

GE
Intelligent Platforms

Hardware User's Guide

6" QuickPanel View Keypad
Intermediate, Color

IC754VSI06SKD
IC754VGI06SKD

GFK-2357A
April 2010



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Caution

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The 6" QuickPanel View Keypad has been tested and found to meet or exceed the requirements of U.S. (47 CFR 15), Canadian (ICES-003), Australian (AS/NZS 3548) and European (EN55022) regulations for Class A digital devices when installed in accordance with guidelines noted in this manual.

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Power, input and output (I/O) wiring must be in accordance with Class 1, Division 2 wiring methods, Article 501 4(b) of the National Electric Code, NFPA 70 and in accordance with the authority having jurisdiction.

For a complete list of agency qualifications, please refer to Appendix A1.

We want to hear from you. If you have any comments, questions, or suggestions about our documentation, send them to the following email address: support.ip@ge.com.

Contents

| | | |
|----------|--|-----------|
| 1 | Welcome | 1 |
| | Getting Started | .2 |
| | Basic Setup | .2 |
| | Unit Runtime Setup | .3 |
| | Startup | .3 |
| | Shutdown | .4 |
| | Panel Cutout | .4 |
| 2 | Overview | 9 |
| | QuickPanel View Keypad Hardware | .10 |
| | Layout Diagram | .10 |
| | Block Diagram | .12 |
| | QuickPanel View Keypad Software | .13 |
| | Windows CE.NET | .13 |
| | Working with Windows CE | .13 |
| | Pocket Internet Explorer | .14 |
| | Backup | .16 |
| | Reboot | .17 |
| | Storage Manager | .18 |
| | System Information | .18 |
| | Copy Project to Flash Card | .19 |
| | Emulate PPC | .19 |
| | HTTP File Transfer Utility | .21 |
| | FTP Server | .22 |
| 3 | Detailed Operation | 27 |
| | Touch Screen Display | .28 |
| | Touch Screen | .30 |
| | Integrated Keypad | .33 |
| | Keypad Operation | .33 |
| | Soft Input Panel | .35 |
| | Communication Port | .38 |
| | COM1- Serial | .38 |
| | Recommended Cabling for TIA/EIA422 or TIA/EIA485 | .38 |
| | Working with the COM port | .40 |
| | CF Port | .44 |

| | |
|---------------------------------|-----------|
| Ethernet | 45 |
| Expansion Bus | 49 |
| DIP Switches | 50 |
| Memory | 52 |
| Flash Memory | 52 |
| SRAM Memory | 53 |
| DRAM Memory | 53 |
| Boot Loader ROM | 54 |
| Memory Expansion Slot | 54 |
| Other Subsystems | 56 |
| Power Management | 56 |
| Battery Backup | 56 |
| Real-time Clock | 57 |
| Configuring SNTP | 58 |
| A1 Design Specifications | 61 |
| Physical | 61 |
| DC Power | 61 |
| Display | 62 |
| Front Panel | 62 |
| Keypad | 62 |
| Touch Screen | 62 |
| CPU | 62 |
| Memory | 63 |
| Memory Expansion Slot | 63 |
| Expansion Ports | 63 |
| Communication Ports | 64 |
| Environmental | 64 |
| Battery | 65 |
| Calendar/Clock | 65 |
| Agency Qualifications | 66 |
| A2 Troubleshooting | 67 |
| Power up | 67 |
| Pocket Internet Explorer | 67 |
| Physical Unit | 68 |
| Index | 69 |

Congratulations on your purchase of a QuickPanel View Keypad, the most advanced compact HMI computer available. The QuickPanel View Keypad is available in different configurations to suit your requirements. Equally at home in a networked environment or as a stand-alone unit, the QuickPanel View Keypad is the ideal solution for factory floor HMI.

Powered by Microsoft Windows CE.NET™, today's embedded operating system of choice, the QuickPanel View Keypad provides a fast track for application program development. The commonality with other versions of Windows simplifies porting your existing program code. Another benefit of Windows CE is the familiarity of the user interface, shortening the learning curve for operators and developers alike. The availability of third-party application software makes this operating system even more attractive.

The 6" QuickPanel View Keypad is an all-in-one microcomputer designed for maximum flexibility. The design, based on an advanced XScale™ microprocessor, brings together a high-resolution touch-screen operator interface with a variety of I/O options. With many standard ports and expansion busses from which to choose, you can connect to most industrial equipment.

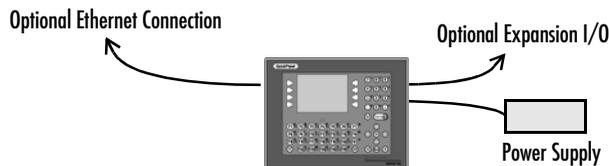
The QuickPanel View Keypad is equipped with several memory types to satisfy even the most demanding applications. A 32 MB section of DRAM is split between the operating system, an object store, and application memory. Functioning as a virtual hard drive, a 32 MB section of non-volatile FLASH memory is divided between the operating system and persistent storage for application programs. The retentive memory consists of 512 KB of battery-backed SRAM for data storage, ensuring your valuable data will never be lost, even during a power failure.

The many features of the QuickPanel View Keypad make it an obvious choice for a world of applications. Your smart choice will provide reliable operation for years to come.

GETTING STARTED

Basic Setup

Your QuickPanel View Keypad is shipped ready for use after a few configuration steps. To power up all you need to do is connect a DC power supply via the supplied quick-connect plug. Depending on your application, you may also want to connect and configure optional input devices (see page 28), communications ports (see page 38) and expansion adapters (see page 49).

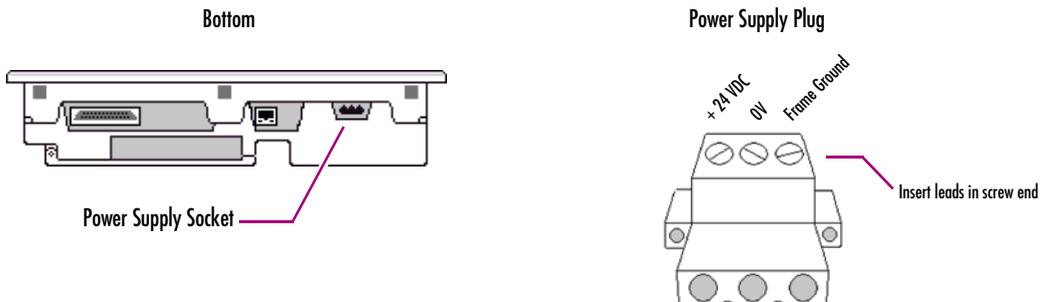


Caution - Electrical Shock Hazard: To avoid personal injury or damage to equipment, ensure that the DC supply is disconnected from power and that the leads are not energized before attaching them to the unit's power supply plug.

To connect a DC power supply

1. Using the three screw terminals shown in the following diagram, attach a 24VDC, 48W power supply to the plug supplied with the QuickPanel View Keypad (see specifications on page 61 for conductor size requirements).
2. Insert the plug into the power supply socket and securely tighten the attaching screws.

Note: The torque range for the attaching screws is 4-6 inch/lbs.



Unit Runtime Setup

To download an application to a QuickPanel View Keypad unit, you must set up a data link between your development workstation and the QuickPanel unit. For more information, see “Ethernet” (page 45) and look up “Downloading a Machine Edition Project” in the Proficy Machine Edition online help.

Startup

When you first start up the QuickPanel View Keypad, a few configuration steps are necessary.

To start the QuickPanel View Keypad

1. Apply DC power to the QuickPanel View.

Once power is applied, the QuickPanel View Keypad begins initializing. The first thing to appear on the display is the splash screen.



2. To skip running any programs included in the StartUp folder, tap **Don't run StartUp programs**.

The splash screen disappears automatically after about 5 seconds. The Windows CE desktop then becomes visible.

3. Tap  **Start**, point to  **Settings** and then tap  **Control Panel**.
4. In the Control Panel, double-tap  **Display** to configure the LCD display (see page 28).
5. In the Control Panel, double-tap  **Stylus** to configure the touch screen (see page 30).
6. In the Control Panel, double-tap  **Date and Time** to configure the system clock (see page 57).
7. In the Control Panel, double-tap  **System** to configure a network machine name (see page 50). Many applications, including Proficy Historian, require a unique machine name. It is recommended procedure to set a unique network name for the QuickPanel View to avoid future conflicts.
8. In the Control Panel, double-tap  **Network and Dial-up Connections** to configure network settings (see page 46).

9. To save the settings, run  **Backup** (see page 16).

Shutdown

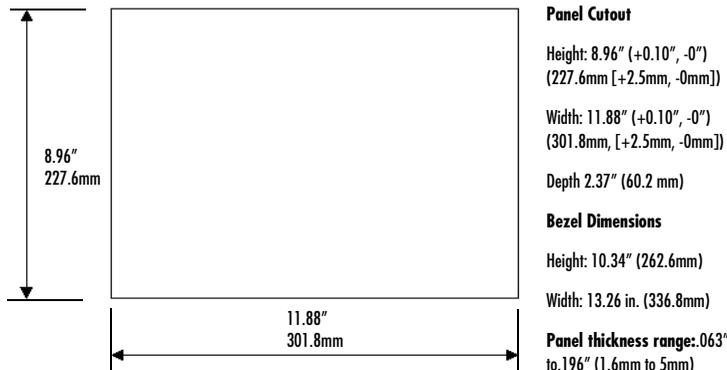
There are no specific dangers associated with a power failure or other unplanned shutdown of the QuickPanel View Keypad. In general, programs are retained in FLASH memory and user data can be retained in battery-backed SRAM. Some operating system settings are retained only with user intervention, so in order to carry out a graceful shutdown of the QuickPanel View Keypad, we recommend you perform the following procedure.

To shut down the QuickPanel View Keypad

1. Quit any programs that are running and wait for all file operations to complete.
2. If you have not changed operating system settings (e.g., brightness or touch screen sensitivity) or do not want to save the changes, remove AC power from the 24VDC supply.
3. To save changes to operating system settings (e.g., brightness, touch screen sensitivity), run  **Backup** (see page 16) and run **Reboot** (see page 17). When the Windows CE desktop reappears, remove AC power from the 24VDC supply.

Panel Cutout

For enclosure mounting, cut an opening in the panel according to the specifications given with the following diagram.



Notes:

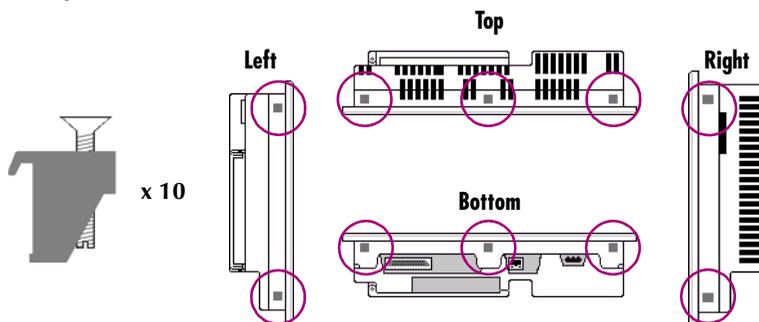
- For compliance to NEMA 4, 4x, and 12 qualification, the unit must be mounted in a comparably NEMA rated (IP56 equivalent) panel or enclosure.
- For compliance to ATEX agency qualification, the unit must be mounted in an IP66 panel or enclosure.

For complete integrity to ATEX it is recommended that the minimum panel thickness be 0.1" (2.54mm).

- For adequate ventilation, allow at least 3 inches of space between adjacent equipment and all sides of the QuickPanel. Ensure that specified conditions of temperature and humidity are not exceeded.
- To avoid gasket degradation, limit repeated insertions or removals of the unit and retightening of the mounting clips. For full protection, always use a fresh gasket. Replacement gaskets may be ordered using part number IC754ACC12GAS.
- In outdoor applications, direct sun exposure may impose increased thermal loads on the QuickPanel leading to excessive temperature rises. Cabinet design and orientation must be carefully considered to avoid exceeding the operational temperature limits. These considerations could include shading for the QuickPanel and its cabinet with awnings or other solar opaque materials, avoiding a due East or West facing of the cabinet, ventilation or active cooling of the cabinet, or other methods.

