A·B QUALITY *Allen-Bradley*

2711P PanelView Plus Operator Terminals

700, 1000, 1250, 1500

User Manual

Rockwell Automation

Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of these products must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards. In no event will Rockwell Automation be responsible or liable for indirect or consequential damage resulting from the use or application of these products.

Any illustrations, charts, sample programs, and layout examples shown in this publication are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Rockwell Automation office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this publication, notes may be used to make you aware of safety considerations. The following annotations and their accompanying statements help you to identify a potential hazard, avoid a potential hazard, and recognize the consequences of a potential hazard:

WARNING

Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

ATTENTION

Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

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Objectives

This preface provides information on the contents of this manual including:

- contents of manual
- intended audience
- European Union Directive Compliance
- Rockwell Automation Support

Packing List

The following items are shipped with an assembled PanelView Plus terminal:

- DC power terminal block
- RSView Machine Edition Runtime
- Mounting clips (up to 8)
- Microsoft Windows CE License Agreement
- Installation guide

Manual Contents

Chapter	Title	Description
1	Overview	Provides overview of the PanelView Plus terminals including features and product components.
2	Installation	Gives Instructions on how to install the PanelView Plus terminal in a panel or enclosure.
3	Applying Power	Describes how to apply power and reset the PanelView Plus terminal.
4	Using Configuration Mode	Shows how to use the PanelView Plus configuration screens to load/run applications and configure terminal settings for the PanelView Plus terminal.
5	Installing and Replacing Components	Shows how to install and replace components of the VersaView CE terminal including: • Logic Module • RAM/Internal Compact Flash • Communication Module • Display Module • Battery • Display Module Bezel • Backlight • AC Power Supply • Product Label • Keypad Legend Inserts • External Compact Flash Card
6	Terminal Connections	Describes connections on the base unit of the PanelView Plus terminal and the communication modules.
7	Transferring Files	Provides information on transferring files using an External Compact Flash Card.
8	Troubleshooting	Provides assistance on isolating operating problems.

Intended Audience

No special knowledge is required to understand this manual or operate the PanelView Plus terminal. However, it is important that you understand the functions and operations of Machine Edition applications that will run on the terminal. Consult the application designer for this information.

Equipment installers must be familiar with standard panel installation techniques.

Related Publications

You may want to refer to the following for additional information:
- online help for RSView Studio or RSLinx
- documentation for your logic controller or processor

European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 61000-6-2 EMC - Generic Immunity Standard, Part 2 - Industrial Environment

This product is intended for use in an industrial environment.

Low Voltage Directive

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests. For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the Allen-Bradley publication Industrial Automation Wiring and Grounding Guidelines For Noise Immunity, publication 1770-4.1.

Open style devices must be provided with environmental and safety protection by proper mounting in enclosures designed for specific application conditions. See NEMA Standards publication 250 and IEC publication 529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.

Rockwell Automation Support

Before you contact Rockwell Automation for technical assistance, we suggest you please review the troubleshooting information contained in this publication first.

If the problem persists, call your local Rockwell Automation representative or contact Rockwell Automation in one of the following ways:

Phone	United States/Canada	1.440.646.5800
	Outside United States/Canada	You can access the phone number for your country via the Internet:
		1. Go to http://www.ab.com
		2. Click on *Product Support* (http://support.automation.rockwell.com)
		3. Under *Support Centers*, click on *Contact Information*
Internet	$\Rightarrow$	1. Go to http://www.ab.com
		2. Click on *Product Support* (http://support.automation.rockwell.com)

Software and Firmware Upgrades

To receive software updates (software serial number required) and firmware upgrades for your terminal:

- call your local Rockwell Automation sales office or distributor
- call Rockwell Software at 1-440-646-7800 or fax 1-440-646-7801
- access www.software.rockwell.com

Overview

Chapter Objectives

This chapter gives an overview of the PanelView Plus terminals including:

- hardware features
- software support
- modular components
- base configured unit
- communication modules
- remote AC power supply
- display modules
- catalog number configuration and product components

Hardware Features

The PanelView Plus terminals are operating and display devices that run RSView Machine Edition (V3.0 or later). Features include:

- graphic color display modules with keypad, touch screen, or keypad & touch screen support
- analog resistive touch screen
- field replaceable bezels
- modular communications for easy add-on capability
- memory expansion modules for field upgrades to 256 MB
- Compact Flash Card slot supports Type I/II Compact Flash Cards
- USB ports provides connections for keyboard/mouse/printer support
- Ethernet and serial communications
- IrDA infrared data port
- same panel cutouts as the PanelView Standard and PanelView Enhanced terminals

Software Support

RSView Machine Edition runtime (3.0 or later) is included with the PanelView Plus terminal and does not require activation.

Modular Components

The PanelView Plus terminals use modular components allowing for flexible configuration, installation, and upgrades. Items can be ordered as separate components or factory assembled per your configuration.

Communication Module

Logic Module
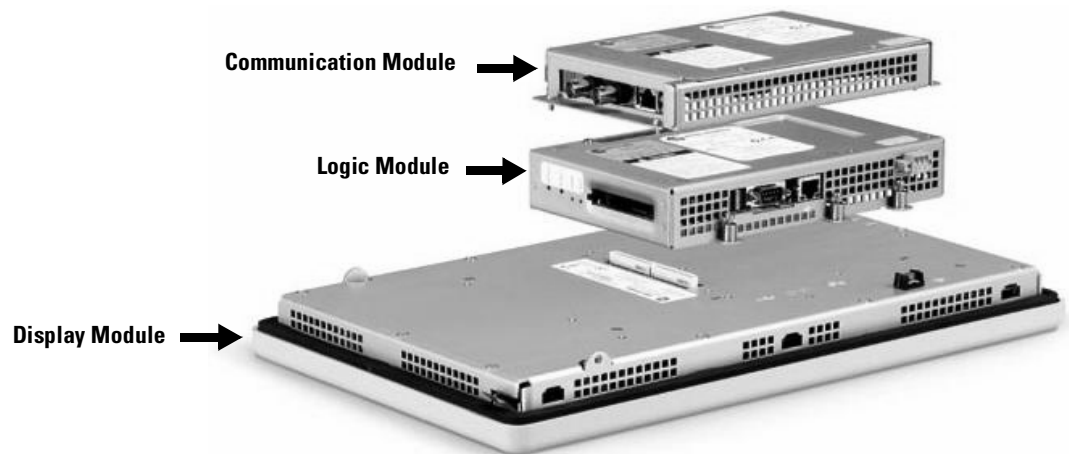
Display Module

Base Configured Unit

The base configured unit of the PanelView Plus terminal consists of:

- Display Module (700, 1000, 1250, 1500) with Keypad, Touch or Keypad & Touch Input
- Logic Module

The Logic Module contains:

- 24V dc input (18…32V dc)
- SDRAM and Flash memory (various sizes)
- 10/100BaseT Ethernet Port
- Serial RS-232 Port for file transfers, printing and logic controller communications
- 2 USB Ports for attaching mouse, keyboard or printer
- Compact Flash Card Slot for Type I/II Compact Flash cards
- Battery-backed real-time clock
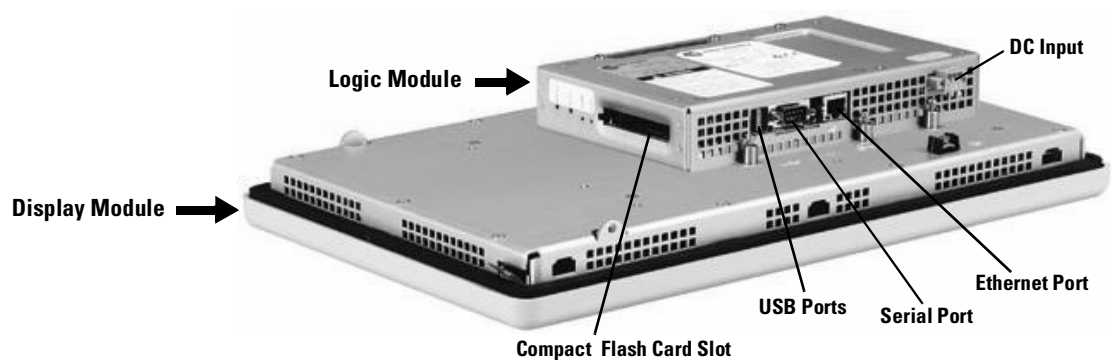
Communication Modules

You can attach a separate Communication Module to the base configured unit of the PanelView Plus terminal to increase your communications capability.

- DH+/DH485/Remote I/O

The Communication Modules install easily on top of the Logic Module on the back of the unit.

Communication Module ➡
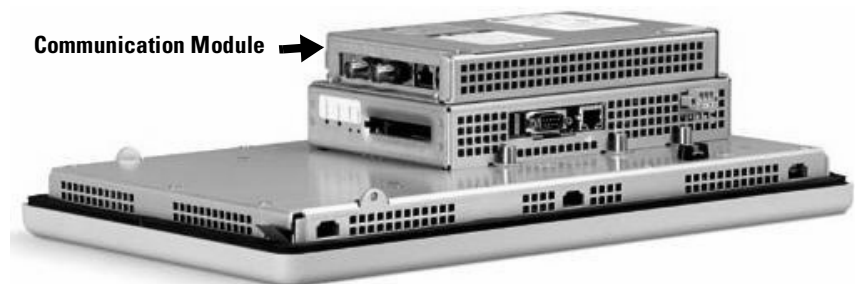
Remote AC Power Supply

The Logic Module provides a DC power input. For applications using AC power, a remote AC to DC power supply is available for DIN Rail mounting.

Display Modules

The PanelView Plus terminals offer a range of TFT color graphic displays with either keypad, touch screen, or keypad & touch support.

- 700 (6.5 inch)
- 1000 (10.4 inch)
- 1250 (12.1 inch)
- 1500 (15 inch)

All of the displays have common features and firmware providing for easy migration to a larger display. Field replaceable bezels are also available.

Touch Screen

The following illustration shows a 1000 touch screen display. All of the touch screen displays are analog resistive and similar except for size.
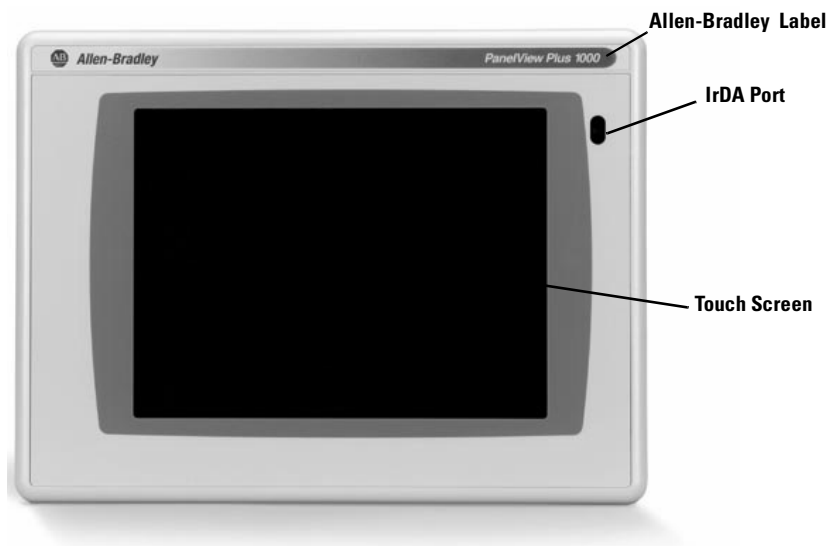
Keypad or Keypad & Touch

The following illustration shows the features of the 1000 keypad or keypad & touch display. All of the displays are similar except for size and the number of function keys available.
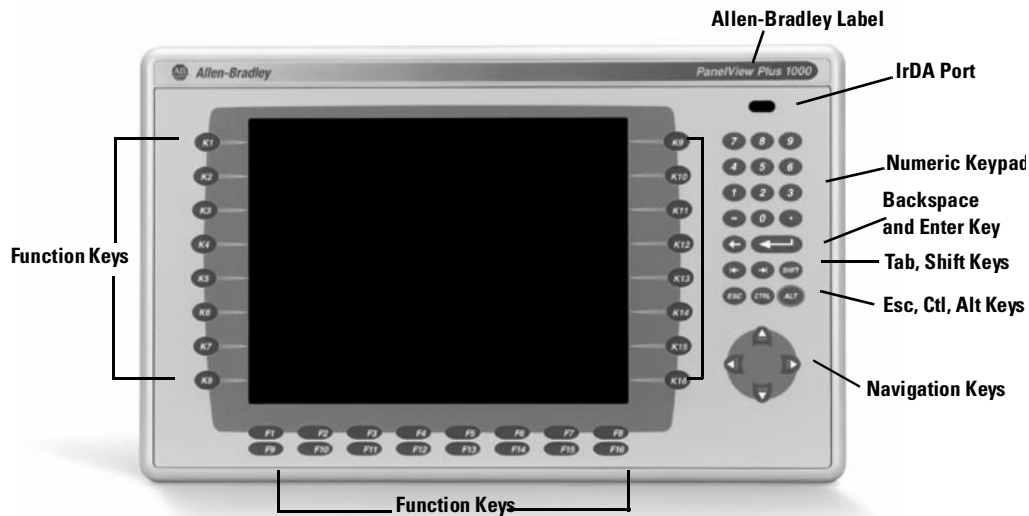
All of the Kxx and Fxx function keys on the keypad terminals are programmable.

Feature	Description
Function Keys 700 (F1-F10, K1-K12) 1000 (F1-F16, K1-K16) 1250 (F1-F20, K1-K20) 1500 (F1-F20, K1-K20)	Programmable keys that initiate functions on terminal display. These keys may have custom legends.
Label	Allen-Bradley or customer applied label.
IrDA Port	For data or application transfers.
Numeric Keypad	0-9, ., -, Backspace, Enter, Tab, Shift, Esc, Ctrl, Alt keys
Navigation Keys	Use the arrow keys to move cursor in lists, select objects, Alt+arrow key activates home, end, page up, page down functions.

Catalog Number Configuration

The following table shows the catalog number configuration for PanelView Plus terminals.

Input	Size	Type	Comms	Power	Memory Flash/RAM	Label
2711P- **K** = Keypad	**7** = 6.5 inch	**C** = Color	**4** = Standard Communication (Ethernet & RS-232)	**B** = AC DIN	**1**= 32 MB/64 MB	**Blank** =AB Label
T = Touch	**10** = 10.4 inch		**6** = DH+, DH-485, RIO & Standard Communication	**D** = DC	**2** = 128MB/128 MB	**N** = No Label
B = Both	**12** = 12.1 inch					
	15 = 15 inch					

Product Components

All of the PanelView Plus components listed in this section are available as separate catalog numbers for field replacement.

Display Modules

Cat. No.	Description
2711P-RDK7C	700 Keypad Color Display
2711P-RDT7C	700 Touch Color Display
2711P-RDB7C	700 Keypad and Touch Color Display
2711P-RDK10C	1000 Keypad Color Display
2711P-RDT10C	1000 Touch Color Display
2711P-RDB10C	1000 Keypad and Touch Color Display
2711P-RDK12C	1250 Keypad Color Display
2711P-RDT12C	1250 Touch Color Display
2711P-RDB12C	1250 Keypad and Touch Color Display
2711P-RDK15C	1500 Keypad Color Display
2711P-RDT15C	1500 Touch Color Display
2711P-RDB15C	1500 Keypad and Touch Color Display

Communication Modules

Cat. No.	Description
2711P-RN6	DH+DH-485/Remote I/O Communication Module

Remote AC Power Supply

Cat. No.	Description
2711P-RSACDIN	AC to DC DIN Rail Power Supply, 85…265V ac, 47…63 Hz

Logic Module

Cat. No.	Description
2711P-RP	Logic Module without memory

Internal Compact Flash Cards

Cat. No.	Description
2711P-RW1	32 MB Compact Flash with RSView Machine Edition
2711P-RW2	128 MB Compact Flash with RSView Machine Edition
2711P-RW3	256 MB Compact Flash with RSView Machine Edition

RAM Memory

Cat. No.	Description
2711P-RR64	64 MB SODIMM Memory
2711P-RR128	128 MB SODIMM Memory
2711P-RR256	256 MB SODIMM Memory

Compact Flash Cards (Blank)

Cat. No.	Description
2711P-RC1	32 MB Blank Compact Flash Card
2711P-RC2	128 MB Blank Compact Flash Card
2711P-RC3	256 MB Blank Compact Flash Card
2711P-RC4	512 MB Blank Compact Flash Card
2711P-RCH	Compact Flash to PCMCIA Adapter

Legend Kits

Cat. No.	Description
2711P-RFK7	Replacement Legend Strips for 700 Keypad Terminal
2711P-RFK10	Replacement Legend Strips for 1000 Keypad Terminal
2711P-RFK12	Replacement Legend Strips for 1250 Keypad Terminal
2711P-RFK15	Replacement Legend Strips for 1500 Keypad Terminal

Protective Antiglare Overlays

Cat. No.	Description
2711P-RGK7	Antiglare Overlay for PanelView Plus 700 Keypad or Keypad/Touch Terminal
2711P-RGT7	Antiglare Overlay for PanelView Plus 700 Touch Terminal
2711P-RGK10	Antiglare Overlay for PanelView Plus 1000 Keypad or Keypad/Touch Terminal
2711P-RFT10	Antiglare Overlay for PanelView Plus 1000 Touch Terminal
2711-RFK12	Antiglare Overlay for PanelView Plus 1250 Keypad or Keypad/Touch Terminal
2711-RFT12	Antiglare Overlay for PanelView Plus 1250 Touch Terminal
2711-RFK15	Antiglare Overlay for PanelView Plus 1500 Keypad or Keypad/Touch Terminal
2711-RFT15	Antiglare Overlay for PanelView Plus 1500 Touch Terminal

Backlights

Cat. No.	Description
2711P-RL7C	Replacement Color Backlight for PanelView Plus 700 Terminals
2711P-RL10C	Replacement Color Backlight for PanelView Plus 1000 Terminals
2711P-RL12C	Replacement Color Backlight for PanelView Plus 1250 Terminals

Miscellaneous

Cat. No.	Description
2711P-RY2032	Replacement Battery
2711P-RTMC	Mounting Clips
6189-2CONN	DC, AC and 6182 Relay Connectors

Adapter Plates

Cat. No.	Description
2711P-RAK7	Adapts a PanelView Plus 700 Keypad Terminal to a PanelView Standard 900 Keypad Cutout
2711P-RAT7	Adapts a PanelView Plus 700 Touch Terminal to a PanelView Standard 900 Touch Cutout
2711P-RAK10	Adapts a PanelView Plus 1000 Keypad Terminal to a PanelView 1000/1000E Keypad Cutout
2711P-RAT10	Adapts a PanelView Plus 1000 Touch Terminal to a PanelView 1000/1000E Touch Cutout
2711P-RAK12E	Adapts a PanelView Plus 1250 (or PV1000/1000E) Keypad Terminal to a PanelView 1200/1400E Keypad Cutout
2711P-RAT12E2	Adapts a PanelView Plus 1250 (or PV1000/1000E) Touch Terminal to a PanelView 1200E Touch Cutout
2711P-RAT12E	Adapts a PanelView Plus 1250 (or PV1000/1000E) Touch Terminal to a PanelView 1400E Touch Cutout
2711P-RAK12S	Adapts a PanelView Plus 1250 (or PV1000/1000E) Keypad Terminal to a PanelView Standard 1400 Keypad Cutout
2711P-RAT12S	Adapts a PanelView Plus 1250 (or PV1000/1000E) Touch Terminal to a PanelView Standard 1400 Touch Cutout
2711P-RAK15	Adapts a PanelView Plus 1500 Keypad or Keypad & Touch Terminal to a PanelView 1200E/1400E Keypad Terminal
2711P-RAT15	Adapts a PanelView Plus 1500 Touch Terminal to a PanelView 1400E Touch Cutout

Cables

Cat. No.	Description
2711P-EX04	Ethernet CAT5 Crossover Cable, Industrial Grade, 4.3 m (14 ft)
2711-NC13	RS-232 Operating Cable (9-pin D-Shell to 9-pin D-Shell), 5 m (16.4 ft)
2711-NC14	RS-232 Operating/Programming Cable (9-pin D-Shell to 9-pin D-Shell), 10 m (32.7 ft)
2711-NC21	RS-232 Operating Cable (9-pin D-Shell to 8-pin Mini DIN), 5 m (16.4 ft)
2711-NC22	RS-232 Operating Cable (9-pin D-Shell to 8-pin Mini DIN), 10 m (32.7 ft)
1761-CBL-AS03	DH-485 Operating Cable, 3 m (10 ft)
1761-CBL-AS09	DH-485 Operating Cable, 9 m (30 ft)

Communication Adapters

Cat. No.	Description
1761-NET-AIC	AIC+ Advanced Interface Converter
1747-AIC	Isolated Link Coupler with DH-485 Communication Module (2711P-RN6)

Installation

Chapter Objectives

This chapter provides instructions on how to install the PanelView Plus terminals. It provides information on:

- hazardous locations
- environment
- enclosures
- clearances
- required tools
- mounting dimensions
- cutout dimensions
- panel installation

Hazardous Locations

This PanelView Plus terminals are suitable for use in:

- Class I, Division 2, Groups A, B, C, D
- Class II, Division 2, Groups F, G
- Class III, Division 1
- or non-hazardous locations

The following statement applies to use in hazardous locations.

WARNING	**Explosion Hazard**
⚠	• Substitution of components may impair suitability for hazardous locations.
	• Do not disconnect equipment unless power has been switched off and area is known to be non-hazardous.
	• Do not connect or disconnect components unless power has been switched off.
	• All wiring must comply with N.E.C. articles 501-4(b), 502-4(b), 503-3(b) as appropriate.
	Peripheral equipment must be suitable for the location it is used in.

Do not install the terminals in environments where atmospheric gases have ignition temperatures **less** than 135 °C or 275 °F. In additon, the PanelView Plus terminals have an operating temperature code of T4 (maximum operating temperature of 55 °C or 131 °F).

Environmental Considerations

The PanelView Plus terminals are suitable for use in an industrial environment when installed in accordance with these instructions. Specifically, this equipment is intended for use in clean, dry environments (Pollution Degree 2[1] and with circuits not exceeding Over Voltage Category II[2] (IEC 60664-1).[3]

(1) Pollution Degree 2 is an environment where, normally only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation shall be expected.

(2) Over Voltage Category II is the load level section of the electrical distribution system. At this level transient voltages are controlled and do not exceed the impulse voltage capability of the product's insulation.

(3) Pollution Degree 2 and Over Voltage Category II are International Electrotechnical Commissions (IEC) designations.

Enclosures

The terminals must be mounted in a panel or enclosure to protect the internal circuitry. The terminals meet IP54 and NEMA Type 12/13 and 4X (indoor) ratings only when mounted in a panel or enclosure with the equivalent rating. When the terminal is not mounted in a panel, it is not secure or safe for operation. You must comply with NEMA Type 4X (indoor) requirements for environmental specifications.

Clearances

You must allow adequate clearances around the terminal, inside the enclosure, for adequate ventilation. Consider heat produced by other devices in the enclosure. The ambient temperature around the terminals must be between 0…55 °C (32…131 °F).

Minimum clearances for ventilation are:
- top and bottom clearance: 51 mm (2 in)
- side clearances: 25 mm (1 in)

Maximum side clearance for insertion of memory card and cable wiring is 102 mm (4 in).

Required Tools

Besides the tools required for the panel or enclosure cutouts, you will need the following for installation:
- small slotted screw driver
- torque wrench (N•m/in-lb)
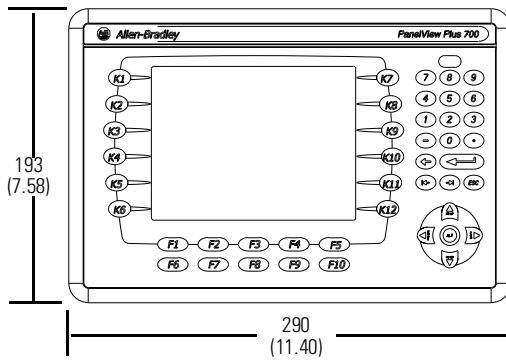
Mounting Dimensions

This section provides mounting dimensions for the PanelView Plus terminals. The depth dimensions are shown for:

- base configured unit (Display Module and Logic Module)
- base configured unit with Communication Module

All dimensions are in mm (inches).

