Allen-Bradley

MobileView Guard G750 Terminal

2727-G7P20D1P4
2727-G7P20D1P5
2727-G7P20D1Q6
2727-G7P20D3Q7

User Manual

Rockwell Automation

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.ab.com/manuals/gi) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual we use notes to make you aware of safety considerations.

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.

Attentions help you:

- identify a hazard
- avoid a hazard
- recognize the consequence

IMPORTANT

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

SHOCK HAZARD

Labels may be located on or inside the drive to alert people that dangerous voltage may be present.

Chapter 4

Configuring the MobileView Terminal

Chapter 5

Using RSView ME Station

This preface provides information on:

- manual contents
- terminology
- intended audience
- intended uses
- European Communities (EC) Directive Compliance
- standards and agency certifications
- Rockwell Automation Support

Contents of Manual

This manual is organized as follows:

Chapter	Title	Description
1	Overview	Gives a general overview of the MobileView Guard G750 and its features.
2	Safety Precautions and Elements	Describes safety precautions and safety elements (enabling switch, emergency stop switch) of the MobileView Guard G750.
3	Terminal Connections	Shows how to connect the MobileView Guard G750 to the Junction Box, make Ethernet, serial, and IrDA (keyboard and printer) connections, use the PC Card slot, and install the optional mounting bracket.
4	Configuring the MobileView Terminal	Provides details on how to use the MobileView Configuration Tool to calibrate operating elements. It also provides details on how to transfer data between the MobileView terminal and PC, and install programs.
5	CE Thin Client Operating Instructions	Gives instructions on how to start up, configure Ethernet settings, and power off the MobileView Guard. It also gives details on how to start terminal services.
6	Windows CE Applications	Describes the Windows CE software installed in the MobileView terminal, generation of Windows CE programs, and the MobileView Guard virtual channel.
7	Using RSView ME Station	Describes the RSView ME Station software installed in the MobileView 2727-G7P20D1Q6 and 2727-G7P20D3Q7 terminals.

Chapter	Title	Description
8	Maintenance and Troubleshooting	Provides information on cleaning, handling and troubleshooting the MobileView Guard G750 terminal.
A	Specifications	Gives specifications for the MobileView Guard G750 terminal.
B	Available Fonts for Terminal Applications	Provides information on pre-installed fonts and available fonts for download for the MobileView terminals.

Terminology

The MobileView Guard G750 is referred to as the MobileView terminal throughout this manual.

Intended Audience

This manual is for the individuals responsible for installing, configuring, troubleshooting, and operating the MobileView Guard G750 in an industrial environment.

Intended Uses

The MobileView Guard G750 may only be used for the types of use described in this manual. This terminal has been developed, manufactured, tested and documented in accordance with ergonomic guidelines and the appropriate safety standards. If you follow the instructions and safety precautions relating to the intended use are properly observed, the MobileView Guard G750 does not, under normal circumstances, represent a danger to the health of personnel or a risk of damage to other property or equipment.

Observe national regulations for disposing of electronic components.

European Communities (EC) Directive Compliance

The product has the CE mark and is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives. In addition, the device meets the Council Directive 98/37/EC as a safety component.

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 61000-6-4:2001 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 61000-6-2:2001 EMC - Generic Immunity Standard, Part 2 - Industrial Environment
- EN 61131-2 - Programmable Controllers Part 2 - Equipment Requirement and Tests

This product is intended for use in an industrial environment.

Safety of Machinery Standards

The MobileView Guard G750 meets the following council directives:

- EN 954-1:1996 Safety-related parts of control systems
- EN 292-1:1991 - Basic concepts, general principles for design
- EN 292-2: 1991/A1:1995 - Technical principles and specifications
- EN418:1992-Emergencystopequipment,functionaspects,principles of design
- EN 60204-1:1997 - Electrical equipment of machines, general requirements

A Declaration of Conformity is available upon request.

Overview

Chapter Objectives

This chapter covers the following topics:

- overview
- hardware description
- membrane keypad
- touch screen
- terminal configurations
- terminal accessories

Overview

The MobileView products are a family of human machine interface devices with a rugged design and Windows-CE compatible electronics. The MobileView Guard G750 is specifically designed for safety applications with features, including:

- multiple 3-position enable switches
- emergency stop switch (option)

These features allow operator access to the machine's safety system as well as the general interface to its control system.

Using a high-performance Intel StrongARM processor and providing an Ethernet interface, the MobileView Guard G750 is ideal for a variety of applications including:

- operator panel for machines and plants
- teach and programming panel for robots
- test, maintenance, and startup

All tasks can be solved graphically and in color. Operation is intuitive, using a touch screen with symbol-controlled sequences.

