



C.E. Electronics, Inc.  
**ELITE TOUCH**



# Product Overview

The elevator industry is embracing touch technology and C.E. Electronics is making this technology available for your building with the ELITE TOUCH® elevator touchscreen system. Passengers choose their destination not by pushing the traditional elevator pushbutton, but by touching the corresponding area on a screen.

Our product line consists of large, vibrant, color touchscreens that are linked to the elevator controller via the controller interface board. We offer a keypad as an alternate to typical pushbutton which meets code.

The graphics are designed with the number of floors served in mind, and passengers touch their desired destination on the screen. The virtual button changes color to let the passenger know that the call has been registered. At the conclusion of the run, the virtual button reverts to the original color.

The large screen area can be laid out in sections to meet your building's requirements. The screen is very versatile in that you can choose many other functions other than elevator destination. In the following pages you will discover typical design elements used in our screens, however the C.E. Electronics graphics department can assist you in making your design fit your building's needs.





Arthur J. Gallagher & Co.  
BUSINESS WITHOUT BARRIERS™



Please select your destination

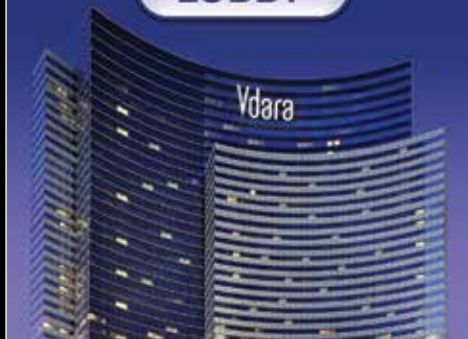


Vdara™  
HOTEL & SPA

Touch the screen to  
select your destination



LOBBY



Please Select Your Destination



Touch the screen to  
select your destination



Press photo to select your experience



ATLANTIS  
PARADISE ISLAND, BAHAMAS.



Touch the screen to select your destination

W

NEW YORK  
UNION SQUARE



MALL  
LEVEL 1

MALL  
LEVEL 2

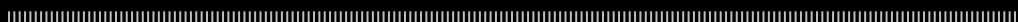


Please touch the screen to select your destination

# Buttons

Buttons are an important function of the touchscreen. The size allocated to this function will change depending on the number of buttons needing to be displayed. In order to meet code, the button itself must be 3/4" with at least a 5/8" character. Our 19" screen is capable of displaying over 100 buttons on one screen, however, the unit is capable of paging multiple screens to display more floors.

We have provided some button examples. Typical shapes are round, square, elongated, and custom styles. For a more tailored made design, our graphic design team can aid you in the best design to enhance your overall building's prominence.





Please touch the screen to select your destination




13 14 15 16  
9 10 11 12  
5 6 7 8  
Oscar's 4  
Conference Center & Meeting Rooms 3  
Fitness Center & Pool 2  
Lobby L

welcome to  
CONTINENTAL PLAZA

Please Select Your Destination

9 Clickpy, Brumfield Investments	10 Warner Sturgeson • Krawitz PL Research • Brumfield Health Partners WLL, LLC Computer Medical
7 Kim Lee • Delaney Foundation MFL, Inc. • Brumfield Health Partners WLL, LLC Computer Medical	8 Green Atlantic Capital • Silver Health • CMC Customer Ready Group • First Atlantic Bankruptcy • Brumfield
5 NSC Consulting • Garfield Wild PC PL • Brumfield Medical	6 Shaker & Co Shaping Ireland
3 J. Harris • Delaney Foundation • Potomac Family LLC Funding • Krawitz Silver Health • CMC • Brumfield Health Partners WLL, LLC Computer Medical	4 Martin • De Imperato • J. Harris Silver Health • CMC • Brumfield Health Partners WLL, LLC Computer Medical
1 Get A Rate • J. Harris • Law Hill Tax Group	2 BGN Healthcare

LL Student Organization • Green Atlantic  
Capital Group • CMC • Brumfield Health Partners  
WLL, LLC Computer Medical



Continental Plaza  
Newmark  
Knobbe, Frank  
CRG

MANDALAY BAY  
RESORT AND CASINO LAS VEGAS




16 17 18 19 20  
11 12 13 14 15  
6 7 8 9 10  
L 2 3 4 5

Please touch the screen to select your destination

COWIE & MOTT  
ATTORNEYS AT LAW

7 8 9 10 11 12  
L 2 3 4 5 6

Please select your destination



W  
NEW YORK  
UNION SQUARE



16 17 18 19 20  
11 12 13 14 15  
6 7 8 9 10  
\*L 2 3 4 5  
MALL LEVEL 1 MALL LEVEL 2

RESTAURANTS & LOUNGES ENTERTAINMENT FITNESS CENTER & SPA



Please touch the screen to select your destination

Please select your destination

27 28 29  
24 25 26  
21 22 23  
18 19 20  
L 16 17

The Historic  
ALFRED I DU PONT  
BUILDING



# Banner

The Banner normally occurs in the top portion of the screen.  
Typical elements found here are:

- the property logo on a static photo,
- a logo on a slide show of still photos, or
- a short movie clip embeded and triggered when the logo is touched.