PanelView Plus 700

700 Keypad or Keypad & Terminal

a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module
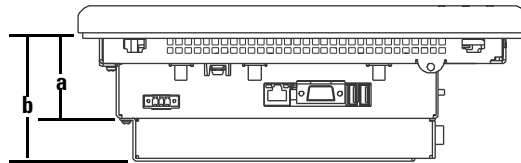
700 Touch Screen Terminal

a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module

PanelView Plus 1000

1000 Keypad or Keypad & Touch Terminal

a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module
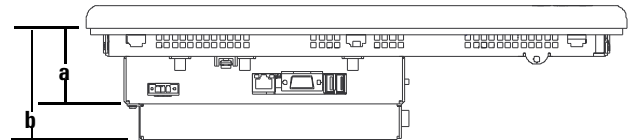
1000 Touch Screen Terminal
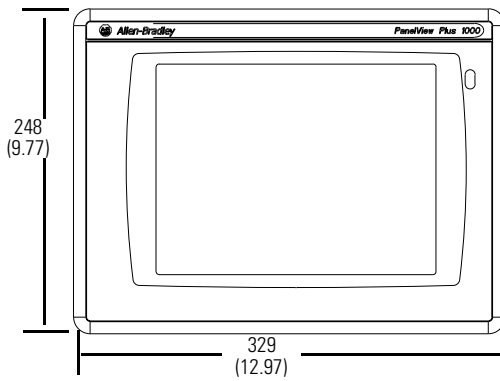
a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module
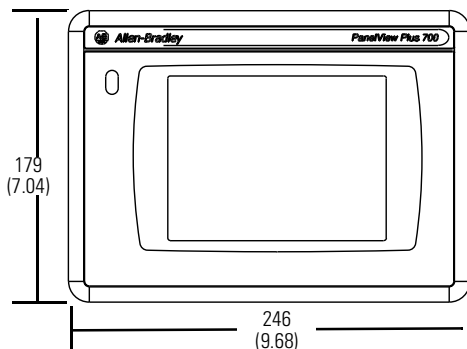
PanelView Plus 1250
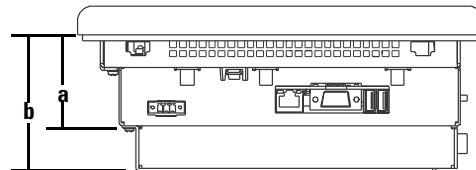
1250 Keypad or Keypad & Touch Terminal

a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module

1250 Touch Screen Terminal

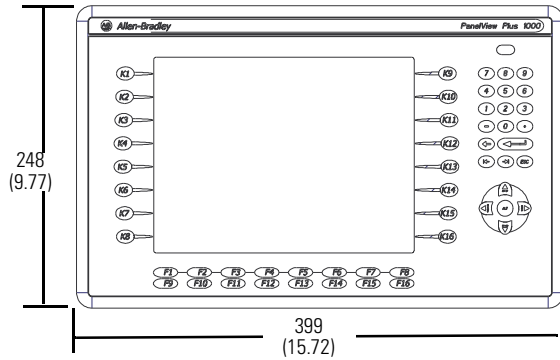**a** 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module
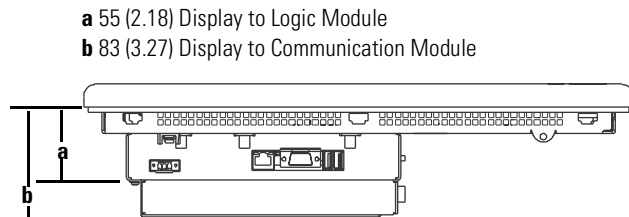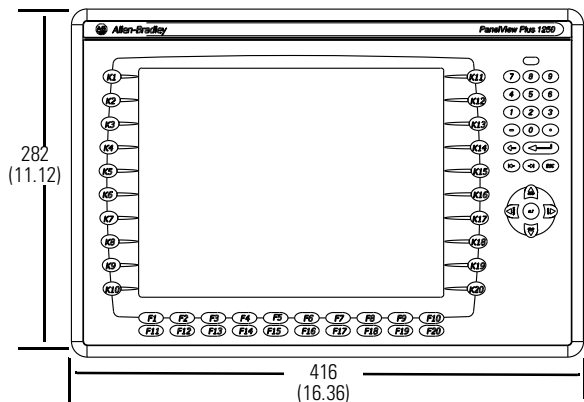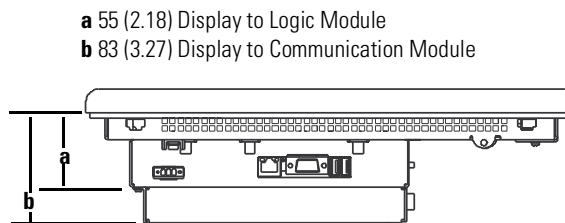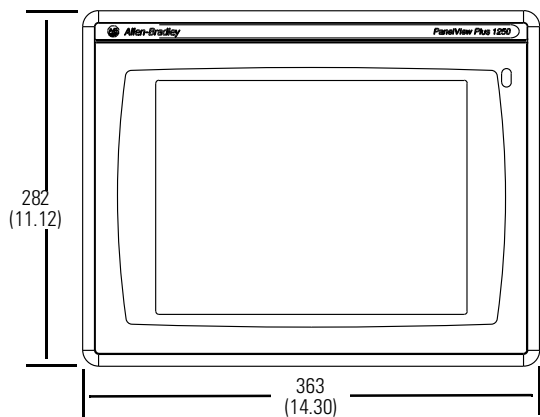
PanelView Plus 1500

1500 Keypad or Keypad & Touch Terminal

330
(12.97)

419
(18.46)

a 65 (2.55) Display to Logic Module
b 93 (3.65) Display to Communication Module

1500 Touch Screen Terminal

330
(12.97)

416
(16.37)

a 65 (2.55) Display to Logic Module
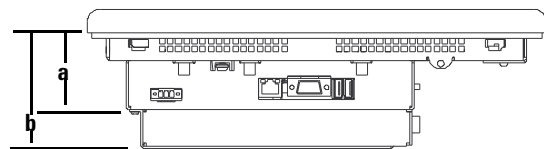**b** 93 (3.65) Display to Communication Module
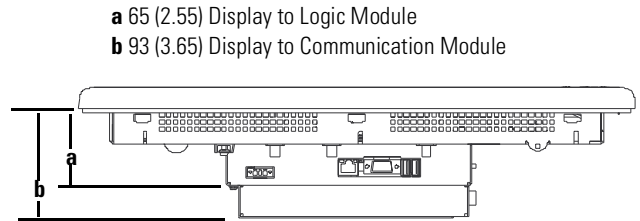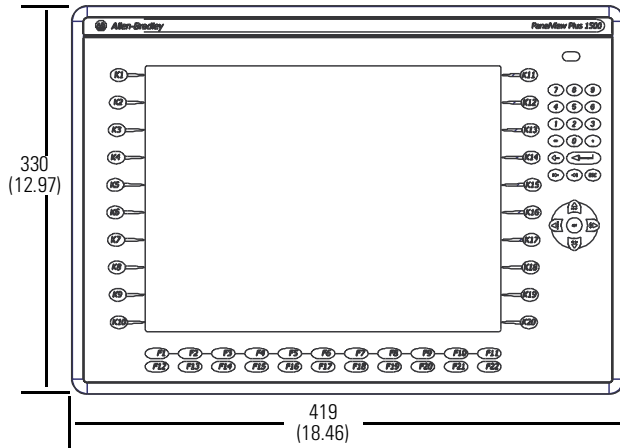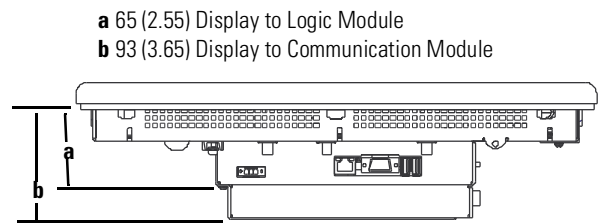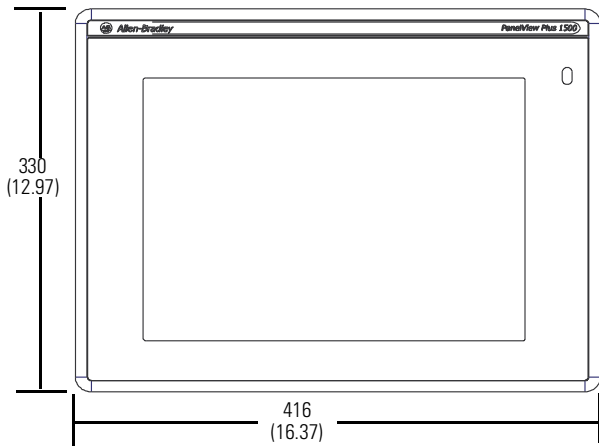
Cutout Dimensions

This section provides panel cutout dimensions for each terminal. Use the full size template shipped with your terminal to mark the cutout dimensions. All dimensions are in mm (inches).

PanelView Plus Terminal	Height	Width
PanelView Plus 700 Keypad or Keypad & Touch	167 (6.57)	264 (10.39)
PanelView Plus 700 Touch	154 (6.08)	220 (8.67)
PanelView Plus 1000 Keypad or Keypad & Touch	224 (8.8)	375 (14.75)
PanelView Plus 1000 Touch	224 (8.8)	305 (12.00)
PanelView Plus 1250 Keypad or Keypad & Touch	257 (10.11)	390 (15.35)
PanelView Plus 1250 Touch	257 (10.11)	338 (13.29)
PanelView Plus 1500 Keypad or Keypad & Touch	305 (12.00)	419 (16.50)
PanelView Plus 1500 Touch	305 (12.00)	391 (15.40)

Panel Installation

All of the PanelView Plus terminals are installed in the same manner using clips for mounting. The number of clips used (4, 6 or 8) varies by terminal type. The mounting clips are shipped with each terminal.

ATTENTION	• Disconnect all electrical power from the panel before making the panel cutout.
⚠	• Make sure the area around the panel cutout is clear.
	• Do not allow metal cuttings to enter any components already installed in the panel.
	• Failure to follow these instructions may result in personal injury or damage to panel components.

To install a PanelView Plus terminal in a panel:

1. Cut an opening in the panel using the panel cutout provided with the terminal. Remove any sharp edges or burrs.

2. Make sure the terminal sealing gasket is properly positioned on the terminal as shown. This gasket forms a compression type seal. Do not use sealing compounds.

Sealing Gasket

3. If using keypad legend strips on keypad terminals, we recommend that you install the strips before installing the terminal. Be careful not to pinch the legend strip during installation.

4. Place the terminal in the panel cutout.

5. Install the mounting clips. The ends of the clips slide into the slots on the terminal.

Mounting Clip Slot   **Mounting Clip**
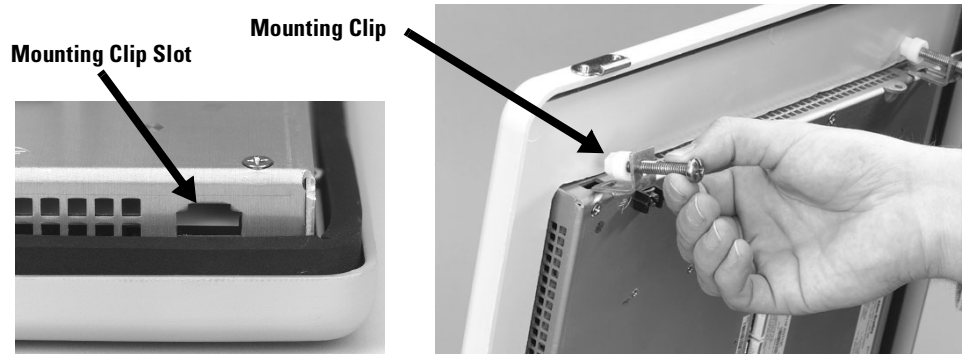
6. Tighten the clip mounting screws by hand until the gasket seal contacts the mounting surface uniformly.

7. Alternately tighten the mounting clips screws to a torque of .90 - 1.1 N•m (8 - 10 in-lb). Do not over-tighten.

1		4
	Torque Sequence for 4 Clips	
3		2

1	5	3
	Torque Sequence	
4	2	6

	1	6	
3	Torque Sequence		8
7			4
	5	2	

ATTENTION

Tighten the mounting clip screws to a torque of .90 - 1.1 N•m (8 - 10 in-lb) to provide a proper seal and to prevent potential damage to the terminal. Allen-Bradley assumes no responsibility for water or chemical damage to the terminal or other equipment within the enclosure because of improper installation.

Applying Power

Chapter Objectives

This chapter provides information:

- wiring and safety guidelines
- connecting DC power
- connecting AC power
- resetting the terminal
- powerup sequence

Wiring and Safety Guidelines

Use publication NFPA 70E, Electrical Safety Requirements for Employee Workplaces when wiring the PanelView Plus terminals. In addition to the NFPA guidelines:

- connect the terminal and other similar electronic equipment to its own branch circuit.
- protect the input power by a fuse or circuit breaker rated at no more than 15 Amps.
- route incoming power to the terminal by a separate path from the communication lines.
- where power and communication lines must cross, they should cross at right angles.Communication lines can be installed in the same conduit as low level DC I/O lines (less than 10 volts).
- shield and ground cables appropriately to avoid Electromagnetic Interference (EMI). Grounding minimizes noise from EMI and is a safety measure in electrical installations.

For additional grounding recommendations, refer to the National Electrical Code published by the National Fire Protection Association of Boston.

Applying DC Power

The PanelView Plus terminals have an integrated power supply that operates on 24V dc. The electrical input ratings are:

- 24V dc nominal (18…32V dc)
- 70 Watts maximum (2.9A @24V dc)

The power supply is internally protected against reverse polarity.

The input power, terminal block on the power supply is removable and supports the following wire sizes:

Wire Type	Wire Size (2-wire maximum per terminal)	Terminal Block Screw Torque
Stranded	#16 to #22 AWG	.23 - .45 N•m (2 - 4 in-lbs)
Solid	#18 to #22 AWG	.23 - .45 N•m (2 - 4 in-lbs)

PanelView Plus terminals using 24V dc power are EN 61131-2 Equipment Class II devices.

ATTENTION

Use a Class 2/SELV (Safety Extra-Low Voltage) isolated and ungrounded power supply as input power to the PanelView Plus terminal. This power source provides protection so that under nominal and single fault conditions, the voltage between conductors and between conductors and Functional Earth/Protective Earth does not exceed a safe value.

To connect DC power:

1. Secure the DC power wires to the terminal block screws.
2. Secure the Functional Earth (FE) ground wire to the ⏚ terminal block screw.
3. Apply 24V dc power to the terminal.

Logic Module with

⏚ Functional Earth Ground — + DC Positive

- DC Negative
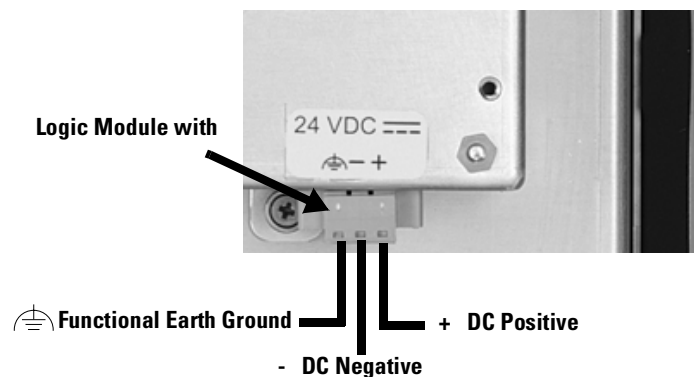
Applying AC Power

Connecting to AC power requires the AC Power Supply (2711-RSACDIN) that mounts to a DIN Rail. This power supply converts DC power to AC power and has the following electrical input ratings:

- 85…264 V ac (47…63 Hz)
- 120 VA maximum

For more information, refer to the installation instructions shipped with the power supply.

Resetting the Terminal

All PanelView Plus terminals have both a Reset switch and a Default switch on the side of the logic module.

Default   Reset
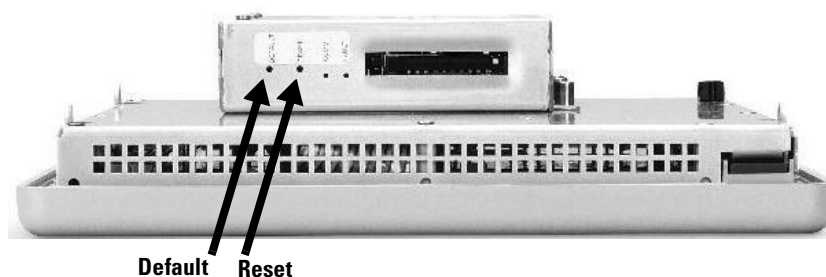
Reset

Use the RESET switch to restart the terminal without having to disconnect and reapply power. Insert a thin probe into the hole marked RESET and press the switch. The terminal will perform a series of startup tests and run RSView ME or the loaded .MER application depending on how the terminal is configured.

Default

Safe Mode is a diagnostics mode where the system is reduced to a known state that allows recovery from a configuration or application problem. Use the DEFAULT switch with the RESET switch to start the terminal in Safe Mode. This is a diagnostics mode where the system is reduced to a known state that allows recovery from a software problem. Safe Mode ignores all user changes to the system and avoids any problem that is due to interactions with end-user software or changes.

• Insert a thin probe into the hole marked DEFAULT and press the switch, then;

• Insert the probe into the hole marked RESET and press the switch. The system will restart immediately into the Safe Mode.

ATTENTION

!

Use a nonconducting object to press the RESET and DEFAULT switch. **Do not** use a conducting object such as a paper clip or you may damage the terminal. **Do not** use the tip of a pencil; graphite may damage the terminal.

Startup Sequence

After a reset, the PanelView Plus performs a series of startup tests and then either:

• runs the .MER application currently loaded in the terminal

• enters PanelView Plus configuration mode

The action that occurs depends on what startup options are configured for your PanelView Plus terminal.

Using Configuration Mode

Chapter Objectives

This chapter shows how to use the configuration screens of your PanelView Plus terminal to:

- perform data entry and navigation
- load an ME application
- run an ME application
- modify application settings
- modify terminal settings

Starting Configuration Mode

When you reset or startup the PanelView Plus, you should automatically enter Configuration Mode.

If you are unable to enter confguration mode, see page 8-11 in Chapter 8, Troubleshooting.

To access Configuration Mode from a running application:

- press the Goto Configuration Mode button.

  The application stops running but is still loaded.

Name of application that is currently loaded. Only appears if application is loaded.

To activate buttons:

- on keypad terminals, select the corresponding function key [Fx]
- on touch screen terminals, tap the button with your finger or stylus.
- if a mouse is attached, make selections with the mouse.

Current application:

Objects Demo4.mer

Load Application [F1]	Run Application [F2]	Application Settings [F3]
Terminal Settings [F4]	Delete Log Files Before Running [F5]	○ Yes ◉ No
	Reset [F7]	Exit [F8]
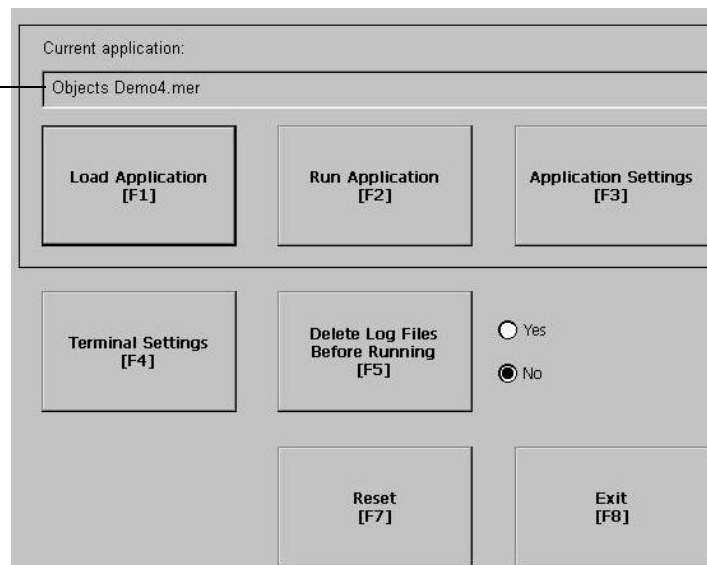
Main Screen Button	Description
Load Application (F1)	Opens another screen where you can select an application to load. Once loaded, the application name will appear under Current Application.
Run Application (F2)	Runs the .MER application displayed under Current Application. An application must be loaded before you can run it.
Application Settings (F3)	Opens a menu of application-specific configuration settings.
Terminal Settings (F4)	Opens a menu of options to configure non-application, specific terminal settings for the PanelView Plus terminal.
Delete Log Files Before Running (F5)	Toggles between Yes and No. If you select Yes, all data log files, alarm history and alarm status file will be deleted before the application is run. If you select No, log files are not deleted first.
Reset (F7)	Resets the terminal. The action that occurs on startup depends on whether you defined shortcut paths in the Windows Startup folder.
Exit (F8)	Exits Configuration Mode.

Data Entry and Navigation

Configuration Mode uses screen buttons for data entry and navigation.

- On terminals with a touch screen, tap the button with your finger or stylus.
- On terminals with a keypad, select the function key listed on the button, or in some cases, the corresponding key on the keypad.

Besides operation specific buttons which are used to modify configuration data, most screens have a combination of the following buttons.

Screen Buttons	Description
Close [F10]	Returns to the previous screen.
OK [F7]	Accepts modified values and returns to previous screen.
Cancel [F8]	Cancels the current operation without saving any changes.
▲ ▼	Moves highlight up or down a list.
↵	Selects a highlighted screen or item from a list.

Input Panel

Many screens have buttons that access fields where you must enter/edit data. When you press the button or function key, the Input Panel opens ready for you to input data.

If the field is restricted to a numeric value, only the 0-9 keys will be enabled. If the value is an IP address, the 0-9 and decimal point keys will be enabled. All other buttons will be disabled.

- on a touch terminal, tap the keys.
- on a keypad terminal, use the arrow keys on the keypad to select keys.
- If a mouse is attached, use the mouse to select keys.
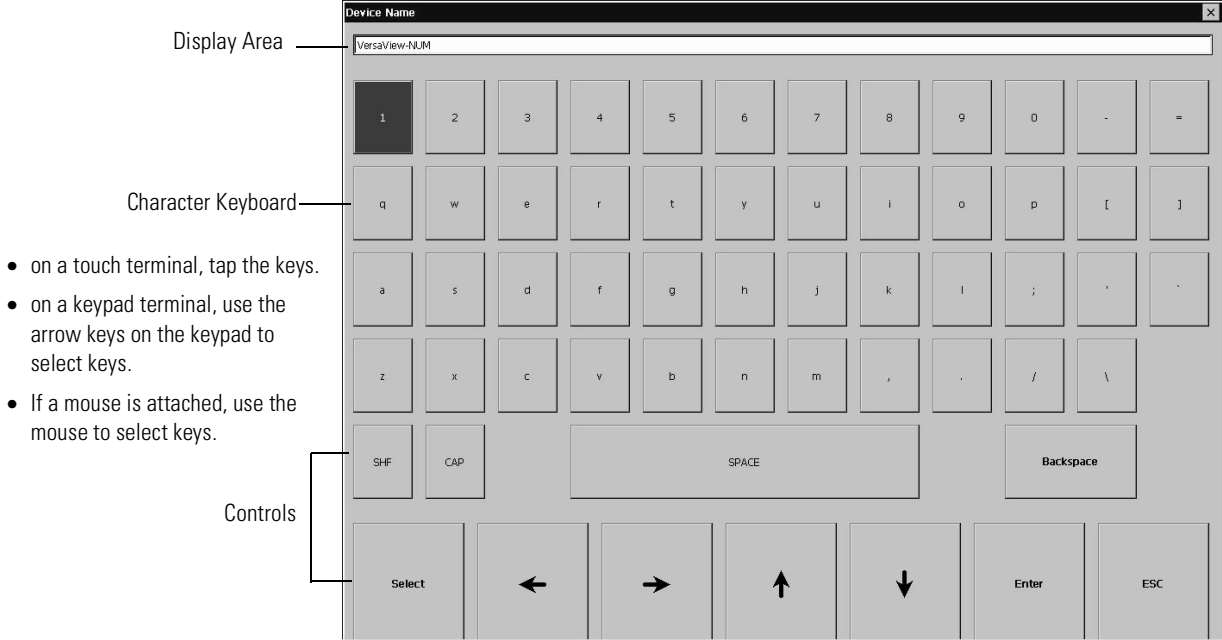
| Controls	Function
SHF	Switches keys between their shifted and unshifted state. The initial default is shifted.
CAPS	Switches keys between lowercase and uppercase characters. The initial default is lowercase.
SPACE	Enters a space between characters in the Display Area.
Backspace	Deletes the previous character (to the left of the cursor) in the Display Area.
Select	Selects a character and enters it in the Display Area.
Right, Left, Up, Down Arrow Keys	Selects the character to the right, left, above or below the currently selected character.
Enter	Accepts the entered characters and returns to the previous screen
ESC	Cancels the current operation and returns to the previous screen.

To enter characters in the Display Area:

1. Select a character on the Character Keyboard.
2. Press the Select **button** to copy the character to the Display Area.
3. When done entering all characters, press **Enter**. You will return to the previous screen.

You will return to the previous screen with the newly data entered.

Loading an ME Application

To load an RSView ME .MER application, select the **Load Application** button on the main screen:
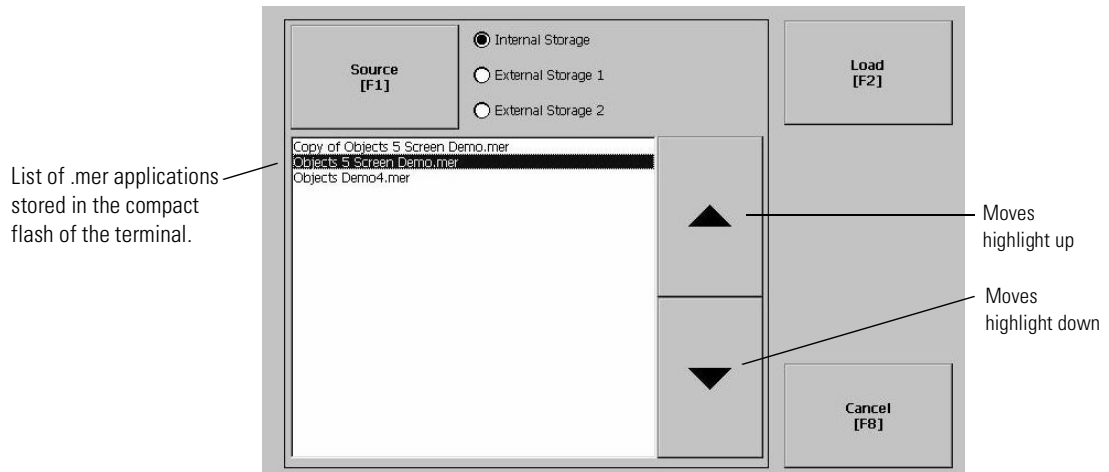
1. Select the **Source** button to select the storage location of the application file you want to load. The options are:
   - Internal Storage - the Internal Compact Flash in the PanelView Plus terminal.
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.