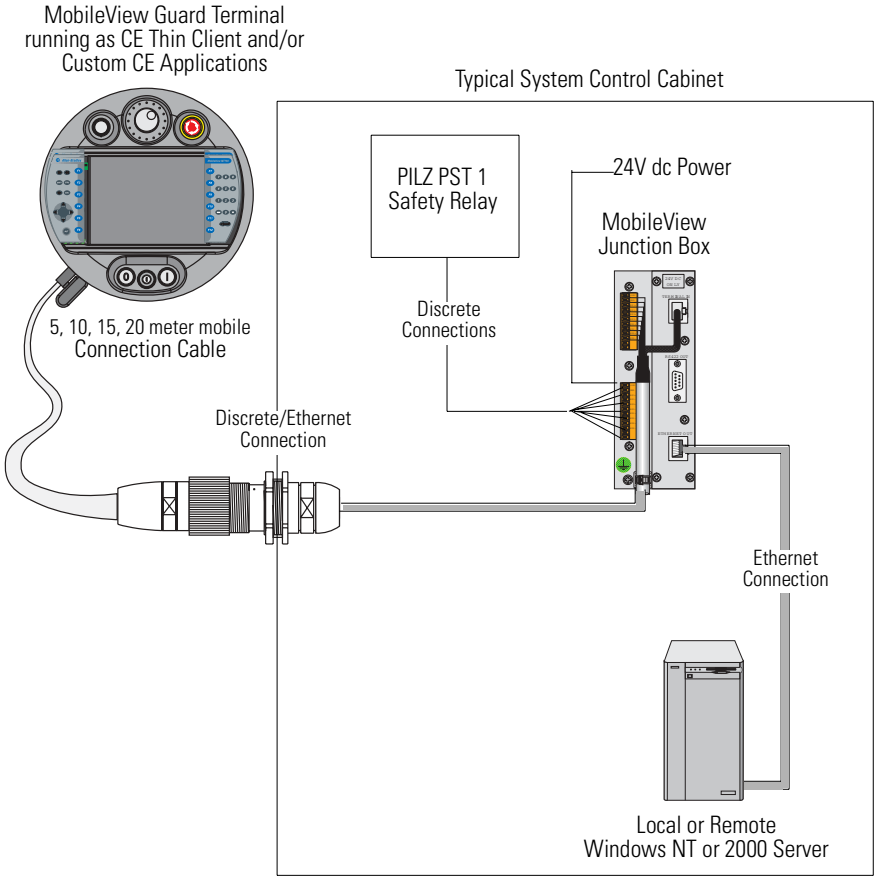
Instead of a floppy or hard disk drive, which are not suitable for harsh environmental conditions, the MobileView Guard G750 uses scalable FLASH and RAM banks. Functionality is easily expanded using PC cards Type I, II, and III.

The MobileView Guard G750 connects as a client to a Windows NT or Windows 2000 server. It also provides a Windows CE platform for applications generated with common visualization tools, Visual Basic, Visual C++, and the CE 4.x Software Developers Kits (SDK) included on the product CD.

The MobileView Guard G750 Catalog Numbers 2727-G7P20D1Q6 and 2727-G7P20D3Q7 support RSView Machine Edition Software.

