMC**

Electromagnetic compatibility. EMC requirements stipulate that a device shall not cause interference within itself or in other devices, and is not susceptible to interference from other devices. The European Union was the first governing body to establish laws (CE) regarding immunity of devices from EMI. *See also* **CE**, **EMI**, and **RFI**.

## **EMI**

Electromagnetic interference. This interference in the operation of a device is caused by incompatibility with ambient signals. Common sources of EMI include transmitters and receivers (radio, TV, cell phone), power mains (lightning, surges, brownouts), appliances, computer oscillators, and electrostatics. Many countries have established laws (such as FCC and CE) governing EMI source limits. *See also* **CE**, **FCC**, **EMC**, and **RFI**.

## **ENERGY STAR®**

A voluntary partnership between the U.S. Department of Energy, the U.S. Environmental Protection Agency, product manufacturers, local utilities, and retailers. ENERGY STAR labeled products use less energy than other products. Partners help promote energy-efficient products by labeling with the ENERGY STAR logo and educating consumers about the benefits of energy efficiency.

## **FCC Class A**

A marking FOR OFFICE USE means the design has been tested for compliance with the U.S. Federal Communications Commission's (FCC) Part 15 Class A RF emissions limits, and is suitable for use in nonresidential settings. Industry Canada's RF emissions limits are identical to the FCC's. *See also* **IC Class A**.

## **FCC Class B**

A marking FOR HOME OR OFFICE USE means the design has been tested for compliance with the U.S. Federal Communications Commission's (FCC) Part 15 Class B RF emissions limits, and is suitable for use in residential or nonresidential settings. Industry Canada's RF emissions limits are identical to FCC's. *See also* **IC Class B**.

## **flat square screen**

A screen that is flatter and more square than the conventional CRT screen. The flatter outline reduces picture distortion and ambient reflections, and allows better use to be made of the screen area.

## **flicker**

Condition of the display caused by the mismatch of vertical and horizontal refresh rates, when a phosphor's illumination begins to decay prior to being refreshed. The resulting flicker is particularly detectable with peripheral vision. Flicker can be eliminated by increasing the refresh rate to a value at or above 70 Hz.

## **frequently asked question(s) (FAQ)**

A list of questions/answers provided by companies related to their products or Web site.

## **GS**

A German certification, Geprüfte Sicherheit ("tested safety"). End products can be GS-certified by TUV for expected safety concerns, meaning they have been evaluated and have met German standards. Typical end products are desktop touchmonitors.

## **hard disk**

A storage device inside a computer, generally designated as the C: drive. It cannot be seen without opening up the computer; however, usually a light on the front of a computer shows when the hard disk is being accessed.

## **hertz**

The unit of frequency named after the physicist Heinrich Hertz (1857–1894). One hertz (Hz) is equal to one cycle/second.

## **horizontal frequency**

The time it takes to scan each of the horizontal lines that make up the display, measured in kilohertz (kHz). Horizontal frequency is directly related to the vertical refresh rate, so that the greater the number of vertical lines, the higher the horizontal frequency required.

## **horizontal scanning frequency**

The number of video lines written on the screen every second (from left to right); also called line frequency and expressed in kHz. The higher the horizontal scanning frequency, the higher the resolution and/or the refresh rate,



## Glossary of “Touch” Terms and Related Technical Terminology

which produces a more stable image, helping to reduce user fatigue and stress.

### **I2C bus: access bus standard**

A standard-protocol two-wire (clock and data) serial data bus.

### **IC Class A**

A Class A compliance statement means the design has been tested for compliance with Industry Canada's ICES 03 Class A RF emissions limits, and is suitable for use in non-residential settings. Industry Canada's RF emissions limits are identical to the FCC's. *See also* **FCC Class A**.

### **IC Class B**

A Class B compliance statement means the design has been tested for compliance with Industry Canada's ICES 03 Class B RF emissions limits, and is suitable for use in residential or non-residential settings. Industry Canada's RF emissions limits are identical to the FCC's. *See also* **FCC Class B**.