2. Select an .MER file from the list. Use the up and down cursor keys to select a file.

3. Select the **Load** button to load the application.

   You will be asked if you want to replace the terminals' current communication configuration with the application's communication configuration.

4. Select **Yes** or **No**. If you select **Yes**, any changes made to the device addresses or driver properties in the RSLinx Communications screen will be lost.

The name of the currently loaded application will appear at the top of the main Configuration Mode screen.

Running an Application

To run the currently loaded application, select the **Run Application** button on the main Configuration Mode screen. An application must be loaded, before you can run it. Log files generated by the application may be deleted if this option was selected on the main screen or enabled as a Startup Option under Terminal Settings.
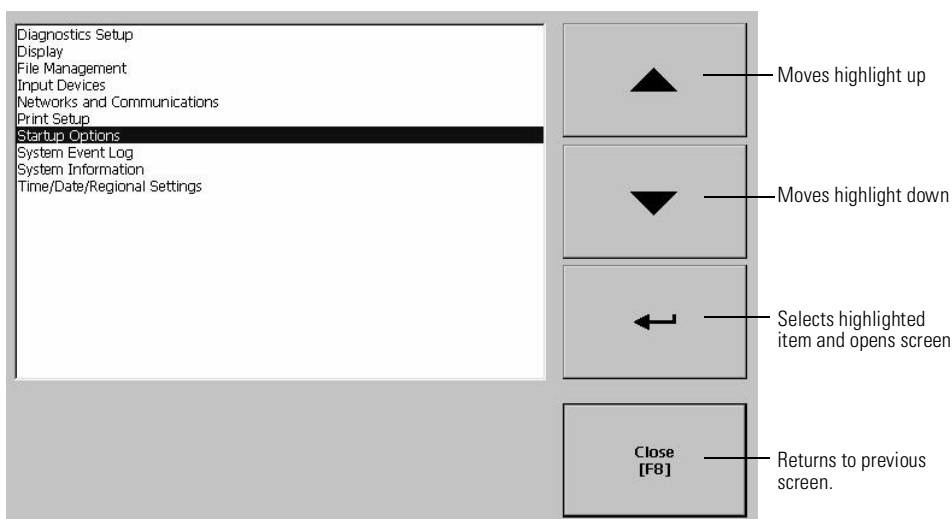
Application Settings

From the Application Settings screen, you can show device shortcuts defined for the loaded .MER application. For example, your .MER application might have SLC defined as a device shortcut name for the SLC 5/05. Device shortcuts are read-only and cannot be edited.

Terminal Settings

From Terminal Settings, you can open screens to configure and modify non-application settings for the PanelView Plus terminal.

- On a touch terminal, tap the button.
- On a keypad terminal, press the corresponding key on the keypad

| Diagnostics Setup |
| Display |
| File Management |
| Input Devices |
| Networks and Communications |
| Print Setup |
| **Startup Options** |
| System Event Log |
| System Information |
| Time/Date/Regional Settings |

▲ — Moves highlight up

▼ — Moves highlight down

↵ — Selects highlighted item and opens screen

Close [F8] — Returns to previous screen.

Terminal Setting	Description
Diagnostic	Forwards diagnostic messages form a remote log destination to a computer running diagnostics.
Display	Shows the temperature of the display, sets the intensity of the backlight, and enables/disables the screen saver.
File Management	Copies or deletes application files or font files from a storage location.
Input Devices	Configures settings for the keypad, touch screen, or attached keyboard and mouse.
Networks and Communications	Configures network connections and communication settings specific to the application (DHPlus, DH485, Remote I/O, Serial).
Print Setup	Configures settings for printing displays, alarm messages, and diagnostics messages generated by the application.
Startup Options	Specifies whether the terminal starts up in configure or run mode. Also lets you enable/disable tests to run on the terminal at startup.

Terminal Setting	Description
System Event Log	Displays a list of system events currently logged by the terminal.
System Information	Displays power, temperature, battery and memory details for the terminal. Also shows the firmware number for RSView ME and technical support information.
Time/Date/Regional Settings	Sets the date, time, language and numeric format used by the terminal and applications.

Networks and Communications

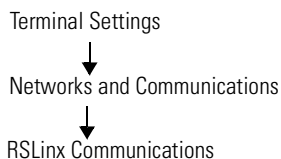From the Networks and Communications screen, you can access settings for:

- KEPServer Serial Port ID's
- Network Connections
- RSLinx Communications

Terminal Settings

↓

Networks and Communications

↓

KEPServer Serial Port ID's
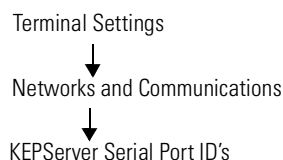
KEPServer Serial Port ID's

To access the KEPServer Serial Port ID's screen, you must have KEPServer Enterprise installed on your terminal. Otherwise, you will get an error message when accessing this screen. If you plan on using KEPServer Enterprise and serial communications, you must specify which COM port to use.
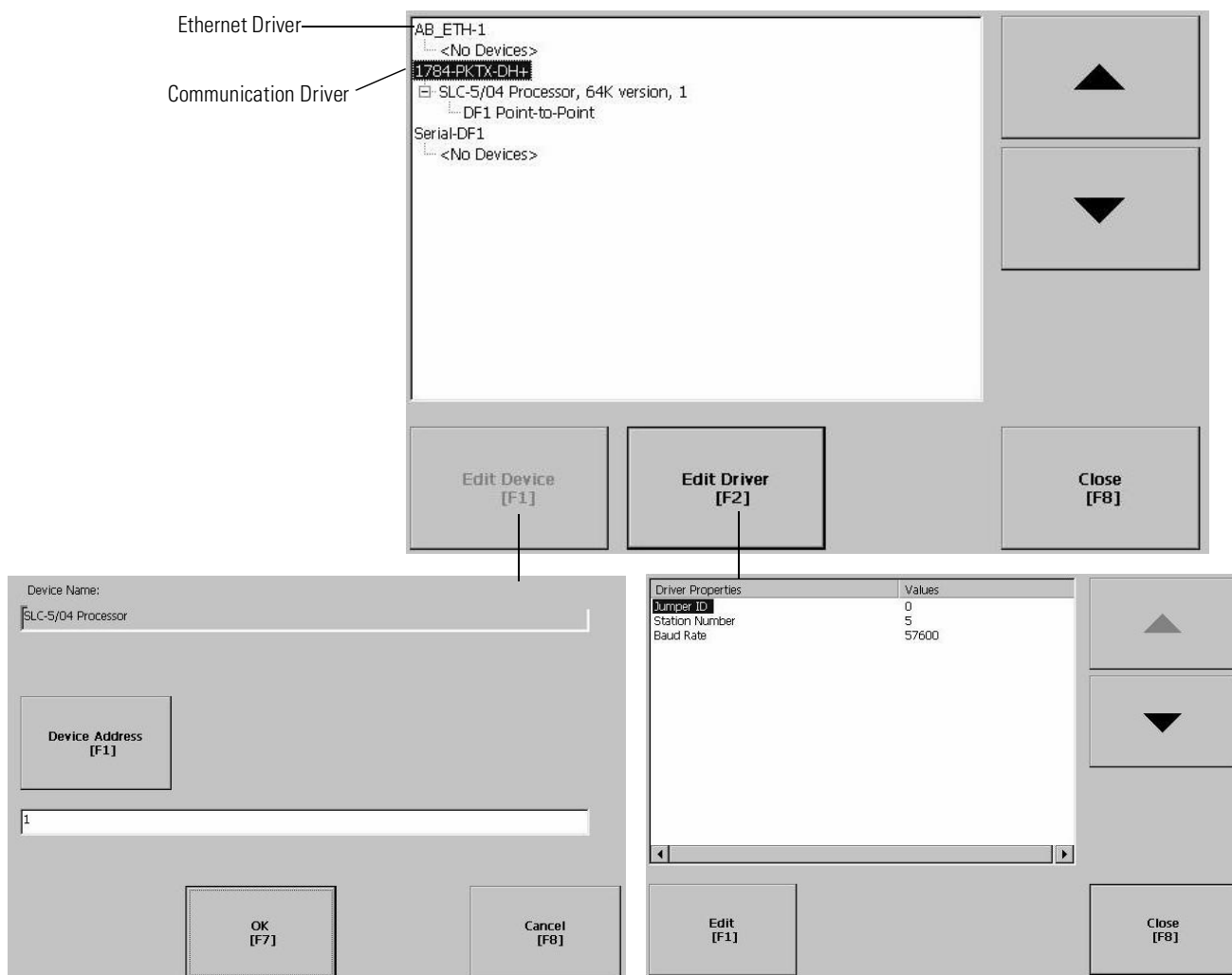
Terminal Settings

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Networks and Communications

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RSLinx Communications

RSLinx Communications

The RSLinx Communications screen shows a treeview of installed communication cards and network configurations. You can:

- edit/view the driver settings for the communication protocol used by your .MER application.
- edit the device address of the controller on the network.

The procedure for editing these settings is the same regardless of the communication protocol. The only differences are the properties for each communication protocol and the device address of the logic controller. The properties for each communication protocol are defined immediately after this section.

Ethernet Driver ——————

Communication Driver ——————

```
AB_ETH-1
  └ <No Devices>
1784-PKTX-DH+
  ⊟ SLC-5/04 Processor, 64K version, 1
       └ DF1 Point-to-Point
Serial-DF1
  └ <No Devices>
```

▲

▼

Edit Device
[F1]

Edit Driver
[F2]

Close
[F8]

Device Name:

SLC-5/04 Processor

Device Address
[F1]

1

OK
[F7]

Cancel
[F8]

Driver Properties	Values
Jumper ID	0
Station Number	5
Baud Rate	57600

▲

▼

Edit
[F1]

Close
[F8]

To edit communication settings:

1. From the RSLinx Configuration Screen, select the communication card installed on your terminal.

2. Select the **Driver Settings** button.

    A properties screen opens showing the current communication settings for the driver.

3. To modify a setting, select the setting and then the **Edit** button. The Input Panel opens showing the current setting.

4. Using the Input Panel, modify the setting and then select the **Enter** button.

You return to the previous screen with the newly entered data.

To edit the device address of the logic controller:

1. From the RSLinx Configuration screen, select a device node.

2. Select the **Edit Device** button.

    A screen opens showing the name of the device and its current node address.

3. To modify the device address, press the **Device Address** button. The Input Panel opens showing the current address.

4. Using the Input Panel, modify the address and then select the **Enter** button.

You return to the previous screen with the new address.

IMPORTANT	Modified settings do take effect until the terminal is rebooted.

DHPlus Properties

The DHPlus Properties screen lets you view or modify settings for a PanelView Plus connected to a DHPlus network.

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Station Number	The unique address of the PanelView Plus on the DHPlus network.	0 - 77 (octal)
Baud Rate	The baud rate of the DHPlus network.	57600 (default) 115200 230400

DH485 Properties

The DH485 Properties screen lets you view or modify settings for a PanelView Plus connected to a DH-485 network.

| Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Station Number	The unique station number of the PanelView Plus on the DH-485 network.	0 - 31 (decimal)
Baud Rate	The baud rate of the DH-485 network.	9600 19200
MaxStationNumber	The maximum station number on the DH-485 network. The value must be greater than or equal to the Station Number.	0-31 (decimal)

Remote I/O Properties

The RIO Properties screen configures Remote I/O communication settings for the PanelView Plus terminal on a Remote I/O link.

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Baud Rate	The baud rate of the Remote I/O network.	57600 (default) 115200 230400

Serial Properties

The Serial Properties screen configures settings for serial communications (using the RS-232 serial port) on the PanelView Plus terminal.
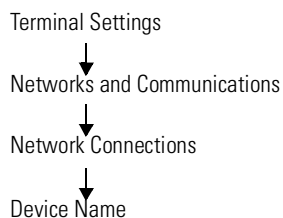
Field	Description	Valid Values
Device	The serial device your PanelView Plus terminal is connected to.	PLC_CH0 KF2 SLC_CH0 KF3 KFC KFC15 AC_CH0
Error Check	Type of error checking used. Error checking is automatically configured if Use Auto Config is set to Yes.	BCC, CRC
Parity	Type of parity used. The parity is automatically configured if Use Auto Config is set to Yes.	None, Odd, Even
Stop Bits	Number of stop bits used.	1 or 2
Ack Timeout	Ack/Poll timeout value in milliseconds.	20 - 60,000 ms
Max Retries	Maximum number of retries before the serial driver fails.	0 - 255
Station	Station number based on a specific device.	PLC_CH0 0-77 (octal) KF2 0-77 (octal) SLC_CH0 0-31 KF3 0-31 KFC 1-99 KFC15 1-99 AC_CH0 0-255
Baud Rate	Data rate at which serial driver communicates. The baud rate is automatically configured if Use Auto Config is set to Yes.	110, 300, 600, 1200, 4800 9600, 19200, 38400, 115200
Use Auto Config	Automatically or manually configures the baud rate, parity and error checking parameters.	Yes (auto configure) No (manual configure)
Com Port	Communication port used on the PanelView Plus terminal.	1 (COM1) 2 (COM2)

Terminal Settings

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Networks and Communications

↓

Network Connections
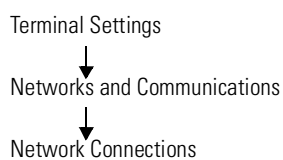
Network Connections

The Network Connections screen lets you configure the following for the PanelView Plus terminal:

- Device Name
- Network Adapters
- Network Identification

Terminal Settings

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Networks and Communications

↓

Network Connections

↓

Device Name

Device Name

The Device Name screen identifies the PanelView Plus terminal to other computers on the network.

Field	Description	Valid Values
Device Name	Name that identifies the PanelView Plus terminal to other computers on the network.	15 characters maximum, without spaces
Device Description	Provides a description of the terminal.	50 characters maximum

Terminal Settings

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Networks and Communications

↓

Network Connections

↓
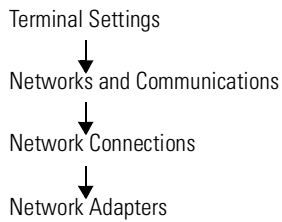
Network Adapters

Network Adapters

The Network Adapters screen configures driver settings for all network adapters installed on the terminal. The only network adapter on the PanelView Plus terminal is the (IntelR) Fast Ethernet Controller.

Press the **Name Servers** button and/or **IP Address** button to access driver settings.
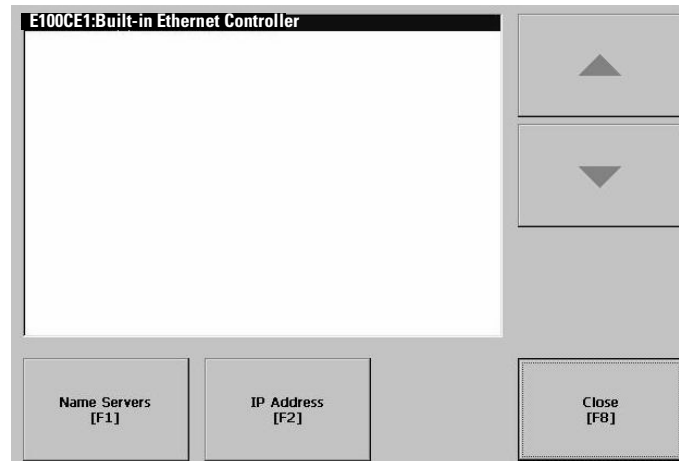
Name Servers

Defines Name Server addresses for the Network Adapter. These addresses are automatically assigned if DHCP is enabled for the network adapter.
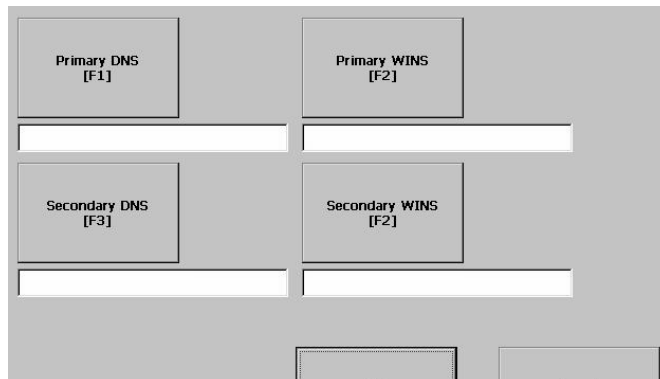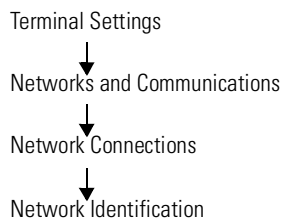

Field	Description	Valid Values
Primary DNS	The address of the primary DNS resolver.	xxx.xxx.xxx.xxx
Secondary DNS	The address of the secondary DNS resolver.	xxx.xxx.xxx.xxx
Primary WINS	The address of the primary WINS resolver.	xxx.xxx.xxx.xxx
Secondary WINS	The address of the secondary WINS resolver.	xxx.xxx.xxx.xxx

IP Address

The IP Address screen identifies the IP address of the selected network adapter. If the network the PanelView Plus is connected to does not automatically assign an IP address, you can assign the address in this screen.

IP Address [F1]		Use DHCP [F4]
		○ Yes
Subnet Mask [F2]		● No
Gateway [F3]		
Mac ID: 00-00-bc-03-05-08	OK [F7]	Cancel [F8]

Field	Description	Valid Values
Use DHCP	Enables or disables DHCP (Dynamic Host Configuration Protocol) settings. DHCP automatically allocates network devices and configurations to newly attached devices on the network. If DHCP is set to Yes, the PanelView Plus is automatically assigned an IP address, Subnet Mask and Gateway. The fields are disabled. If DHCP is set to No, you can enter the IP address, Subnet Mask and Gateway address.	Yes (default) No
IP Address	A unique address identifying the PanelView Plus on the Ethernet network.	xxx.xxx.xxx.xxx 000.000.000.000 (default) Range of values for the first set of decimal numbers is 1-255 unless all fields are set to 000. The range of values for the last three sets of decimal numbers is 0-255.
Subnet Mask	Address must be identical to the server subnet mask.	xxx.xxx.xxx.xxx
Gateway	Optional Gateway address.	xxx.xxx.xxx.xxx
Mac ID	Read only field	

Terminal Settings

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Networks and Communications

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Network Connections

↓

Network Identification

Network Identification

The Network Identification screen configures settings that enable the PanelView Plus terminal to gain access to network resources. You can enter a user name, password and domain (provided by your network administrator).

User Name [F1]	
Password [F2]	
Domain [F3]	
	OK [F7] Cancel [F8]

Field	Description	Valid Values
User Name	Identifies the user to the network.	70 characters maximum
Password	Characters that gain access to network along with the user name.	No character limitation
Domain Name	Provided by network administrator.	15 characters maximum

Diagnostic Setup

The Diagnostic Setup screen configures diagnostics for the current computer. The screen shows a treeview of possible diagnostic nodes.

Terminal Settings

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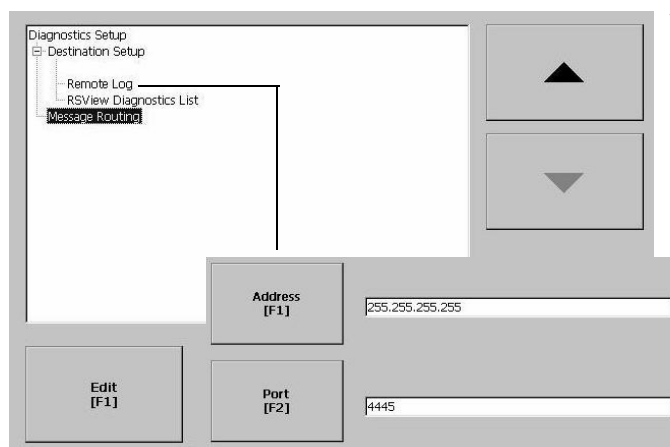
Diagnostic Setup

To access the Remote Log Setup or Message Routing, select the node and then the Edit button.

The Remote Log Destination forwards messages that it receives to a Windows 2000/XP computer running diagnostics. The location is determined by the IP address and port number.

Field	Description	Valid Values
Address	Address of the remote Windows 2000/XP computer.	xxx.xxx.xxx.xxx
Port	The port used to communicate with the remote Windows 2000/XP computer.	4445 (default)

Message Routing

The Message Routing screen lets you access the following screens:

- Remote Log
- RSView Diagnostics List

Each one of the above screens shows a list of messages that can be sent to that destination. The list shows the On/Off status of each message type. Use the **On/Off** button to turn a message type on or off. A message type is enabled if it has a checked box.
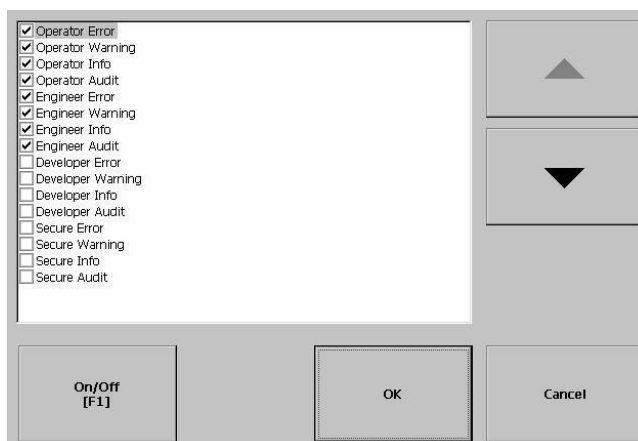
File Management
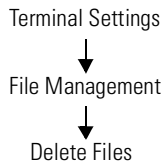
The File Management screen lets you access screens to:

- Delete Files
- Copy Files

Delete Files

From the Delete Files screen you can select options to:

- Delete Applications - deletes an .MER application file from a storage location.
- Delete Fonts - deletes a font file from a storage location.
- Delete Log Files - deletes any data log files, alarm history files and alarm status files in the System Default location on the PanelView Plus terminal.

Delete Application or Font Files

The process for deleting an application file or a font file is the same.
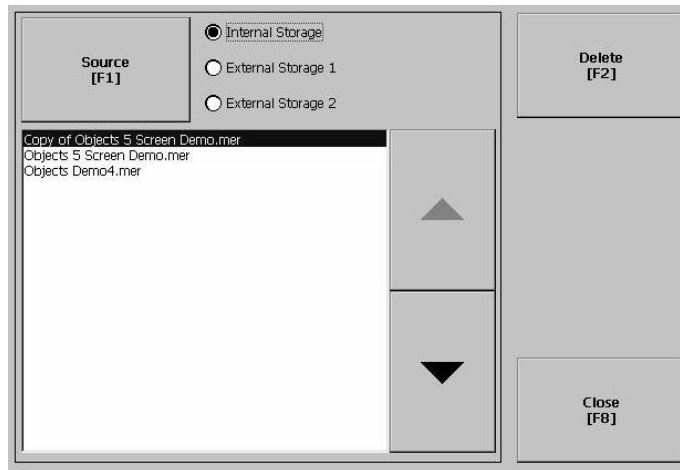
1. Select the **Source** button to select the storage location of the application or font file that you want to delete.
   - Internal Storage - the Internal Compact Flash in the PanelView Plus terminal.
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.
2. Select a file from the list.
3. Select the **Delete** button.
4. You will be asked if you want to delete the selected application or font file from the storage location. Select **Yes** or **No**.

Delete Log Files

Select this option to delete any data log files, alarm history files and alarm status files in the System Default location on the PanelView Plus terminal. You will be asked to confirm the operation.

Do you want to delete all of the RSView ME Station Log Files?

Select **Yes** or **No**. Any log files not located in the System Default location will not be deleted.

Terminal Settings
↓
File Management
↓
Copy Files
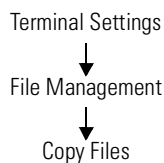
Copy Files

From the Copy Files screen, you can select options to:
- *Copy Applications* - copies an .MER application file from one storage location to another
- *Copy Fonts* - copies a font file from one storage location to another.

Copy Applications or Fonts

The process for copying an application file or a font file is the same.

List of files stored in Compact Flash of terminal.
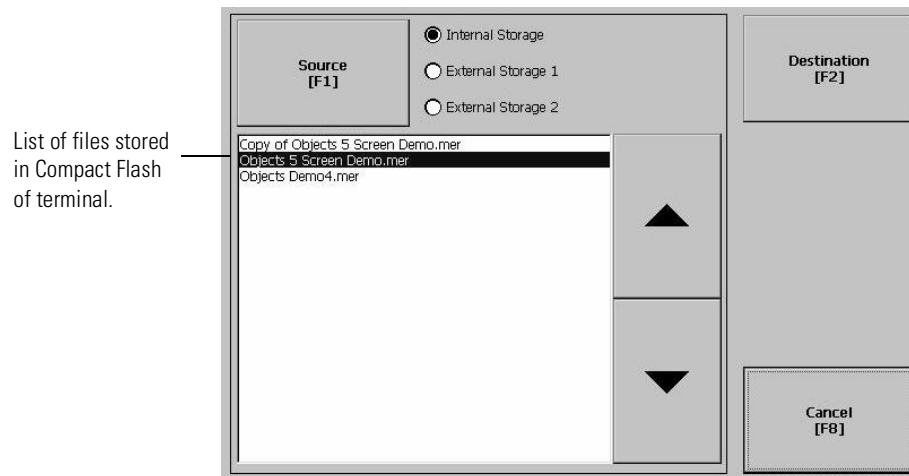
1. Select the **Source** button to select the location of the application or font file that you want to copy.
   - Internal Storage - the Internal Compact Flash in the PanelView Plus terminal.
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.