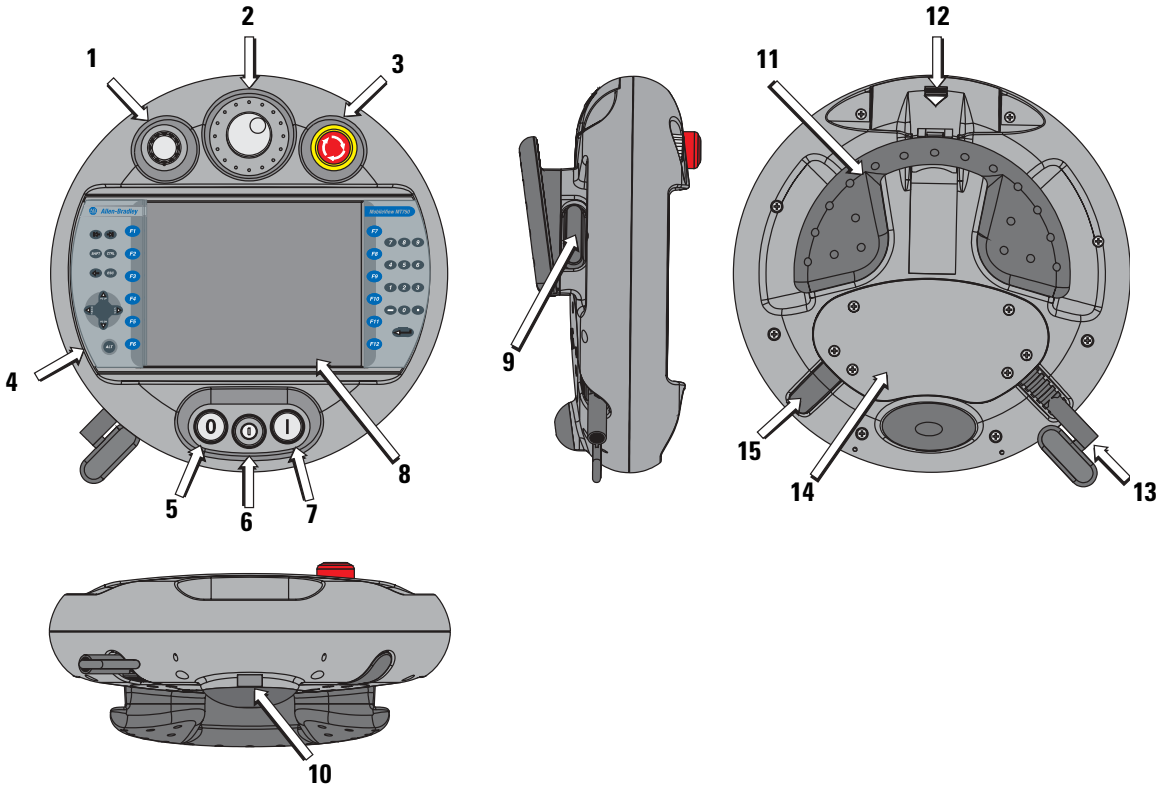
The MobileView Guard G750 easily adapts to specific applications using configurable operating and control elements.

MobileView Guard Sample System Configuration



Hardware Description

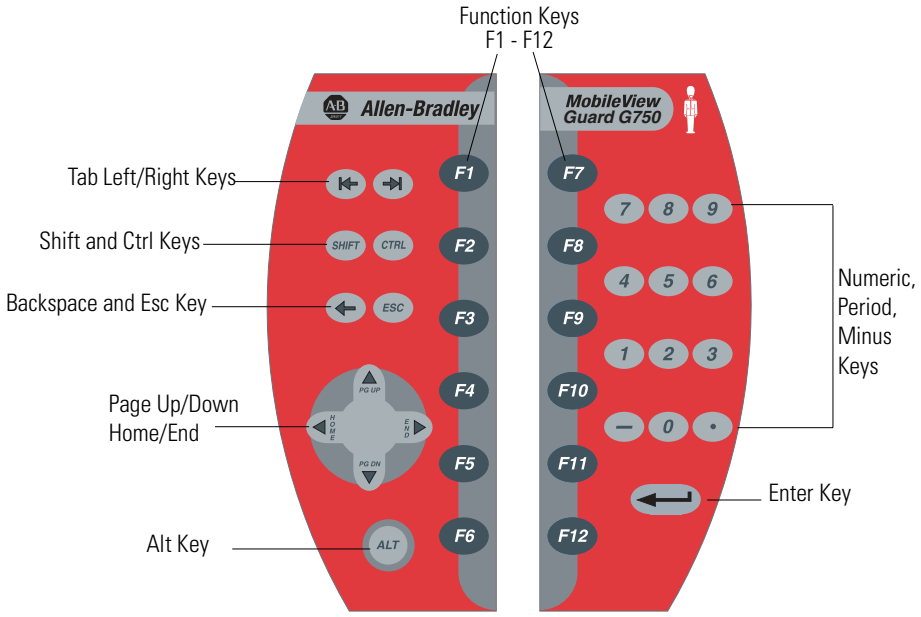
The following illustration shows the location of key hardware components.



1	Potentiometer with 0-127 linear resolution (option)
2	Electronic handwheel with 50 pulses/rev, -32768 to +32768 (option)
3	Emergency stop switch, twin-circuit, N/C contacts, 24V dc, 500mA max (option)
4	Membrane keypad with tactile feedback - standard Windows keyboard operation
5	Illuminated momentary push button, normally open, OFF marking, yellow LED (option)
6	3-position key switch (option)
7	Illuminated momentary push button, normally open, ON marking, yellow LED (option)
8	7.7 inch VGA (640 x 480 pixels) passive matrix color LCD display with analog resistive touch screen
9	3-position, twin circuit, enabling switch (one each side of handle) for safety interface
10	IrDA keyboard/printer interface, 9600 or 115.2K baud
11	Handle for left or right-hand operation
12	Single slot PC card interface for Type I, II and III cards (option)
13	Strain relief for connection cable (shipped with cable)
14	Back cover to connection compartment
15	Plug for cable outlet when not used (meets degree protection IP54)

Membrane Keypad

The MobileView terminal has a membrane keypad with stainless steel dome switches for tactile feedback.