### **interlaced scanning mode**

A scheme that takes two passes to paint an on-screen image, painting every other line on the first pass and sequentially filling in the rest of the line on the second pass. This scheme usually causes flicker. *See also* noninterlaced scanning mode.

### **Invar shadow mask**

A special type of shadow mask, made out of Invar and alloy, that is able to withstand the high temperature generated by the electron beam. The Invar shadow mask allows the CRT to generate a brighter image than with the conventional shadow mask. An advanced Invar shadow mask improves brightness by 40 percent over the standard.

### **ISO 9241 part 3**

An ergonomic standard that covers hardware, software, workplace, and environment. It addresses the actual application at the workplace. The objective of part 3 is to ensure that the CRT display shall be legible, readable, and comfortable in use.

### **linearity**

The degree to which the actual location of a pixel on the screen corresponds with its intended location. Nonlinearity causes screen images to be more distorted in one area of the screen than in another. This is sometimes caused by poor voltage regulation in the monitor's electronics.

### **magnetic field effects (MFE)**

A monitor is affected by magnetic fields. When a screen develops wrong colors in certain areas, or the picture becomes distorted, check what is located near the monitor. A steel cabinet, desk, bench, or steel girder imbedded in a wall or ceiling could cause distortion of the picture tube's electron

beams due to an impeding magnetic field. Moving the monitor approximately 3 feet away from the suspected source can clear the problem, as can degaussing it. Speakers should also be considered as a possible source of distortion, since they may also create a magnetic field when powered on.

### **memory**

In technical references, the word memory used by itself refers to random access memory (RAM).

### **modem**

A device that allows one computer to communicate with another over phone lines. Can be inside a computer (internal) or external. All modern modems are also capable of sending and receiving faxes with the use of fax software.

### **MPR II**

A set of Swedish safety standards that covers the levels of magnetic and electrical fields in both VLF and ELF ranges. The Swedish National Board for Measurement and Testing (SWEDAC) requires that products sold in Sweden comply with MPR II. To measure emissions, a sophisticated test that screens out background radiation must be in place. Since distance to the CRT and orientation of the measuring device affect measurement, precise placement of the measuring device is essential and difficult to repeat. In addition, the actual image displayed can have an impact on emissions, so that a given set of measurements may not predict the emissions a user would actually encounter. It is worth noting that there are no scientific studies that conclude that measurements above MPR II levels are hazardous. *See also* **TCO**.

### **noninterlaced (NI) scanning mode**

A scheme for assembling an image on the screen by painting all the lines in one pass, then painting an entirely new frame. Noninterlaced scanning mode reduces flicker. *See also* **interlaced scanning mode**.

### **operating system (OS)**

The program that runs a computer. The operating system takes care of managing files and folders (such as renaming, moving, copying, and deleting files). It also provides the ability to start the other software you have on your computer. Operating systems also usually include many programs, such as a text editor, that are almost essential to have on every computer.

### **opto-electronics**

Infrared-light emitting diodes (LEDs) and photo transistors used for touch-sensing in infrared (IR) touchscreens.

### **opto-matrix frame**

Used in infrared (IR) touchscreens. The touch frame contains two opposite rows of IR-light emitting diodes (LEDs) and photo transistors, collectively referred to as opto-electronics, concealed behind an IR-transparent bezel.

# Glossary of “Touch” Terms and Related Technical Terminology

## **phosphor**

Chemical compound that emits light when excited by electrons.

## **pixel**

Abbreviation for picture element, the smallest element of the picture that can be displayed on the screen. Each pixel contains one red, one blue, and one green phosphor.

## **PDF file (Adobe® Portable Document Format)**

A universal file format that preserves the fonts, formatting, colors, and graphics of any source document, regardless of the application and platform used to create it. PDF is the open de facto standard for distributing formatted documents over the Internet. PDF files are compact and can be shared, viewed, navigated, and printed using free Adobe Acrobat® Reader® software, downloadable from <http://www.adobe.com>. Documents can be converted into PDF files with Adobe Acrobat 5.0 software.

