BORG DISPLAYS

Affordable in-wall touchscreen controllers

Borg Does Windows™

Borg is *the* world's leading provider of in-wall interactive displays specifically for OEM and installer direct integration industries. With over 12 years in embedded touch-screen designs, Borg's team excels in usability, support, and custom options. Plus we *ARE* the factory and as such can provide nimble flexibility to solve your needs TODAY whether in custom designs, sizes, features or firmwares.

Borg's suite of affordable Protégé brand in-wall platforms are much more than a blank canvas – each Protégé enables a variety of applications and installation scenarios as purposed solid-state control or display appliances yielding years of always-on reliability.

Our team goes beyond building hardware – we listen to your needs and those your clients' and design, rebuild, and redeploy firmwares to accommodate the changing world of plugins and optimal interactivity. As such our platforms are future-friendly with auto-updating applets to stay abreast of advances.

Try Protégé on for affordability then ask about our volume discounts and flexible Micro-OEM branding opportunities.

21"

15"

10"

8"

6"

4"

Touch is intuitive

SINGLE TOUCH
RESISTIVE TECHNOLOGY

MULTI TOUCH
CAPACITIVE TECHNOLOGY

Stock or Custom sizes / Custom bezels

Windows is a trademark from a tiny little company called Microsoft Corp

Clever configurable capacitive bezel buttons and updateable Content Manager

Protégé is Flexible

Protégé is the premier alternative to closed system touchscreens or PCs. As a standard's-based appliance, Protégé does what a PC can do but better and for far less power, less consumables, and lasts much longer. With no spinning media (HDD or fans) and super long life LED LCD's, Protégé is *the* single box solution for your application!

Deploy Windows XPe, WES, or WinCE-based Protégé in-wall touchscreens from the world's leading innovator of embedded controllers. Our elegant 7th generation platform was designed in the EU as optimal high-performance terminals.

Capacitive bezel buttons are configurable to launch, toggle applications, kiosk URLs, and screen functions.

Tested and available to enable a variety of applications like Skype, Google Sidebar and leading control system providers or as **OEM platforms** with minimal capital exposure through a **factory-direct** relationship.

RoHS, Energy Star and buzzword compliant, Protégé offers energy-efficiency and solid state reliability for years of always-on service on a XPe or WES OS.

Digital Signage

Control Interfaces

Application Server

IE Kiosk Page Server

Room Scheduling

VoIP Communication

DVR Monitoring

Interactive Kiosk

Ask us what these buttons can do and why this is unique

Protégé 21

Wide Format Professional in-wall touchscreen

The affordably elegant and large format 21.5" 16:9 touchscreen is a high-performance smartscreen controller running **XPe** or **Win7e** and resistive or multi-touch overlays. Protégé 21a offers a fast Intel Atom 1.6Ghz processor, flush-mounting or VESA mount, brandable acrylic bezel, capacitive soft-touch configurable buttons, and is VoIP-ready. Protégé is ideal for web or Win-based applications where dedicated in-wall location is essential. The solid state platform offers unwavering stability on as a high-performance display or controller.

Protégé 21 Standard Features:
- Intel 1.6Ghz low-heat, high-performance processor.
- 21.5" **16:9 TFT LED** up to **1920x1080** res, 16.7M colors
- MPEG2 hardware accelerator integrated
- Gigabit Ethernet Controller
- 2 speakers, mic, cam and 4 **hard buttons** on bezel
- 1 LAN, 1 RS232, 1 RS232/422/485, 2 USB2.0, 1 PS/2,
- Power Supply: 9~24V full range DC input.
- Steel back box with VESA mount option included
- Auto Power-On feature

Customizable Acrylic Bezel:
- 4 soft-touch sensing buttons on GPIO bus
- LED: RED off; GREEN on; ORANGE button touch
- Microphone / 2 amplified speakers
- Adjustable bezel camera

Options:
- 2-Video input card w/remote
- WiFi networking
- Custom bezel color/logo/button icons, etc
- SATA 64GB HDD

Protégé 21a (XPe)
- Windows XP embedded
- 5-wire resistive touch
- 2GB DOM / 1GB RAM
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Protégé 21w (WES)
- Windows 7 embedded
- Multi-touch capacitive
- 4GB DOM / 2GB RAM
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 8.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 12
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access
- Multi-touch ready

Screw type power | Ethernet | PS2 | USB | VGA | Serial | Audio in/out

Protégé 21 Ports and Connector types

Protégé 15

Professional grade in-wall touchscreens

Introducing an affordably elegant and interactive large high-performance smartscreen controller running Windows OS. Protégé 15 offers a fast processor, flush-mounting, acrylic bezel, capacitive soft-touch configurable buttons and more. Protégé is ideal for any web or Win-based application where an in-wall location and touch access is essential. The robust solid state smartscreens enable unwavering stability and offer a high-performance PC-like experience so make Protégé the backbone of your installations today!