The keys on the keypad operate identically to a Windows PC keyboard with the exception of Tab Left and the ALT-Arrow key combinations. Most standard 2-key combinations are supported including some 3-key combinations. The table below shows the Windows virtual key codes for each key.

Keypad Key	Windows Virtual Key Code
Numeric keys 0 - 9	VK_NUMPAD0 through VK_NUMPAD9
. (period)	VK_DECIMAL
- (minus)	VK_SUBRACT
Arrow (left/right/up/down)	VK_LEFT/VK_RIGHT/VK_UP/VK_DOWN
Enter	VK_RETURN
Backspace	VK_BACK
ALT+Up arrow (PG UP)	VK_PRIOR
ALT+Down arrow (PG DN)	VK_NEXT
ALT+Left arrow (PG HOME)	VK_HOME
ALT+Right arrow (PG END)	VK_END
Tab Left key	VK_LSHIFT+VK_TAB
Tab Right key	VK_TAB
SHIFT key	VK_LSHIFT
CTRL	VK_LCONTROL
F1 - F12 function keys	VK_F1 through VK_F12

Keypad Key	Windows Virtual Key Code
ESC	VK_ESCAPE
ALT key	VK_MENU
Options: Illuminated push button, left Key switch, left Key switch, right Illuminated push button, right	 VK_F13 VK_F14 VK_F15 VK_F16

Touch Screen

The touch screen is calibrated before shipment. No further calibration is required.

ATTENTION

Do not use a sharp object, such as a screw driver to operate the touch screen. Using sharp objects may damage the touch screen.

MobileView Guard Configurations

The MobileView Guard terminal is available in 4 configurations. The table below lists each configuration by catalog number and the included features.

Features	2727-G7P20D1P4	2727-G7P20D1P5	2727-G7P20D1Q6	2727-G7P20D3Q7
7.7 Inch VGA Display	Yes			
IrDA Interface	Yes			
3-Position Enable Switch	Yes			
2-Circuit E-Stop	No	Yes		
Memory	16MB RAM 32MB Flash		64MB RAM 64MB Flash	
PC Card Slot	No		Yes	
Communications	10Base-T Ethernet			
Operating Elements	No	No	Push Button with OFF Marking - Position 5 Key Switch - Position 6 Push Button with ON marking - Position 7 Potentiometer - Position 1 Electronic Handwheel - Position 2	No
Windows CE Operating System	Yes			
RSView Machine Edition	No		Yes	
Thin Client Application	Yes			

MobileView Guard Accessories

The following accessories are available for the MobileView terminal.

Catalog Number	Description
2727-MRT5	MobileView Guard Connection Cable (5 meter /16.4 ft) - connects the MobileView Guard terminal to the Junction Box Cable.
2727-MRT10	MobileView Guard Connection Cable (10 meter /32.8 ft) - connects the MobileView Guard terminal to the Junction Box Cable
2727-MRT15	MobileView Guard Connection Cable (15 meter /49.2 ft) - connects the MobileView Guard terminal to the Junction Box Cable.
2727-MRT20	MobileView Guard Connection Cable (20 meter/65.6 ft) - connects the Mobileview Guard terminal to the Junction Box cable.
2727-MRJB1	MobileView Guard Junction Box - provides controller, Ethernet, power supply, emergency stop switch, and enabling switch connections.
2727-MREX1	MobileView Guard Junction Box Cable (2 meter / 6.5 ft) - connects the MobileView Guard Connection Cable to the Junction Box.
2727-MRC1	MobileView Download Cable (4 meter /13.1 ft) - connects between the MobileView Guard terminal to a PC.
2727-MRMB1	MobileView Guard Mounting Bracket for stationary operation or storing the MobileView Guard terminal.
2727-MRSDK1	MobileView Guard SDK file set for WIndows CE development.

Safety Precautions and Elements

Chapter Objectives

This chapter provides information on general safety precautions in addition to important information on:

- power supply
- enabling switches
- emergency stop switch
- handling of the MobileView terminal

General Safety

The MobileView Guard G750 may only be used for the types of use described in this manual. The MobileView Guard G750 has been developed, manufactured, tested and documented in accordance with ergonomic guidelines and the appropriate safety standards.

When disposal of MobileView terminals is required, please observe the national regulations for disposing electronic components.