Logo on  
Static photo



Logo on a slideshow  
of still photos



Embedded video  
triggered when  
logo is touched



## Hot Spots

The screen can be designed with Hot Spot buttons for more in-depth information. Multiple topics can be featured at a property. When a rider touches this area of the screen, information regarding that topic is featured in the banner area.

When a rider touches a hot spot button called Restaurants & Lounges, up to 3 sub selections occur in the banner picturing three specific area establishments. The rider can get specific information on each by touching the sub selection in the banner.

Information could include, but is not limited to an advertisement, address or map to the destination, or a QR code which when read with a QR reader on a smart phone would connect the rider to the restaurant's website and menu page. This information then leaves with them when they exit the elevator, information such as a phone number and address. Reservations can then be made at their leisure.

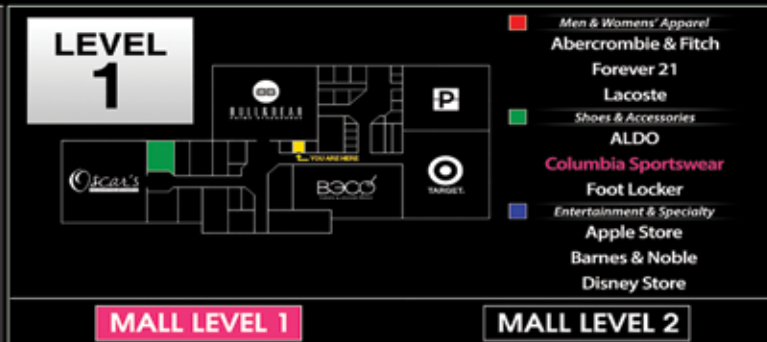
This feature can also be used on any style Hot Spot button; directories, building amenities, shopping and entertainment.



## Hot Spot Descriptor



## Hot Spot Sub-Selection



## Hot Spot Category



# Hardware

Because our system is modular you will only receive what you need. The system consists of a touchscreen with graphics controller, keypad, and controller Interface. These items can be mixed and matched to make a complete system designed specifically for your building's needs. Items can be remotely mounted and only need 2TWSP wires to communicate between modules. If space is a problem, the controller interface can be mounted on the COP, car top or machine room. A series of different controller interfaces are available to fit your specific controller type. Ask a CE sales staff to see if we have one designed for your controller brand.





# Component Layout

**Typical design for a main & auxiliary configuration:**

## Touchscreen:

Mounts to the COP. The unit is designed to fit in the window, eliminating the raw edge of COP.

## Keypad:

Mounts to COP. The unit satisfies the code requirements for traditional elevator pushbuttons. The unit also has a handicap button to aid the visually impaired with an auditory announcement of the desired floor destination. Unit comes with an LCD feedback display which also mounts to COP. The display helps take the guesswork out of knowing which floors have been entered into the keypad.

## Electronics:

Can be mounted locally inside the COP or remotely on car top if space is limited. Max distance is 15'.

## Controller Interface:

Can be mounted inside the COP, car top or machine room. Several styles are available which will communicate directly to your controller on its own serial communication. This greatly reduces wiring and installation time.

.....

CE LED Lighting

Elite PI / Max Series

Touchscreen

Keypad

Door Open,  
Door Close,  
Alarm, etc.

Service Cabinet



# Touchscreens

The touchscreen is not only the human interface to the elevator, but also a wealth of information about your building and surrounding areas.

We offer multiple sizes to meet your particular building's application requirements.