The unit will **not** fit through this cutout with a CF card inserted in the port, with any cables connected, or with the power supply plug inserted in the socket.

To secure the QuickPanel View Keypad to a panel, use the 10 included mounting clamps. They hook into openings located on the top, bottom, and sides of the housing.



To mount the QuickPanel View Keypad in a panel

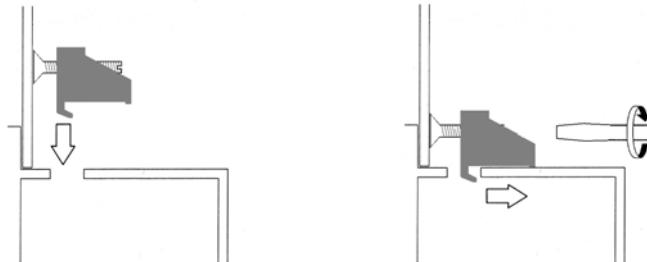
1. Insert the unit into the panel cutout (without a CF card in the CF port).
2. Insert the hook of each mounting clamp into the housing openings as shown below.
3. Ensure that the gasket is properly seated in the bezel channel and firmly tighten the clamp screws.

Note: The torque range for the mounting clamp screws is 2.6-4.4 inch/lbs (0.3-0.5 Nm).

Welcome

Getting Started

The mounting clamps hold the unit in place by tension alone. No drilling is required.



Do not damage the gasket attached to the back of the QuickPanel View Keypad's bezel. This gasket prevents shock hazards and damage caused by liquids accidentally entering the unit after installation.

2

Overview

This chapter provides introductory information on the 6" QuickPanel View Keypad hardware and software with descriptive procedures for completing some of the most common tasks you will encounter.

In this chapter:

| | |
|--|-----------|
| Layout Diagram | 10 |
| Block Diagram | 12 |
| Windows CE.NET | 13 |
| Working with Windows CE | 13 |
| To place a program in the Start menu | 14 |
| Pocket Internet Explorer | 14 |
| To configure a dial-up connection | 14 |
| To configure a LAN connection | 15 |
| To configure a Proxy server | 15 |
| Backup | 17 |
| To run the Backup program | 17 |
| Reboot | 18 |
| To reboot the system | 18 |
| Storage Manager | 19 |
| System Information | 19 |
| To run the System Information program | 19 |
| Microsoft File Viewers | 20 |
| To access the Microsoft file viewers | 20 |
| Copy Project to Flash Card | 21 |
| To copy a Machine Edition project onto a CF card | 21 |
| To update a Machine Edition project | 22 |
| Emulate PPC | 22 |
| To use Emulate PPC during an ActiveSync session | 22 |
| HTTP File Transfer Utility | 23 |
| To use the HTTP utility | 23 |
| FTP Server | 24 |
| To create a self-signed certificate | 27 |
| To install a certificate on an FTP Client | 27 |

QUICKPANEL VIEW KEYPAD HARDWARE

Layout Diagram

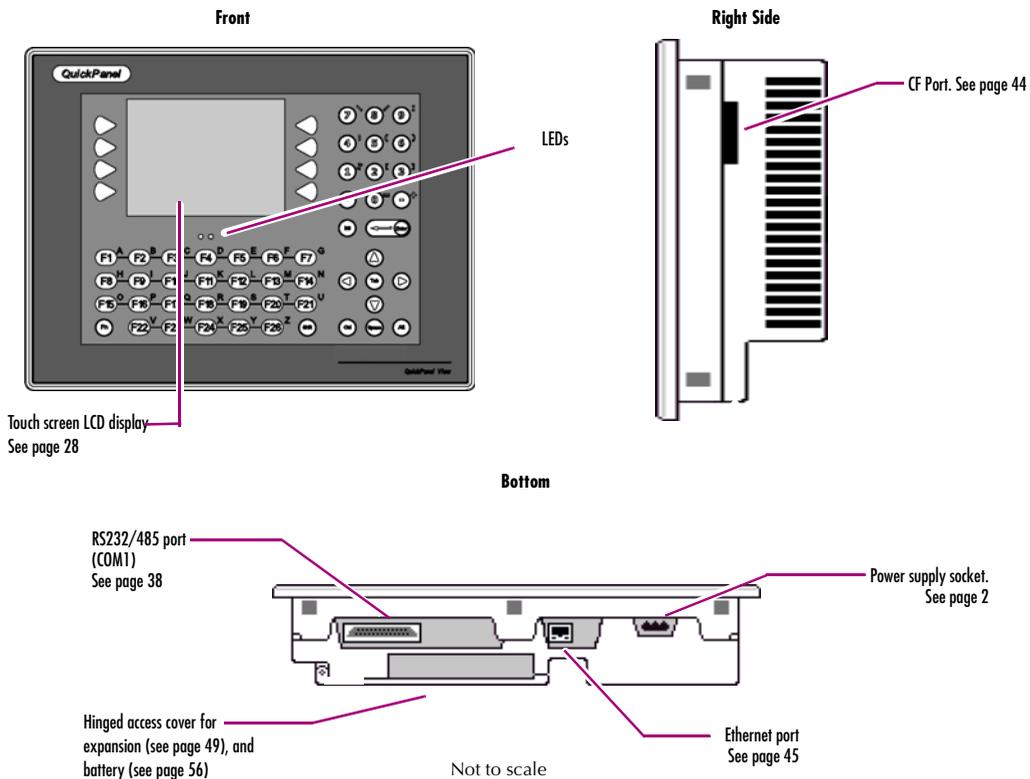
In addition to the primary touch screen interface, the 6" QuickPanel View Keypad supports a variety of communication ports including an expansion bus to allow great flexibility in application. The back of the QuickPanel opens allowing access to the expansion bus connector, memory expansion connector, DIP switches and battery. The following diagram shows the physical layout of the QuickPanel View Keypad and the locations of ports and connections.



Caution: Remove power from the QuickPanel View before opening the back. Working on a “live” unit may result in damage to equipment and injury to personnel. Always use anti-static precautions (i.e. grounded wrist strap) when accessing the interior of the unit. Do not allow conductive material, liquid or solid, to contact the electronics of the QuickPanel.

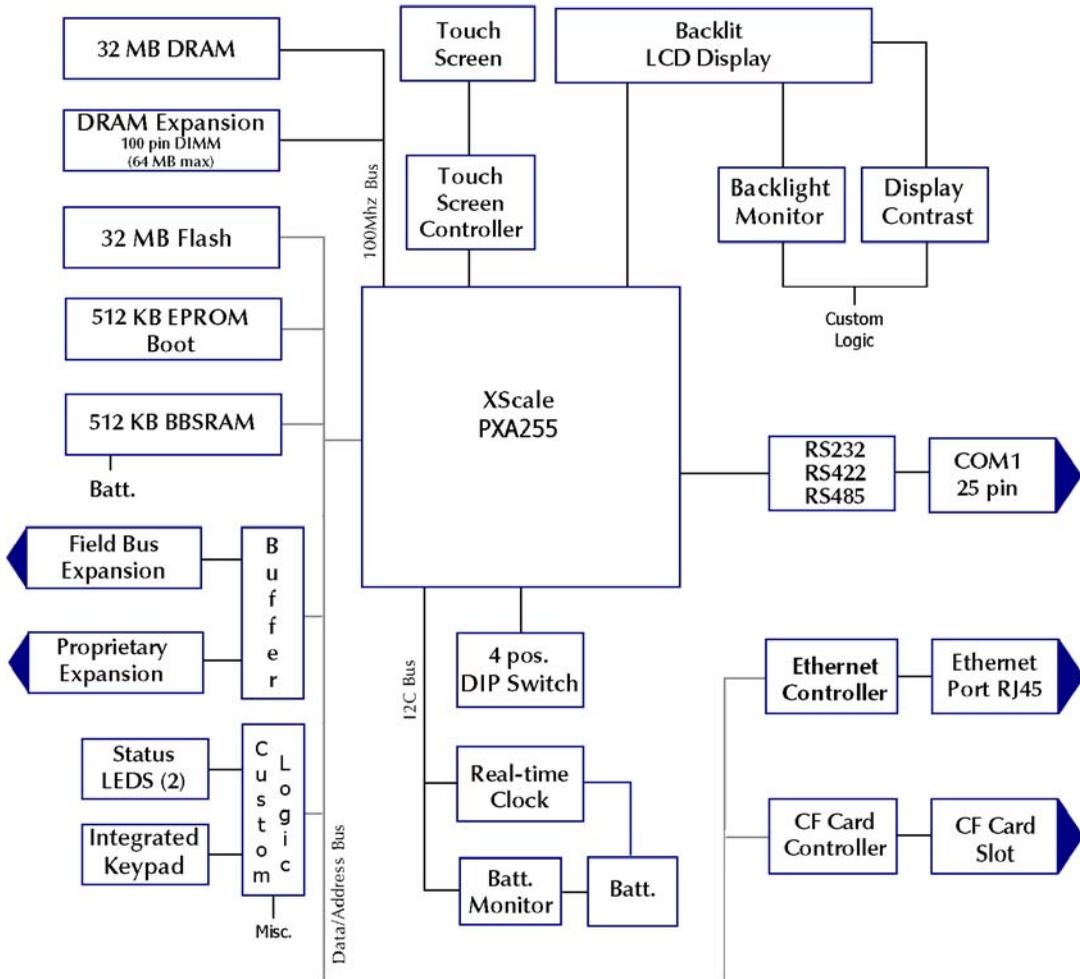
The left LED is green when power is applied and amber if both backlights fail;¹ the right LED is tricolor (green, red, or amber) and programmable.

¹ Backlights are not field replaceable.



Block Diagram

The 6" QuickPanel View Keypad is based on the XScale™ microprocessor, and employs large-scale integration to provide high performance with a small footprint. The following block diagram illustrates the major functional areas of the QuickPanel View Keypad and the interfaces between them.



QUICKPANEL VIEW KEYPAD SOFTWARE

Windows CE.NET

Microsoft Windows CE.NET™ is the operating system for the QuickPanel View Keypad. It is a full 32-bit O/S with a graphical user interface. This operating system is finding widespread application in hand-held PCs and embedded HMI's, such as the QuickPanel View Keypad. The familiar look and feel of Windows CE shortens the learning curve for users having experience with Windows 95/98/NT/2000/ME/XP. From a software developer's perspective, the CE environment is a subset of the WIN32 application programming interface, simplifying the porting of existing software from other versions of Windows.

The QuickPanel View Keypad operating system is stored in an 16 MB block of FLASH memory and copied to a block of DRAM for execution. The operating system starts automatically following a power-up or reset of the QuickPanel View Keypad.

For more on Windows CE visit

www.microsoft.com/windows/embedded/windowsce/default.msp.

Working with Windows CE

When working with Windows CE on the QuickPanel View Keypad, user input is achieved via the touch screen with a stylus or other suitable pointing device, and via the intergrated keypad, see page 33. The Soft Input Panel (SIP) may also be used for character and numeric entry, or for entering keyboard shortcuts. For more information on the Soft Input Panel, see page 26.

Although the main user input device when working with Windows CE is the touch screen, it can often be convenient to use keyboard shortcuts, such as those described in the following table.

| Keyboard Shortcut | Action |
|---|---|
| CTRL+ESC or  | Opens the Windows CE Start menu. Use arrow keys to select a program and ENTER to run it. |
| ALT+TAB | Starts the Task Manager. Use it to quit unresponsive programs. |
| CTRL+ALT+= | Starts the touch screen calibration. |
| SPACEBAR | Equivalent to single-tap. |
| ENTER | Equivalent to double-tap. In a dialog box, equivalent to OK. |

| Keyboard Shortcut | Action |
|-------------------|--|
| TAB | In a dialog box, select next control. |
| SHIFT+TAB | In a dialog box, select previous control. |
| CTRL+TAB | In a tabbed dialog box, open the next tab. |
| ESC | Close dialog box, discarding changes. |
| ARROW KEYS | In a dialog box, select controls or items from a list box. |

To place a program in the Start menu

1. Start  Windows Explorer.
2. Navigate to the program you want to place in the  Start menu.
3. Tap the program's icon to select it.
4. From the **Edit** menu, choose **Copy**.
5. Navigate to the \Windows\Programs\ folder.
6. From the **Edit** menu, choose **Paste Shortcut**.
7. To save the settings, run  **Backup** (see page 16).