It is important to follow the instructions in this manual in all circumstances. Failure to do so could result in potential sources of danger or the defeating of safety features integrated in the terminal.

In addition to the safety instructions in this manual, you must also use safety precautions and accident prevention measures appropriate to the situation.

ATTENTION

- Make sure interrupted processes can be properly restarted after power failures or power dips. No dangerous operating conditions must be allowed to occur, even temporarily.
- In situations where faults occurring within the automation system could cause personal injury or significant damage to machinery and equipment, take additional external safety measures to ensure the system remains in a safe operating condition.
- Make sure unauthorized persons are not allowed to adjust settings or make memory modifications that could lead to dangerous situations.
- Test the functionality of safety-related parts (E-stop and enabling switches) on a regular basis.
- If the MobileView terminal and controller do not communicate using a point-to-point connection, keypad data, for example, may transmit with a delay. Use of an Ethernet switch between the MobileView terminal and controller is recommended for a higher speed connection.
- Test safety-relevant parts after strong shocks to the terminal (for example, if terminal is dropped on ground).
- When the MobileView terminal is used to operate the machine/plant, ensure that the MobileView is the single point of operation (C.F. ANSI/RAI 15.06).
- If you use a PC card with the MobileView, always make sure the PC card is properly loaded. After a strong impact, the PC card cover remains closed. Verify the card is properly loaded to maintain a good electrical contact.
- When the MobileView is used in manual mode (for example, teaching of robot), ensure the robot moves at a slower speed (C.F. ANSI/RAI 15.06).

Power Supply

ATTENTION

- The device meets the safety class III in accordance with EN 61131-2 and EN 50178. The 24V power supply for the equipment must provide appropriate isolation between the safety-extra-low-voltage circuits and dangerous-contact voltage circuits (for example, by safety transformers or similar facilities).
- The power supply circuit must be protected with a 3.15 A fuse.
- The nominal supply voltage of the MobileView terminal (without MobileView Connection Cable) is 24V dc (supply voltage range: 18-32V dc).
- Typical current consumption is:

  - 300 mA at 24V dc
  - 400mA at 18V dc
- When planning the power supply, consider the voltage drop in the connection cable. Specifications of power supply lines in the connection cable are:

  - Cross section: AWG24 (0.24mm2)
  - Material: zinc-coated copper strand
  - Line resistance: <90 Ohm/km (<145 Ohm/mile)

Enabling Switches

The enabling switches are in accordance with EN 60204-1 in safety categories according to EN 954-1 (Safety related parts of control system). There are two parallel switched, potential-free, normally open contacts for connecting external peripherals, nominal voltage 24V dc (safety-extra-low voltage in accordance with EN 61131-2 and EN 50178), typical current 500 mA dc.

The electronic enabling switch realizes the enabling equipment as a safety function for machines in special operating modes. The enabling switch is part of the MobileView terminal.

Each machine features a *normal operating mode* and a *special operating mode*.

- In *normal operating mode*, guards and/or operative protection devices are used to prevent access and guarantee safety. *Special operating modes* are used to maintain the normal operating mode.

- In *special operating mode*, safety must be guaranteed in other ways since the operator must enter dangerous areas of the machine, and targeted movements must be possible. In this case, a reduced speed of the machine must be defined by means of the risk assessment. A movement will only be possible if an enabling device is actuated. The user must be trained and must know the details of the intended use. The safety related parts of the control for reducing speed and for the enabling device must be constructed so that they meet the safety category 3 according to EN 954-1, defined by the risk assessment.

To meet safety category 3 in accordance with EN 954-1, the enabling switch must be implemented with 2 circuits.

EN 60204-1 describes the functioning of the enabling device. Due to the latest findings of analysis of accidents and since technical solutions are available, the 3-position enabling switch became state of the art. The positions 1 and 3 of the enabling switch are OFF functions. Only the central position is used for enabling. The EN 60204-1 is identical with IEC 60204-1. So the 3-position enabling switch is of international relevance.

The enabling switch consists of a 3-position operating element and separated evaluation electronics. Essential features are continuous two-channel circuits between the actuating elements and the connecting terminals. For the evaluation circuits, different technologies and circuits are used. Because of the electronic switching contacts, their lifetime does not depend on the load as long as the nominal values of the load (ohmic, inductive and capacitive) are not exceeded.

ATTENTION

- Enabling switches may only be used if the operator activating the switch recognizes the dangerous situation in time to take immediate action if necessary.
- The enabling switch is only used to enable commands for performing dangerous movements. The commands must be activated by a separate operating element (key on terminal). Only persons allowed to activate the enabling switch are allowed to work in the dangerous area.
- On the MobileView Guard terminal, the enabling switches always feature 2 circuits.