## Specifications

<i>Operating Temperature</i>	0° - 65°c
<i>Standards Conformance, System</i>	Elevator and Escalator Equipment UL508, Standards for Industrial Control CSA C22.2 No. 14 ASME A17.5 Elevator and Escalator Electrical Equip, 1st edition CSA B44.1-14 Elevator and Escalator Electrical Equip, 5th edition
<i>Standards Conformance, Keypad</i>	CSA B44-07 Appendix E ASME A17.1-2007 ADA Standards for Accessible Design, 2010 Edition
<i>Redundancy Operation</i>	In a system with main and auxiliary screens, in the event of failure of one touchscreen, the other screen remains operational if it is a screen failure. If it is an electronics (CPU) failure, then both screens will fail, however, the keypad or traditional elevator pushbuttons will remain operational as they are independent of the CPU or touchscreens. Power feed from the elevator control is recommended, but power from a UPS system can be utilized.
<i>Breakage Resistance</i>	The touchscreen meets the UL-60950 and CSA22.2 No. 60950 ball drop test requirements (0.5 kg, 50mm dia ball dropped from 1.3m). They are constructed from tempered glass with a safe break pattern. They contain no overlays or coatings to wear out, scratch, or tear.



ET153 - 15.3"



ET190 - 19.0"



# Keypad Assembly

The Keypad is part of our product line which enables you to maintain code requirements for pushbuttons. This unit can also provide a backup in the event the touch screens are out of service.

## Details:

- Metal Keys; black anodized aluminum, stainless steel
- 16mm in either tactile or flush character
- Buttons available in either flat or at a 15 degree angle
- Body is a high pressure zinc alloy die-casting
- Handicap supports both visual and audible announcements
- California code buttons are available

## Keypad Display:

This unit takes the guesswork out of knowing what floors have been entered into the keypad. Feedback and prompts aid you in data entry.

## Details:

- LCD screen provides visual feedback of keys pressed
- Can be mounted anywhere 360° from keypad, within 18"

## Keypad Speaker:

This addition to the keypad assembly provides for verbal instructions as well as announcements of floors entered.

## Details:

- 8 ohm speaker

## ETKYPD-XXX | Keypad





# Controller Interface

The ELITE TOUCH® Controller Interface board can be placed in the COP, on car top or in the machine room, for ease of installation. The CIB links the touchscreens to the elevator controller. It imitates the function of traditonal pushbuttons. No additional changes are needed to the existing controller. The controller will continue to function as if it were connected to conventional pushbuttons.

## Details:

- Voltage 20 - 120 vac/dc
- Relay outputs, no/nc
- In COP, on car top or in machine room via 2TWSP and power and ground
- Box is not needed if mounted in COP
- Pluggable connectors for ease of installation
- UL/CSA recognized

## Proprietary Controller Interface Cards:

- Reduces wiring during installation
- Converts our network to controller network
- Small in size

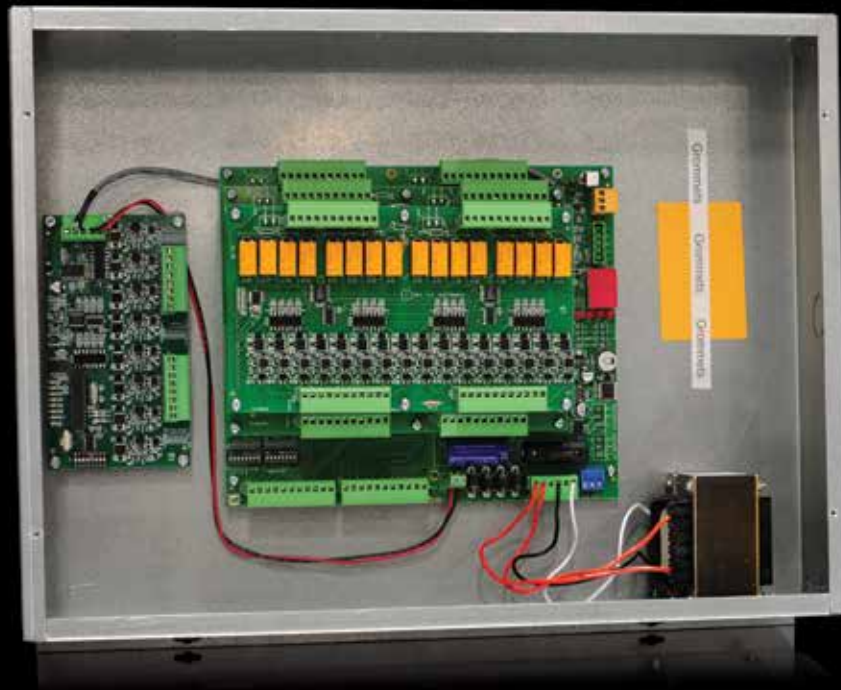
## Discrete Input Controller Interface Cards:

- Optically isolated inputs/relay outputs for **ANY** Discrete Controller.