Pocket Internet Explorer

Microsoft's Pocket Internet Explorer is a full-featured browser that is fully integrated with the Windows CE operating system. This browser allows you to connect with an internet service provider, view web pages and download from FTP sites.

Pocket Internet Explorer supports JScript. Java support can be added from third-party sources. Pocket Internet Explorer does not support VBScript; however, VBScript components are included in the operating system and may be used by third-party applications such as Proficy Machine Edition.

A connection can be established over an Ethernet network or a dial-up connection (default). The Ethernet or dial-up connection must first be properly configured.

To configure a dial-up connection

1. Start  Pocket Internet Explorer.
2. From the **View** menu, choose **Options**.

The **Internet Options** dialog box appears.

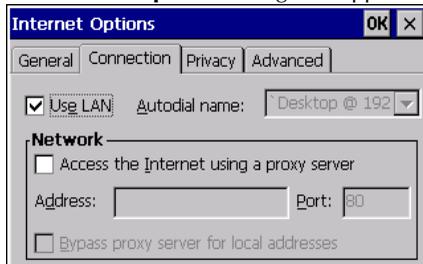


3. On the **Connection** tab, select the dial up connection from the combo list.
4. Tap **OK**.
5. To save the settings, run  **Backup** (see page 16).

To configure a LAN connection

1. Start  Pocket Internet Explorer.
2. From the **Tools** menu, choose **Options**.

The **Internet Options** dialog box appears.

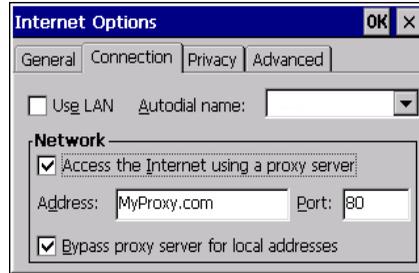


3. On the **Connection** tab, select the **Use LAN** check box.
 4. Tap **OK**.
- To save the settings, run  **Backup** (see page 16).

To configure a Proxy server

1. Start  Pocket Internet Explorer.
2. From the **Tools** menu, choose **Options**.

The **Internet Options** dialog box appears.



3. On the **Connection** tab, select the **Access the Internet using a proxy server** check box.
4. In the **Address** box, type the URL of your proxy server (see your ISP or network administrator).
5. In the **Port** box, type the server's port number for HTTP access.
6. Select the **Bypass Proxy for Local Addresses** check box to connect directly to sites in your intranet.
7. Tap **OK**.
8. To save the settings, run  **Backup** (see page 16).

Backup

Backup saves changes that you make to the Windows Registry or Desktop to Flash memory. This utility is required because the QuickPanel View Keypad is not battery powered. Specifically, Backup does the following:

- It stores the Windows CE registry (including any control panel settings) in Flash memory.
- It stores any changes (or additions) made to the 'Windows' subtree of the file system in the user block of FLASH memory.

Run Backup whenever you make configuration changes to the operating system or installed applications, and prior to shutting down the QuickPanel View Keypad.

To run the Backup program

1. On the desktop, double-tap  **Backup**.

The **Backup** dialog box appears.



2. Tap **OK**.

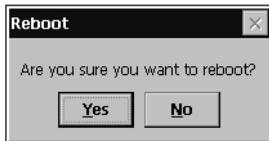
Reboot

Reboot performs a controlled and orderly shut down of the Windows CE operating system, then restarts the QuickPanel View. This ensures all open files are closed properly.

To reboot the system

1. To save changes to system configurations, run  **Backup** (see page 16).
2. Tap  **Start**, point to  **Programs**, then the  **System** folder, and tap  **Reboot**.

A confirmation dialog box appears.



3. Tap "Yes"
The operating system reboots.

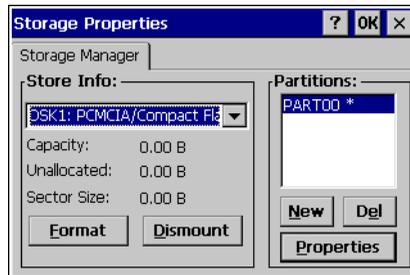
Overview

QuickPanel View Keypad Software

Storage Manager

Use Storage Manager to repair or format lost or corrupted data volumes. Storage Manager can repair data volumes existing either in Compact Flash (CF) or battery-backed SRAM (BBSRAM). Data volumes existing in the main flash file system of the QuickPanel may not be repaired by Storage Manager.

Storage Manager, accessed from the Control Panels folder, is a Microsoft product for which on-line help is available.



System Information

System Information is a custom utility that displays a splash screen with the following information:

- **Operating System version.** For example, 'Windows CE 5.00'.
- **Platform.** Identifies the host hardware, its version and build number.

Tapping **More Info** on the splash screen opens the Advanced System Information window, which provides information such as hardware version and serial number, CPU type and specifications, etc. This information can be especially useful if you are contacting GE Intelligent Platforms Support.

To run the System Information program

1. On the desktop, double-tap  **System Information**.

The **System Information** splash screen appears.



2. Tap **More Info** to open the Advanced System Information window, or tap **Close** to continue.

Network information alone can be viewed by double-tapping the  LAN icon displayed on the taskbar for each connection.

Copy Project to Flash Card

RestorePCCard is a custom utility for transferring Proficy Machine Edition™ Projects between compatible QuickPanel View Keypad units via CF cards.

Caution: Ensure that the copy or update operation is complete (i.e., no busy or wait cursor displays) before disconnecting power.

To copy a Machine Edition project onto a CF card

1. Ensure there is a blank CF card in the in the CF port.
2. Double tap the  **Copy Project to Flash Card** icon on the desktop.
3. Tap **Yes** when the **Proceed with Copy to CF Card** confirmation dialog box appears.

The system copies the project onto the blank CF Card.

To update a Machine Edition project

You can update a Proficy Machine Edition application currently stored on the QuickPanel View Keypad with a revision stored on a CF Card.

1. Insert the CF Card containing an upgraded version of the Machine Edition project in the CF port.
2. Reboot the machine (see page 17).

When a valid project is found on the CF card, you will be prompted to install the project or skip it. Tap **OK** to install or **Cancel** to skip the install and continue to reboot. If an invalid project is found, an error message appears in a dialog box. This dialog box must be closed before reboot will continue.

3. Remove the CF Card from the slot.

Emulate PPC

Emulate PPC is a utility that allows the QuickPanel to emulate a Pocket PC 2003 during an ActiveSync session, enabling the download of third-party Pocket PC 2003 software.

To use Emulate PPC during an ActiveSync session

1. Start  **Windows Explorer** , double tap  **Windows**, then double tap  **EmulPPC**.

The Emulate PPC dialog box appears.

Overview*QuickPanel View Keypad Software*

2. Start the ActiveSync session. When installation of third-party software is complete, close the dialog box to deactivate Emulate PPC.

HTTP File Transfer Utility

The HTTP File Transfer Utility (HFTU) is a small, standalone command line program that allows you to send and delete files to and from computers over a network. The HFTU uses the HTTP protocol, so you can even send files to computers over the Internet.

Run the HTTP utility from a command line prompt, from a batch file (.BAT) or as an application call in a script. The HTTP utility is an executable (.EXE) file included in the 6" QuickPanel View Keypad's operating system.

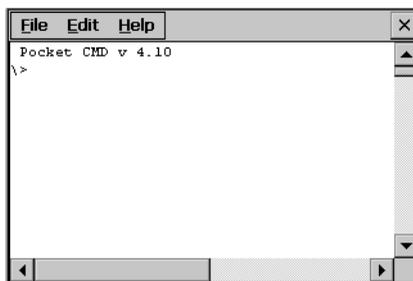
The HTTP utility currently supports two file transfer commands: COPY and DELETE.

Note: In order to function, the HTTP File Transfer utility requires both computers to have web servers that support PUT functionality. (Most web servers support PUT, including the Proficy Machine Edition web server installed with the runtimes for View and Logic Developer - PC.) If in doubt, check the documentation for your web server.

To use the HTTP utility

1. From the  **Start** menu, choose  **Programs**, then choose  **Command Prompt**.

The **Command Line** editor appears.



2. Type commands as required.
3. Use the following syntax:

HTTPUTIL COPY source destination

Where "source" is the URL of the source file, and "destination" is the URL of the destination file. For example:

```
HTTPUTIL COPY \MyFile.txt http://MyServer/webfiles/MyFileBACKUP.txt
```

Copies a file called MyFile.txt on drive C: of the local computer to the webfiles folder under the web server at //MyServer. Note that you can rename a file as you copy it.

HTTPUTIL DELETE url

Where "url" is the remote URL of the file you want to delete. This URL must use the "/" or "HTTP:/" syntax. For example:

```
HTTPUTIL DELETE http://MyServer/webfiles/MyFileBACKUP.txt
```

Deletes a file called MyFileBACKUP.txt from the webfiles directory under the web server at HTTP://MyServer.

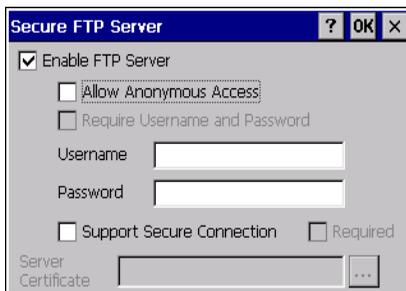
FTP Server

The FTP Server included with the QuickPanel View supports both standard (RFC 959) and Explicit FTPS (i.e., FTP/SSL, Auth TLS, TLS-C, RFC-4217). It does not support SFTP or implicit FTPS, which uses different ports and is based on SSH rather than SSL.



All configuration of the FTP server is accomplished with the Secure FTP Server control panel applet. By default, the server is not enabled. Once enabled, a background program will run, waiting for clients to connect. Up to ten

connections are supported. Sessions that are idle for five minutes are terminated by the server.



The Server supports:

- Non-secure operation. All information including username, password, and data is transmitted with no encryption and susceptible to packet sniffing and various FTP attacks. This is the default.
- Both secure and non-secure operation. This mode of operation, either secure or non-secure, is determined by the client when it connects. This operation is active when 'Support Secure Connection' is enabled, but 'Required' is not.
- Secure operation only. Secure operation uses encrypted connections for the control connection. The data connections are encrypted or non-encrypted based on the settings of the client. Secure operations also require the server to have a signed server certificate it can use to prove it is the actual machine the client wanted to reach and not an imposter. This mode is active when both 'Support Secure Connection' and 'Required' are enabled.

By default, the server requires a username/password combination to be configured. The server supports one username/password combination to authenticate remote users. There are three modes of authentication operation:

- No support for anonymous login. This is the default.
- Anonymous with no password. This is enabled when 'Allow Anonymous Access' is checked, but 'Require Username and Password' is not checked.
- Anonymous with password requested (but not validated). This is enabled when 'Allow Anonymous Access' and 'Require Username and Password' are checked. This can prevent some types of attacks and is required by some clients.

To save the settings, run **Backup** (see page 16).

Once connected, a remote user is logged into the FTP root directory. This is available from the QuickPanel View as \Temp\ftp and is a volatile RAM area. Files

placed in this area are not persisted over a power cycle/reboot and use memory from the Storage Memory allocation. Programs running on the QuickPanel have read and write access to the \Temp\ftp directory, but remote users can only read, rename and delete files. This is to protect against the user inadvertently filling up the RAM area.