## **point of information (POI)**

The location at a facility where visitors seek information.

## **point of sale (POS)**

The location at a merchant's facility where customer make purchases.

## **POS terminal**

A device placed in a merchant location, connected to the bank's system or authorization service provider via telephone lines, and designed to authorize, record, and forward data by electronic means for each sale.

## **RAM**

Random access memory. In technical references often simply referred to as memory. A computer's memory is not like its hard disk, which is permanent storage. Memory can only store information while the computer is on; however, it is much faster than a hard disk. A hard disk is a mechanical device, but memory is stored on computer chips, and information can be accessed from anywhere on the chip almost instantly.

## **refresh rate**

Number of times the screen can be redrawn per second—an ergonomic issue directly related to long-term ease of use. A higher refresh rate means a less “flickering” display, resulting in less eyestrain and fatigue. Bandwidth, horizontal scanning rate, and vertical scanning rate work together to determine both the resolution and the refresh rate.

## **resolution**

The number of pixels that can be displayed on a screen, specified as the number of pixels in a horizontal line multiplied by the number of horizontal lines. For example, a resolution of 800 x 600 is 800 pixels running horizontally

and 600 pixels running vertically—a total of 480,000 pixels.

## **RF**

Radio frequency. Electromagnetic waves at a frequency between audio and infrared, used primarily in radio and television transmission.

## **RFI**

Radio frequency interference. This interference in the operation of a device is caused by incompatibility with ambient RF signals. *See also* **EMC, EMI, and RF.**

## **RS-232 port**

A standardized serial port for connecting a computer to peripheral equipment, such as a printer, mouse, scanner, modem, or touchscreen.

## **screen size versus viewable image size**

Screen size is the total size, measured diagonally, of the monitor screen before it is placed in the monitor cabinet. Viewable image size is the size, measured diagonally, of the monitor screen that can be viewed once it is in the cabinet.

## **stripe pitch**

The equivalent of dot pitch on aperture grille tubes—the distance between one stripe and the next one of the same color, expressed in millimeters.

## **TC095 and TC099**

A standard set by the Swedish Tjänstemännens Central Organization (TCO) in 1991. It is even more stringent than MPR II, especially for alternating electric fields (AEF). Not only are the permitted field levels reduced compared with MPR II, but the measuring distance is reduced as well. Ergonomic and ecologic requirements are included for TC095. For TC099, it is expanded to include more ergonomic and ecologic requirements. *See also* **MPR II.**

## **tilt**

The angle of the CRT with respect to the horizontal-mounting bracket of the chassis. Tilt can vary, depending on the monitor's orientation to the earth's magnetic poles. Monitor manufacturers orient and align their products in the eastern direction. When the monitor is facing a north/south direction, there may be a slight rotation of the image.

## **UL/cUL Listed**

End products can be Listed by Underwriters Laboratories for expected safety concerns, The CNL/USL designation in the certification indicates evaluation to U.S. and Canadian standards. Typical end products are desktop touchmonitors.

## **UR/cUR Recognized components**

Component products can be Recognized by Underwriters

## Glossary of “Touch” Terms and Related Technical Terminology

Laboratories for expected safety concerns. The CNR/USR designation in the certification indicates evaluation to U.S. and Canadian standards. Typical end products are touchscreens, controllers, and kiosk touchmonitors.

### **USB**

Universal Serial Bus. An external bus standard that supports data transfer rates of 12 Mbps (12 million bits per second). A single USB port can be used to connect up to 127 peripheral devices, such as mice, modems, and keyboards. USB also supports Plug-and-Play installation.

### **user-friendly**

Describes an interface—Web site, equipment, process—that people find easy to use, or intuitive.

### **VCCI**

A Japanese standard for RF emissions developed by the Voluntary Control Council for Interference. The VCCI marking on an end product indicates it has been tested for compliance with the VCCI program.