Enabling Switch Operation

The actuating element consists of two symmetrically arranged slides. The position of these slides is detected by electrical switches and transmitted to the evaluation electronics.

Positions of Enabling Switch

Home Position (1)	enabling outputs are open
Enabling (2)	enabling outputs are closed
Panic (3)	enabling outputs are open

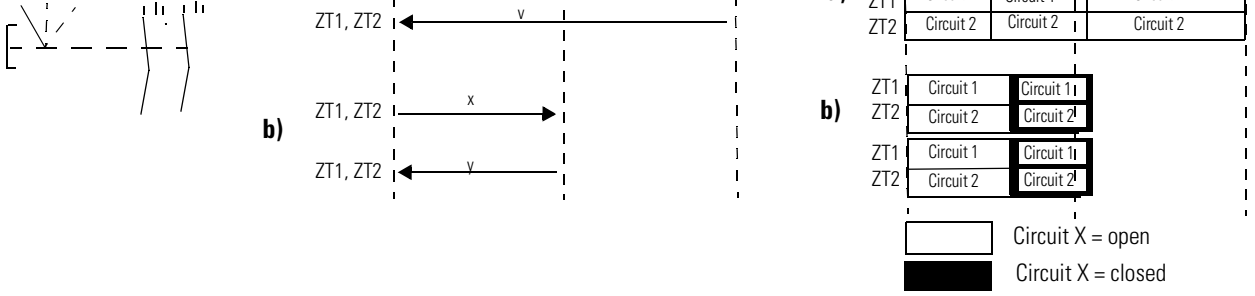
For the enabling switch, the following switch sequences are possible:

A. Home position ⓧ enabling ⓤ panic ⓥ home position (1-2-3-1)

B. Home position ⓧ enabling ⓨ home position (1-2-1)

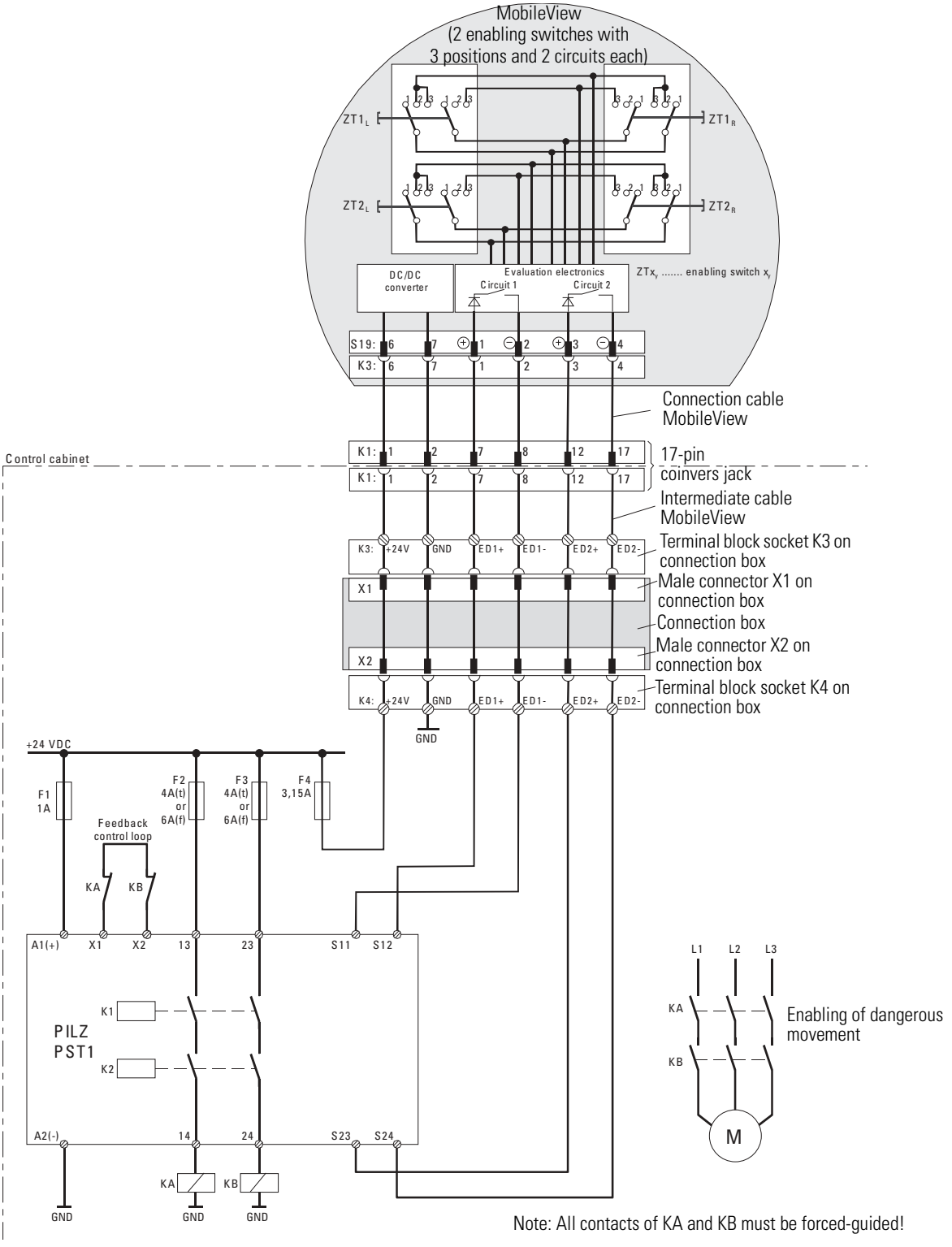
The pushing of the actuating elements directly into the panic position is evaluated in a way that the enabling position is skipped when the actuating elements are released.