2. Select the **Destination** button on the same screen to open the following screen.
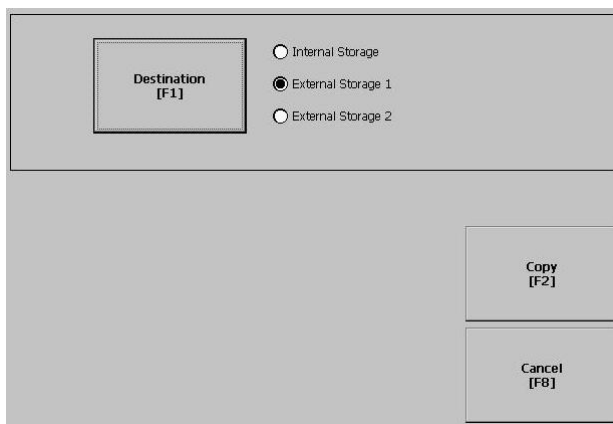

3. Select the **Destination** button to select the storage location where you want to copy the application or font file to.

• Internal Storage - the Internal Compact Flash in the PanelView Plus terminal.

• External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal.

• External Storage 2 - for future use.

4. Select the **Copy** button to copy the selected application or font file to the selected destination.

If the file exists, you will receive a warning and will be asked if you want to overwrite the existing application.

5. Select **Yes** or **No**.

Display

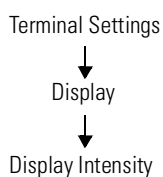The Display screen allows you to open screens to access:

• Display Temperature
• Display Intensity
• Screen Saver

Terminal Settings
↓
Display
↓
Display Temperature
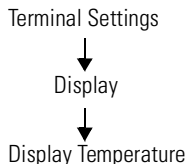
Display Temperature

The Display Temperature screen shows the current temperature of the display.

Terminal Settings
↓
Display
↓
Display Intensity

Display Intensity

The Display Intensity screen lets you view or modify the current intensity of the backlight. The default intensity is 100%. When you change the intensity, the terminal temporarily changes to that intensity. The change is not permanent until you select **OK**.
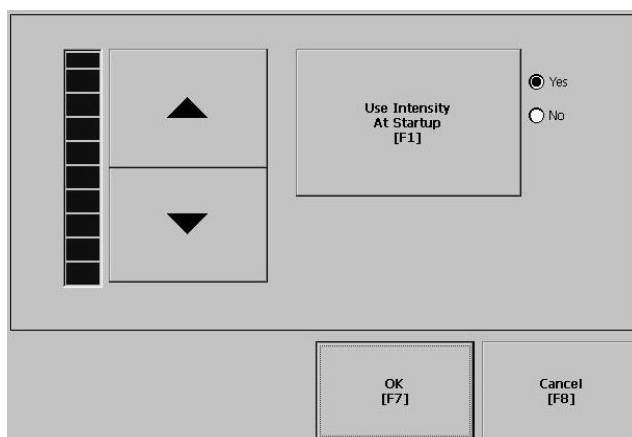
The screen indicates whether the current intensity of the backlight will be used when the PanelView Plus terminal starts up. The button toggles between Yes or No.

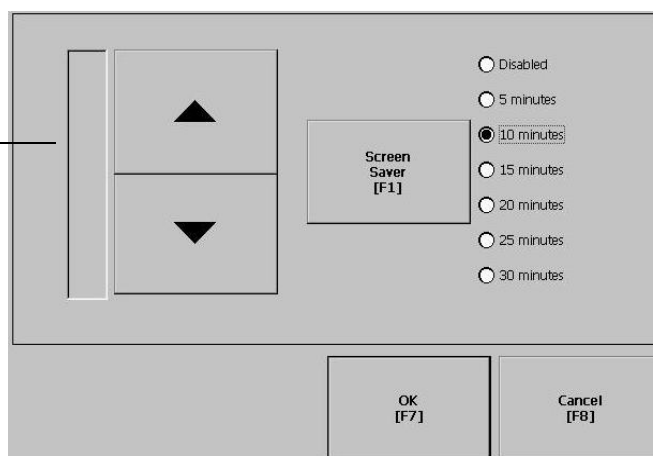Terminal Settings
↓
Display
↓
Screen Saver
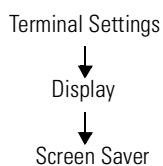
Screen Saver

The Screen Saver screen lets you:
  - disable the screen saver
  - enable the screen saver after the selected idle time
  - adjust the brightness of the screen saver

Select Up or Down Cursor button to increase or decrease the screen saver brightness
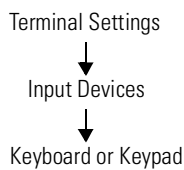
Input Devices

The Input Devices screen lets you access screens to view and modify settings for:

- Keyboard
- Keypad
- Mouse
- Touch Screen

Keyboard and Keypad Setup
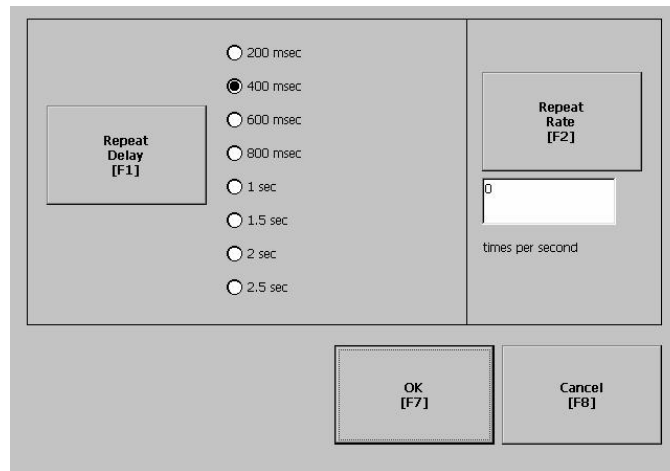
Terminal Settings
↓
Input Devices
↓
Keyboard or Keypad

The Keyboard and Keypad screen opens these screens:

- Key Repeat Settings
- Keyboard Settings

Key Repeat Settings for Attached Keyboard or PanelView Plus Keypad

The Key Repeat Settings configures settings for keys on the PanelView Plus terminal **or** keys an attached keyboard.

| Field	Description	Valid Values
Repeat Rate	The number of times per second a key repeats when you hold down a key.	0 - 30 The default is 0 or disabled
Repeat Delay	The amount time that elapses before a key repeats when you hold down a key.	200 ms 400 ms 600 ms 1 sec 1.5 sec 2 sec 2.5 sec The following values are not available settings for an attached keyboard: 200ms, 1.5 sec, 2 sec, 2.5 sec

Key Settings for Attached Keyboard

The Keyboard Settings screen enables or disables the Ctrl-Alt-Esc option. This key sequence is equivalent to the Ctrl-Alt-Del sequence on a computer. The default is currently enabled.

Key Settings for PanelView Plus Keypad

The Keypad Settings screen enables/disables Single Key Mode option which is used to restrict multiple or simultaneous key presses.

Field	Description	Valid Values
Single Key Mode	Enables or disables Single Key Mode. If enabled, any programmable key that is pressed inhibits all keys until the programmable key is pressed again. This includes the Alt, Ctrl, Shift keys. If enabled with abort, any secondary key press will terminate the initial key press immediately. If disabled, there are no restrictions on key presses.	Enabled Enabled with Abort Disabled (default)
Hold Off Time	The length of time to ignore multiple presses of the same key.	400 ms (default)

Terminal Settings

↓

Input Devices

↓
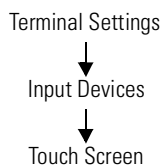
Touch Screen

Touch Screen

The Touch Screen lets you access the following screens:
- Calibration
- Cursor
- Double-Tap Sensitivity

Touch Screen Calibration

This screen calibrates the touch screen of the PanelView Plus terminal. Touch the center of the target (+) each of the 4 times it appears. When the calibration is complete, you will see the message:

"Tap the screen to register saved data. Wait for 30 seconds to cancel saved data and keep the current settings."

+   Carefully press and briefly hold stylus on the center of the target.
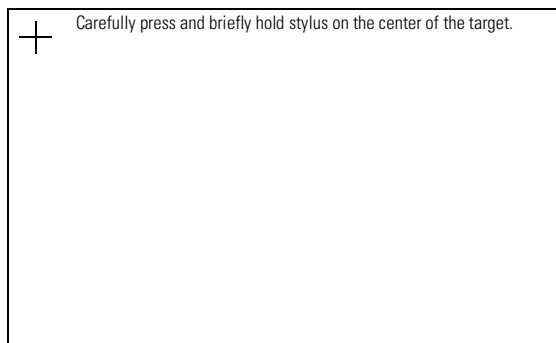
Cursor

This screen enables or disables the cursor on touch screen terminals. Disabling the touch screen cursor will not disable the mouse.

Enable Cursor
[F1]

◉ Yes
○ No

OK
[F7]

Cancel
[F8]
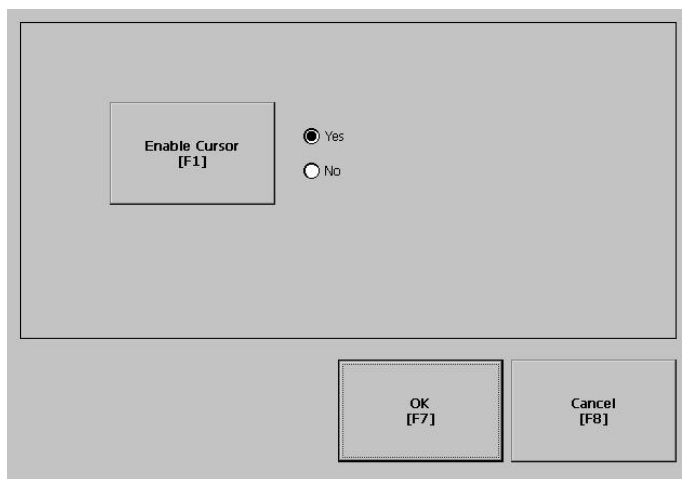
Double-Tap Sensitivity

This screen lets you set and test the sensitivity for both speed and physical distance between touch screen presses.
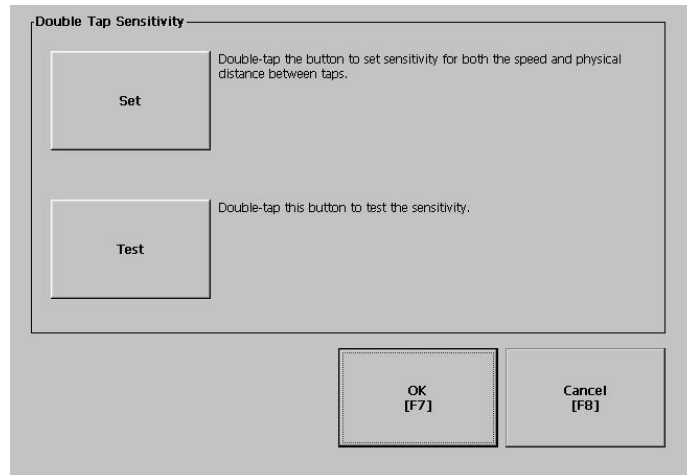
- The **Set** button sets the sensitivity of touch screen presses.
- The **Test** button tests the sensitivity of touch screen presses. If you double-tap the test button with the time set using the Set button, the **Test** button will reverse it's foreground and background colors.

Terminal Settings
↓
Input Devices
↓
Mouse
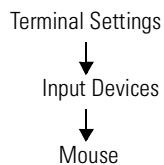
Mouse

The Mouse screen sets and tests the sensitivity for both speed and physical distance between mouse clicks. This process is identical to that for setting Double-Tap sensitivity for the touch screen.

Print Setup

The Print Setup screen lets you access screens to configure print options for:

- Displays
- Alarms
- Diagnostic messages.

Terminal Settings

↓

Networks and Communications

↓
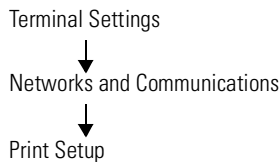
Print Setup

Display, Alarm , and Diagnostic Print Setup

The general setup for printing displays, alarm messages and diagnostics messages from an RSView .MER application is the same. The Advanced Settings for each function are different.
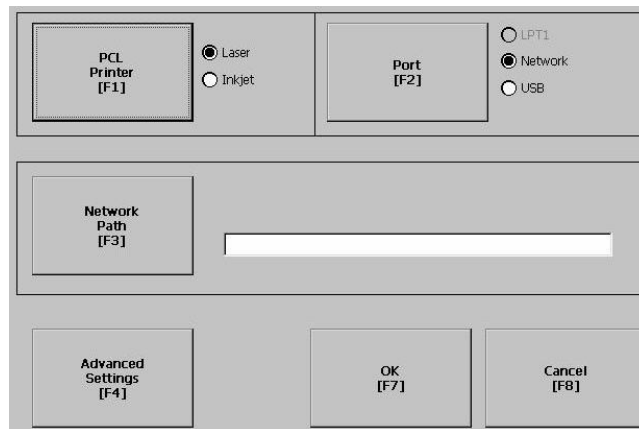
Field	Description	Valid Values
PCL Printer	Type of printer to use.	Laser (default) Inkjet
Port	Port to use for printing displays, alarm messages, and diagnostic messages.	Network (default) USB
Network Path	Network path of printer to use if the Port selection is Network.	519 characters maximum
Advanced Settings	Press this button to open additional settings.	

Advanced Settings for Display Print Setup

Select the **Advanced Settings** button to:

- change print orientation (portait or landscape)
- enable or disable draft mode

Advanced Settings for Diagnostic Messages and Alarm Messages

The following screen configures when to print diagnostic or alarm messages that are sent to the Network or USB port.

To configure how messages are queued for printing, select the **Print Messages After** button and set one of the following options:

- **Specified number of messages**

  Prints messages after 60 are queued or another specified value. The default is 60 (about one full page of messages.)

- **500 messages or timeout period, whichever is first**

  Prints after 500 messages are queued or a specific time period has elapsed, whichever comes first. The default time period is 168 hours (7 days). You can specify another value. For example, if 350 messages are in the queue and 7 days have elapsed, the 350 messages will print.

- **Specified number of messages or timeout period, whichever is first**

  Prints after a specified number of messages are queued or a specific time period has elapsed, whichever comes first.

  The default number of messages to queue is 60. The default timeout period is 168 hours (7 days). You can change both values. For example, the number of messages is set to 75 and the timeout period is set to 48 hours (2 day). If the queue has 75 messages after only 24 hours, these messages will print. If there are only 15 messages in the queue at 48 hours, the 15 messages will not print until the time period has elapsed.

Startup Options
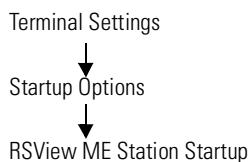
The Startup Options screen accesses the following screens to modify:

- RSView ME Station Startup
- Startup Tests

Terminal Settings

↓

Startup Options

↓

RSView ME Station Startup

RSView ME Station Startup

The RSView Machine Station Startup screen specifies what action the PanelView Plus terminal takes on startup:

- Do not start RSView ME Station
- Go to Configure Mode
- Run the Current Application

  This option is available only if an application is loaded.
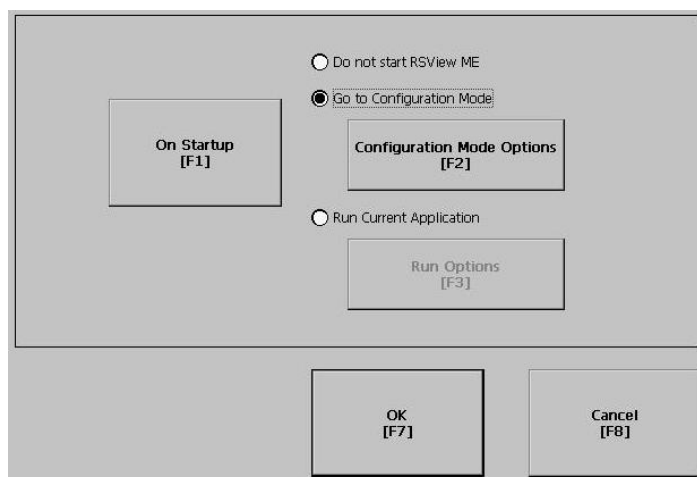
RSView ME Station will start up based on shortcuts in the Windows Startup folder and whether an application is loaded.

Select the **On Startup** button to switch between Do not start RSView ME, Go to Configure Mode, or Run the Current Application. Select the button under the last two options to configure specific settings for each mode.
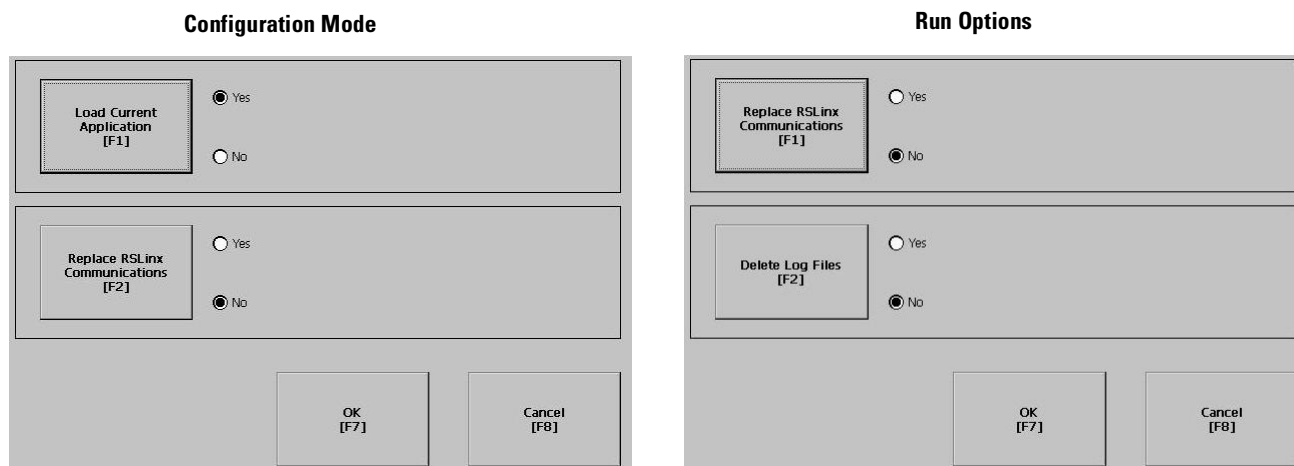
Configuration Mode

The Configuration Mode Options screen specifies whether the PanelView Plus will boot up in Configure Mode:

- with the current application loaded.
- with the communication configuration of the current application or the terminal's RSLinx communication configuration.

  If you select **Yes** to replace the terminal's communication configuration with that of the application, any changes made to the device addresses or driver properties in the RSLinx Communications screen will be lost.

These options are available only if an application is loaded in the terminal. If an application is not loaded, both options are disabled and set to **No**.

Configuration Mode   **Run Options**

Configuration Mode	Run Options
Load Current Application [F1] ◉ Yes ○ No	Replace RSLinx Communications [F1] ○ Yes ◉ No
Replace RSLinx Communications [F2] ○ Yes ◉ No	Delete Log Files [F2] ○ Yes ◉ No
OK [F7] Cancel [F8]	OK [F7] Cancel [F8]

Run Options

The Run Options screen specifies whether or not:

- to replace the terminal's communication (RSLinx) settings with application settings when the application is run.

  If you select **Yes**, any changes to the device addresses or driver properties in the RSLinx Communications screen will be lost when the terminal boots up.

- to delete log files (data, alarm history, alarm status) generated by the terminal from the System Default location before running the application.
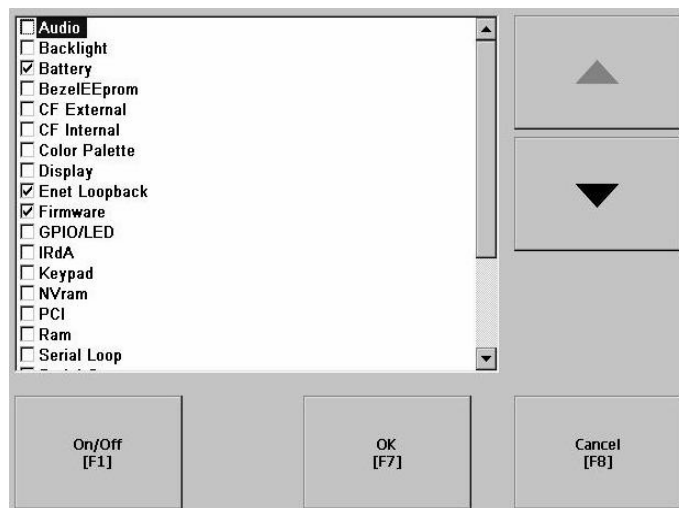
Terminal Settings

↓

Startup Options

↓
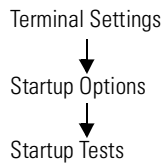
Startup Tests

Startup Tests

The PanelView Plus can run extended tests on startup. The Startup Tests screen provides access to these screens:

- Startup Tests Settings
- Repeat Count

Select Tests

The Select Tests screen shows a list of each test that can be performed on the PanelView Plus terminal at startup and its current On/Off status. You can turn any test in the list on or off by selecting the **On/Off** button. The terminal will only run tests with a checked box.

Startup Tests Settings

From the Startup Tests Settings screen, you can:

- enable extended diagnostics to run on the terminal at startup
- disable extended diagnostics at startup
- specify how many times to repeat the selected tests that are run on the terminal during startup.

The Repeat Count field shows the current value. You can enter a value in the range of 0 - 128.

```
┌Number of times to repeat tests──────────────────────────────┐
│                                                              │
│      ┌──────────────────┐                                    │
│      │   Repeat Count   │   ┌──────────┐                     │
│      │       [F1]       │   │0         │                     │
│      │                  │   └──────────┘                     │
│      └──────────────────┘                                    │
│                                                              │
└──────────────────────────────────────────────────────────────┘

      ┌──────────────────┐
      │ Enable Extended  │   ○ Yes
      │   Diagnostics    │
      │       [F2]       │   ◉ No
      └──────────────────┘

                          ┌──────────────┐     ┌──────────────┐
                          │      OK      │     │    Cancel    │
                          │     [F7]     │     │     [F8]     │
                          └──────────────┘     └──────────────┘
```
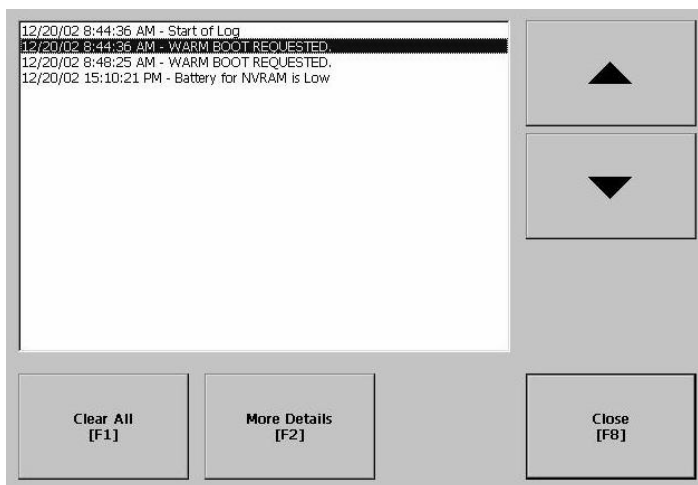
IMPORTANT	Enabling Extended Diagnostics and setting a high Repeat Count will increase the time it takes the terminal to reboot.
	The tests will run each time you reset or cycle power to the terminal until you disable Extended Diagnostics. Setting a low repeat count will also decrease the startup time.

System Event Log

The System Event Log screen displays a list of system events currently logged by the PanelView Plus terminal.

Terminal Settings
↓
System Event Log

12/20/02 8:44:36 AM - Start of Log
12/20/02 8:44:36 AM - WARM BOOT REQUESTED.
12/20/02 8:48:25 AM - WARM BOOT REQUESTED.
12/20/02 15:10:21 PM - Battery for NVRAM is Low

Clear All [F1]   More Details [F2]   Close [F8]

- To display System Event Log Details for a specific event, select an event and then select the **More Details** button.
- To clear all System Event Logs, press the **Clear All** button.

System Information

The System Information screen lets you access:

- RSView ME Station information
- Terminal Information

Terminal Settings
↓
System Information
↓
Terminal Information
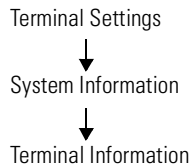
Terminal Information

The Terminal Information screen displays the following details for the PanelView Plus terminal:

- total power on time
- processor temperature
- battery voltage and battery state
- amount of memory on terminal


```
┌─────────────────────────────────────────────────────────────┐
│  Total power on time (minutes):      Battery voltage:        │
│       34200                              3.22                │
│                                                              │
│  Processor temperature:              Battery state:          │
│       40.00 °C                           GOOD                │
│                                                              │
│  Memory:     48144KB  RAM                                    │
│                                                              │
│  Memory Allocation                          Close            │
│       [F1]                                   [F8]            │
└─────────────────────────────────────────────────────────────┘
```

All fields are read only except for memory allocation.

To access details on Memory Allocation, select the **Memory Allocation** button.