All removable flash devices appear to remote FTP users as directories off of the FTP root directory. PC Flash cards partitions appear as directories such as \PCFlashStorage. The names contain no spaces as FTP commands do not support spaces in filenames. Full access privileges are granted for the client in these folders/devices.

Removable flash device directories are captured when a session is opened and are not changed while the session exists. If you start without a CF card installed, you will have to close your session and login again to see the CF directory. If the CF card existed when you logged in and is removed and inserted, it will still work provided the CF card's device name did not change during reinsertion.

A server certificate is a special type of document which contains information about the server's settings and a chain of electronic signatures to guarantee the document has not been altered. A Server certificate must be chosen from the certificates available in the QuickPanel View Secure FTP Server control panel applet.



The certificate itself is imported with the Certificates control panel applet. The main requirements of the certificate are that it must have the server authentication key usage attribute set and the name of the certificate should match the name used to connect to the FTP server (which could be the IP address of the server).

Certificates can either be purchased from an online vendor and imported into the QuickPanel View, or a self-signed certificate can be generated from the QuickPanel View. The benefit of a purchased certificate is that any user that has the root certificate used by the online vendor can determine the certificate is valid without the need for any additional information. A self-signed certificate is only known to be valid by clients that have added the certificate to their trusted list. Users can still

access a server using a self-signed certificate, but they lose the ability to verify that no one is operating as an imposter somewhere on the network between them and the server.

To create a self-signed certificate

1. Open a command prompt window by selecting the Start menu, selecting Programs, then Command Prompt.
2. From the command prompt, type "genslfcert CN=<unique identifier>".

You may specify a unique identifier of your choice, such as machine name, machine location, or IP address in place of unique identifier.

3. A self-signed certificate is created in the My Certificates section of the certificates Control Panel.

This will create a self-signed certificate in the My Certificates section of the certificates control panel and a SelfSigned.cer file in My Computer which can be transferred to FTP Clients as a trusted source. Certificates may be managed through snap-in's to the Microsoft[®] Management Console or other third party management consoles.

A Backup should be performed after configuring the FTP server and/or creating the self-signed certificate.

To install a certificate on an FTP Client

1. Double click the certificate. Select the **General** Tab.
The Certificate properties are displayed.
2. Click the **Install Certificate** button.
The Certificate Import Wizard appears.
3. Click **Next** to continue.
The Certificate Store screen appears.
4. Specify whether Windows should place the certificate in a certificate store or select another location. Click **Next** to continue.
The Completing the Certificate Import Wizard screen appears.
5. Click **Finish** to complete the installation of the certificate.
The Security Warning message appears. This message informs you Windows will automatically trust any certificate issued by this Certification Authority.
6. Click **Yes** to allow Windows to trust any certificate issued by this Certification Authority.

3

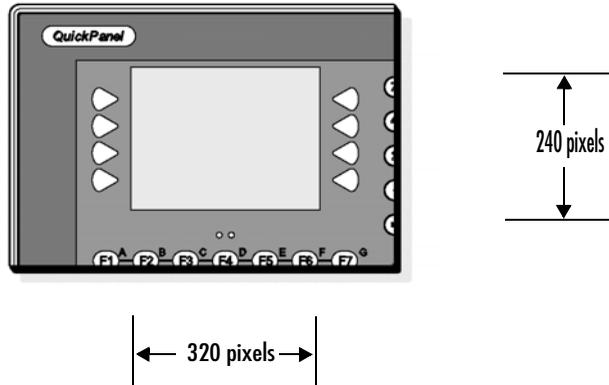
Detailed Operation

In this chapter:

| | |
|---|-----------|
| Touch Screen Display | 30 |
| To adjust the display brightness | 30 |
| To configure backlight auto turn off | 32 |
| To calibrate the touch screen | 33 |
| To set the double-tap sensitivity | 34 |
| Soft Input Panel | 36 |
| To show/hide the Soft Input Panel | 36 |
| To display the Soft Input Panel icon in the system tray | 37 |
| To reset SIP location | 38 |
| Communication Port | 39 |
| To add a new remote networking connection | 41 |
| To add a virtual private network or PPP over Ethernet | 42 |
| To change the default device properties | 44 |
| To change the default TCP/IP settings | 44 |
| CF Port | 45 |
| Ethernet | 46 |
| To set an IP address | 47 |
| To set up access to a Windows network | 48 |
| To access a remote resource on a Windows network | 48 |
| Expansion Bus | 50 |
| DIP Switches | 51 |
| To configure startup behavior | 52 |
| Memory | 53 |
| To add Flash memory with a CF Card | 53 |
| To change the DRAM memory allocation | 54 |
| To install additional DRAM | 56 |
| Other Subsystems | 57 |
| To access the Power Properties control panel | 57 |
| To remove the internal battery | 58 |
| To set the real-time clock | 58 |
| To display the time on the taskbar | 59 |
| To set SNTP | 60 |

TOUCH SCREEN DISPLAY

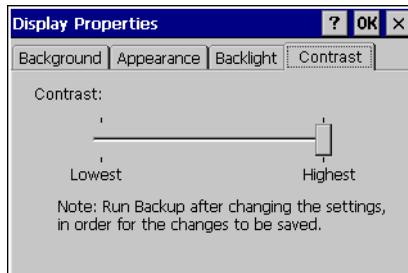
The QuickPanel View Keypad's integrated flat-panel display is backlit, measures 5.7" diagonally, and employs passive STN technology. Its resolution is 320 x 240 pixels, and it supports a maximum of 65,536 colors (256 colors simultaneously). A timer feature lets you configure the backlight to turn off automatically, thus extending its life.



To adjust the display contrast

1. In the Control Panel, double-tap  **Display** and choose the **Contrast** tab.

The **Contrast** dialog box appears.

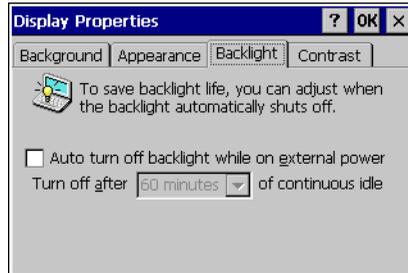


2. Drag the **Contrast** slider between **Lowest** and **Highest**.
3. Tap **OK** to exit the control panel.
4. To save the settings, run  **Backup** (see page 16).

To configure backlight auto turn off

1. In the Control Panel, double-tap  **Display** and choose the **Backlight** tab.

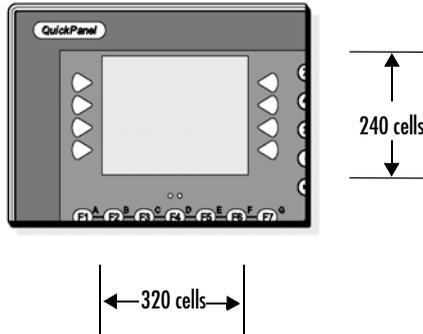
The **Backlight** dialog box appears.



2. Select **Auto turn off backlight while on external power**.
3. Tap **OK** to exit the control panel.
4. To save the settings, run  **Backup** (see page 16).

Touch Screen

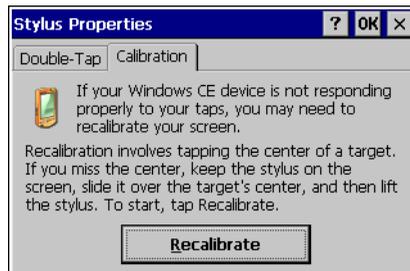
The QuickPanel View Keypad display is coupled to a resistive touch panel with 12-bit resolution. When the QuickPanel View Keypad is properly calibrated, this translates into a grid of touch cells on the face of the display. Although you can use your finger to actuate the touch screen, use of a blunt stylus is recommended.



To calibrate the touch screen

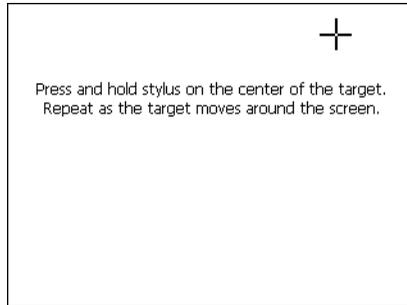
1. In the Control Panel, double-tap  **Stylus**.

The **Stylus Properties** dialog box appears.

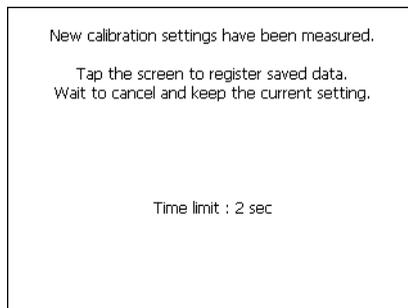


2. Choose the **Calibration** tab
3. Tap the **Recalibrate** button.

A cross hair target is displayed.



4. Follow the directions given to calibrate the touch screen.
5. Tap the screen to preserve the new setting or wait out the time limit to revert to previous settings.

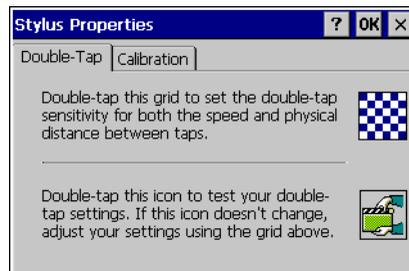


6. To save the settings, run  **Backup** (see page 16).

To set the double-tap sensitivity

1. In the Control Panel, double-tap  **Stylus**.

The **Stylus Properties** dialog box appears.



Detailed Operation

Touch Screen Display

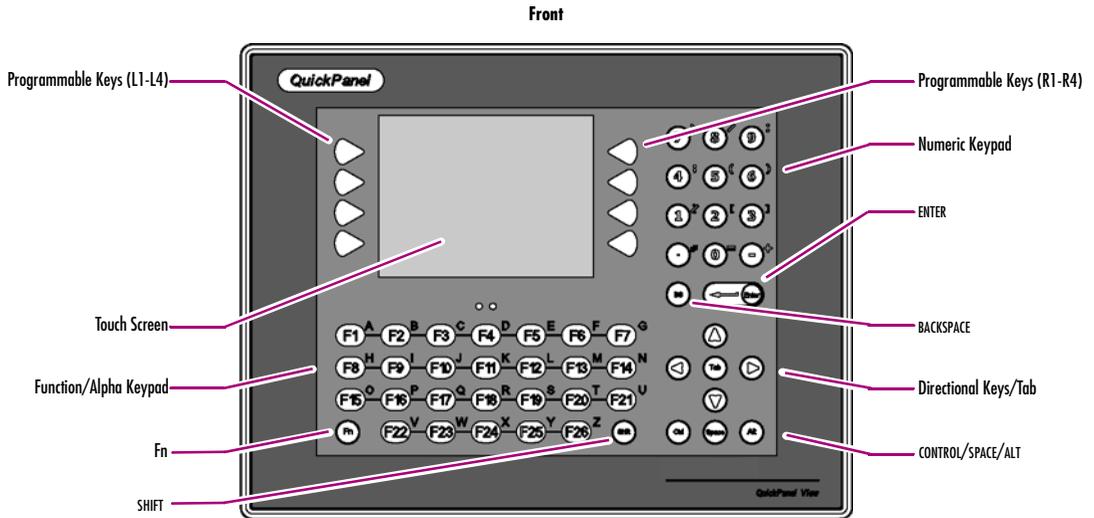
2. Choose the **Double-Tap** tab.
3. Double-tap the grid to enter a setting.
4. Double-tap the test icon to check the setting.

If the test icon doesn't change when you double-tap it, double-tap the grid again.

5. Tap **OK** to finish.
6. To save the settings, run  **Backup** (see page 16).

INTEGRATED KEYPAD

The QuickPanel View Keypad's integrated keypad provides numerous options, illustrated in the following diagram:



You can configure the integrated keypad using the QuickPanel View Keypad target in Proficiency Machine Edition v5.0 SP2 or later, where the assignment of keys to the animation of displayed objects is supported. For information on linking keypad keys to Machine Edition View graphical objects, see the *Touch Animation, Keystroke Example* topic in Machine Edition Online Help.