Contact Travel Diagram



Connection Example with a Safety Control Relay

The diagram below shows suggested wiring for enabling switches using a PILZ PST safety control relay to meet safety category 3. Refer to PILZ PST documentation for additional information.



Note: All contacts of KA and KB must be forced-guided!

- Only if both channels of ZT_L or ZT_R are activated "simultaneously" will both output relays K1 and K2 energize and the output contacts 13-14 and 23-24 close.
- The output relays K1 and K2 will not energize if:
  - only one enabling channel is activated,
  - the tolerance value for the simultaneity period is exceeded,
  - the feedback control loop X1-X2 is open.
- If one enabling channel is released after being simultaneously activated, the output relays K1 and K2 will return to their initial position. The forced-guided output contacts 13-14 and 23-24 will open. The output relays will only energize again after both enabling channels have been released and operate simultaneously again.

In this way, the enabling switches avoid that one single error making the safety function inoperable. A single error will be recognized at the next cycle at the latest.

Switching Element Data

Nominal voltage	24V dc (typical) 32V dc (maximum)
Nominal current	500 mA (typical)
Short-circuit current	circuit 1; maximum 1.9 A circuit 2: maximum 600 mA
Max. inductive load (at 500 mA)	circuit 1: >1H circuit 2: maximum 320 mH
Max. capacitive load	circuit 1: no limit since the transistor is protected thermally circuit 2: maximum 500 µF

The switching elements of the enabling switches are protected against reversed polarity. The outputs of both circuits are protected against short circuits and excess load.

- Circuit 1: thermal protective circuit
- Circuit 2: fold back protective circuit

Foreseeable Misuse of the Enabling Switch

Foreseeable misuse means not allowing the enabling switch to be fixed in the enabling position. Misuse of the enabling switch must be restricted. The following measures are recommended, which cause the machine to stop in manual mode.

- Inquiry of the enabling switch when turning on the machine/plant and inquiry of the enabling switch when changing the operating mode from automatic to manual. (The enabling switch must not be in the enabling position.)
- The enabling switch must be released within a defined period of time and pushed into the enabling position again. The length of time must be defined according to the activity.

Emergency Stop Switch

The emergency stop switch of the MobileView terminal meets the requirements of EN 418. It must be designed as an emergency stop of category 0 or category 1 (see EN 60204-1, chapter 9.2.5.4.2) on the basis of the risk assessment for the machine. The connection of the force-guided contacts to an appropriate monitoring system must meet the safety category which is defined by means of the risk assessment (in accordance with EN 954-1) of the machine.

The emergency stop has 2, potential-free, normally closed contacts for connecting external peripherals, a nominal operating voltage of 24V (Safety Extra Low Voltage in accordance with EN 61131-2 and EN 50178), and a maximum operating current of 500 mA.

ATTENTION

- When the emergency stop switch is not wired into the emergency stop circuit, the MobileView terminal must be stored where it is not available to operators.
  Consider that the operator might activate the nearest emergency stop in case of danger. This could have fatal consequences if the emergency stop does not function.
- Emergency stop functions must remain operational in all operating modes. Resetting an activated emergency stop must not result in uncontrolled startup of machines or installations.
- The emergency stop switch does not replace other safety devices.