### **vertical frequency**

The number of times per second that the monitor can draw all the lines on the entire screen. A higher vertical frequency or refresh rate will reduce flicker, helping to reduce user fatigue and stress.

### **vertical scanning frequency**

In interlaced mode, the number of fields written to the screen every second, expressed in Hz. In noninterlaced mode, the number of frames (complete pictures) written to the screen every second (also known as **refresh rate**). A higher vertical frequency or refresh rate will reduce flicker, helping to reduce user fatigue and stress.

### **VESA**

Video Electronic Standards Association, a consortium of manufacturers formed to establish and maintain industry-wide standards for video cards and monitors. VESA was instrumental in the introduction of the Super VGA and Extended VGA video graphics standards with a refresh rate of 70 Hz, minimizing flicker and helping to reduce user fatigue and stress. *See also* **video graphics adapters**.

### **video bandwidth**

*See* **bandwidth**.

### **video graphics adapter**

A card with character generator and an array of microprocessors that translate bit information from the computer into displayable video signals for the monitor. These cards comply with various standards that determine the nature of the quality of the display.

VGA (video graphics adapter), introduced in 1987, was the first analog card. It offered still higher resolution than EGA

(enhanced graphics adapter): 640 x 480 pixels for graphics and 720 x 400 pixels for test, and a color palette of 256 colors. VGA could also emulate EGA and CGA (color/graphics adapter).

Super VGA (SVGA), devised by VESA in 1989, offers a resolution of 800 x 600 pixels.

XGA-8514A, introduced by IBM in 1990, offers a resolution of 1024 x 768 pixels (interlaced) and a color palette of 256 colors.

Extended VGA (XVGA), introduced by VESA in 1991, offers a top resolution of 1024 x 768 pixels (noninterlaced) and a refresh rate significantly higher than that of IBM's XGA-8514A.

High-end graphics adapters, introduced in the late 1990s for professional workstations, offer top resolutions from 1280 x 1024 to 1600 x 1280, horizontal line frequencies up to 90 kHz, and bandwidths up to 200 MHz.

### **video signal**

The output from the video graphics adapter incorporating the red (R), green (G), and blue (B) signals and the luminance signal, or combinations of these signals, that pass to the video input of the monitor.

### **viewable image size (VIS)**

Actual maximum viewable image size is dependent upon the size of the plastic or bezel around the CRT. Typically, the maximum possible for a "17-inch" monitor is actually 15.75 inches, plus or minus 0.25 inch at the ends of diagonal measurement. VIS differs from diagonal linear measurement.

### **VRAM/video memory**

Random access memory for storing video information. VRAM is a special-purpose RAM with two data paths for access rather than the one path of a conventional RAM. The two paths let the VRAM handle two tasks simultaneously: display refresh and process access. VRAM does not force the system to wait for one function to finish before starting another, so it permits faster operation for the video subsystem.

## Elo Warranty, Trademark, and Copyright Information



Except as otherwise stated herein or in an order acknowledgment delivered to Buyer, Seller warrants to Buyer that Product shall be free of defects in materials and workmanship. See relevant specification sheet for touchmonitors.

Seller makes no warranty regarding the model life of monitors. Seller's suppliers may at any time and from time to time make changes in the monitors delivered as Products or components.

Buyer shall notify Seller in writing promptly (and in no case later than thirty [30] days after discovery) of the failure of any Product to conform to the warranty set forth above; shall describe in commercially reasonable detail in such notice the symptoms associated with such failure; and shall provide to Seller the opportunity to inspect such Products as installed, if possible. The notice must be received by Seller during the Warranty Period for such product, unless otherwise directed in writing by the Seller. Within thirty (30) days after submitting such notice, Buyer shall package the allegedly defective Product in its original shipping carton(s) or a functional equivalent and shall ship to Seller at Buyer's expense and risk.