Memory Allocation

The Memory Allocation screen displays:

- amount of allocated storage or program memory
- amount of storage or program memory currently in use


You can modify the allocation of storage or program memory. Press the **Up** or **Down** button to increase/decrease the memory allocation. Each button press changes the allocation by a value of 4. If you change the allocation for one type of memory, the other is automatically updated accordingly.

Terminal Settings
↓
System Information
↓
About RSView ME Station

RSView ME Station Information

The About RSView ME Station screen provides access to:

- RSView ME Station firmware number
- Rockwell Technical Support information

Firmware version:

3.00.00.48   (Major, Minor, Patch, Build)

| Technical Support
[F1] | | Close
[F8] |
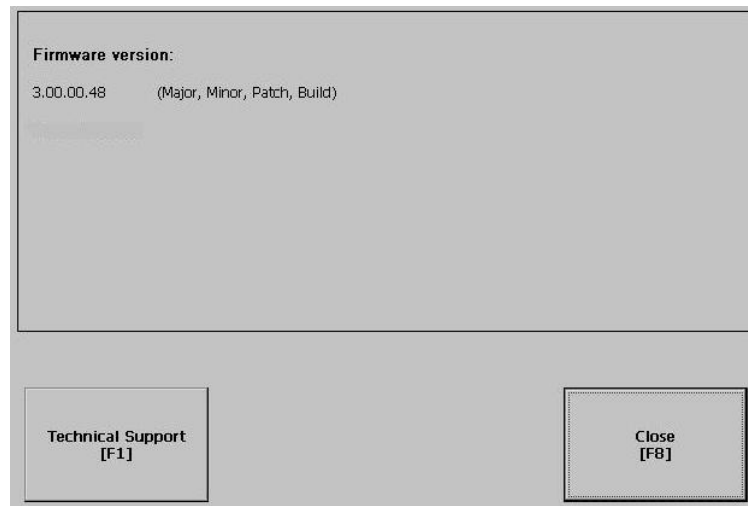
Time/Date/Regional Settings

The Time/Date/Regional Settings screen lets you access the following screens to set:

- date
- regional settings
- time
- time zone

Terminal Settings

↓

Time/Date/Regional Settings

↓
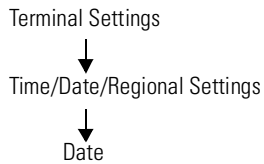
Date

Date

The Date screen shows and configures the current date in separate Year, Month and Day fields.

| 2002 | 12 | 20 |
| Year [F1] | Month [F2] | Day [F3] |

OK [F7]   Cancel [F8]

Field	Description	Valid Values
Year	The current year in a 4-digit format.	1980 - 2099
Month	The current month.	1 - 12
Day	The current day. The day of the month is validated based on the month.	0 - 31

Terminal Settings
↓
Time/Date/Regional Settings
↓
Time
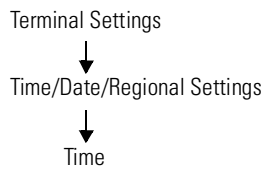
Time

The Time screen shows and configures the current time in 24-hour format in separate Hour, Minute and Second fields.

Enter time in 24 hour format:

| 8 | 17 | 25 |

| Hour [F1] | Minute [F2] | Seconds [F3] |

| OK [F7] | Cancel [F8] |

Field	Description	Valid Values
Hour	The current hour in 24-hour format.	0 - 23
Minute	The current minute in 24-hour format.	0 - 59
Seconds	The current second in 24-hour format.	0 - 59

Terminal Settings

↓

Time/Date/Regional Settings

↓
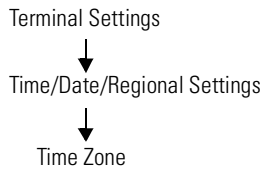
Time Zone

Time Zone

The Time Zone screen shows the current time zone that is installed on the PanelView Plus terminal. Time zones are installed as a part of the operating system. Changing the time zone adjusts the current time and date to match the new time zone.
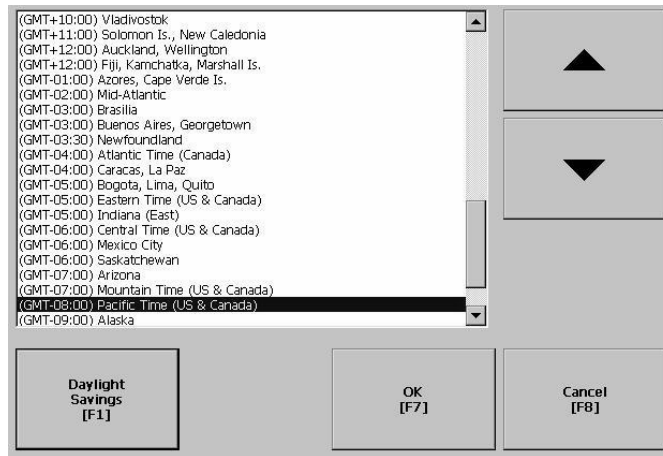

Language	Default Time Zone
English	(GMT -05:00) Eastern Time (US & Canada)
French	(GMT +01:00) Brussels, Copenhagen, Madrid, Paris
German	(GMT +01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
Japanese	(GMT +09:00) Osaka, Sapporo, Tokyo

If the selected time zone supports Daylight Savings, you can select the **Daylight Savings** button.

Daylight Savings

The Daylight Savings screen configures whether daylight savings time is in effect for the current time zone. Daylight Savings is set to Yes for all time zones except for Japanese, which does support daylight savings. Daylight savings changes are not permanently applied until you close the Time Zone screen.

Terminal Settings

↓

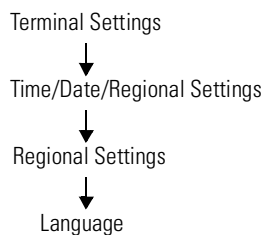Time/Date/Regional Settings

↓
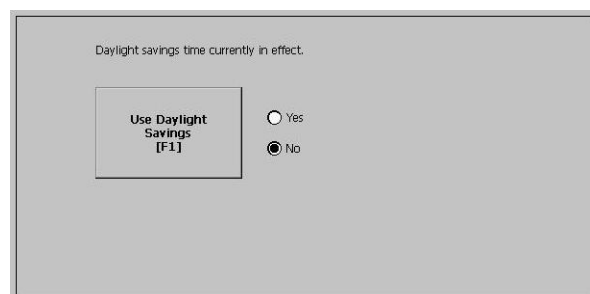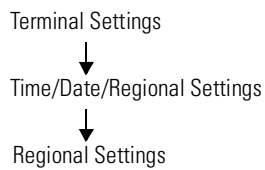
Regional Settings

Regional Settings

The Regional Settings screen allows you to access these screens:

- Language
- Numeric Format
- Long Date Format
- Short Date Format
- Time Format

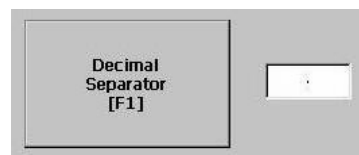The current language is shown at the bottom of the Regional Settings screen.

Terminal Settings

↓

Time/Date/Regional Settings

↓

Regional Settings

↓

Language

Language

The Language screen allows you to select a language that is installed on the PanelView Plus. Languages are installed as a part of the operating system.

Terminal Settings

↓

Time/Date/Regional Settings

↓

Regional Settings

↓
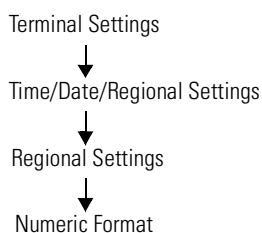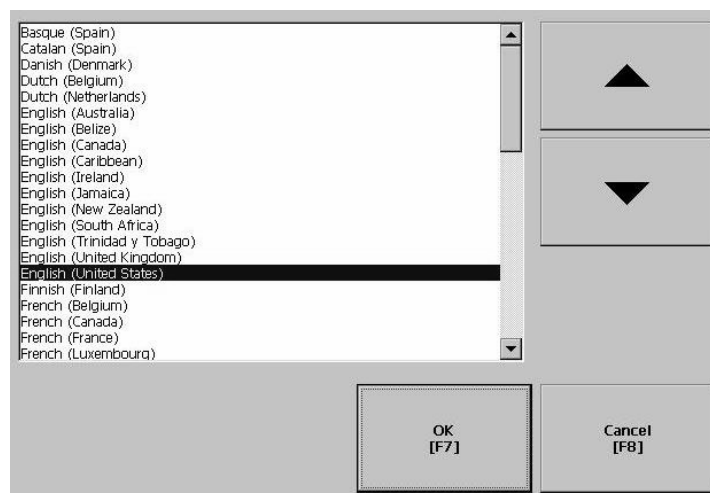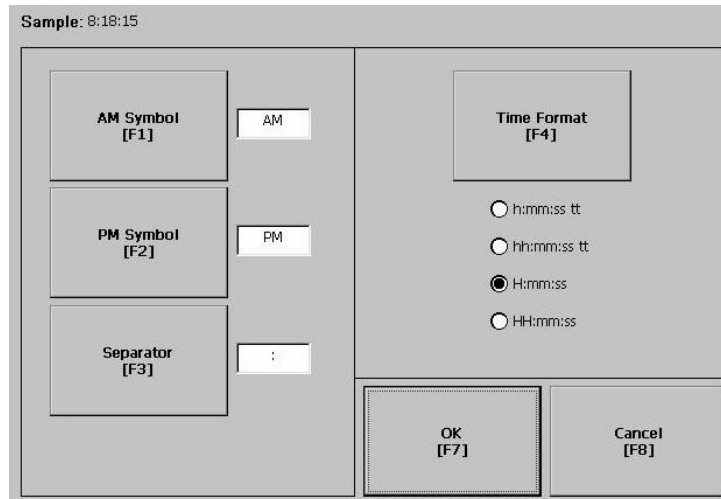
Numeric Format

Numeric Format screen

The Numeric Format Screen allows you to modify the decimal separator used by the current language. The default decimal separator is ".". The field will accept a separator up to 3 characters.

Terminal Settings

↓

Time/Date/Regional Settings

↓

Regional Settings

↓
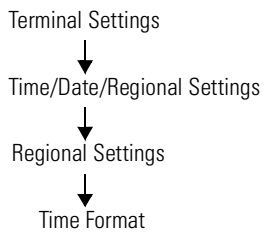
Time Format

Time Format

The Time Format screen configures the time format for the current language. A sample of the current time is shown using the currently selected format.

Sample: 8:18:15

AM Symbol [F1]   AM

PM Symbol [F2]   PM

Separator [F3]   :

Time Format [F4]

○ h:mm:ss tt
○ hh:mm:ss tt
● H:mm:ss
○ HH:mm:ss

OK [F7]   Cancel [F8]

Field	Description	Example
Time Format	h:mm:ss tt (default) h = hour, no leading zero tt = AM or PM symbol	7:23:02 AM or 1:13:31 PM 11:43:59 AM
	hh:mm:ss tt hh = hour with leading zero tt = AM or PM symbol	07:23:02 AM or 01:13:31 PM 11:43:59 PM
	H:mm:ss H = hour in 24 hour format, no leading zero	7:03:42 or 1:13:32 23:43:59
	HH:mm:ss HH = hour in 24-hour format with leading zero	07:03:42 or 01:13:22 23:43:59
AM Symbol	Characters to indicate AM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the AM symbol.	AM (default) 12 character maximum
PM Symbol	Characters to indicate PM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the PM symbol.	PM (default) 12 character maximum
Separator	Character(s) that separate fields in time format.	: (default) 3 character maximum

Terminal Settings

↓

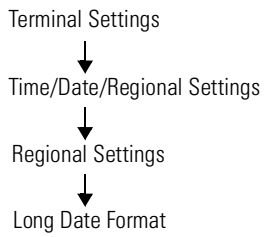Time/Date/Regional Settings

↓

Regional Settings

↓
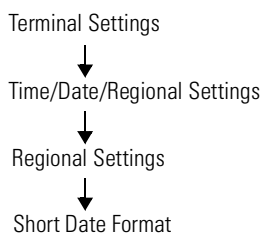
Short Date Format

Short Date Format

The Short Date Format screen configures the short date format used by the current language. A sample of the current date is shown using the currently selected short date format.
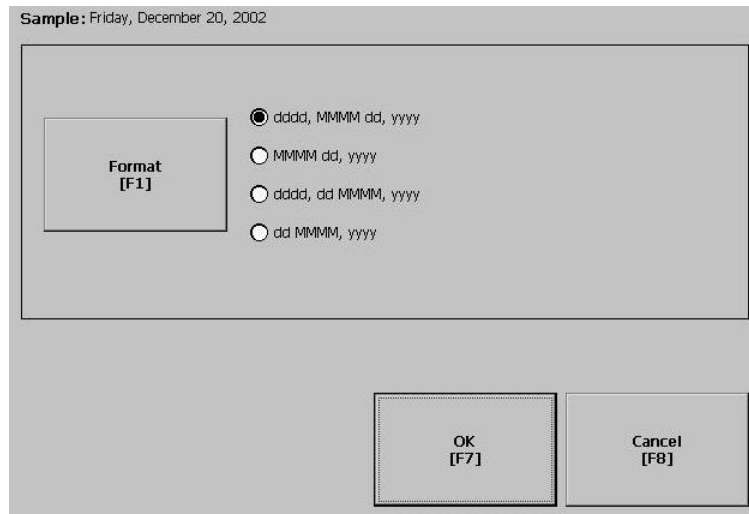
Sample: 1/15/03

○ M/d/yyyy
◉ M/d/yy
○ MM/dd/yy
○ MM/dd/yyyy
○ yy/MM/dd
○ yyyy-MM-dd
○ dd-MMM-yy

Format
[F1]

/

Separator
[F2]

OK
[F7]

Cancel
[F8]

Field	Short Date Formats	Example
Format	M/d/yyyy (default) M/d/yy MM/dd/yy MM/dd/yyyy yy/MM/dd yyyy-MM-dd dd-MMM-yy	1/2/2003 1/2/03 01/02/03 01/02/2003 03/01/02 2003-01-02 02-Jan-03
Separator	Character(s) separator for fields in time format. The default separator is either - or / depending on short date format.	- or / (default) 3 character maximum

Terminal Settings

↓

Time/Date/Regional Settings

↓

Regional Settings

↓

Long Date Format

Long Date Format

The Long Date Format screen configures the long date format used by the current language. A sample of the current date is shown using the currently selected long date format.

Sample: Friday, December 20, 2002

Format
[F1]

● dddd, MMMM dd, yyyy
○ MMMM dd, yyyy
○ dddd, dd MMMM, yyyy
○ dd MMMM, yyyy

OK
[F7]

Cancel
[F8]

Field	Short Date Formats	Example
Format	dddd, MMMM, dd, yyyy (default) dddd is name of week day MMMM is name of month dd is 2-digit day of month with leading zero yyyy is 4-digit year	Monday, January 01, 2003
	MMMM dd, yyyy MMMM is name of month dd is 2-digit day of month with leading zero yyyy is 4-digit year	January 01, 2003
	dddd, dd MMMM, yyyy dddd is name of week day dd is 2-digit day of month with leading zero MMMM is name of month yyyy is 4-digit year	Monday, 01 January, 2003
	dd MMMM, yyyy dd is 2-digit day of month with leading zero MMMM is name of month yyyy is 4-digit year	01 January, 2003

Installing and Replacing Components

Chapter Objectives

This chapter shows how to install, replace or upgrade various components of the PanelView Plus terminal, including:

- Logic Module
- RAM and Internal Compact Flash
- Communication Module
- Display Module
- Battery
- Display Module Bezel
- Backlight
- AC Power Supply
- Product Label
- Keypad Legend Inserts
- External Compact Flash Card

Required Tools

Tools required to install or replace the various components of the PanelView Plus terminal are:

- #1 and #2 Phillips screwdriver
- Electrostatic (ESD) wristband

Precautions

Before installing or replacing any components, disconnect power from the PanelView Plus terminal. During installation, take care not to touch any of the exposed electronic components.

ATTENTION	Disconnect all power from the PanelView Plus terminal before installing or replacing any components. Failure to disconnect power may result in electrical shock and/or damage to the terminal.

ATTENTION	Work in a static free environment and wear a properly grounded ESD wristband.
	Be careful when touching any of the exposed electronic components to prevent damage from electrostatic discharge (ESD).

Installing RAM and Internal Compact Flash

The Logic Module (2711P-RP) of the PanelView Plus terminal does not contain RAM (2711P-RRxxx) or Internal Compact Flash (2711P-RWx) when ordered as a separate component. You must install the RAM and Internal Compact Flash before attaching the Logic Module to the Display Module.

To install/replace RAM and/or Internal Compact Flash:

1. Remove power from the terminal.

2. Place the terminal, display side down, on a flat stable surface.

3. Loosen the 6 captive screws that secure the Logic Module.

4. Carefully lift the Logic Module away from the terminal and turn over to expose the circuit board.

IMPORTANT	Wear a properly ground ESD wristband before touching any of the electronic components in the Logic Module.

Skip Steps 5 - 6 if not replacing RAM.

5. Locate the RAM module on the circuit board. Pull the metal retaining clips away from the module and slide out the RAM module (if present).

Retaining Clips

6. Insert the new RAM module at a 45° angle and snap down.
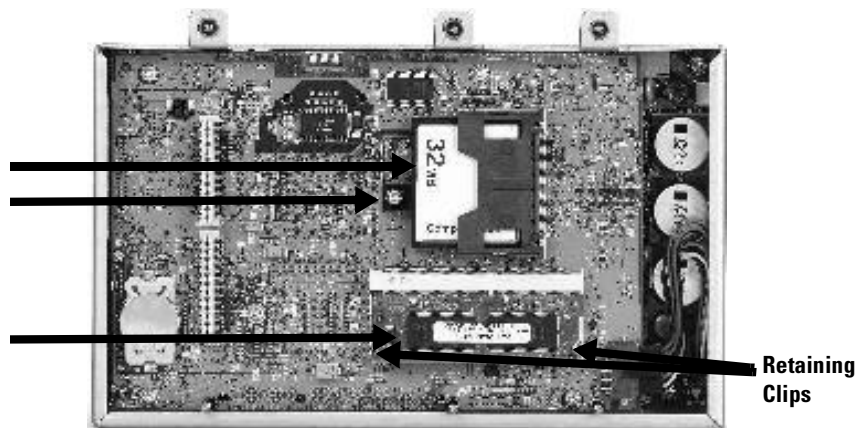
Skip Steps 7 - 11 if not replacing Internal Compact Flash.

7. Locate the Internal Compact Flash card. Unscrew and remove the retaining clip that secures the card.

8. Pull out the Compact Flash card (if present).

9. Insert the new Compact Flash card.

10. Re-attach retaining clip.

11. Attach the Logic Module by aligning the 2 connectors on the bottom of the module with the connectors on the Display Module.

12. Push down on the Logic Module until firmly seated.

13. Tighten the 6 captive screws that secure the Logic Module to a torque of .68 N•m (6-8 in-lb).

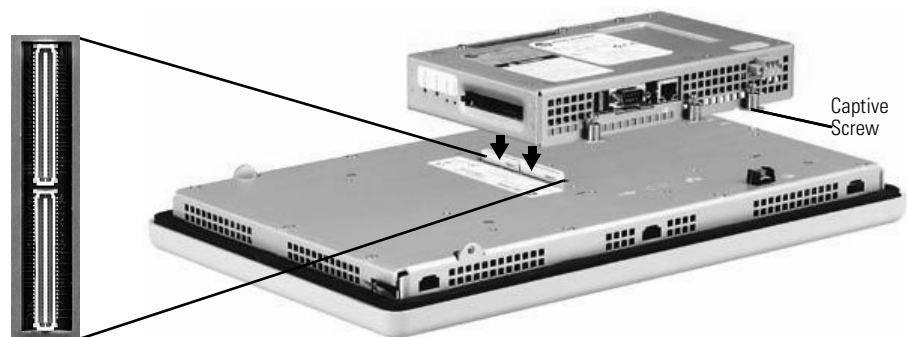## Installing and Replacing the Logic Module

This section shows how to install and replace the Logic Module (2711P-RP) of the PanelView Plus terminal. If the Display Module and Logic Module are ordered as separate components, attach the Logic Module to the Display Module before panel installation.

| **TIP** | If the Logic Module is ordered as a separate component, you must install the RAM and Compact Flash before attaching the Logic Module to Display Module. |

To install a Logic Module:

1. Disconnect power from the terminal.

2. If Display Module is removed from panel, set the module, display side down, on a clean, flat, stable surface to prevent scratches.

3. Position the Logic Module over the back of the Display Module until the 2 connectors on the bottom of the Logic Module align with the connectors on the Display Module.

Captive Screw

4. Push down on the Logic Module until firmly seated.

5. Tighten the 6 captive screws that secure the Logic Module to the Display Module to a torque of .68 N•m (6-8 in-lb).

Logic Module

Captive screws on top and bottom
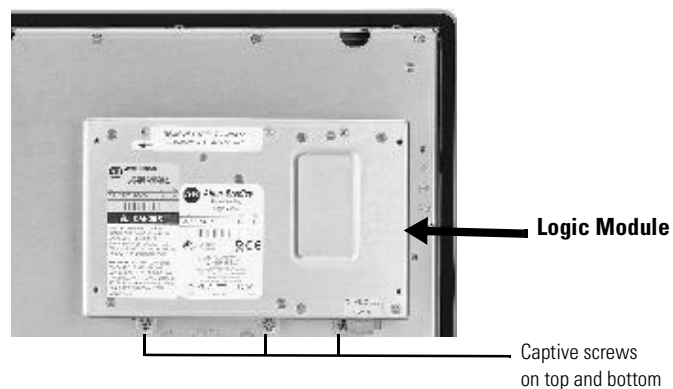
To replace the Logic Module:

Before replacing the Logic Module, you must remove the Communication Module (if attached). You will also need to remove the Internal RAM and Compact Flash from the Logic Module to reuse in the new Logic Module.

1. Disconnect power from the terminal.

2. Disconnect all power and communication cables.

3. If Display Module is removed from panel, set the module, display side down, on a clean, flat, stable surface to prevent scratches.

4. Remove the 4 screws that attach the Communication Module (if attached) to the Logic Module. Carefully lift the Communication Module away from the Logic Module.
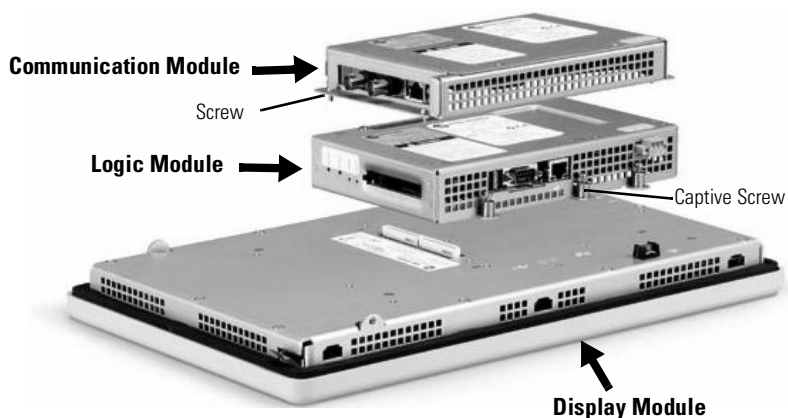
5. Remove the 6 captive screws that secure the Logic Module to the Display Module.

6. Carefully lift the Logic Module away from the back of the Display Module.

7. Remove the internal RAM and Compact Flash from the Logic Module if you want to reuse them in the future. Refer to page 5-2.

> **IMPORTANT** Wear a properly ground ESD wristband before touching any of the electronic components in the Logic Module.

8. Install the new Logic Module as described on page 5-3.

9. Attach the Communication Module (if necessary).

Installing/Replacing a Communication Module

This section shows how to install and replace a Communication Module on the PanelView Plus terminal. The Communication Module installs over the Logic Module. The Communication Modules are available as separate catalog numbers for specific communication protocols. The installation is the same for all modules regardless of the communication type.

WARNING	If you connect or disconnect any communication cable with power applied to this module or any device on the network, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

TIP	The Logic Module must be attached to the Display Module before you attach the Communication Module.

To install a Communication Module:

1. Disconnect power from the terminal.

2. If Display Module is removed from panel, set the module, display side down, on a clean, flat, stable surface to prevent scratches.

3. Remove the label covering the Communication Module connector on the Logic Module.

Logic Module

REMOVE LABEL TO INSTALL COMMUNICATION MODULE
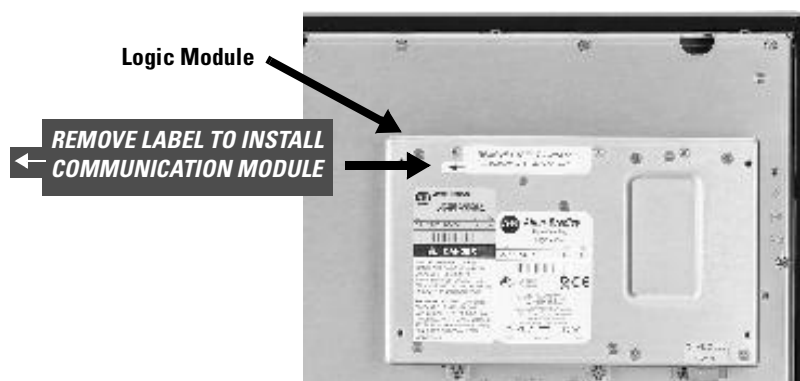
4. Position the Communication Module over the Logic Module so that the connectors on bottom of module align with connectors on Logic Module.