Keypad Operation

In general, the keys report and operate in the same manner as those on a standard keyboard, but note the following:

- An additional 14 programmable Function keys have been added to the standard 12, as well as an additional 8 programmable “guitar-pick” keys.
- Function keys are enabled by default. Pressing Fn enables the lower-case alpha characters as well as the alternate numeric keypad characters. Use SHIFT for upper-case characters as you would on a standard keyboard.
- Keys do not auto-repeat when held down.

Detailed Operation

Integrated Keypad

- Some keys that are available on a standard keyboard are not available on the QuickPanel View Keypad, including Escape, Caps Lock, and tilde (~).

Note: Characters that are unavailable via the keypad can typically be accessed via the Soft Input Panel (see page 35).

The Fn key enables the alternate character set on the function/alpha keypad and on the numeric keypad. If Fn is not active, the function keys report as F1 through F26 and the numeric keys report as 0 to 9, the decimal point (.), and the minus symbol (-). If Fn is active, the keys report as the labels on their upper right indicate.

For a list of keyboard operating system shortcuts, see page 13.

To enable and disable the alternate character set on the keypad

- Press and release the **Fn** key once to enable the alternate character set. Press it again to disable the alternate character set.

When the **Fn** key is pressed once, an icon displays in the system tray.



SOFT INPUT PANEL

The Soft Input Panel (SIP) is a software emulation keyboard that can be used as an operator data input device.

An icon in the system tray lets you view or hide the SIP.



To show/hide the Soft Input Panel

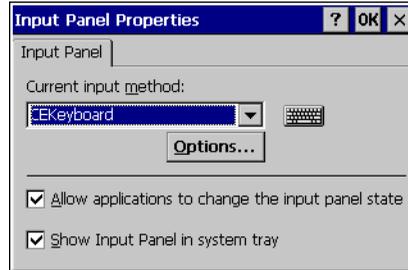
- On the system tray of the task bar, double-tap the  icon. The Soft Input Panel appears/disappears.

Note: When the SIP is visible, it can be dragged around the screen by its title bar to reveal different parts of the screen that would be obstructed from view by the SIP.

To display the Soft Input Panel icon in the system tray

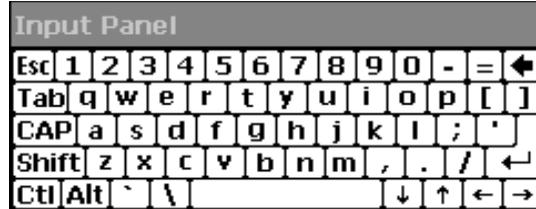
1. In the Control Panel, double-tap **Input Panel**.

The **Input Panel Properties** dialog box appears.



2. Select the **Allow applications to change the input panel state** check box.
3. Select or clear the **Show Input Panel in system tray** check box.
4. Tap **OK**.
5. To save the settings, run  **Backup** (see page 16).

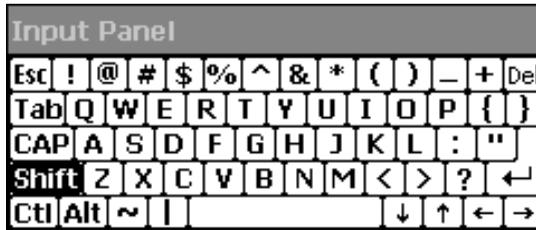
The Soft Input Panel provides a standard QWERTY key layout with numeric keys at the top row as illustrated in the following picture.



Lower Case SIP

Uppercase characters are accessed by pressing the SHIFT key once. This is equivalent to holding down the SHIFT key on a conventional keyboard. The SHIFT key is active while the next key is pressed then reverts back to its unselected state. The CAP key does the same thing as SHIFT but does not revert to lower case after

another key is pressed. Rather, the Soft Input Panel remains in the Uppercase mode. The CTRL and ALT keys behave the same as the SHIFT key.



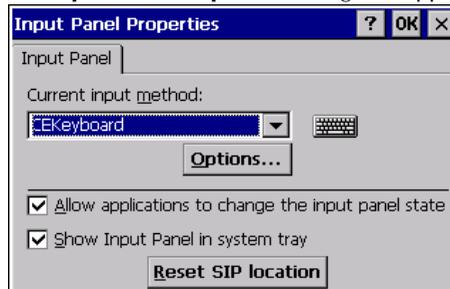
Upper Case SIP

To reset SIP location

In the event the user accidentally drops the SIP off screen and can't drag it back on screen, the following steps will reset the SIP to the centre of the screen.

1. In the Control Panel, double-tap  **Input Panel**.

The **Input Panel Properties** dialog box appears.



2. Select **Reset SIP location**.

COMMUNICATION PORT

The QuickPanel View Keypad has one serial data communication port, COM1.

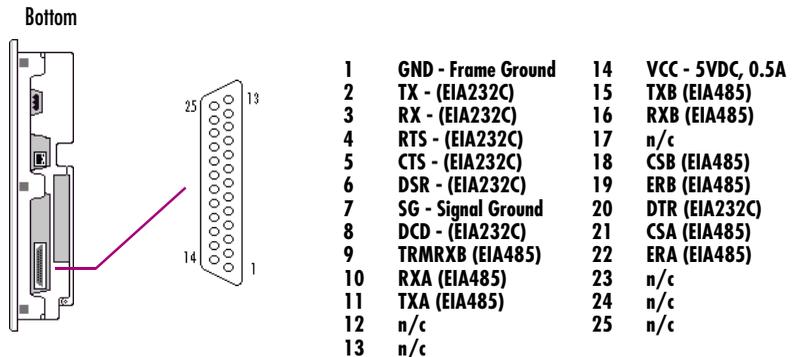
COM1- Serial

The COM1 port is a general purpose bidirectional serial data channel that supports the EIA232C and EIA485 electrical standards. The COM1 port can be accessed and configured:

- as a direct or dial-up remote networking connection.
- as the port used by a terminal session (modem link only).
- from a user-created application program.

A connection can be configured to reside on a network supporting a TCP/IP protocol.

A DB25S (female) connector, mounted on the bottom of the enclosure, provides standard signals as described in the following table.



Note: Pin 14 is fused with a field-replaceable, 1.0A fast-blow fuse.

Recommended Cabling for TIA/EIA422 or TIA/EIA485

The COM1 port on the QuickPanel View provides connections to devices, which support either TIA/EIA422 or TIA/EIA485. These electrical standards specify a differential signaling technique which provides high data rates, long distances and good noise rejection. The standards do not address signal encoding (protocol), connectors, or cabling. However, certain characteristics of interfacing these devices should be considered in order to ensure reliable connections.

- Connections** Connect nodes in a daisy chain fashion. Do not connect in other arrangements, especially "star." The standards do not specify the maximum number of nodes or devices that can be connected to a TIA/EIA 422 or 485 network. Instead, the standards limit the number of electrical connections by specifying that a maximum of 32 unit loads (UL) may be connected. The QuickPanel View presents one UL.
- Interconnect media** Always use twisted pair cabling and group complimentary signals into conductor pairs; TXA with TXB, for example. Use a cable with a characteristic impedance of 100 ohms to 120 ohms. A wire gauge of 24 AWG is commonly used. Maximum cable length is 4,000' (1,219.2m), but may be less due to cable impedance, connection quality, data rates, and other factors.
Shield is optional. See below.
- Termination** Always provide proper termination at each end of the 422/485 network. The QuickPanel View provides built-in termination resistance when pin #9 (TRMRXB) is connected to pin #10 (RXA).
DO NOT TERMINATE EVERY NODE. ONLY TERMINATE THE END NODES.
- Grounding** A signal return path between transmitting and receiving devices must be provided. This return path is separate from the Rx and Tx data lines and the other 422/485 signals supported by the QuickPanel View and may be provided by a separate conductor in the cable. Connect both ends of the signal return conductor to Signal Ground (pin #7). Shielding or use of a twisted pair for this connection is not necessary.
For installations where all devices are in the same cabinet and have the same ground potential between devices, connecting Signal Ground between all the devices on the 422/485 network is adequate to ensure proper voltage levels at the devices.
However, if there is a difference in ground potential between devices, such as when the devices are in widely separated cabinets, then signal grounds on a 422/485 network should not be tied together. The cable shield and cable ground should be connected together at only one device, closest to the earth ground connection.
The signal and frame grounds of the QuickPanel View are capacitively coupled, but in some devices these ground references are connected together. Connect Signal Ground (pin #7) to Frame Ground (pin #1) and then to earth ground on the QuickPanel View only in the circumstance where the other devices separate their signal and frame grounds and the QuickPanel View is the only device with frame and signal ground connected to earth ground.

Shielding

Shielded cable is required for compliance with CE and FCC requirements. The cable shield should be connected to the metal connector shell or by pin #1 of the QuickPanel 25-pin serial connector. Shield and cable ground (pin #7 of the 25-pin connector or pin #5 of the 9-pin connector) should not be connected directly together.

The Frame Ground (pin #1) of the QuickPanel View should be used for attaching the cable shield in these applications.

Caution: Do not connect Signal Ground (pin #7) to Frame Ground (pin #1) on the QuickPanel View Keypad, except in the specific and limited circumstances noted in the Grounding section above.

Working with the COM port

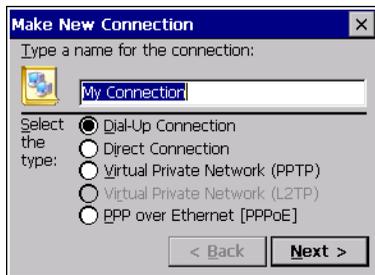
To add a new remote networking connection

1. From the  **Start** menu, tap  **Settings** and then  **Network and Dial-up Connections**.

The **Connection** window appears.

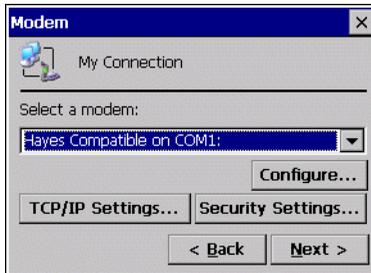
2. Double-tap  **Make New Connection**.

The **Make New Connection** window appears.

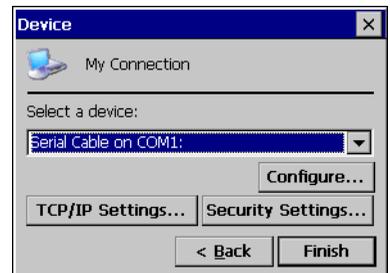


3. Type a name for the new connection.
4. Choose a connection type. If you are configuring a Modem, choose **Dial-Up Connection**. If you have a Device, select **Direct Connection**.
5. Tap **Next**.

The **Modem** or **Device** dialog box appears, depending on the connection type.

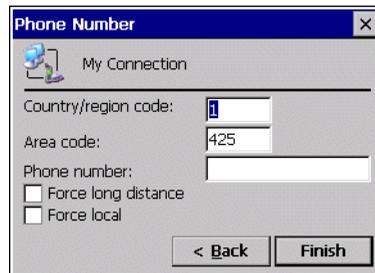


or



6. From the list, choose the device or modem you want to use. (If a CF card is inserted, it is available in the device list.)
You can **Configure** your device or **TCP/IP Settings** at this time if you wish.
7. Tap **Finish** for direct connection (Device dialog box) or **Next** for dial-up (Modem dialog box).

If you are adding a dial-up connection the following dialog box appears.



8. Type the destination **Country/region code**, **Area code**, and **Phone number** in the appropriate boxes.
9. Select or clear the **Force Long Distance** or **Force Local** check boxes.
10. Tap **Finish**.
11. To save the settings, run  **Backup** (see page 16).