Within a reasonable time after receipt of the allegedly defective Product and verification by Seller that the Product fails to meet the warranty set forth above, Seller shall correct such failure by, at Seller's options, either (i) modifying or repairing the Product or (ii) replacing the Product. Such modification, repair, or replacement and the return shipment of the Product with minimum insurance to Buyer shall be at Seller's expense. Buyer shall bear the risk of loss or damage in transit, and may insure the Product. Buyer shall reimburse Seller for transportation cost incurred for Product returned but not found by Seller to be defective. Modification or repair of Products may, at Seller's option, take place either at Seller's facilities or at Buyer's premises. If Seller is unable to modify, repair, or replace a Product to conform to the warranty set forth above, then Seller shall, at Seller's option, either refund to Buyer or credit to Buyer's account the purchase price of the Product less depreciation calculated on a straight-line basis over Seller's stated Warranty Period. THESE REMEDIES SHALL BE THE BUYER'S EXCLUSIVE

REMEDIES FOR BREACH OF WARRANTY. EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, SELLER GRANTS NO OTHER WARRANTIES, EXPRESS OR IMPLIED BY STATUTE OR OTHERWISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PURPOSE, THEIR QUALITY, THEIR MERCHANTABILITY, THEIR NONINFRINGEMENT, OR OTHERWISE. NO EMPLOYEE OF SELLER OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY FOR THE GOODS OTHER THAN THE WARRANTY SET FORTH HEREIN. SELLER'S LIABILITY UNDER THE WARRANTY SHALL BE LIMITED TO A REFUND OF THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT SHALL SELLER BE LIABLE FOR THE COST OF PROCUREMENT OR INSTALLATION OF SUBSTITUTE GOODS BY BUYER OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES.

Buyer assumes the risk and agrees to indemnify Seller against and hold Seller harmless from all liability relating to (i) assessing the suitability for Buyer's intended use of the Products and of any system design or drawing and (ii) determining the compliance of Buyer's use of the Products with applicable laws, regulations, codes, and standards. Buyer retains and accepts full responsibility for all warranty and other claims relating to or arising from Buyer's products, which include or incorporate Products or components manufactured or supplied by Seller. Buyer is solely responsible for any and all representations and warranties regarding the Products made or authorized by Buyer. Buyer will indemnify Seller and hold Seller harmless from any liability, claims, loss, cost, or expenses (including reasonable attorney's fees) attributable to Buyer's products or representations or warranties concerning same.

### Trademark and Copyright Information

AccuTouch, AccuTouch HL, CarrollTouch, Entuitive, IntelliTouch, IntelliTouch Ultra, iTouch, MonitorMouse, MonitorMice, SecureTouch, SmartSet, TouchBack, TouchTools, TouchReady, and TouchUp are trademarks of Elo TouchSystems, Inc. Apple, ColorSync, iMac, and Macintosh are registered trademarks of Apple Computer, Inc. Windows is a registered trademark of Microsoft Corporation. All other trademarks are the property of their respective owners.

AccuTouch products are covered by one or more of the following patents: 5,220,136; 4,220,815; 4,661,655; 4,687,885; 4,731,508; 4,822,957; 5,045,644; 4,659,873; 4,777,328; 4,797,514; 4,933,660.

IntelliTouch products are covered by one or more of the following patents: 4,642,423; 4,644,100; 4,645,870; 4,700,176; 4,746,914; 4,791,416; 4,825, 212; 4,859,996; 4,880,665; RE.33.151; 5,591,945.

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**tyco**  
Electronics



### About Tyco Electronics

Tyco Electronics is one of the major business units of Tyco International Ltd. Headquartered in Harrisburg, Pennsylvania, USA, Tyco Electronics is the world's largest passive electronic components manufacturer, and a world leader in cutting-edge wireless technologies, fiber-optic active components, and complete power systems. The company has facilities located in 56 countries serving customers in the aerospace, automotive, computer, communications, consumer electronics, industrial, and power industries. Tyco Electronics provides advanced technology products from over thirty well-known and respected product brands, including Agastat, Alcoswitch, AMP, AMP Netconnect, Buchanan, CoEv, Critchley, Elcon, Elo TouchSystems, HTS, M/A-COM, Madison Cable, OEG, Potter & Brumfield, Raychem, Schrack, Simel, and TDI Batteries.