5. To prevent Electrostatic Discharge (ESD) between the modules, allow the Communication Module to touch the Logic Module before making connection.
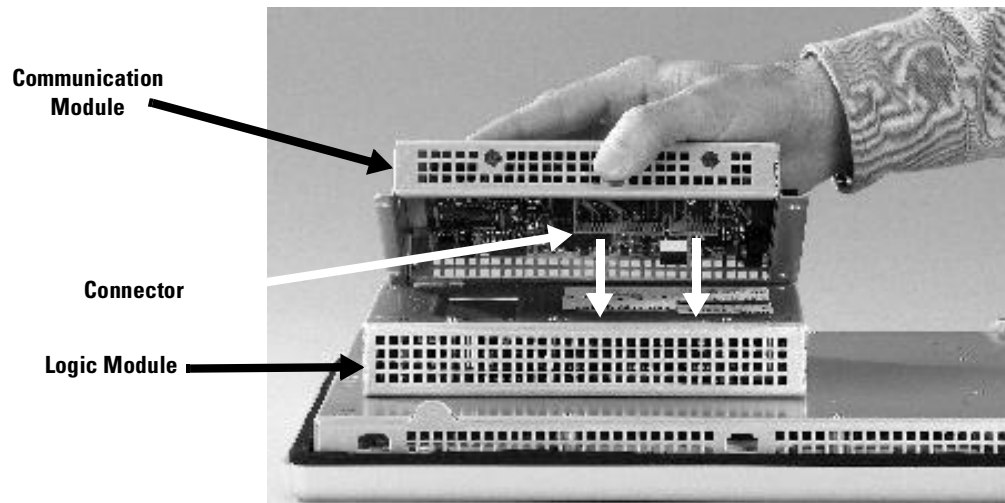
6. Push down on Communication Module until connectors are firmly seated.

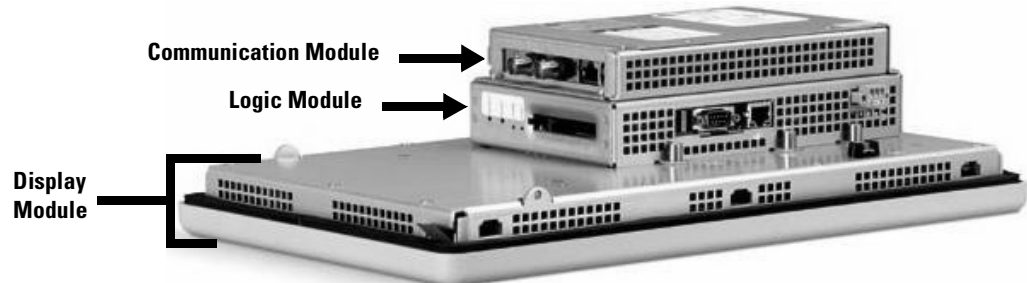7. Tighten the 4 screws that secure the Communication Module to the Logic Module. Tighten screws to a torque of .68 N•m (6-8 in-lb).
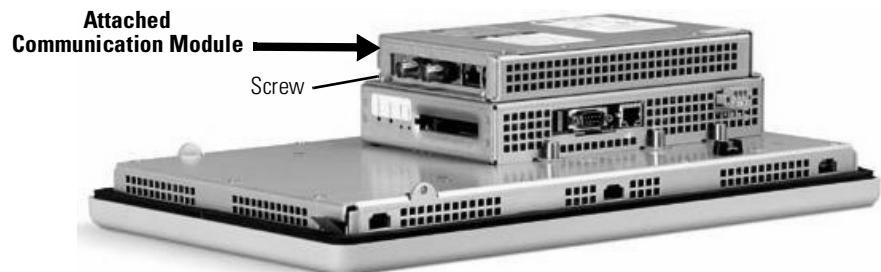
To replace a Communication Module:

1. Disconnect power from the terminal.

2. Disconnect communication cables from the Communication Module.

3. Remove the 4 screws that secure the Communication Module to the Logic Module.

4. Carefully lift the Communication Module away from the Logic Module and set aside.

5. Follow steps 4 - 7 above.

Replacing the Display Module

This sections shows how to replace the Display Module (2711P-RDxxxx). It is necessary to remove the Communication Module from the Logic Module to perform this operation.

Communication Module
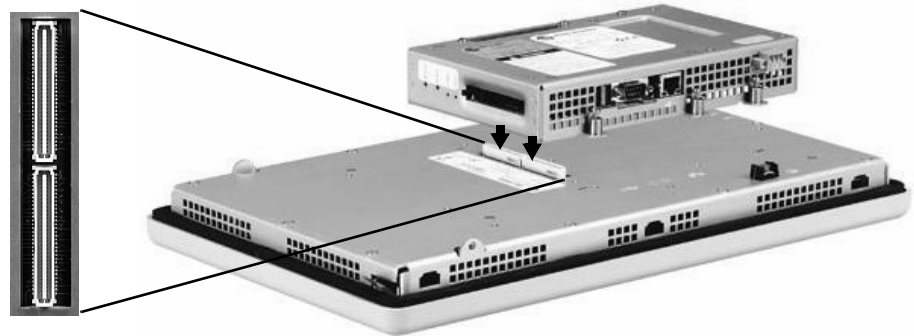
Logic Module

Display Module

1. Disconnect power from the terminal.

2. Remove terminal from panel.

3. Detach the Communication Module (if attached) from the Logic Module by removing the 4 screws.

4. Loosen the 6 captive screws that attach the Logic Module to the Display Module.

Logic Module

Captive screws on top and bottom

5. Carefully lift the Logic Module from the terminal.

6. Set the Display Module aside.

7. Position the new Logic Module over the new Display Module so that the connectors align.

8. Push down on the Logic Module until firmly seated.

9. Tighten the 6 captive screws that secure the Logic Module to the Display Module to a torque of .68 N•m (6-8 in-lb).

10. Attach the Communication Module (if necessary) and tighten the 4 screws to a torque of .68 N•m (6-8 in-lb).

Replacing the Battery

The lithium battery (2711P-RY2032) is used by the real-time clock and static RAM; it is not used for application backup or retention. The clock module has a life expectancy of 2 years without power.

WARNING ⚠	When you connect or disconnect the battery an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding. Replace the battery only with the indicated catalog number.
	For Safety information on the handling of lithium batteries, including handling and disposal of leaking batteries, see Guidelines for Handling Lithium Batteries, publication AG 5-4.
	Do not dispose of battery in a fire or incinerator. Dispose of used batteries in accordance with local regulations.
	Store batteries in a cool, dry environment. We recommend 25 °C with 40…60% relative humidity. You may store batteries for up to 30 days between -45…85 °C, such as during transportation. To avoid possible leakage, do not store batteries above 60 °C for more than 30 days.

To replace the battery:

1. Disconnect power from the terminal.
2. Place the terminal, display side down, on a flat stable surface.
3. Detach Communication Module (if attached) from the Logic Module by removing the 4 screws.
4. Loosen the 6 captive screws that attach the Logic Module to the Display Module.
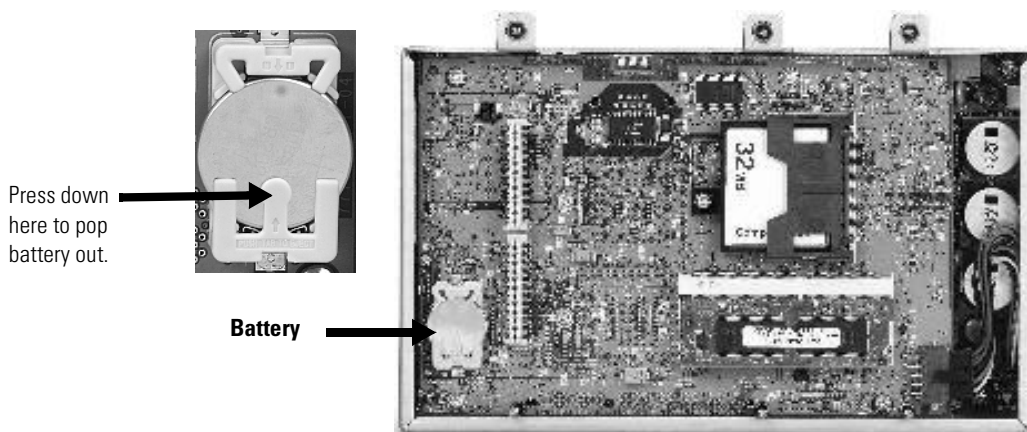

Logic Module

Captive screws
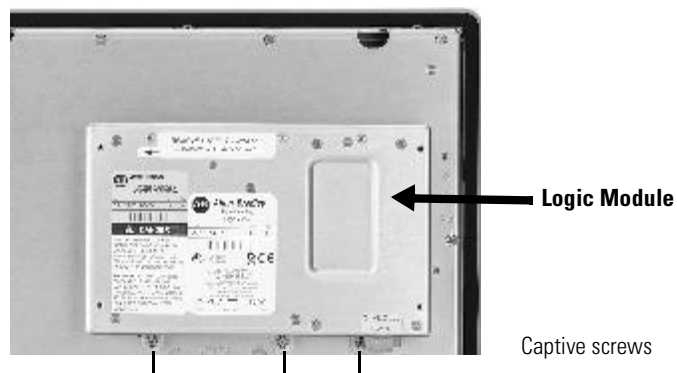
5. Carefully lift the Logic Module away from the terminal and flip over to expose the circuit board.
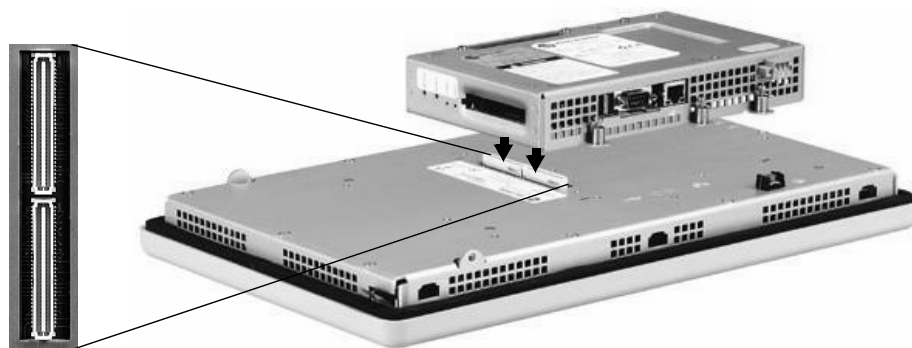

| **IMPORTANT** | Wear a properly ground ESD wristband before touching any of the electronic components in the Logic Module. |

---

6. Locate the battery on the circuit board.

Press down here to pop battery out.

Battery

7. Press down firmly on the middle part of battery retainer clip. The battery will pop out.
8. Slide the new battery under the 3-prong holder and push down.
9. Attach the Logic Module by aligning the 2 connectors on the bottom of the module align with the connectors on the terminal.

10. Push down on the Logic Module until firmly seated.
11. Tighten the 6 captive screws that secure the Logic Module to a torque of .68 N•m (6-8 in-lb).
12. Attach the Communication Module (if necessary) and tighten the 4 screws to a torque of .68 N•m (6-8 in-lb).

Replacing Bezel

Removing Display Module Bezel

It is not necessary to remove the Logic Module or Communication Module before removing the bezel, except for the PanelView Plus 700.

1. Disconnect power from the terminal.

2. Set the terminal, display side down, on a flat stable surface.

IMPORTANT	Wear a properly ground ESD wristband before touching any of the electronic components in the Logic Module.

3. Remove the screws from the back of the Display Module. The number of screws varies for each terminal type.
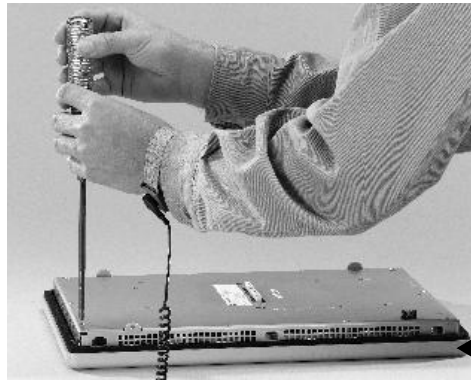
Display Module Bezel

This step applies to Touch Screen only terminals.

4. On touch screen terminals, remove the 2 screws that secure the small metal plate to the back of the Display Module.
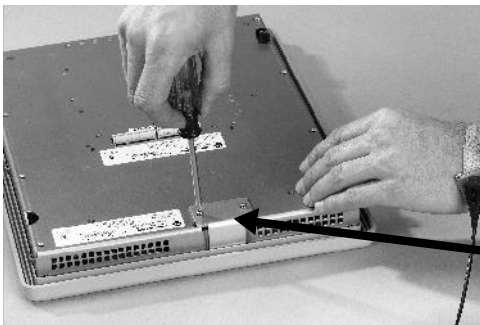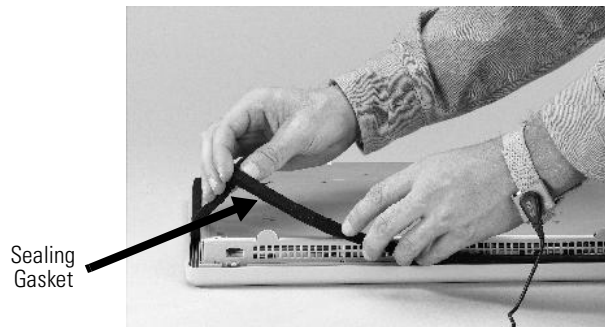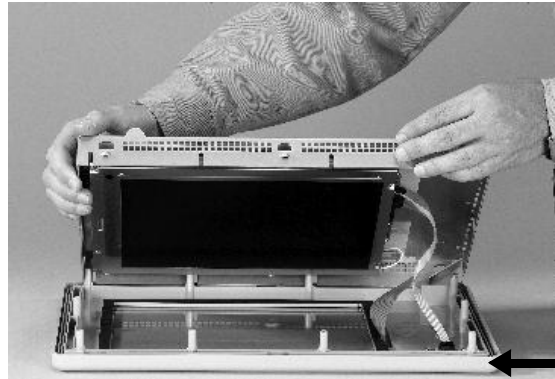
Plate
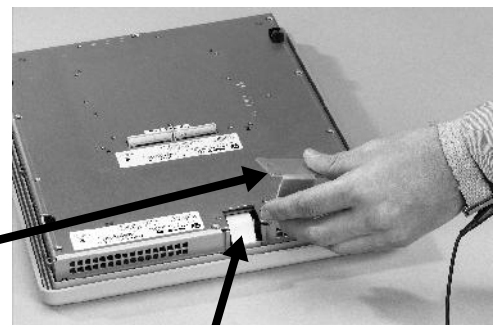
Touch Screen Connector

5. Remove the sealing gasket.

Sealing Gasket

6. Lift the back of the Display Module away from the bezel.

Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.

Display Module Bezel

7. Detach all connectors (maximum of 3). The number of connectors varies by model.
  • IrDa connector
  • Function Key connector
 • Touch Screen connector

8. Set bezel aside.

Replacing Display Module Bezel

1. Make sure new bezel is free of lint and marks before attaching.

2. Attach the following connectors. The number of connectors varies by model.

  • IrDa connector

  • Function Key connector

3. Place the back of the Display Module over the new bezel. Be careful not to pinch any of the cables.

Allow the Touch Screen connector to extend out of the access opening.

4. Attach Touch Screen connector.

5. Replace the sealing gasket (shown in step 5 on page 5-11).

6. Attach screws that secure Display Module to bezel and tighten to a torque of 1.35 - 1.58 N•m (12-14 in-lb).

7. On touch screen terminals, re-attach the small metal plate to the back of the Display Module using 2 screws (shown in step 4 on page 5-11).

Replacing Backlight

This section shows how to replace the backlight for the 700, 1000, and 1250 models. The 1500 does not have a replaceable backlight.

1. Disconnect power from the terminal.

2. Remove Display Module bezel as described on page 5-11.

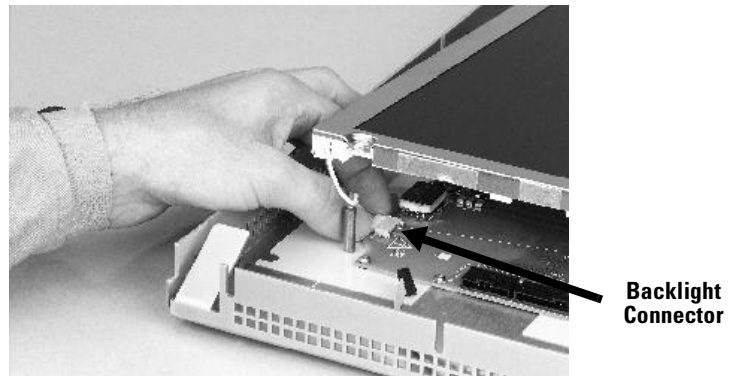**3.** Remove the 4 screws that secure the LCD Display.
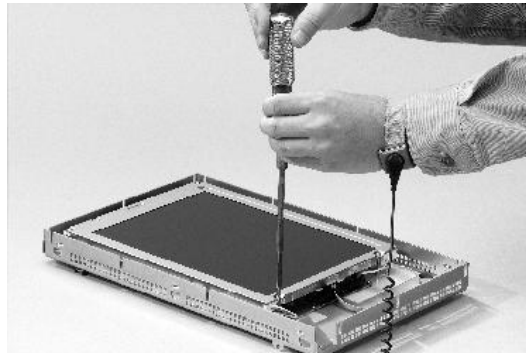
4. Lift the LCD Display and detach the Display Connector from the circuit board. The location of the connector varies by model.
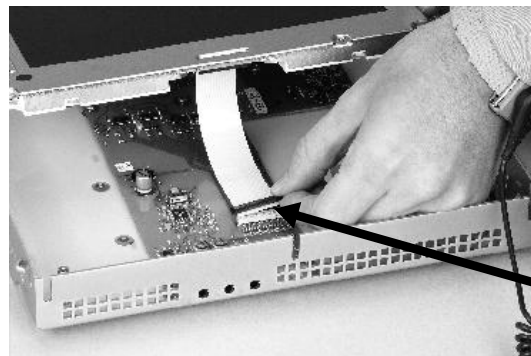
Display Connector

5. Detach the Backlight Connector from the circuit board.
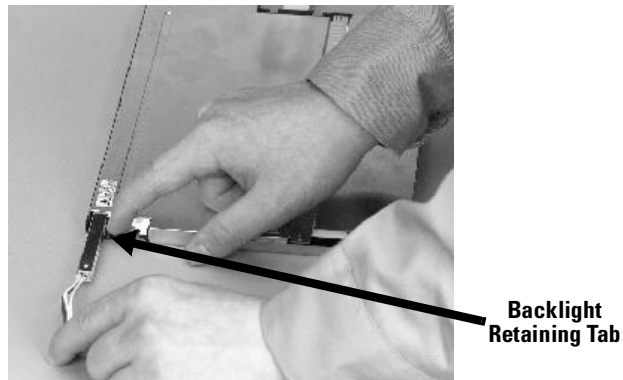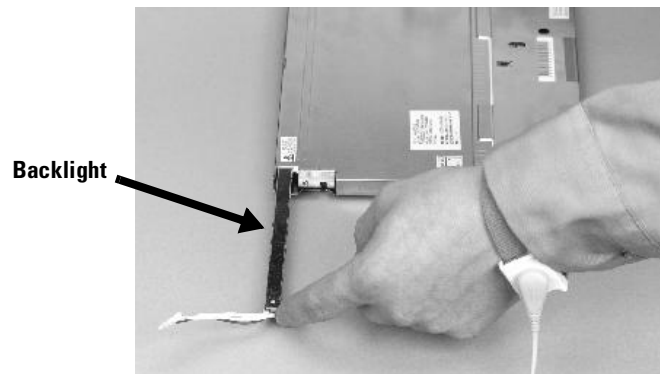
The 1250 has two Backlight Connectors.

Backlight
Connector

For PanelView Plus 700/1000

Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.

6. Press the retaining tab that secures the backlight and then pull out the backlight.

Backlight
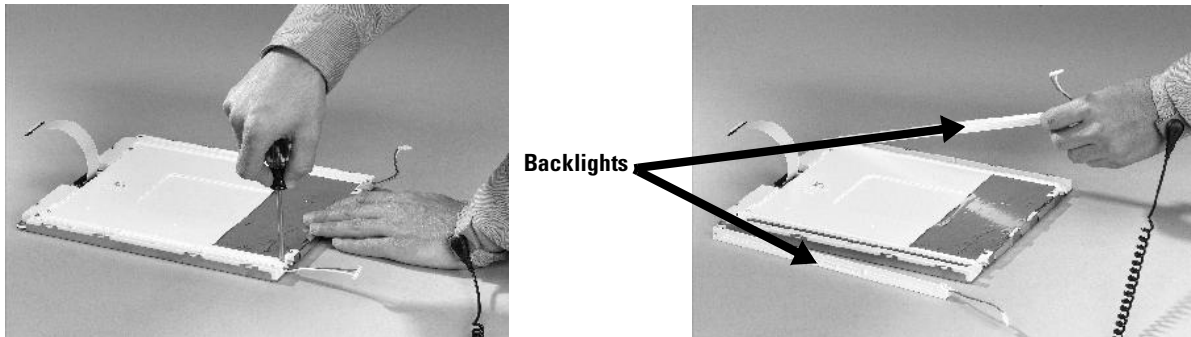Retaining Tab

7. Insert the new backlight.

Backlight

For PanelView Plus 1250 (has 2 Backlights)

Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.

8. Remove the 2 screws that secure each of the two backlights and then remove the backlights.

Backlights

9. Insert the new backlights and then secure each with the 2 screws.

10. Attach the Backlight Connector to the circuit board (shown in step 5 on page 5-14).

11. Attach the LCD Display Connector to the circuit board (shown in step 4 on page 5-13).

12. Secure the LCD Display by attaching the 4 screws. The terminals use different size screws. Use the following chart to tighten the screws.

PanelView Plus	Screw Size	Torque
700	2.5 mm	.68 N•m (6-8 in-lb)
1000/1250	#4	.68 N•m (6-8 in-lb)
1500	#6	.90 - 1.1 N•m (8-10 in-lb)

13. Replace the Display Module bezel as described on 5-12.

Installing the Remote AC Power Supply

Connecting to AC power requires a separate Power Supply (2711P-RSACDIN) that mounts to a DIN Rail. This power supply converts DC power to AC power and has the following electrical input ratings:

- 85…264 V AC (47…63 Hz)

For details on installation, refer to the installation instructions shipped with the power supply.

Removing the Product Label

If you ordered a PanelView Plus terminal with a label, you can remove it and attach your own label.

1. Remove the Allen-Bradley label using your fingers or a tweezers.

2. Clean area with damp cloth and isopropyl alcohol.

3. Remove adhesive backing of OEM label and affix over area where Allen-Bradley label was located.

Installing Keypad Legend Inserts

This section shows how to replace the legend inserts in the PanelView Plus keypad terminals. The legend strips are available as separate catalog numbers (2711P-RFKxx) for each keypad version of the terminals. One side of the legend strips have the default key legends and the other side is blank for creating custom legends.

The legend inserts for the bottom rows of function keys (F1 - Fxx) are accessible from the back on the unit and can be replaced with the terminal mounted in the enclosure.

To replace the F1-Fxx function key legends:

1. From the rear of the unit, pull the legend strips out from the slots on the lower side of the terminal.

2. Slide the new inserts into the same slots until only the end tab is visible.

The legend inserts for the K1-Kxx function keys on the left and right side of the display are accessible when the Display Module bezel is removed.

To replace the K1-K22 function key legends:

1. Remove power from the terminal.

2. Remove the Display Module bezel as described on page 5-11.

3. Pull the legend inserts out from the slots on the lower part of the bezel.
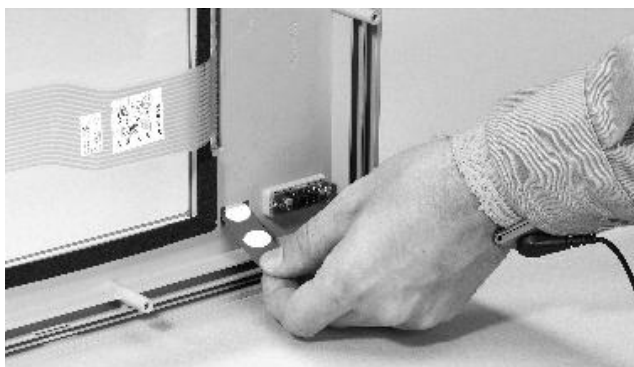
4. Insert and slide the new legend strips into the same slots until only the end tab is visible.

5. Replace the Display Module bezel as described page 5-12.

Using an External Compact Flash Card

The PanelView Plus terminal has a Compact Flash Card slot which supports Type I/II Compact Flash cards. The cards (2711P-RCx) are available in different memory sizes.

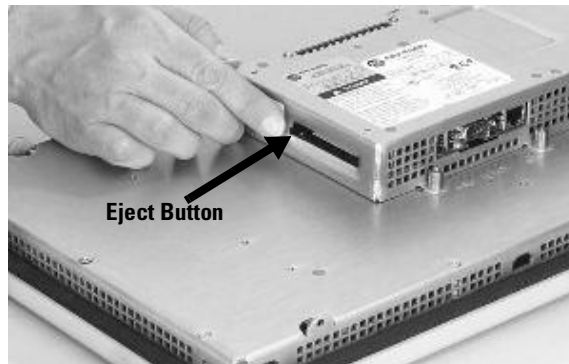The card slot is located on the side of the Logic Module.