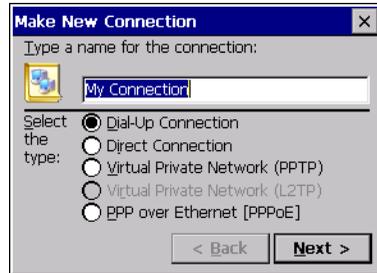
To add a virtual private network or PPP over Ethernet

1. From the  **Start** menu, tap  **Settings** and then  **Network and Dial-up Connections**.
The **Connection** window appears.
2. Double-tap  **Make New Connection**.

Detailed Operation

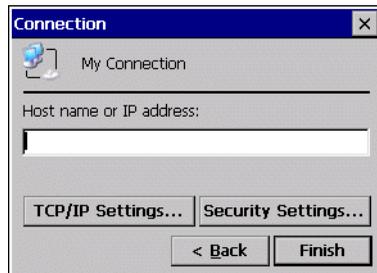
Communication Port

The **Make New Connection** window appears.

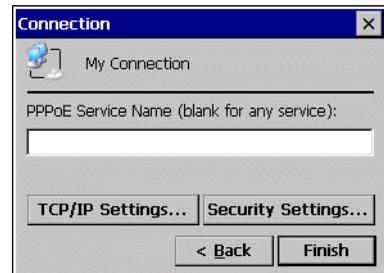


3. Type a name for the new connection.
4. Choose a connection type. Select **Virtual Private Network** to configure a VPN connection. Select **PPP over Ethernet** for a PPPoE connection.
5. Tap **Next**.

The **VPN** or **PPPoE** Connection window appears, depending on the connection type.



or



6. Enter the Host Name or IP address for a VPN connection, or a PPPoE Service Name for a PPPoE connection.
You can configure your **TCP/IP Settings** at this time if you wish.
7. Tap **Finish**.
8. To save the settings, run  **Backup** (see page 15).

To change the default device properties

1. From either the Device or Modem dialog box, tap **Configure**.

The **Device Properties** dialog box appears.



2. In the **Port Settings** tab, choose settings for all connection preferences.
3. If the connection is for terminal emulation, select or clear the terminal-related check boxes.

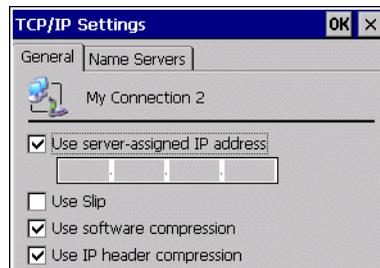
You can use the QuickPanel View Keypad to emulate a terminal attached via a modem link (Hayes compatible) to COM1. A terminal emulation definition is added as a unique session.

4. To save the settings, run  **Backup** (see page 15).

To change the default TCP/IP settings

1. Obtain correct TCP/IP settings from your network administrator.
2. From either the **Device**, **Modem**, **PPPoE Connection**, or **VPN Connection** dialog box, tap **TCP/IP Settings**.

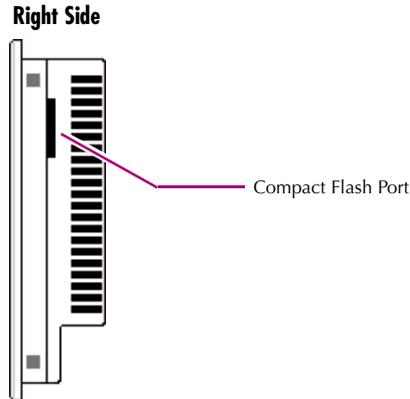
The **TCP/IP Settings** dialog box appears.



3. Clear the **Use server-assigned IP address** check box.
4. Enter the TCP/IP settings from your network administrator and then click **OK**.
5. To save the settings, run  **Backup** (see page 15).

CF PORT

To enhance the QuickPanel View Keypad's capabilities with additional flash memory, the unit is equipped with a CF (Compact Flash) Type 2 port on its side.



A CF card is inserted in this port with the card's front facing the back of the unit (the narrow side slot on the card should be toward the bottom).

Note: For full protection from electrostatic discharge, peel off the paper label on the side of the CF card facing the bezel to allow contact between the card and the internal frame ground contacts on the CF connector.

The card should slide in easily—to avoid damage, do not force it.

The Copy Project to Flash Card utility (see page 19) lets you transfer Proficiency Machine Edition projects between QuickPanel View Keypad units via CF Cards.

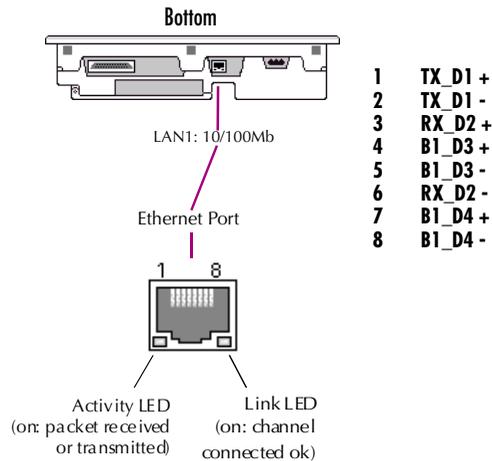
No Compact Flash cards are supplied with the QuickPanel View Keypad. A list of cards (and other devices) that have been tested and are compatible can be found by visiting <http://www.ge-ip.com/support>, then select the Operator Interface category, then select the QuickPanel View product name.

The CF port in the QuickPanel View supports only 3.3v CF cards. 5v CF cards are not supported.

Caution: Do not remove power while the system is writing to the CF card, such as when copying a Proficiency Machine Edition project. Removing power while writing may lead to data loss and file or CF card corruption. To ensure the system completes writing to flash and closes all files, see "Shutdown" on page 4.

ETHERNET

The QuickPanel View Keypad is equipped with an auto-negotiate, full or half duplex Ethernet port (IEEE802.3). You can connect an Ethernet network cable (unshielded, twisted pair, UTP CAT 5) to the unit via the RJ45 connector on the bottom of the enclosure. LED indicators on the port indicate channel status. Access to the port is possible either by Windows CE network communications, or by your custom application. The following diagram shows the location, orientation, and pin out of the Ethernet port.



There are two methods for setting an IP address on the QuickPanel View Keypad:

- **DHCP (Dynamic Host Configuration Protocol).** Using this method uniquely specify the numeric addresses for the QuickPanel View, the Subnet Mask and the Default Gateway (if applicable).

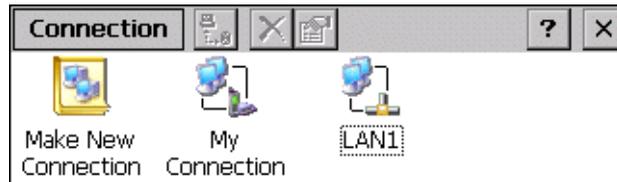
Note: There must be a DHCP server on the connected network for a valid IP address to be assigned. Contact your network administrator to ensure correct DHCP server configuration.
- **Manual method.** Using this method uniquely specify the numeric addresses for the QuickPanel View Keypad, the Subnet Mask, and the Default Gateway (if applicable).

Note: Use a crossover cable to connect the QuickPanel View Keypad to a PC directly; when connecting to a LAN HUB, use a straight through cable. Contact your network administrator if you require further information.

To set an IP address

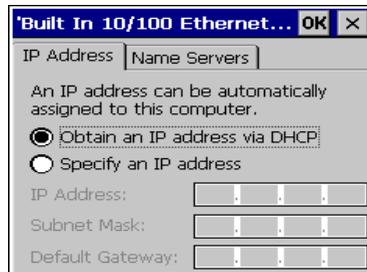
1. From the Control Panel, tap  **Network and Dial-up Connections**.

The **Connection** window appears.



2. Select a  connection and choose  **Properties**.

The **Built-in Ethernet Port Settings** dialog box appears.



3. Select a method:
 - **Obtain an IP address via DHCP** (automatic).
 - **Specify an IP address** (manual).
4. Enter the **IP Address**, **Subnet Mask** and **Default Gateway** numbers obtained from your network administrator (manual method only).
5. Tap **OK**.
6. To save the settings, run  **Backup** (see page 16).

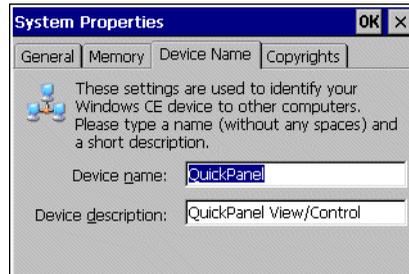
If the DHCP method was selected, the network server will assign an IP address while the QuickPanel View Keypad is initializing. (You must be connected to the network).

After setting an IP address for the QuickPanel View Keypad, you can access any network drives or shared resources for which you have permission.

To set up access to a Windows network

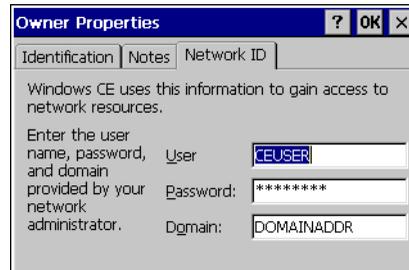
1. In the Control Panel, double-tap  **System**.

The **System Properties** dialog box appears.



2. On the **Device Name** tab, in the **Device name** box, type a unique name for your QuickPanel View Keypad. In the **Device description** box, type a description.
3. Tap **OK**.
4. In the Control Panel, double-tap  **Owner**.

The **Owner Properties** dialog box appears.



5. On the **Network ID** tab, type your assigned **User name**, **Password** and **Domain**.
6. Tap **OK**.
7. To save the settings, run  **Backup** (see page 16).

Using Windows CE Explorer, you can now access anything on your local network for which you have permission.

To access a remote resource on a Windows network

1. Start  **Windows Explorer**.

The **Explorer** window appears.



2. Type in the **Address** box, or choose from a list, the path to a remote resource.

For example '\\MyRemoteComputer\MyFolder' specifies the folder named 'MyFolder' on a computer with the name 'MyRemoteComputer'.

3. Press **ENTER**.

The resource specified is displayed as a collection of files and folders. It can take a few moments to retrieve the data from your local network.

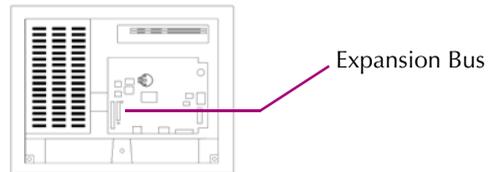
Note: You can use the **NET** command from the shell to map a network resource to the QuickPanel View Keypad for frequent access. The resource then appears in the  **Network** folder.

EXPANSION BUS

An expansion bus is included with the QuickPanel View Keypad, and optional modules that mount directly to it are available. For more information on expansion modules, contact your distributor.

The expansion bus connectors are accessed by opening the back of the unit.

Back (open)



Note: To ensure compliance to CE Mark, the mounting screws must be used when installing an expansion card.



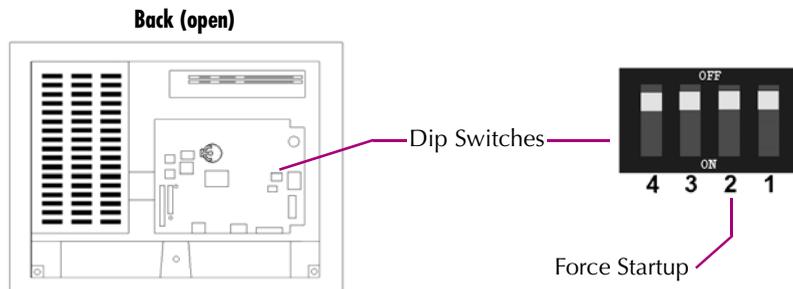
Caution: Disconnect the AC power from your 24 VDC power supply before opening the QuickPanel View Keypad. Working on a “live” unit may result in damage to equipment and injury to personnel. Always use anti-static precautions (i.e. grounded wrist strap) when accessing the interior of the unit. Do not allow conductive material, liquid or solid, to contact the electronics of the QuickPanel.

Caution: Ensure all pins are properly aligned when inserting expansion cards. Misalignment could cause damage to the QuickPanel View Keypad and/or the expansion card.