Protégé 15a/w Features:
- Intel Atom 1.6Ghz high-performance fanless processor.
- 15" High Bright TFT LED LCD up to1024x768 resolution
- Touch Panel: 5-wire resistive type standard
- ACPI 1.0 power saving compliant
- MPEG2 hardware accelerator integrated
- Gigabit Ethernet Controller
- 2 speakers, microphone and **camera** on front bezel
- Ports 1 x LAN, **2 x RS232**, 2 x USB2.0, 1 x PS/2,
- Power Supply: 8~24V full range DC input.
- Steel back box included
- Auto Power-On feature

Customizable Acrylic Bezel:
- 4 soft-touch capacitive sensing buttons on GPIO bus
- LED: RED off; GREEN on; ORANGE button press.
- Microphone / 2 amplified speakers – VoIP ready
- Customizable look/feel

Options:
- 2-Video input card w/remote
- WiFi networking
- Custom bezel color/logo/button icons, etc
- SATA 64GB HDD

Protégé 15a
- Windows XPe
- 2GB DOM / 1 GB RAM
- 5 wire resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Protégé 15w
- Windows 7 embedded
- 4GB DOM / 2GB RAM
- 5 wire resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 8.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 12
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access
- Multi-touch ready

Microsoft
Windows xp
Embedded

Windows 7
for Embedded Systems

Screw type power   Ethernet   PS2   USB   VGA   Serial   Audio in/out

Protégé 15 Ports and Connector types

Protégé 10

Wide Format Professional in-wall touchscreen

The affordably elegant 10.1" 16:10 touchscreen is a high-performance smartscreen/controller running the flexible Windows OS with touch overlay options. Protégé 10 offers a fast Intel Atom 1.6Ghz processor, flush-mounting, a brandable acrylic bezel, capacitive soft-touch configurable buttons, and VoIP-ready. Protégé is ideal for web or Win-based applications where dedicated in-wall location is essential. The solid state platforms offer unwavering stability on Windows as a high-performance experience.

Make Protégé the backbone of your installations today!

Protégé 10a/w Features:
- Intel 1.6Ghz low-heat fanless processor.
- **10.1" 16:10 format TFT LED 1024x600 resolution**
- MPEG2 hardware accelerator integrated
- Tilt-adjustable **web camera**
- Gigabit Ethernet Controller
- 2 speakers, micro, cam and **4 hard buttons**
- 1 RS232, **1 RS232/422/485**, 2 USB2.0, 1 PS/2
- Power Supply: 9~24V full range DC input.
- Steel back box included
- Auto Power-On feature

Customizable Acrylic Bezel:
- 4 soft-touch sensing buttons on GPIO bus
- LED: RED off; GREEN on; ORANGE button press
- Microphone / 2 amplified speakers
- Bezel web camera (as shown below)

Options:
- 2-Video input card w/remote
- WiFi networking
- Custom bezel color/logo/button icons, etc
- SATA 64GB HDD

Protégé 10a
- Windows XPe
- 2GB DOM / 1GB RAM
- 5 wire resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Protégé 10w
- Windows 7 embedded
- 4GB DOM / 2GB RAM
- Multi-touch capacitive
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 8.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 12
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access
- Multi-touch ready

Screw type power   Ethernet   PS2   USB   VGA   2 Serial

Protégé 10 Ports and Connector types

PoE High Power ready

Protégé 8a/w

Professional in-wall embedded touchscreens

Introducing affordable elegance touch-control in a high-performance smartscreen controller running the flexible Windows embedded OS. Protégé 8a/w offers a super fast Intel Atom processor, flush-mounting, acrylic bezel, capacitive soft-touch configurable buttons and more. Protégé is ideal for any web or Win-based application where an in-wall location and touch access is essential. The robust solid state smartscreens enable unwavering stability and offer a high-performance experience so make Protégé the backbone of your installations today!