Compact Flash Card Slot
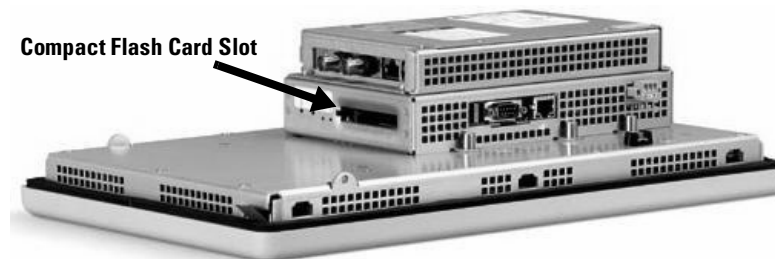
Inserting a Compact Flash Card

1. Insert the card in the Compact Flash Card slot of the terminal until firmly seated.
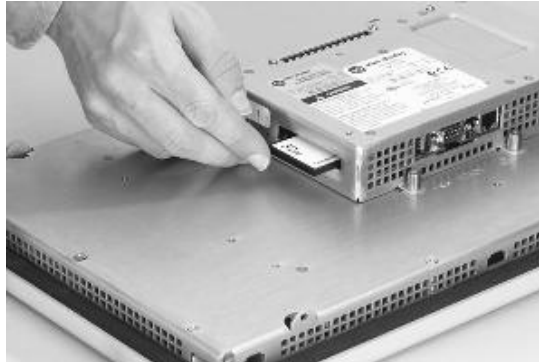
Removing a Compact Flash Card

1. Press the Eject button above the card slot. When the button pops out, press it again to release the card.

Eject Button

2. Remove the card from the card slot.

Terminal Connections

Chapter Objectives

This chapter provides network and device connections for the PanelView Plus terminals, including:

- wiring and safety guidelines
- Logic Controller Cable Charts
- USB Ports
- Serial connections on base unit
- Ethernet (onboard communications)
- DH485/DH+/RIO Communications Module

Wiring and Safety Guidelines

Use publication NFPA 70E, Electrical Safety Requirements for Employee Workplaces when wiring the PanelView Plus terminals. In addition to the NFPA general guidelines:

- route communication cables to terminal by a separate path from incoming power:

| **IMPORTANT** | Do not run signal wiring and power wiring in the same conduit. |

- where power and communication lines must cross, they should cross at right angles. Communication lines can be installed in the same conduit as low level DC I/O lines (less than 10 volts).
- shield and ground cables appropriately to avoid Electromagnetic Interference (EMI).Grounding minimizes noise from EMI and is a safety measure in electrical installations.
- use the National Electric Code published by the National Fire Protection Association as a source for grounding.

Logic Controller Cable Charts

Refer to the following charts for a summary of PanelView Plus terminal connections to controllers and network interface modules.

Runtime Communication Cables - To Controllers

Protocol	PanelView Plus Comm Port	Cables: PanelView Plus to Processor				
		SLC-500, 5/01, 5/02 CH1 RJ45 (DH-485)	SLC-5/03, 5/04, 5/05 CH0 (9-pin RS-232) (DF1 or DH-485)	SLC 5/03 CH1 (RJ45) (DH-485)	SLC 5/04 CH1 (DH+)	SLC 5/05 CH1 (ENET)
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) PanelView Plus 700 -1500	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	N/A	N/A	N/A
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) PanelView Plus 700 -1500	use AIC+ Module (1761-NET-AIC) Connect to Port 1 or 2	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	use AIC+ Module (1761-NET-AIC) Connect to Port 1 or 2	N/A	N/A
DH-485 xxx6xx	DH-485 Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	1761-CBL-AS03 (10ft/3m) 1761-CBL-AS09 (30ft/9m)	use AIC+ Module (1761-NET-AIC) Connect to Port 3	1761-CBL-AS03 (10ft/3m) 1761-CBL-AS09 (30ft/9m) **Note 1**	N/A	N/A
EtherNet/IP (any)	EtherNet/IP Comm Port PanelView Plus 700 -1500	N/A	Use 1761-NET-ENI Module with Ethernet cable	N/A	N/A	2711P-CBL-EX04 Ethernet Crossover Cable **Note 2*
Remote I/O xxx6xx	Remote I/O Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	SLC 5/02 only use 1747-SN with shielded twinaxial cable	use 1747-SN Module with shielded twinaxial cable			
DHPlus xxx6xx	DH+ Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	N/A	N/A	N/A	shielded twin axial cable	N/A

Note 1: 2711P-CBL-EX04 can be used for direct connections only

Note 2: 1784-CP14 can be used for direct connections only

IMPORTANT   You must configure the Channel 0 Port of the SLC 5/03, 5/04, 5/05 controller for DH-485 communications using the RSLogix 500 (AI500 software).

		Cables: PanelView Plus to Processor		
Protocol	**PanelView Plus Comm Port**	**PLC-5, PLC-5C, PLC-5E CH0 (25-pin RS-232) (DF1)**	**ControlLogix CH0 (9-pin RS-232) (DF1)**	**MicroLogix 1000, 1200, 1500LSP CH0 (8-pin Mini DIN) (DF1 or DH-485)**
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) PanelView Plus 700 -1500	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m) (9-to-25 pin adapter required)	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m) (null modem not required) *** See Note 1 ***
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) PanelView Plus 700 -1500	N/A	N/A	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m) (null modem not required) *** See Note 1 ***
DH-485 xxx6xx	DH-485 Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	N/A	N/A	use AIC+ Module (1761-NET-AIC) Connect to Port 3
EtherNet/IP (any)	EtherNet/IP Comm Port PanelView Plus 700 -1500	to PLC-5E with Ethernet cable	use 1756-ENET or 1788-ENBT Module with Ethernet cable	Use 1761-NET-ENI Module with Ethernet cable
Remote I/O xxx6xx	Remote I/O Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	shielded twinaxial cable	use 1756-DHRIO Module with shielded twinaxial cable	N/A
DHPlus xxx6xx	DH+ Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	shielded twinaxial cable	use 1756-DHRIO Module with shielded twinaxial cable	N/A

Note 1: AIC+ Module recommended for isolation purposes when PanelView and controller are not on same power supply

|		Cables: PanelView Plus to Processor		
Protocol	**PanelView Plus Comm Port**	**MicroLogix 1500LRP CH1 (9-pin RS-232) (DF1 or DH-485)**	**CompactLogix CH0 (9-pin RS-232) (DF1 or DH-485)**	**FlexLogix CH0 (9-pin RS-232) (DF1)**
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) PanelView Plus 700 -1500	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)		
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) PanelView Plus 700 -1500	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)		N/A
DH-485 xxx6xx	DH-485 Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	use AIC+ Module (1761-NET-AIC) Connect to Port 3		N/A
EtherNet/IP (any)	EtherNet/IP Comm Port PanelView Plus 700 -1500	use 1761-NET-ENI Module with Ethernet cable		use 1788-ENBT Module with Ethernet cable
Remote I/O xxx6xx	Remote I/O Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	N/A	N/A	N/A
DHPlus xxx6xx	DH+ Communication Port PanelView Plus 700 -1500 2711P-xxx6xx	N/A	N/A	N/A

		Cables: PanelView Plus to Communication Adapters				
		1747-AIC	**1761-NET-AIC**			
Protocol	**PanelView Plus Comm Port**		**Port 1 (9-pin)**	**Port 2 8-pin Mini DIN()**	**Port 3 (DH485)**	**1761-NETDNI or 1771-NET-ENI**
DF1 (any)	RS-232 Comm Port (9-pin) PanelView Plus 700 -1500 2711P-xxx4xx	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC12 (32ft/10m)	N/A	2711-NC21 (16ft/5m) 2711-NC12 (32ft/10m)
DH-485 Serial (any)	RS-232 Comm Port (9-pin) PanelView Plus 700 - 1500	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC12 (32ft/10m)	N/A	
DH-485 xxx6xx	DH-485 Communication Port PanelView Plus 700 - 1500 2711P-xxx6xx	1761-CBL-AS03 (10ft/3m) 1761-CBL-AS09 (30ft/9m) or wired	N/A		DH-485 Cable	N/A

USB Ports

The PanelView Plus terminal has two USB ports. The Windows CE operating system currently only supports standard USB keyboard and mouse devices (that is, HID devices) with native device drivers. It also supports some USB printers that have Printer Control Language (PCL) capabilities. A vendor-specific Windows CE driver will be required for all other USB devices.

The USB device can plug into either one of the two USB ports on the PanelView Plus terminal. While the USB interface is designed to be connected and disconnected under power, the Windows CE operating system will not automatically recognize any changes made under power.

USB Connector Pinout

USB Ports
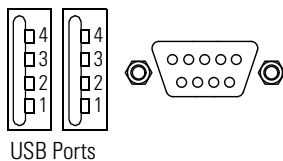
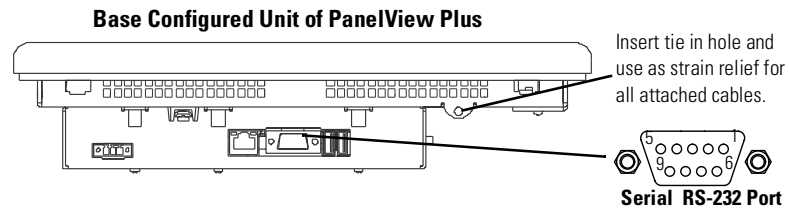| Pin	Signal
1	USBVCC
2	USBD-
3	USBD+
4	USB-GND

WARNING

If you connect or disconnect the USB cable with power applied to the PanelView Plus or the serial device on the other end of the cable, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

Serial Connections

The base configured unit of the PanelView Plus terminal has a multi-purpose serial RS-232 port that supports:

- DH-485 communications through a serial connection
- DF1 full duplex communications with controllers using direct connections or modem connections
- third party point-to-point communications
- application uploads/downloads
- printing

The serial port on the base configured unit of the PanelView Plus terminal is a 9-pin, male, RS-232 connector. The table below shows the pinout descriptions for this port and how these pins map to the serial ports on the controllers.

Base Configured Unit of PanelView Plus

Insert tie in hole and use as strain relief for all attached cables.

Serial RS-232 Port

PanelView Plus RS-232 Port 9-pin DCE		SLC 9-pin	PLC 25-pin	MicroLogix/ DNI 8-pin DIN
1				
2	RXD →	2	3	4
3	← TXD	3	2	7
4	← DTR	4	20	
5	← COM →	5	7	2
6	DSR →	6	6	
7	← RTS	7	4	
8	CTS →	8	5	
9				
Connector Shell	Chassis Gnd			

Pins 1 - 9 are electrically isolated.

The maximum cable length for serial communications is 15.24 meters (50 feet).

WARNING

If you connect or disconnect the serial cable with power applied to the PanelView Plus or the serial device on the other end of the cable, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

Modem Connection

Wire or radio modem communications is possible between the PanelView Plus and controller. Each modem must support full duplex communications. Refer to your modem user manual for details on settings and configuration.
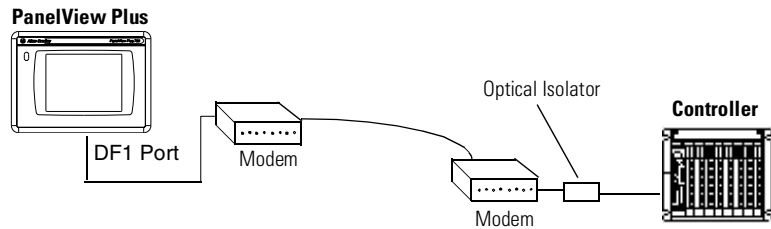
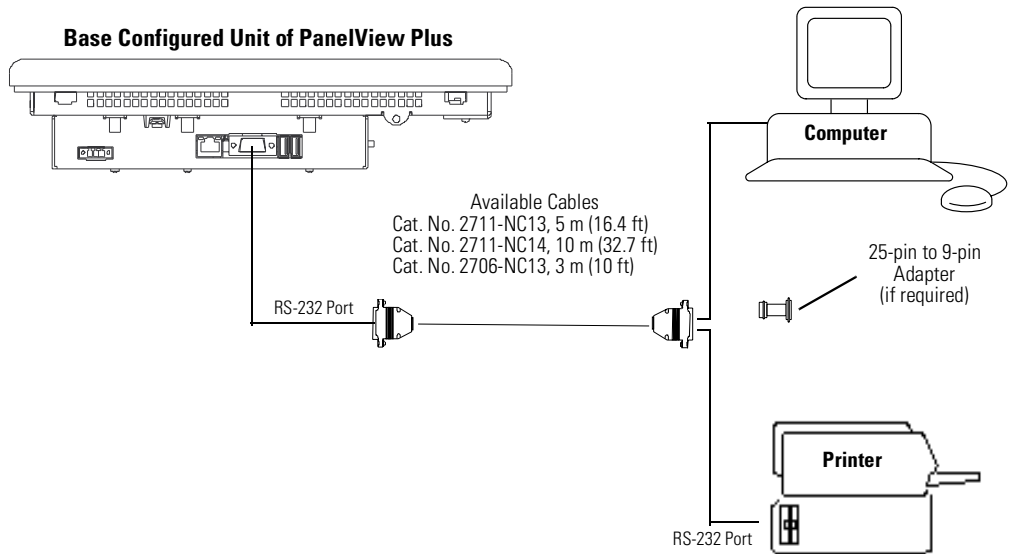

Constructing a Null Modem Cable

To construct a null modem cable, refer to the following pinout:

9-pin		25-pin	9-pin
3		3	3
2		2	2
5		7	5
1		8	1
4		20	4
6		6	6
8		5	8
7		4	7
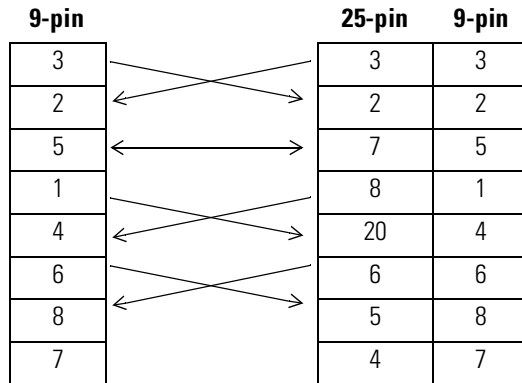
Computer or Printer Connections

The RS-232 serial port on the base configured unit of the PanelView Plus terminal supports:

- application uploads/downloads using a direct connection
- or printing

Base Configured Unit of PanelView Plus

Available Cables
Cat. No. 2711-NC13, 5 m (16.4 ft)
Cat. No. 2711-NC14, 10 m (32.7 ft)
Cat. No. 2706-NC13, 3 m (10 ft)

RS-232 Port

Computer

25-pin to 9-pin
Adapter
(if required)

Printer

RS-232 Port

PanelView Plus Port (DCE)
9-pin male

		Printer/Computer Port (DTE) with Handshaking 9-pin male
1 NC		1 DCD
2	RXD	2 RXD (Data Receive)
3	TXD	3 TXD (Data Transmit)
4 NC		4 DTR
5	COM	5 COM
6 (pulled high to +12V)	RTS	6 DSR
7	RTS	7 RTS
8	CTS	8 CTS
9 NC		9 NC

Upload/Download or Printer Cable without Hardware Handshaking

PanelView Plus Printer Port (DCE)
9-pin male

Printer/Computer Port (DTE)
9-pin   25-pin

		9-pin	25-pin
2	RXD	2	3
3	TXD	3	2
5 COM	COM	5	7

Ethernet Connections

The base configured unit of the PanelView Plus terminal has an Ethernet port that supports:
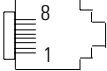
- EtherNet/IP communications
- third party Ethernet communications
- network connections
- application uploads/downloads
- printing

Ethernet Connector

The base unit configured unit of the PanelView Plus terminal has an RJ45, 10/100Base-T connector for EtherNet/IP or Ethernet TCP/IP network communications.

Ethernet Port   Use RS-232 serial port to transfer applications or print.   Insert tie in hole and use as strain relief for all attached cables.
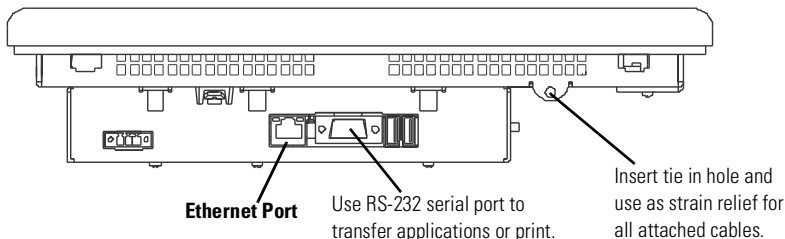
The connector pinout is shown below.

Pin	Pin	Pin Name
RJ45 Connector	1	TD+
	2	TD-
	3	RD+
	4	NC
	5	NC
	6	RD-
	7	NC
	8	NC
	Shield Connection	Chassis Gnd

Use point-to-point, 10/100Base-T cables with cross over pin-outs (such as 2711P-CBL-EX04) when connecting the Ethernet port on the PanelView Plus directly to a logic controller's Ethernet port or a computer 10/100Base-T port. Use standard Ethernet cables when connecting to a switch or hub.

Cables

Category 5 shielded and unshielded twisted-pair cables with RJ45 connectors are supported. If 100 Mbit/second data rates are used, we recommend that you use a shielded cable. The shielded cable will help insure that industrial noise immunity levels are maintained. The maximum cable length between the terminal's Ethernet port and a 10/100Base-T port on an Ethernet hub (without repeaters or fiber) is 100 meters (328 feet). In industrial applications, keep the cable length to a minimum.

WARNING

If you connect or disconnect the Ethernet cable with power applied to the PanelView Plus or any device on the network, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

DH-485/DH+/Remote I/O Module

The PanelView Plus terminal with a DH-485/DH+/Remote I/O Communication Module supports communications with the following networks:

- DH+ networks
- DH-485 networks
- Remote I/O networks

You can communicate with only one network at one time.

Module Connections

Allen Bradley

DH485
1. Earth Ground
2. Shield/Drain
3. Signal Ground
4. Channel B
5. Channel A
6. Termination Resistance

DH+
RIO

Remote I/O	**DH+**
3. Clear	3. Blue
2. Shield/Drain	2. Shield/Drain
1. Blue	1. Clear

LED Indicator
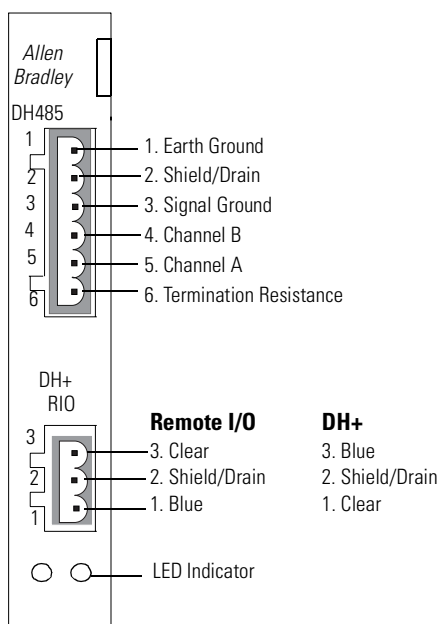
The DH-485/DH+/Remote I/O Module is supplied with 2 ferrites for cables. After installing the communications cable, place the ferrite around the cable close to the Module Connector. The ferrites suppress EMI (Electromagnetic Interference) from the cable.

DH-485 Network Port Wiring

Use these instructions for wiring Belden cable. If you are using standard Allen-Bradley cables, see the Cable section on page 6-2.

Attaching RS-485 Connector to the Communication Cable

IMPORTANT	A daisy-chained network is recommended. We do not recommend the following.
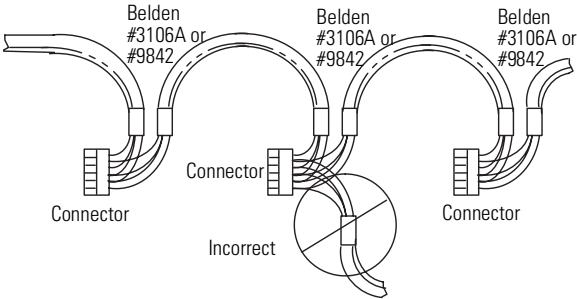
Attach the connector to the Belden #3106A or #9842 Cable as shown below.

Single Cable Connection
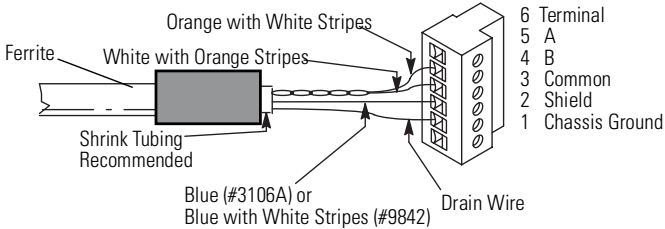
Multiple Cable Connection
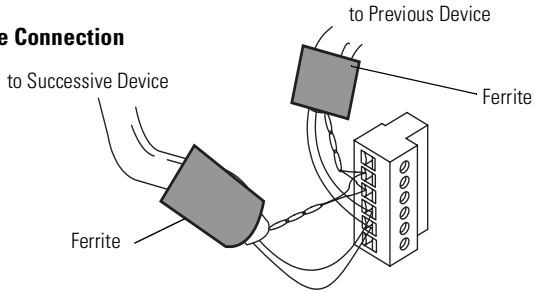
The table below shows connections for Belden #3106A.

For this Wire/Pair	Connect this Wire	To this Terminal
Shield/Drain	Non-jacketed	Terminal 2 - Shield
Blue	Blue	Terminal 3 - (Common)
White/Orange	White with Orange Stripe	Terminal 4 - (Data B)
	Orange with White Stripe	Terminal 5 - (Data A)

DHPlus Network Connections

Use the Belden 9463 twin axial cable (1770-CD) to connect a PanelView Plus terminal to the DH+ link.

You can connect a DH+ link in 2 ways:

- trunk line/drop line - from the drop line to the connector screw terminals on the DH+ connectors of the processor
- daisy chain - to the connector screw terminals on the DH+ connectors on the processor

Follow these guidelines when installing DH+ communication links:

- do not exceed these cable lengths:
  - trunk line-cable length: 3,048 m (10,000 ft)
  - drop-cable length: 30.4 m (100 ft)

  The maximum cable length is determined by baud rate.
- do not connect more than 64 stations on a single DH+ link
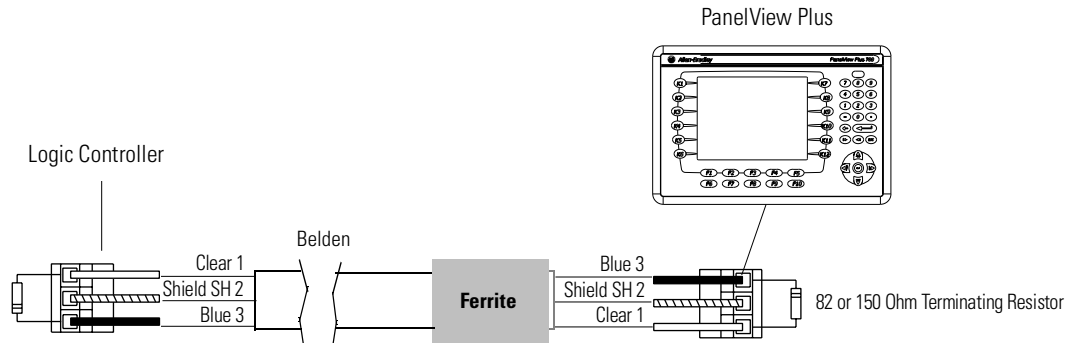
Remote I/O Connections

To connect a PanelView Plus terminal to a Remote I/O scanner, use cable Catalog No. 1770-CD (equivalent to Belden 9463). The maximum cable length (link distance) is determined by the baud rate.

- 2,800 meters (10,000 feet) for 57.6K baud
- 1,400 meters (5,000 feet) for 115.2K baud
- 700 meters (2,500 feet) for 230.4K

See Programmable Controller Wiring and Grounding Guidelines, Publication 1770-4.1. The user manual for the I/O scanner module also provides cabling information.
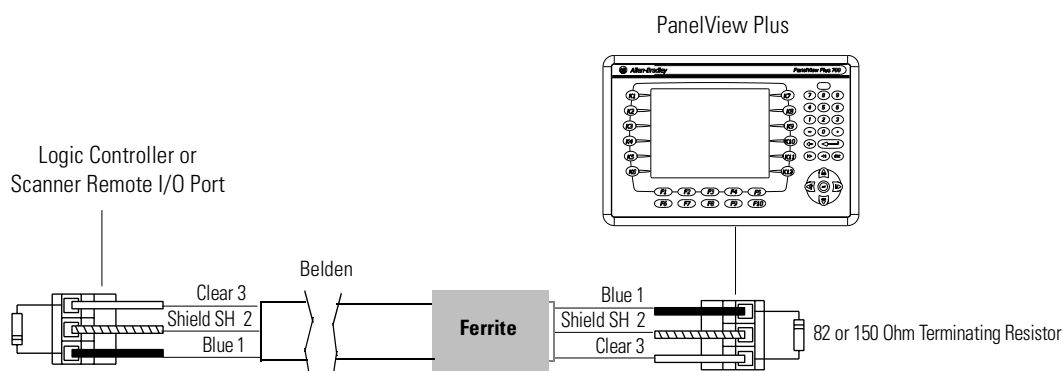
The orientation of the Remote I/O Connector on the PanelView Plus is reversed from the PLC Scanner connector. However, the polarity is the same as the scanner card connection to the SLC.

Transferring files

Chapter Objectives

This chapter covers information on:

- transferring applications using a Compact Flash Card

IMPORTANT	For details on transferring .MER applications from a computer to the PanelView Plus terminal, refer to RSView Studio help or documentation.