DIP SWITCHES

The QuickPanel View Keypad is equipped with four DIP switches that each control separate functions.

DIP switches are set to “OFF” by default in the factory. DIP switch 2 is the Force Startup switch. Turning this switch on forces the startup applications to run when the operating system is started.



When the switch is set to “OFF”, the QuickPanel View Keypad operates normally, displaying the startup splash screen. You can skip running the startup applications by tapping the “Don’t run StartUp Programs” button on the startup splash screen.



When the switch is set to “ON”, the startup programs are forced to run and the “Don’t run Startup Programs” button is not available on the startup splash screen.

Note: Do not adjust switches other than switch 2. They are reserved for factory functions. Also note that the “Off” position of the switches is toward the DIMM connector, “On” toward the COM1 connector.

To configure startup behavior



Caution: Disconnect the AC power from your 24VDC power supply before opening the QuickPanel View Keypad. Working on a “live” unit may result in damage to equipment and injury to personnel. Always use anti-static precautions (i.e. grounded wrist strap) when accessing the interior of the unit. Do not allow conductive material, liquid or solid, to contact the electronics of the QuickPanel.

1. Open the back cover of the QuickPanel View Keypad.
2. Locate the DIP switches and set DIP switch 2 to “ON”.

The startup applications are now forced.

Note: Do not adjust the other switches. They are reserved for factory functions.

MEMORY

The QuickPanel View Keypad supports a variety of memory subsystems to ensure the requirements of your application are met. All system memory is tied directly to the microprocessor's address and data busses for fastest access. To increase DRAM by up to 64 MB, a 100-pin DIMM memory expansion slot is also included.

Flash Memory

This block of non-volatile memory (32MB) is the main long-term program storage for the QuickPanel View Keypad, operating like a virtual hard drive from the point of view of Windows CE. It is divided into two areas, of which only one is accessible from Windows CE Explorer. The  **Flash Storage** folder represents a block of memory (16MB) available for long-term storage of user application programs. Another 16MB block is used to store the Windows CE operating system, and is not directly accessible from Windows CE Explorer.

The operating system and all user application programs are transferred from Flash to DRAM for execution. Any user additions to the  **Windows** folder are retained in  **Flash Storage** when the  **Backup** utility is run.

FLASH memory has a limited write-cycle lifetime. That is, the physical memory devices wear out after approximately 100,000 cycles (minimum), so it is advisable to limit file operations such as copy, delete, etc.

The write cycle is much slower for FLASH than it is for other portions of RAM, therefore FLASH is not recommended for the storage of program variables, or any data items whose values are dynamic.

Flash memory can optionally be added with a CF Card, which will appear as the  **PCFlash Storage** folder.

Caution: Do not remove power while the system is writing to the CF card, such as when copying a Proficy Machine Edition project. Removing power while writing may lead to data loss and file or CF card corruption. To ensure the system completes writing to flash and closes all files, see "Shutdown" on page 4.

To add Flash memory with a CF Card

1. Insert a Compact Flash card into CF Port (see page 44). The unit immediately reads the new secondary storage. If the disk requires formatting, you will be prompted to do so.
2. New memory appears in Windows CE Explorer as  **PCFlash Storage**.

External flash memory devices are named after their types of connection and order of attachment. For example, if you connect two flash memory devices, one via the CF port and one via the fieldbus connector, the first device connected is named

PCFlash Storage, the second PCFlash Storage2. At powerup, a CF port device is recognized and named first. Otherwise name depends on connection order.

SRAM Memory

This 512 KB block of static RAM is battery-backed to provide data retention through a power cycle. This memory block is shared by the operating system and user applications. A portion of the SRAM memory operates as a virtual hard drive and is accessible from the Windows CE Explorer. It is represented as the  **SRAM Storage** folder. A typical application program would create a file in this folder and store any critical program data in that file.

DRAM Memory

The QuickPanel View Keypad is equipped with 32 MB of dynamic RAM. Part of the DRAM (13.2 MB) is reserved for the Windows CE operating system and is not accessible by user applications. The other 18.8 MB is split between two functions: an object store for temporary file storage, and the main memory for running programs.

Typically, compressed programs stored in FLASH are expanded and moved to DRAM for execution. Temporary storage of program variables or data files is also provided by DRAM—any data stored in DRAM will not be retained through a power cycle or reboot.

The split between program memory and storage memory may be adjusted as necessary to make more room for one or the other, depending on your specific application needs. For example, if you find that an application is short of memory, use the System Properties dialog box to alter DRAM memory allocation.

Caution: Setting Program Memory too low may prevent additional applications from starting, or may cause currently running applications to fail due to lack of memory. Setting Storage Memory too low may prevent the saving of files into the object store portion of the file system, which may also cause application failures.

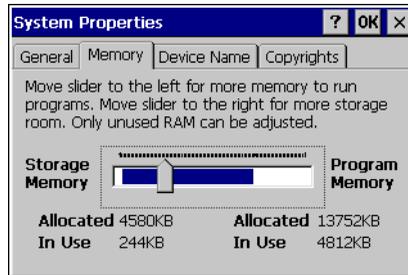
To change the DRAM memory allocation

1. In the Control Panel, double-tap  **System**.

Detailed Operation

Memory

The **System Properties** dialog box appears.



2. On the **Memory** tab, drag the slider to divide the DRAM into Storage and Program memory.

The amount of memory allocated to and used by each area is displayed numerically. The blue bar indicates the current amount of unallocated DRAM and determines the boundaries within which the slider can move.

3. Tap **OK** to apply the new setting.
4. To save the settings, run  **Backup** (see page 16).

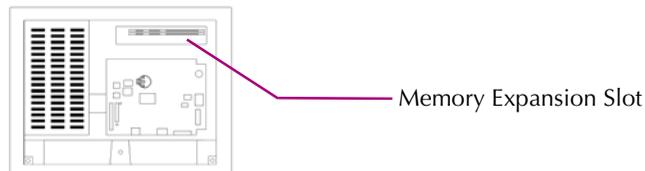
Boot Loader ROM

The Boot Loader ROM provides 512 KB of non-volatile storage for the QuickPanel View Keypad's initialization program. This program configures the QuickPanel View Keypad hardware then starts the operating system's execution. This memory is not accessible from Windows CE Explorer, nor should any attempts be made to modify the contents of this ROM.

Memory Expansion Slot

The QuickPanel View Keypad is equipped with a 100-pin DIMM memory expansion slot which lets you increase DRAM to a total of 96 MB.

Rear (open)



Caution: Disconnect the AC power from your 24VDC power supply before opening the QuickPanel View Keypad. Working on a “live” unit may result in damage to equipment and injury to personnel. Always use anti-static precautions

when accessing the interior of the QuickPanel View Keypad. Do not allow conductive material, liquid or solid, to contact the electronics of the QuickPanel.

To install additional DRAM

1. Disconnect AC power from the 24VDC supply.
2. With a small screwdriver carefully remove the top rear access cover.
3. Insert the new DIMM carefully into the expansion slot, noting the orientation of the pin locators. When the DIMM is fully seated, lift each side clip until it clicks into place.
4. Snap the access cover back into place.

OTHER SUBSYSTEMS

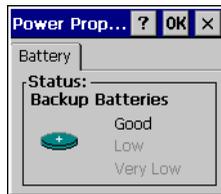
Power Management

The QuickPanel View Keypad's Power Properties control panel displays the status of the backup battery. The  Battery Very Low Or Missing icon displays in the taskbar when the battery is either missing or very low.

To access the Power Properties control panel

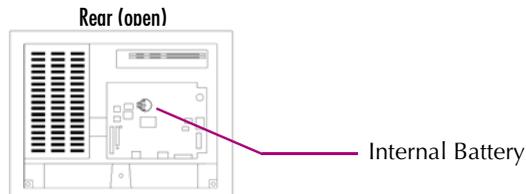
1. In the Control Panel, double-tap  Power.

The Power Properties dialog box appears.



Battery Backup

Auxiliary backup power for the real-time clock and SRAM is provided by a **non-rechargeable**, internal lithium battery (+3VDC, BR2032), ensuring that no loss of data occurs when the main 24VDC supply is removed. Backup power is enabled or disabled by installing or removing the battery, accessed via the rear panel as shown in the following illustration.



Caution: Disconnect the AC power from your 24VDC power supply before opening the QuickPanel View Keypad. Working on a “live” unit may result in damage to equipment and injury to personnel. Always use anti-static precautions when accessing the interior of the QuickPanel View Keypad. Do not allow conductive material, liquid or solid, to contact the electronics of the QuickPanel.

To remove the internal battery

1. Disconnect AC power from the 24VDC supply.
2. Open the rear access panel.
3. Release the battery by *gently* lifting it from the completely exposed side, past the small protrusions. To avoid breaking the battery retainer clips, do not apply excessive upward pressure.
4. Slide the battery out of its carrier, noting the arrow on the carrier indicating the direction of removal.

Real-time Clock

The QuickPanel View Keypad has a programmable real-time clock capable of reporting the current time in Year/Month/Day/Hour/Minute/Second. The time is set from the Windows CE interface and retained through a power cycle if battery backup is available. Daylight saving time is enabled by a check box within the dialog box. The time can be displayed in the system tray on the task bar.

To set the real-time clock

1. In the  Control Panel, double-tap  **Date/Time**.

The **Date/Time Properties** dialog box appears.



Note: Tap Apply after making changes in any box.

2. To modify the date, select the **Date/Time** tab.
3. Tap the year to choose a new year; tap the month to choose a new month.
4. Tap a date to specify the day of month.
5. From the **Time Zone** box, choose your zone.
6. Select **Auto Adjust DST** to have the clock automatically compensate for daylight savings time.
7. In the **Current Time** box, adjust the hours, minutes and seconds.
8. Tap **OK** to finish.

To display the time on the taskbar

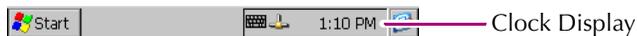
1. From the  Start menu, choose  Settings and then  Taskbar and Start Menu Properties.

The **Taskbar Properties** dialog box appears.



2. On the **Taskbar Options** tab, select **Show Clock**.
3. Tap **OK**.

An hours and minutes display now appears in the taskbar.



Configuring SNTP

There are two levels of Network Time Protocol (NTP) time servers available on the Internet.

First-level time servers are primarily intended to act as source time servers for second-level time servers. First-level time servers may also be capable of providing mission-critical time services. Some first-level time servers may have a restricted access policy.

Second-level time servers are intended for general SNTP time service needs and usually enable public access. It is recommended that you use second-level time servers for normal SNTP time server configuration because they are normally located on a closer network that can produce faster updates.

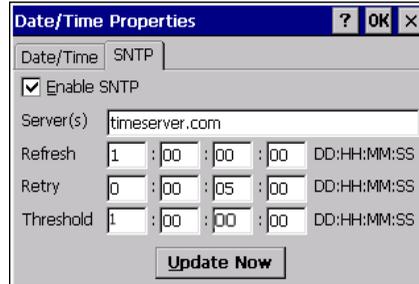
It is recommended that you research any time server selection to ensure that it can meet your specific time server requirements. More information and a list of SNTP time servers can be found at <http://support.microsoft.com/kb/262680/>.

If the time on the time server is more than the threshold value away from the current time on the QuickPanel View Keypad, then the time is not updated. Setting the Threshold to 0 tells the utility to always accept the time from the server. This setting would be useful in a case where the backup battery has died and the QuickPanel View Keypad was power cycled, since the internal clock would have reset back to January 1, 1980 12:00 am.

To set SNTP

1. In the  Control Panel, double-tap  **Date/Time**.

The **Date/Time Properties** dialog box appears.



Note: Tap Update Now after making changes in any box.

2. To add or modify SNTP settings, select the **SNTP** tab.
3. To enable SNTP, ensure the **Enable SNTP** check box is selected.
4. Enter the time server name in the **Server(s)** field.
5. Set the **Refresh**, **Retry**, and **Threshold** parameters.
6. Tap **Update Now** to update SNTP settings immediately.
7. Tap **OK** to finish.
8. To save the settings, run  **Backup** (see page 16).