# Direct Interfaces to OEM Controllers



Discrete Input Controller Interface Board



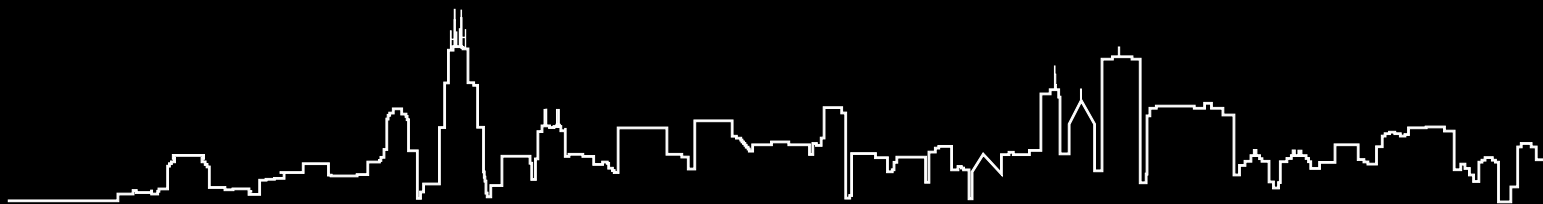
# User Modes

The screens are capable of several user modes:

- Fire Service
- Swing Service



Fire Phase II



Please select your destination

13	14	15
10	11	12
7	8	9
4	5	6
L	2	3

 The Historic  
**ALFRED I DU PONT**  
BUILDING

Swing Service - Lowrise  
Serving Floors:  
Lobby, 2 - 15

Please select your destination

27	28	29
24	25	26
21	22	23
18	19	20
L	16	17

 The Historic  
**ALFRED I DU PONT**  
BUILDING

Swing Service - Highrise  
Serving Floors:  
Lobby, 16 - 29

# Achieving Code Compliance

Code compliance in the United States is slowly evolving to match the technology available to the industry. At this time, screens alone are not enough to meet requirements. Touchscreens must be paired with either traditional pushbuttons or a keypad. Other buttons on the COP such as door open/closed or alarms will remain mechanical.





October 24, 2014

Michael Concannon, Regional Manager  
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RE: Touch Screen Elevator Controls

-Vertical Transportation Consulting  
-Inspection Services  
-Maintenance Review Program  
-Modernization  
-Code Research  
-Trial Research  
-Traffic Analysis  
-Site Surveys  
-Project Management  
-Plan Review  
-NAESA (Certified Inspectors)

Dear Mr. Concannon,

Upon researching this issue, it has been concluded that touch-screen controls for elevator car operating panels is compliant with applicable codes.

Under ASME A17.1 definitions of "operation, automatic" it refers to starting of an elevator in response to "the momentary actuation of operating devices". Definitions for different types of automatic operation refers to the use of "buttons" for establishing calls, however this term is not defined in A17.1.

In the Free Dictionary, among other definitions of button is:

**But-ton**  (büt'n)

*n.*

**3. Computer Science**

**a.** In graphical user interface systems, a well-defined area within the interface that is clicked to select a command.

By this definition, an area on a touch screen identified as an elevator floor selection, that is used to establish a command for the elevator to automatically operate to that floor, would be considered a "button".

The 2013 Edition of A17.1 added the following to "operation, group automatic": ....*"It may include but is not limited to: operating device(s) in the car and/or at each landing that provide a means to select destinations identified with landings; keypads or touch screens at each landing and/or in the car;"*..... (Emphasis provided) Often, the code is revised to clarify what is not prohibited, but not specifically addressed, for new technology that was not in existence when the code was developed.

Only one ASME A17.1 Interpretation (11-469) has been published regarding touch screens, and that Inquiry was only pertaining to the operation of a Destination Dispatch System elevator on Phase II Firefighter's Operation. That Inquiry specified that keypads were permitted for Phase II but touch screens are not, presumably due to the possible sensitivity of touch screens to heat.

For accessible passenger elevators, keypads for call registration would be required in addition to touch screens in any event. This would be to comply with ADA requirements for tactile characters to identify elevator controls as specified in **407.4.7.1.3**. The ADA was revised in the 2010 Edition, and among other changes specifically permits keypads to be used to establish elevator car calls.

Vertical Assessment Associates as an elevator consulting firm has specified touch screen systems for elevator car operating panels, and have found them to be fully functional and code compliant.

With the advent of Destination Dispatch Systems and the great technological improvements in touch screen technology, the use of systems and devices utilizing touch screens in elevator operational controls will undoubtedly become more prevalent.

Respectfully submitted,

Lee Rigby, CEI

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