Using a Compact Flash Card

The PanelView Plus terminal allows you to copy or load files using a compact flash card from RSView ME. To copy files in RSView ME using a compact flash card, see page 4-17.

Troubleshooting and Maintenance

Chapter Objectives

This chapter provides information on how to isolate and correct common operating problems with system components.

- general troubleshooting
- troubleshooting individual components (display, touch screen, keypad, attached keyboard or mouse)
- Ethernet
- startup
- advanced troubleshooting
- system error messages
- system identification errors
- restarting in configuration mode
- startup problems
- restarting in safe mode
- LED indicators
- firmware upgrade
- cleaning the display window

General Troubleshooting

This section provides a list of general troubleshooting steps to follow when trying to isolate problems.

- ***Check for adequate power***. The PanelView Plus terminal requires 24V dc at 1.5 A minimum. An under-powered unit could result in unpredictable behavior.

  The AC Power Supply (2711P-RSACDIN) meets Class 2/SELV requirements, and is approved for the PanelView Plus terminal.

- ***Check LED indicators on the Logic Module***. Is power on? Is the unit attempting to start? The red LED should be Off, except for a few brief flashes, and the green LED should be On. If the LEDs remain Off, the power supply or Logic Module has failed. Check the power cable. Replace the Logic Module if the power is within range; if not, replace the power supply.

If the terminal powers up and stops during startup, the state of the Logic Module LEDs indicate the following:

Blinking red LED indicates a recoverable error.

Red LED	Green LED	Description
Blinking	Off	Last firmware download failed. Repeat firmware download.
Blinking	Blinking	EBC boot loader firmware failed or is missing. Load new EBC firmware
Blinking	ON	Windows CE OS firmware failed or is missing. Load new CE OS firmware.

Solid red LED indicates a non-recoverable and fatal error.

Red LED	Green LED	Description
On	Off	Fatal hardware error occurred in Logic Module. Replace the Logic Module.
On	Blinking	Fatal hardware error occurred in Display Module. Replace the Display Module.

- *Check messages at startup for errors*. Record any error message and refer to the System Error Message table on page 8-9 for troubleshooting.

- *Check voltages and temperatures*. From Configuration Mode, open Terminal Settings>System Information>Terminal Information.

  - Battery Voltage should be at least 2.75 V. Replace the battery if less than 2.75 V.

  - Display Temperatures should be less than 55 °C. The CPU temperature should be less than 95 °C.

    If the temperatures are higher, check for obstructed airflow through the chassis and attempt to moderate the ambient temperatures within the enclosure and surroundings.

- *Check System Event Log for errors or unexpected reboots.* From Configuration Mode, open Terminal Settings>System Event Log.

- *Use Extended Diagnostics to perform more extensive hardware testing at startup*. From Configuration Mode, open Terminal Settings>Startup Tests>Select Tests.

Select one or more of the tests you want to run. Enable extended diagnostics and set the iteration or repeat count.

Restart the PanelView Plus terminal. The Serial Port test requires a loopback connector with the following connections.

DB9 Connector (female)

```
1 ──── N/C
2 ──── RX  ─┐
3 ──── TX  ─┘
4 ──── DTR ─┐
5 ──── N/C  │
6 ──── DSR ─┘
7 ──── RTS ─┐
8 ──── CTS ─┘
9 ──── N/C
```
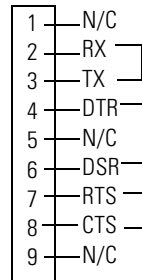
Extended Diagnostics are performed at every startup until disabled. A failure will momentarily halt startup and display an error message.

Troubleshooting Components

This section provides tips on how to isolate problems with individual components of the PanelView Plus terminal, including the display, touch screen, keypad, attached keyboard or mouse.

Display Problems

This section provides tips on how to isolate problems with the Display.

- *Check the brightness setting of the Display Module*. Is the display brightness dim or unreadable?

  From Configuration Mode, open Terminal Settings>Display Intensity.

- *Check the Screen Saver settings*. Is the backlight turning off or dimming the display unexpectedly.

  From Configuration Mode, open Terminal Settings>Display>Screen Saver.

- *Check the LED indicators on the Logic Module*. Do they flash during startup? Is power on and is the unit attempting to start?

- *Check the Display temperature.* From Configuration Mode, open the Terminal Settings>Display>Display Temperature screen. Poor contrast and slow screen updates will occur if the Display is too cold or too hot.

- **Check the startup messages**. Is the Display operating at all and do the startup messages appear? Record any error message and use the System Error Message table on page 8-9 for troubleshooting.

- **Replace the Display Module if all other attempts do not resolve problem**. If replacing the Display Module corrects the problem, then the Display was not functioning properly.

Touch Screen Problems

This section provides tips on how to isolate problems with the Touch Screen.

- **Check the catalog number of the unit**. Verify that your terminal has a touch screen by looking at the label on the Display Module.

- **Perform a calibration of the touch screen**. From Configuration Mode, open Terminal Settings>Input Devices>Touch Screen>Calibration. Follow the directions.

  The calibration requires 4 user screen touches. When the touches do not converge to a satisfactory calibration, you are asked repeatedly for additional screen touches and the calibration process never terminates. A touch screen that does not calibrate is not present or not functioning properly. Replace the bezel or the Display Module.

- **Check the Cursor Enable setting for the touch screen**. Is the cursor visible? From Configuration Mode, open Terminal Settings>Input Devices>Touch Screen>Cursor.

- **Check the pointer input by attaching a USB mouse**. If the mouse works, but the touch screen does not, then the touch driver or touch screen is not functioning properly. If both the mouse and the touch screen are not working, then it is an application problem.

- **Does touching or dragging on the screen appear to work?** If yes, even if incorrectly, the touch screen is present and working but requires calibration.

- **Replace Bezel or Display Module if all other attempts do not resolve the problem**. If replacing the Display Module or bezel corrects the problem, then the touch screen was not functioning properly.

Keypad Problems

This section provides tips on how to isolate problems with the Keypad:

- ***Check Multi-Key/Hold-Off settings***. From Configuration Mode, open Terminal Settings>Keypad>Keypad Settings.

  Is the Hold-Off Delay longer than expected, or are multiple key presses being held by Multi-Key Lockout? Check all configurable settings.

- ***Check key input by attaching a USB keyboard***. If the keyboard works, but the keypad does not, then the keypad driver or keypad is not working. If both the keypad and keyboard are not working, then the problem may be the application.

- ***Replace the Display Module if all other attempts do not resolve problem***. If replacing the Display Module corrects the problem, then the keypad was not functioning properly.

Problems with Attached Mouse

This section provides tips on how to isolate problems with an attached Mouse.

- ***Check the Cursor Enable setting***. Is the cursor visible? From Configuration Mode, open Terminal Settings>Input Devices>Touch Screen>Cursor. Also check mouse settings.

- ***Check the USB cable and connection***. Detach and then re-attach the mouse. Cycle power to the terminal.

- ***Is the mouse a USB composite device?*** If the mouse is a keyboard/mouse composite device, then try a stand-alone USB mouse.

- ***Replace the USB mouse***. Try a different model or manufacturer. Check Knowledgebase at the http://support.rockwellautomation.com site for a list of USB devices that are compatible with the PanelView Plus terminal. If attaching a new mouse resolves the problem, then the old mouse was not working or non-compliant.

Problems with Attached Keyboard

This section provides tips on how to isolate problems with the Keyboard:

- ***Check for enabled Alt-Ctrl keys.*** From Configuration Mode, open Terminal Settings>Input Devices>Keyboard>Keyboard Settings.

  Are the keys enabled as expected? Check all configurable settings in Keyboard Properties.

- ***If keypad is present, check input using the keypad***. If the keypad works, but the keyboard does not, then the keyboard driver or keyboard is probably not working. If both the keypad and the keyboard are not working, then it is probably an application problem.

- ***Check the USB cable and connector***. Detach and re-attach the keyboard. Insure a good connection. Cycle power to the terminal.

- ***Is the keyboard a USB composite device?*** If the keyboard is a keyboard/mouse composite device, then try a stand-alone USB keyboard.

- ***Replace the USB keyboard***. Try a different model or manufacturer. Check Knowledgebase at the http://support.rockwellautomation.com site for a list of USB devices that are compatible with the PanelView Plus terminal. If a new keyboard resolves the problem, then the old keyboard was probably non-compliant.

Ethernet Problems

- ***Check LED indicators at the Ethernet connector***. The green LED indicates a communications link and should be ON. The amber LED indicates data activity and should be flashing. Verify that there is a connection to the hub?

- ***Check cable connections and quality of cable.*** Check for good connections and things such as quality, crimping, hub connection, and uplink ports.

- ***Check IP Address of the Built-In Ethernet Controller***. From Configuration Mode, select Terminal Settings>Networks and Communications>Network Connections>Network Adaptors.

  If DHCP is enabled, the device expects a valid IP address to be acquired within a several seconds after startup. The TCP/IP protocol automatically assigns 169.254.nnn.nnn when it fails to acquire an IP address from the server. In general, an IP address that begins with 169 will not support a network connection.

  A bad Ethernet connection and the absence of a valid IP address are typically reported in a Communications error message box with the Winsock critical error 10065 - "No route to host".

- ***Check for conflicting IP addresses***. If DHCP is not enabled, make sure the IP address you specify is not in conflict with the address of another device on the network.

- ***Check the Device Name of the PanelView Plus terminal***. Do not allow devices on the network with same (host) name. From Configuration Mode, open Terminal Settings>Communications and Networks>Network Connections>Device Name.

- ***Contact your Network Administrator to check peer or server settings***. The "other side" of the Ethernet connection may also be a problem.

Advanced Troubleshooting

1. Take advantage of alternate connectivity - mouse versus touch screen, keyboard versus keypad, serial communications, and alternate Ethernet connections.

2. Know useful keyboard shortcuts so that you can navigate around the system without a mouse or touch screen.

3. From Configuration Mode, select Terminal Settings>System Event Log to check the event log. Look for error conditions or reasons for unexpected reboots.

4. Check the configuration settings in Configuration Mode for incorrect settings.

5. Most importantly, general troubleshooting thoroughness means getting answers to questions such as:
   - Does the failure always happen? Is it repeatable?
   - Does the failure happen at bootup or some other time? Is there a set of actions that reveal the problem?
   - Does the failure occur on just one terminal or on multiple machines? If more than one machine, what do they have in common? If not all machines, then what is different between machines that fail and those that don't?
   - What appears on the screen, the LED indicators?
   - Lastly, and most important; did everything work until recently? If so, what changed?

System Error Messages

The following table provides a list of system error messages that may display on startup.

Error Number	Displayed Message	Description
1	RAM Test	POST RAM Test failure
23	Internal CF	Internal Compact Flash Card access failure
25	EXE Valid	System firmware is incompatible with the boot loader
30	Watchdog Test	POST Watchdog Test failure
31	Stuck Key	POST Stuck Key Test failure
31.5	Stuck Touch	POST Stuck Touch Test failure
32	Battery Test	POST dead battery failure
33.5	NVRAM Access	Non-volatile memory access failure
34	Display EEPROM	Display Module EEPROM data is corrupted
34.5	Display Temp	Display Module over-temperature failure
35.5	CPU Temp	Processor over-temperature failure
40	EXE Check	System firmware is missing or corrupt
50	External CF	External Compact Flash card access failure
71	Eboot HW Test	Eboot failure

System Identification Errors

The error messages in this section appear on bootup if incorrect or invalid components are used with the PanelView Plus terminal.

- The following dialog appears if a VersaView CE Logic Module is attached to a PanelView Display Module or a PanelView Plus Logic Module is attached to a VersaView CE Display Module. It is recommended that you use a VersaView CE Display Module with a VersaView CE Logic Module and a PanelView Plus Display Module with a PanelView Plus Logic Module. This is a warning allowing you to continue to operate.

> **PanelView Plus/VersaView CE Identity Verification**   `OK` `×`
>
> ⚠ The name on the Display Module does not match the name of the Logic Module. It is suggested that the names should match.
>
> Press OK to continue.
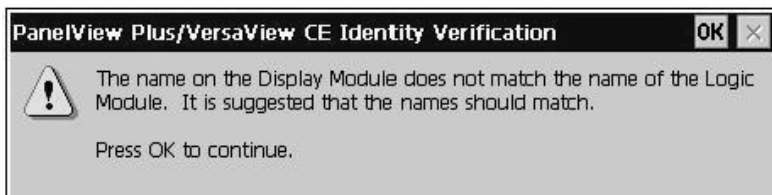
- The following dialog appears if the PanelView Plus Logic Module contains a 6189-RWx Internal Compact Flash card for the VersaView CE terminal.

> **PanelView Plus/VersaView CE Identity Verification**   `OK` `×`
>
> ⚠ Cannot convert PanelView Plus Logic Module to VersaView CE Logic Module. Please install PanelView Plus Compact Flash card (2711P-RWx) in internal slot.
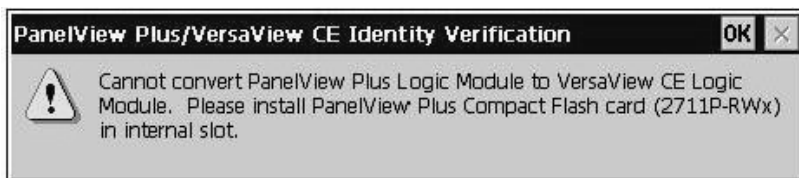
After pressing OK, you will be asked to power off the terminal and insert a valid 2711P-RWx Internal Compact Flash card for the PanelView Plus terminal.

- The following dialog appears if the VersaView CE Logic Module contains a 2711P-RWx Internal Compact Flash card for the PanelView Plus terminal.
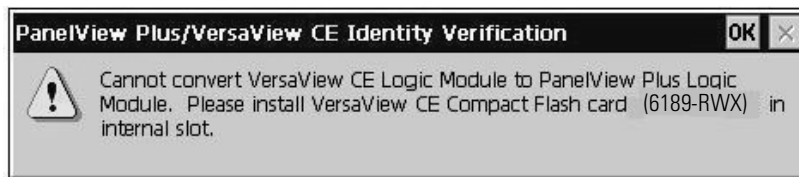
> **PanelView Plus/VersaView CE Identity Verification**   `OK` `×`
>
> ⚠ Cannot convert VersaView CE Logic Module to PanelView Plus Logic Module. Please install VersaView CE Compact Flash card (6189-RWX) in internal slot.

After pressing OK, you will be asked to power of the terminal and insert a valid 6189-RWx Internal Compact Flash card for the VersaView CE terminal.

- The following dialog appears if the Internal Compact Flash in the PanelView Plus Logic Module is corrupt or invalid. This is a fatal error
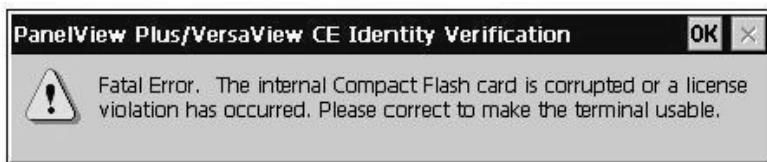
After pressing OK, you will be asked to power of the terminal and insert a valid 6189-RWx Internal Compact Flash card.

Restarting in Configuration Mode

If the PanelView Plus is configured to run an RSView ME .mer application and you need to enter configuration mode, use the following procedure.

To enter Configuration Mode while an application is running:

- press the **Goto Configuration Mode** button on the application screen

To enter Configuration Mode at startup:

1. On a Keypad terminal, hold down the Shift key.

   On a Touch Screen terminal, tap the screen multiple times.

TIP	Begin pressing or tapping when the startup messages have completed and when the first cursor appears.

   The following screen appears.
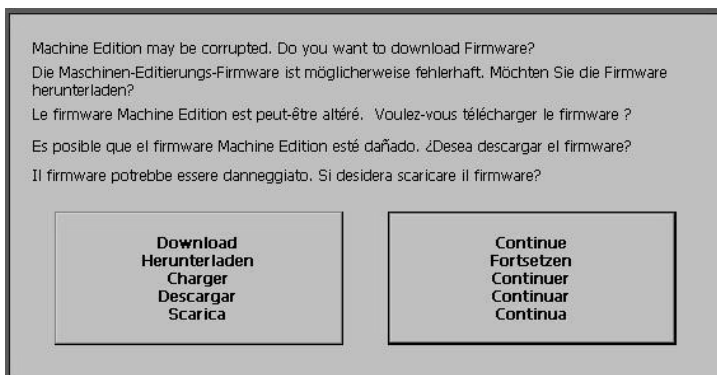
2. Press the **Continue** button to access the Configuration Mode screen.

If you are unable to enter confguration mode even after pressing the Continue button, the firmware may be corrupted. Reload the firmware. See page 8-13.

Startup Problems

If the PanelView Plus terminal does not enter Configuration Mode on startup, then reload the firmware. See page 8-13 for details.

If the application does not start, there may be a problem with the .mer RSView Machine Edition file. Check for a startup screen and compatible version.

Restarting in Safe Mode

Safe Mode is a diagnostics mode where the terminal is reduced to a known state that permits recovery from a configuration or application problem. Safe Mode ignores all user changes to the system and avoids any problems that are due to interactions with end-user software or changes. Once the system is running in Safe Mode, you can repair the offending applications or changes that caused the problem.

When the PanelView Plus terminal is restarted in Safe Mode, the following occurs:

- The last configuration or the default configuration is used. The last configuration is restored at the next reboot unless the default configuration is saved (flushed), in which case it becomes the new Persistent Registry.
- Depending on the state of the system, the touch screen may be calibrated at startup.

To restart in Safe Mode:

The switches that control Safe Mode are located on the right side of the Logic Module above the Compact Flash card slot.

- Insert a thin probe into the hole marked DEFAULT and press the switch, then;
- Insert the probe into the hole marked RESET and press the switch. The system will restart immediately into the Safe Mode

LED Indicators

The PanelView Plus terminals have two LED indicators on the side of the Logic Module to isolate operating problems:

- COMM indicator (green) for communications
- FAULT indicator (red) for hardware faults

COMM and Fault LEDs
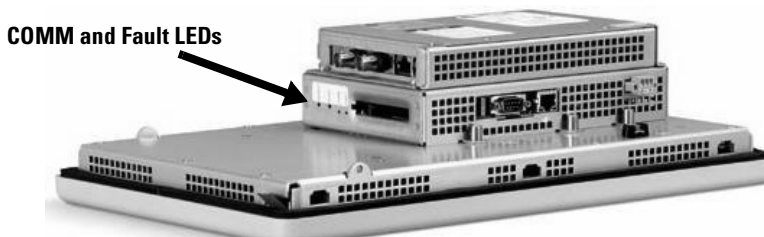
Firmware Upgrade

Application firmware can be downloaded using an Ethernet or serial connection from a desktop computer running the Firmware Upgrade Wizard. This wizard is available from the customer support website.

1. Establish a serial or Ethernet connection to a desktop computer. The serial connection uses the 2706-NC13 cable or equivalent.

2. At startup, the following screen appears if the PanelView Plus is unable to launch RSView Machine Edition.

   Another way to access the screen during startup is to:
   - press and hold the Shift key (on keypad terminals)
   - tap the screen multiple times (on touch screen terminals

TIP	Begin pressing or tapping when the startup messages have completed and when the first cursor appears.

   Machine Edition may be corrupted. Do you want to download Firmware?

   Die Maschinen-Editierungs-Firmware ist möglicherweise fehlerhaft. Möchten Sie die Firmware herunterladen?

   Le firmware Machine Edition est peut-être altéré. Voulez-vous télécharger le firmware ?

   Es posible que el firmware Machine Edition esté dañado. ¿Desea descargar el firmware?

   Il firmware potrebbe essere danneggiato. Si desidera scaricare il firmware?

Download	Continue
Herunterladen	Fortsetzen
Charger	Continuer
Descargar	Continuar
Scarica	Continua

   ---

3. Start the Firmware Upgrade Wizard on the desktop computer and follow the instructions.

4. Press the **Download** button on the terminal when instructed.

Cleaning the Display Window

ATTENTION	Use of abrasive cleaners or solvents may damage the display. Do not scrub or use brushes.

To clean the display window:

1. Disconnect power from the terminal at the power source.

2. Use a clean sponge or soft cloth with a mild soap or detergent to clean the display.

3. Dry the display with a chamois or moist cellulose sponge to avoid water spots.

Removing Paint and Grease

Remove fresh paint splashes and grease before drying by rubbing lightly with isopropyl alcohol (70% concentration). Afterward, wash using a mild soap or detergent. Rinse with clean water.

Use a protective antiglare overlay for easier cleaning of display window.

Specifications

Electrical

DC Power	
Input Voltage DC	24V dc nominal (18…32V dc)
Power Consumption DC	70 Watts maximum (2.9A @24V dc)
AC Power (2711P-RSAC)	
Input Voltage AC	85…264V ac, 47…63 Hz
Power Consumption AC	120VA maximum

Environmental

Operating Temperature	0…55 °C (32…131 °F)
Non-operating Temperature	-25…70 °C (-13 to 158 °F)
Relative Humidity	0…95% without condensation
Shock Operating	15 g at 11 ms
Shock Non-Operating	30 g at 11 ms
Vibration	10…57 Hz, 0.012 pk-pk displacement 57…500 Hz, 2 g pk acceleration
Ratings	Nema Type 12, 13, 4X (Indoor use only), IP54, IP65

Display

Display Type	Color Active Matrix TFT Thin-Film Transistor with LCD Liquid Crystal Display
Display Area Size	
700	6.5 inch
1000	10.4 inch
1250	12.1 inch
1500	15.0 inch
Display Area (W x H)	
700	132 x 99 mm (6.7 inch diagonal)
1000	211 x 158 mm (10.4 inch diagonal)
1250	246 x 184 mm (12.1 inch diagonal)
1500	304 x 228 mm (15.1 inch diagonal)
Resolution	
700	640 x 480
1000	640 x 480
1250	800 x 600
1500	1024 x 768
Touch Technology	Analog Resistive

Mechanical

Weight (for base unit without modules)	
700 Keypad or Keypad & Touch	1.9 kg (4.2 lbs)
700 Touch	1.7 kg (3.8 lbs)
1000 Keypad or Keypad & Touch	2.9 kg (6.3 lbs)
1000 Touch	2.6 kg (5.7 lbs)
1250 Keypad or Keypad & Touch	3.4 kg (7.6 lbs)
1250 Touch	3.2 kg (7.1 lbs)
1500 Keypad or Keypad & Touch	4.6 kg (10.0 lbs)
1500 Touch	4.2 kg (9.3 lbs)

Dimensions H x W x D (for base unit without communication module)	
700 Keypad or Keypad & Touch	193 x 290 x 55 mm 7.58 x 11.40 x 2.18 in
700 Touch	179 x 246 x 55 mm 7.04 x 9.68 x 2.18 in
1000 Keypad or Keypad & Touch	248 x 399 x 55 mm 9.77 x 15.72 x 2.18 in
1000 Touch	248 x 329 x 55 mm 9.77 x 12.97 x 2.18 in
1250 Keypad or Keypad & Touch	282 x 416 x 55 mm 11.12 x 16.36 x 2.18 in
1250 Touch	282 x 363 x 55 mm 11.12 x 14.30 x 2.18 mm
1500 Keypad or Keypad & Touch	330 x 469 x 65 mm 12.97 x 18.46 x 2.55 in
1500 Touch	330 x 416 x 65 mm 12.97 x 16.37 x 2.55 in

Agency Certifications

Agency Certifications When product is marked:	CE	Marked for all applicable directives
	c(UL)us	UL Listed Industrial Control Equipment UL Listed Industrial Control Equipment for use in Canada UL Listed Industrial Control Equipment for use in: • Class I, Div 2 Group A, B, C, D • Class II, Div 2 Group F, G • Class III, Div 1 Hazardous Locations
	C N223	Marked for all applicable acts

Rockwell Automation Support

Rockwell Automation tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility.

If you are experiencing installation or startup problems, please review the troubleshooting information contained in this publication first. If you need technical assistance to get your module up and running, please contact Customer Support (see the table below); our trained technical specialists are available to help.

If the product is not functioning and needs to be returned, contact your distributor. You must provide a Customer Support case number to your distributor in order to complete the return process.

Phone	United States/Canada	1.440.646.5800
	Outside United States/Canada	You can access the phone number for your country via the Internet: 1. Go to http://support.rockwellautomation.com/ 2. Under *Contacting Customer Support* and Other Countries, click on *Click here*
Internet	Worldwide	Go to http://support.rockwellautomation.com/

Your Questions or Comments on this Manual

If you find a problem with this manual, please notify us of it on the enclosed How Are We Doing form.

www.rockwellautomation.com

Corporate Headquarters
Rockwell Automation, 777 East Wisconsin Avenue, Suite 1400, Milwaukee, WI, 53202-5302 USA, Tel: (1) 414.212.5200, Fax: (1) 414.212.5201

Headquarters for Allen-Bradley Products, Rockwell Software Products and Global Manufacturing Solutions
Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe: Rockwell Automation SA/NV, Vorstlaan/Boulevard du Souverain 36-BP 3A/B, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Headquarters for Dodge and Reliance Electric Products
Americas: Rockwell Automation, 6040 Ponders Court, Greenville, SC 29615-4617 USA, Tel: (1) 864.297.4800, Fax: (1) 864.281.2433
Europe: Rockwell Automation, Brühlstraße 22, D-74834 Elztal-Dallau, Germany, Tel: (49) 6261 9410, Fax: (49) 6261 17741
Asia Pacific: Rockwell Automation, 55 Newton Road, #11-01/02 Revenue House, Singapore 307987, Tel: (65) 351 6723, Fax: (65) 355 1733