### About Elo TouchSystems

In 1971, Dr. Samuel C. Hurst, the founder of Elo TouchSystems, invented the world's first electronics touchscreen interface. Today, 30 years later, Elo is still leading the way: Not only are we considered the standard for touch technology, we are also renowned for our wide range of touchscreen systems as well as our dedicated customer service. Whatever the market you're in—Retail, Industrial, Hospitality, Gaming, Medical, or others—here's why Elo is your best choice when looking for a touch-screen partner:

- **Our customers are convinced.**

Thousands and thousands of customers around the world choose Elo—we have already installed millions of touchscreen systems. We won these customers not only with our superior product quality but, based on regular customer-satisfaction surveys, because we also continuously improve our standards of professional competence and customer care.

- **We invest heavily in R&D to give you the best choice of touch technologies.**

We know that our leadership position can only be kept by offering the best touchscreen products possible to a broad cross-section of industries. That's why we invest heavily in R&D. We have over fifty current patents. Moreover, with Tyco Electronics—the world's largest producer of passive electronics components—as our parent, we have considerable technical expertise and resources at our disposal. As a result, we offer the largest selection of touch components, touchmonitors, and development tools available anywhere.

- **We guarantee quality from order to delivery.**

Whether they work on the manufacturing floor, in customer service, or in the president's office, every employee at Elo TouchSystems participates in a Total Quality Management process. We recognize quality not as a finite goal but as a never-ending improvement process throughout all levels of the organization. Our technologies are the benchmark for quality, durability and performance. Moreover, we offer same-day shipments on most of our products and provide in-depth technical assistance to customers throughout the world. Elo has been an ISO 9001 certified company since 1994.

- **We care for our people so they care for you.**

We want our people to care for you and to be motivated, even in this fast-changing business environment. That's why we ensure that values such as teamwork and integrity are part of our daily lives. Secondly, we created an injury-free and participative work place where individual contributions are recognized. And last but certainly not least, we conduct regular, in-depth sales and marketing trainings at our Elo University. This constant attention to employee training and motivation means our customers get the best possible service.



Elo TouchSystems' corporate headquarters are located in Silicon Valley, California, United States, and include the R&D center and main manufacturing site.



Elo TouchSystem's European headquarters are located in Kessel-Lo, Belgium, near the city of Leuven, 25 km from Brussels.



## Elo Partner Programs, completing the hardware and software puzzle

In a continuing effort to increase the availability of touch-based solutions, we have launched two successful Partner Programs. These programs are designed to maximize the synergies among Elo, kiosk-building companies, and touch application software developers, and help us to expand our reach in providing innovative and complete touch solutions to our customers.



### The Kiosk Partner Program

A successful kiosk project often requires the expertise of a turnkey kiosk solution provider who offers a wide range of skills in project management, user interface design, kiosk location placement, hardware and software selection and integration, network management, and implementation services. In our Kiosk Partner Program, our objective is to identify and recruit high-quality kiosk solution providers who integrate Elo's touchmonitors and can support you throughout all phases of a kiosk launch—from design and manufacturing all the way through to installation and support.

Kiosk companies who qualify for the Kiosk Partner Program receive full marketing support from Elo, including the use of the Elo Kiosk Partner symbol. Participants in this program enjoy the privilege of being promoted by Elo through lead referrals and participation in promotional and advertising opportunities, such as tradeshow or mailings.

For a list of partners please visit [www.kioskpartners.com](http://www.kioskpartners.com).



### The TouchReady Software Partner Program

Elo's TouchReady Software Partner Program unites Elo's technology with the world's leading touch software developers to complement Elo's comprehensive array of touch-based hardware solutions available worldwide. The TouchReady Program allows Elo not only to create added value for software developers, but also to directly serve Elo customers seeking software designed for touch applications by providing them with a directory of prequalified software developers ready to offer them a solution. The TouchReady symbol further promotes the use of touch-enhanced applications worldwide and increases awareness of the full breadth of touch software available today.