Protégé 8a/w Features:
- Intel 1.6Ghz low-heat fanless processor.
- 8.4" High Bright TFT LCD 800x600 resolution
- Touch Panel: 5-wire resistive type standard
- MPEG2 hardware accelerator integrated
- Gigabit Ethernet Controller
- 2 speakers, mic, 4 quick access **hard buttons**
- Ports 1 x LAN, **2 x RS232**, 2 x USB2.0, 1 x PS/2,
- Power Supply: 8~24V full range DC input.
- Steel back box included
- Auto Power-On feature

Customizable Acrylic Bezel:
- 4 soft-touch sensing buttons on GPIO bus
- LED: RED off; GREEN on; ORANGE button press
- Microphone / 2 amplified speakers

Options:
- 2-Video input card w/remote
- WiFi networking
- Custom bezel color/logo/button icons, etc
- SATA 64GB HDD

Protégé 8a
- Windows XPe
- 2GB DOM / 1 GB RAM
- 5 wire resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Protégé 8w
- Windows 7 embedded
- 4GB DOM / 2GB RAM
- 5-wire resistive touch
- Tilt adjustable camera
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 8.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 12
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Pro8a

Pro8w

Protégé 8

Affordable Professional in-wall XPe touchscreen

Very affordable elegance in a low-heat, high-performance smartscreen controller running the flexible Windows XPe. Protégé 8 offers a low heat, fast processor, flush-mount, acrylic bezel, capacitive touch configurable buttons and more. Protégé is ideal for any web or Win-based application where an in-wall location and touch access is essential. The robust solid state smartscreens enable unwavering stability and performance so make Protégé the backbone of your installations today!

Protégé 8 (geode) Features:

- Embedded Geode LX-800 low-heat, fanless processor
- 8" High Bright **LED backlit** TFT LCD
    - 800x600 resolution (SVGA) 50,000 hr lamp
    - Total power consumption is 2.745W
- Touch Panel: 4-wire resistive type
- ACPI 1.0 power saving compliant
- MPEG2 hardware accelerator integrated
- Gigabit Ethernet Controller
- Hard button configuration tool
- 2 speakers and 1 microphone on front bezel.
- Ports 1 x LAN, **2 x RS232**, 2 x USB2.0, 1 x PS/2,
- Power Supply: +13~24V full range DC input.
- Steel back box included
- Auto Power-On feature

Acrylic Bezel:

- 4 soft-touch sensing buttons on GPIO bus
- LED: RED off; GREEN on; ORANGE button press
- Microphone / 2 amplified speakers

Standard XPe image:

- 1GB DOM / 512MB RAM
- 4 wire Resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- JVM SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Windowsxp **Embedded**
Microsoft

Standard Button Icons

Screw type power Ethernet PS2 USB VGA Serial

PoE
High Power ready

Protégé 8lt

Affordable Professional in-wall XPe touchscreen

Affordable elegance in a compact, low-heat, high-performance smartscreen controller running the flexible Windows XPe. The Protégé 8lt offers PoE-capable fast processor, flush-mount controller with stock or customizable acrylic bezel. Protégé is ideal for any web or Win-based application where an in-wall location and touch access is essential. The robust solid state smartscreens enable unwavering stability and performance. Make Protégé the backbone of your installations today!

Protégé 8lt (geode) Features:

- Embedded Geode LX-800 low-heat, fanless processor
- 8.4" High Bright **LED backlit** TFT LCD
    - 800x600 resolution (SVGA) 50,000 hr lamp
    - Total power consumption is 2.745W
- Touch Panel: 5-wire resistive type
- ACPI 1.0 power saving compliant
- MPEG2 hardware accelerator integrated
- Gigabit Ethernet Controller
- Screen saver configuration tool
- Ports 1 x LAN, **2 x RS232**, 2 x USB2.0, 1 x PS/2,
- Power Supply: +12V DC input.
- Steel back box included
- Auto Power-On feature – **PoE ready** using 802.3af
    - Injector/splitter or PoE router/splitter

Standard XPe image:

- 1GB DOM / 512MB RAM
- 5-wire Resistive touch
- .Net 1.1, 2.0, 3.0, 3.5
- Internet Explorer 7.0
- Button Monitor 4.01
- Flash plugin 10.2
- Javascript plugin 1.3
- Java SE
- Media Player 11
- User Management
- Screen Saver
- Windows Explorer
- QC Hardware test tool
- Remote Access

Protégé 8lt Ports:

VGA out   DC power jack   2-Serial   PS2   2-USB   Gigabit Ethernet

PoE High Power

RoHS

energy ENERGY STAR

PoE High Power ready

Protégé 6

Introducing control elegance in a compact, low-heat, high-performance touchscreen running the reliable embedded WinCE 5.0. The Protégé 6 offers a flush-mount, acrylic bezel, speaker, and configurable capacitive buttons.

Protégé is ideal for locked web or Windows-based application where an in-wall location and touch access is essential. PoE ready with steel backbox installation ease.

The robust solid state smartscreens enable unwavering stability and performance so make Protégé the backbone of your installations today!

Two versions: IE/Kiosk and Application Server

Protégé 6 Features:
- Embedded 32-bit RISC, 336Mhz low-heat, high-performance fanless processor
- 5.7" High Bright TFT LCD with 640x480 resolution (VGA) 50,000 hr LED backlight lamp
      Total power consumption is **2.2W - 21% savings over CCFL, 5x the longevity**
- Touch Panel: 4-wire resistive type
- ACPI 1.0 power saving compliant
- MPEG2 hardware accelerator integrated
- 10/100 Ethernet Controller
- Speaker and microphone on front bezel.
- Ports 1 x LAN, 1 x RS232, 1 x RS232/RS485, 1 x USB1.1
- Power: +12 ~ +45V full range DC input. PoE (power over Ethernet).
- Includes steel back box
- Auto Power-On feature, Power indicator, Status indicator, and bezel "Edge Glow" indicator.

Acrylic Bezel:
- 4 soft-touch sensing buttons on GPIO bus, Reset, Mic, Speaker
- LED: RED when off; GREEN when on; ORANGE when any key pressed.
- 2 LEDs - "POWER / Touch" and other is programmable as a "STATUS" indicator

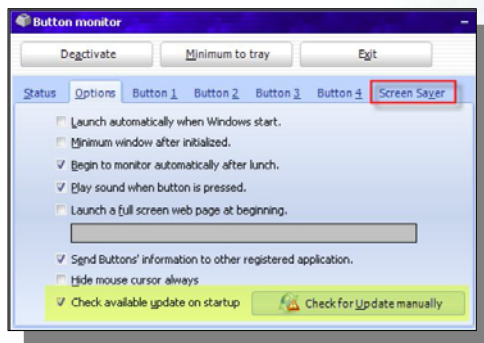CE 5.0 embedded OS + RS232 (3-wire) Ports + PoE

Borg Applications

Button Monitor – Each Protégé bezel sports unique and configurable capacitive bezel buttons which are managed by out Button Monitor applet.
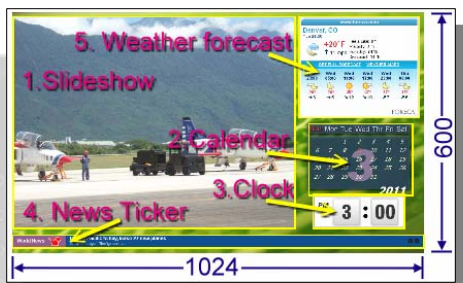

These Buttons are VERY useful when multitasking applications or manual control of the hardware. See footer for standard icons.

Button Monitor Features
- Any Button can launch an app or IE preset
- Select URL for full-screen desktop upon boot
- Set IE to locked down kiosk-mode
- Add sound to button presses, if desired
- Power down manually if desired.
- Deactivate Buttons altogether for passive mode
- Tie Buttons into custom app through the GPIO
- Power-saving screen saver w/content options
    - Digital photos from local or network photos
    - MP3 player random or list local or network
    - News ticker
    - Localized weather
    - Calendar and clock
- Auto update for the latest releases – nice!

Hardware QC – Protégé includes a hardware test utility for easily checking functional acceptance of the LCD, audio, video, and more. Additionally it provides firmware, memory and processor information.