A1

Design Specifications

The specifications listed in this appendix are the design goals for the QuickPanel View. In most cases the “as built” or tested specifications are identical. See page 66 for a list of agency approvals for environmental service and safety.

Physical

| | |
|--|--|
| Enclosure dimensions (actual - see page 4 for panel cutout specifications) | Height: 8.93 in (226.8 mm) Width: 11.85 in (301.1 mm) Depth: 2.37 in (60.1 mm) |
| Bezel dimensions | Height: 10.34 in (262.6 mm) Width: 13.26 in. (336.8mm) Depth: 0.38 in (9.7 mm) |
| Weight | 5.2lb (2.36 kg) |

DC Power

| | |
|-----------------------------|--|
| Input Voltage | 12 VDC (@ +/- 20% regulated power supply; or 24 VDC (@ +/- 20% regulated power supply) |
| Power Dip Tolerance | -30% nominal input voltage, 10msec. |
| Insulation Resistance | >200 Mohm @ 1000V frame ground to 0V >200 Mohm @ 1000V frame ground to 24V |
| Real Power | 24 W @ 24 Vdc |
| Power Supply Conductor Size | 12 to 18 AWG For compliance to CE Mark, the isolated frame ground must be connected. Recommended frame ground connection is via the shortest possible route, using 14 AWG. |
| Connector (Vendor, p/n) | Phoenix Contact, 1777992 |

Display

| | |
|-------------|--|
| Size | 12" 30.5 cm |
| Colors | 65,536 maximum (256 simultaneously) |
| Resolution | 320 X 240 |
| Fabrication | Passive STN Transmissive |
| Backlight | Cold Cathode Fluorescent (CCFL) - rated half life: 40,000 hours ¹ |
| Luminance | 150 NITs |

Front Panel

| | | |
|-------------------|-------------------------|--|
| Bezel Material | Valox 3706 ² | |
| Membrane Material | Lexan HP60 ³ | |
| LEDs | Bottom | Power status indicator (green with power applied, flashes amber if both backlights fail) |
| | Top | Programmable tri-color (green, red, amber) |

Keypad

| | |
|------------------|--|
| Material | AutoFlex EBA10 polyester ² |
| Activation force | 13 oz. +/- 2 oz. |
| Lifetime | 1,000,000 activations with a standard finger |

Touch Screen

| | |
|------------|---|
| Type | Resistive, 12 bit |
| Resolution | X axis - 320 cells Y axis - 240 cells (after calibration) |

CPU

| | |
|-------------|---------|
| Processor | XScale™ |
| Clock speed | 300 Mhz |

¹ Backlight not field replaceable.

² For material specifications, visit www.gepolymerland.com

³ For material specifications, visit gestructuredproducts.com

Memory

| | |
|-------|--|
| FLASH | 32MB |
| SRAM | 512KB (Power off retention is the life of the battery) |
| DRAM | 32MB |
| ROM | 512KB (Boot loader) |

Memory Expansion Slot

| | |
|---------------------------------|--|
| Form Factor | 100 pin DIMM |
| Memory Type | SDRAM |
| Maximum DRAM | 64 MB |
| Maximum Devices/Module | 4 |
| Bus Width | 32 bits |
| Bus Speed | 100 MHz or faster |
| Voltage | 3.3 VDC |
| CAS Latency | CL=3 |
| Refresh Type | Self |
| Refresh Cycle Time | 64 ms maximum |
| Error Correction | Non-ECC |
| Error Detection | No parity |
| Buffering | None |
| Device Row Addressing | 12 Address Lines (A0 to A11) |
| Expansion Memory Catalog Number | 32 MB – IC754ACC32MEM 64 MB – IC754ACC64MEM |

Expansion Ports

| | |
|----------------------|---------------------------------|
| Compact Flash Memory | One slot (Type I/II), 3.3v only |
| FieldBus | One slot |

Communication Ports

| | |
|--------------|--|
| Ethernet | IEEE 802.3 10BaseT/100BaseTX Auto-negotiate Full or half duplex RJ45 connector Two status LEDs Maximum cable length: 30M |
| Serial COM1 | EIA232C/EIA485, DP25S (female) |
| Speed | 300 bps - 115200 bps |
| Mounting h/w | M2.6 jackscrew |
| Fuse | 1.0A, 125V fast blow cartridge type, Littlefuse part #154001 |

Environmental

| | |
|----------------------------------|---|
| Operating Temperature | 32°F to 122°F (0°C to 50°C) |
| Operating Humidity | 10% to 85% RH, non-condensing |
| Storage Temperature ¹ | -4 to 158°F -20 to 70 °C |
| Storage Humidity | 10% to 85% RH (non-condensing) at less than 50°C; maximum 50% RH at greater than 50°C |
| NEMA Rating | 4, 4x, and 12 when mounted in a comparably rated NEMA panel (NEMA 4 is approximately equivalent to IP56; visit www.nema.org) |
| Operational Vibration | IEC 68-2-6 10 - 57Hz, 0.012" peak to peak displacement 57 - 500Hz, 1.0g acceleration |
| Operational Shock | IEC 68-2-27 15g, 11ms (sine wave) |

¹Rated temperature limits refers to the ambient air temperature immediately surrounding (less than 3" or 7.6 cm) the QuickPanel inside the enclosure in which the QuickPanel is mounted. Additional provisions for remaining within the stated limits must be considered where additional, external thermal loads are imposed on the QuickPanel. These could include large heat producing motor drives, or power supplies in the same cabinet or in outdoor applications involving direct sun exposure.

Battery

| | |
|--------------------|-------------------------------|
| Type | BR2032 (3V, 190 mAh, lithium) |
| Life (Approximate) | 5 years |

Calendar/Clock

| | |
|------------|------------------------------|
| Resolution | 1 second |
| Accuracy | +/- 2 to 3 minutes per month |
| Retention | Life of battery |

Agency Qualifications

Model # ES0611K

| Description | Agency Standard or Marking | Comments |
|---|--|---|
| North American Safety for Industrial Control Equipment | UL 508/C-UL | Certification by Underwriter's Laboratories to UL standard and equivalent CSA standard |
| North American Safety for Hazardous Locations Class I, Div. 2, Groups A, B, C, D | UL 1604/C-UL | Certification by Underwriter's Laboratories to UL standard and equivalent CSA standard |
| Explosive Atmospheres Directive European Safety for Hazardous Locations Equipment Group II, Category 3 | ATEX (when mounted in an IP66-rated panel) | Certification in accordance with European directives; refer to Declaration of Conformity and Independent 3 rd Party Assessment Certificate |
| Low Voltage Directive European Safety for Industrial Control Equipment | CE | Self-declaration in accordance with European directives; refer to Declaration of Conformity |
| Electromagnetic Compatibility Directive European EMC for Industrial Control Equipment | CE | Certification by competent body in accordance with European directives; refer to Declaration of Conformity |

A2

Troubleshooting

The tables contained in this appendix can be used to identify and remedy problems that can occur with the 6" QuickPanel View Keypad.

Power up

| Problem | Suggested remedy |
|---------------|--|
| Blank screen. | <p>No power: Check all power connections to the QuickPanel CE.</p> <p>Backlight failed: This is further indicated when the bottom LED glows amber. The LED will only light if both top and bottom backlights have failed.</p> <p>Backlight timer expired: Touch screen to reactivate.</p> |

Pocket Internet Explorer

| Problem | Suggested remedy |
|---|--|
| Cannot access any URLs when using a dial-up connection to an ISP. | <p>If you have previously set up an IP address on a local Ethernet Network, it must be cleared. Disconnect your Ethernet cable and reboot.</p> <p>Your ISP will reassign an IP address when you reconnect the cable.</p> |

Physical Unit

Problem

Suggested remedy

Slow or sluggish touch response.

Ensure that configured I/O or communications channels such as serial or Ethernet are operating without error. These errors can cause higher system overhead leading to delayed response to touch inputs.

Ensure that flash drives, internal or external, are operating without error. If the flash drives are highly fragmented or corrupted, reads and writes to the drive can experience significant delays leading to delayed response to touch inputs. Corrupted external flash drives may be corrected with Storage Manager. See "Storage Manager" on page 18.

After adding expansion memory in the DIMM connector, the system won't boot, or if it does boot, an error message is displayed.

When the system is first started, observe the screen to notice any memory error messages from the boot loader. If any messages appear, such as "DIMM not 12 row", "DIMM not 32 bit", "DIMM refresh unsupported", power down the system and remove the memory module. If the error message is displayed from the Windows CE desktop, also power down the system and remove the memory module. For proper operation, expansion memory modules must meet the requirements stated in the Design Specifications.

Index

A

- accessing
 - Windows network 47
- adding
 - connections 40, 41
- addresses
 - IP 46
- adjusting
 - display brightness 28

B

- backlight
 - (note) 10, 62
 - set for auto turn off 29
- backup 16
- battery 56
 - specifications 65
 - status 56
- baud rate 43
- bezel 62
- block diagram 12
- boot loader ROM 54
- brightness 28

C

- cabling, COM1 38
 - connections 39
 - grounding 39
 - interconnect media 39
 - shielding 40
 - termination 39
- calibrating
 - touch screen 30
- clock 57
- COM1 38
- communication ports 38, 64
 - locations 10

compact flash

- adding memory 52
- configuring
 - set IP address 46
 - TCP/IP settings 43
- connections
 - adding 40, 41
 - set IP address 46
 - TCP/IP settings 43
 - Windows network 47
- cutout 4
 - see also design specifications

D

- design specifications 61
- device properties, configuring 43
- DHCP (Dynamic Host Configuration Protocol) 45
- dial-up connection 40
- dip switches 50
- displaying
 - real-time clock 58
- double-tap sensitivity
 - setting 30, 31
- DRAM 53
 - partition DRAM memory 53
 - partitioning 53

E

- Emulate PPC 19
- Ethernet 45
 - port settings 46
- expansion bus 49
- expansion busses
 - locations 10
- expansion ports 63
- Explorer, Internet 14

F

- flash 52
- flow control 43
- front panel 10, 62
 - bezel 62
 - LEDs 10, 62
 - membrane 62

I

- input panel 35
 - displaying 35, 36
- Internet Explorer 14
- IP address
 - setting 46

K

- keyboard 35
- keyboard shortcuts 13
- keypad, integrated 33, 62

L

- LEDs
 - Ethernet 45, 64
 - front panel 10, 62

M

- Machine Edition 14, 19, 44
- membrane 62
- memory 52, 63
 - adding with CF card 52
 - boot loader ROM 54
 - DRAM 53
 - flash 52
 - partition DRAM memory 53
 - SRAM 53
- memory expansion slot 54

modem configuration 40
mounting
 dimensions 4
 hardware 5
 mounting directions 5
mounting brackets 6

P

panel cutout 4
 see also design specifications
parity 43
partitioning
 DRAM 53
physical layout 10
Pocket Internet Explorer 14
ports
 communication 38, 64
 Ethernet 45
 expansion 63
 keyboard 35
 locations 10
 serial 38
power management 56
 control panel 56
power supply 2
power supply terminals
 location 10
PPPoE 41
product support 7

Proficy Machine Edition 14, 19,
44
programs
 start menu 14
proxy server 15

R

real-time clock 57
 displaying 58
 setting 57, 59
reboot 17

S

serial ports 38
setting
 double-tap sensitivity 31
 sensitivity 30
 IP address 46
 real-time clock 57, 59
setup
 basic 2
 runtime 3
shutdown 4
specifications 61 to ??
SRAM 53
start menu 14
startup 3
 configuring behavior 51
 force startup switch 50

 stop startup programs 50
storage card 52, 53
storage manager 18
support 7
switches, dip 50
System Information 18

T

technical support 7
terminal emulation 43
touch screen 30
 calibrating 30
troubleshooting 67

U

utilities
 backup 16
 System Information 18

V

virtual private network 41

W

Windows CE 13
Windows network
 accessing 47