Software developers who qualify for the TouchReady Program receive full marketing support from Elo, including use of the TouchReady symbol. Elo's TouchReady partners also benefit from participation in promotional and advertising opportunities, such as tradeshow, and gain access to Elo's industry-leading application engineers, as well as other Elo resources.

For a list of partners please visit [www.touchready.com](http://www.touchready.com).





### e-Commerce with Elo

Elo's e-commerce services make doing e-business with Elo easy. Our new Web site at [www.elotouchexpress.com](http://www.elotouchexpress.com) is designed for simple access. Its click-through navigation will speed you straight to the information you need, whether you're a first-time buyer or a seasoned customer.

Elo's on-line services offer you three interface options:

- ***Apply On-Line for an Account***
- ***Shop On-Line***
- ***In Touch with Your Account***

#### Apply On-Line for an Account

Use our convenient on-line forms to apply for credit terms and reseller discounts. Just go to [www.elotouchexpress.com](http://www.elotouchexpress.com) and click on "Apply On-Line for an Account."

#### Shop On-Line

Elo's one-stop shopping for all your touchmonitor and touchcomputer needs is open to everyone 24 x 7, without having to establish an account with us. Just use your credit card to conveniently purchase the right touchmonitor/touchcomputer and accessories for your touch application. Simply point your favorite browser to [www.elotouchexpress.com](http://www.elotouchexpress.com) and click on "Shop On-Line." You will find a broad assortment of Entuitive CRT and LCD touchmonitors for desktop, kiosk, point-of-sale, and industrial use.

Select from Elo's best-selling Entuitive touchmonitors with AccuTouch, IntelliTouch, iTouch, and SecureTouch touch-screen options.



Elo also offers iMac with iTouch for tabletop interactive displays.

All of Elo's Entuitive touchmonitors are specially optimized for touch, and come with full agency approvals and Elo's warranty guarantee of full customer satisfaction. Plus the backing of Elo's ISO 9001 certified quality management and quality assurance standards, and dedicated technical support.

The on-line store is one-stop shopping with fast delivery. It's all you need to point and click to select the perfect touchmonitor/touchcomputer for your applications.





### **In Touch with Your Account**

Elo's e-commerce service provides you with access to a wide range of information about your account on-line.

#### **Check product availability**

- current product availability
- product lead time

#### **Check your order status**

- order acknowledgement
- order reports: summary/history
- open orders backlog
- standard part number/product description listings
- shipping/tracking with direct links to carriers
- change in order status/notification

#### **Check your account balance**

- credit limit and payment terms
- account balance and available credit
- outstanding invoices with due dates
- posted payments and credit memos

#### **Use other on-line forms/services**

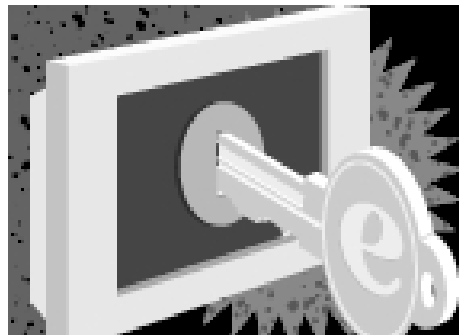
- info on QuickStart product evaluation program
- credit application
- resale tax certification form
- product price quote request
- Return Material Authorization (RMA) request
- customer care feedback form
- account information changes

### **How to get an account ID and password**

Once you have an account established with Elo, go to <https://elotouchexpress.com/forms/account.asp>, click "register on-line access" on [www.elotouchexpress.com](http://www.elotouchexpress.com) or call Elo Customer Service at (800) 557-1458 to obtain a user ID and password for your account access.

*Elo is continuing to extend its services; the following features are scheduled to be added to our on-line services:*

- On-line pricing and price quotes
- Repair order status/explanation of repair
- Warranty status/information/serial number tracking















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