Mirror/Security – On Bezel camera units, you can set a Bezel Button to launch the camera to act as either a mirror or even to monitor the room. This requires a 3rd party application enabling the camera as a separate IP webcam.

Remote Access – Protégé offers multiple methods for user remote access/control and installer remote configuration.
VGA – most units sport an external VGA port for extending the interface to other displays
Explorer – access PCs over the network
Webserver – Enable to push an HTML page
VNC Server – Enables a remote GUI
TeamViewer – Download this app to remotely administer the platform
RDP – Remote Desktop Protocol allows you to port your interface to another PC or conversely port a PC interface to Protégé

Product Inclusions – Protege ships with a steel backbox for pre and post drywall or concrete installation. Steel "non stud" clips are available. Non-PoE assemblies ship with a 120-240v auto-sensing power supply with a variety of plug options.

3rd Party Applications

3rd Party Support – Protégé is very similar to the functional aspects of a standard PC with the notable exceptions that is can be locked down as an appliance to display/control exactly what you want. And of course it consumes less power, and is devoid of any spinning media – i.e. solid state operation. Even so our team has tested many applications and expects professionals to test their own applications but we have NEVER not been able to overwhelmingly satisfy our clients' needs.

Examples of support include:

Control4 MyHome	**Crestron XPanel**	**VISIX**
HomeLogic	**Autonomics Mirage**	**Helvar**
Kaledioscape	**Clipsal CBus**	**ELK**
Honeywell Vista	**Netstreams**	**HAI**
Tightrope Media	**NETxAutomation Voyager**	**KNX**
Medialon	**Sonfy TaHoma**	
Automated Logic WebCTRL	**CasaTunes**	**+ Many, many more!**

Excellent for any application for PC's or that renders in a web-browser

Other Application Support – **Google's Sidebar** is a cool way to add content, world cams, news, stock tickers and more widgets as desired. Automatically re-sizes the main application to accommodate.

VoIP Intercom: SKYPE works very well on Atom units especially if using the adjustable bezel cam. Again this can be launched or toggled from the Bezel Buttons and works as station-to-station intercom as well. **AiPhone – IS Series** has not been tested but appears compliant

Streaming Live Video: **Boxee, Vulkano, Slingbox** and other "place-shifting" TV or video applications so you can view live TV on Protégé.

Integration *is* the killer app. Use Protégé to add 3 or more applications adding WOW value to your work. Use the Button Monitor to launch/toggle full screen apps and IE for Content + Control + Communication. Button #4 can be set to Alt + Tab between full screen locked down interfaces.

Integration Ready: Control + Communication + Content + Room Scheduling + Digital Signage + Application Serving + Energy Mgmt

Partner Programs

Micro-OEM Branding Program

Borg offers a very unique branding opportunity for everyone to extend their logo or customize the bezel colors or button icons.

Two easy ways to brand Protégé touch-screens for your clients:

1) Order just 20 Pro8-Pro15a units and we pay setup and inventory of 50custom bezels.
2) Pay $450 setup + $20/bezel for 50 bezels and then just order 1 unit at a time.

All acrylic bezels are silk-screened for:
1. Bezel color – standard is white
2. Logo and color – complex logos = fees
3. Button icons
4. Button icon color
5. Button background

Custom look – bezel color, logo, icons!

Custom firmware – boot logo, settings, etc

Set hooks on buttons to key applets within your software – then customize the icons!

Its that easy – call us today.

Distributor Programs

Borg also works with qualified Distributors who sell into the professional integration industries. If your organization is interested in offering Protégé locally to your clients and supporting them as expected, please contact us.

What we expect:
Case pack orders
Locally support your clients – we back you up
Market locally and at regional trade events

What we offer:
Sample units at Dist pricing
Great margins, better with higher volumes
Literature, global branding and email blasts
Referrals in your trade regions
Reliable products with years of longevity
Where-To-Buy listing on Borg sites
Interoperability testing with many 3rd party apps

Power Consumption – as energy-efficient appliances they typically consume 10% that of a PC. As such they are Energy Star rated and consume as shown below.

Pro15 Atom	13-25watts
Pro10 Atom	13-18watts
Pro8 Atom	13-18watts
Pro8 Geode	7-12watts
Pro6 RISC	5-8watts