Risk Assessment of Machinery

For the risk assessment, the following standards must be applied:

- EN 292-1 “General principles for design of machinery”
- EN 1050 “Principles for risk assessment of machinery”
- EN 954-1“Safety-related parts of control systems”
- ANSI/RIA 15.06-1999 “For Industrial Robots and Robot Systems - Safety Requirements (Section 9)
- ANSI B11.TR3-2000 “Risk Assessment and Risk Reduction - A guide to estimate, evaluate and reduce risks associated with machine tools”

The safety categories (B, 1, 2, 3, 4) define the structure of safety-related parts of a machine and are derived from this risk assessment.

Page 2-6 shows how the MobileView terminal meets safety category 3 using a PILZ PST1 safety control relay with the enabling switches. The entire control system must be designed according to the principles of safety category 3.

Handling of the MobileView Terminal

The MobileView terminal is a high-quality device that is equipped with state-of-the-art electronics.

To avoid malfunctions or damage through improper handling, follow these instructions during operation.

ATTENTION

- Do not operate the terminal if the cable is damaged or pinched. To avoid damaging the cable, do not place the cable over or around sharp objects.
- When the terminal is not in use, hang the terminal in the mounting bracket or place inside a cabinet or enclosure.
- To avoid dropping the terminal, do not set the terminal on unstable surfaces and keep the cable clear of high traffic areas.
- To avoid damaging the operating elements, do not set the terminal on its operating side.
- If the terminal falls to the ground, test the emergency stop switch and enabling switch, and verify that the PC card cover closes properly before operating machine/plant.
- Do not set the terminal near heat sources and avoid direct sunlight.
- Avoid exposing the terminal to mechanical vibrations, excessive dust, humidity or strong magnetic fields.
- Use a soft, damp cloth with 50% water and 50% isopropyl alcohol to clean the operating panel and operating elements. Do not use solvents, scouring agents, or scrubbing sponges.
- Prevent foreign objects or liquids from getting into the terminal. Check the protective covers of the device regularly. Make sure all screws are firmly tightened and that the housing and cable entrance is not damaged.
- Turn off the power supply before removing the back cover of the MobileView terminal. When the back cover is removed, the terminal is sensitive to electrostatic discharge (ESD).
- If the terminal exhibits any defect, have the unit thoroughly and fully tested by the manufacturer or authorized repair dealer before operating terminal again.
- Do not use sharp objects, such as a screw driver, on the touch screen. Sharp objects may damage screen.

Terminal Connections

Chapter Objectives

This chapter shows how to connect devices to the MobileView terminal, including:

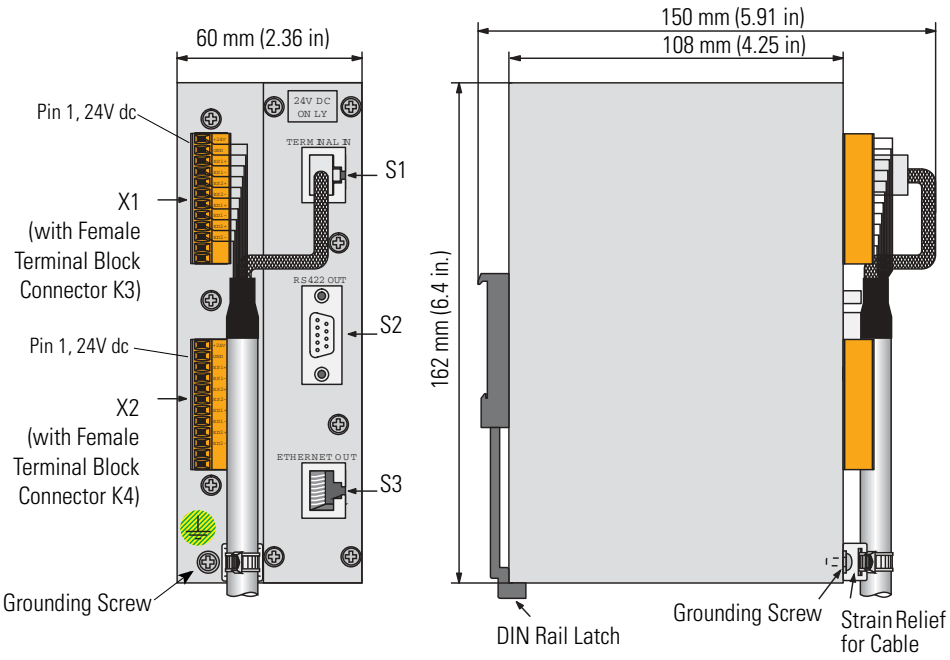
- mounting and connecting the MobileView Junction Box
- accessing and wiring the MobileView connection compartment
- connecting a computer using the RS-232 Port
- making an Ethernet connection
- using the PC card slot
- connecting a keyboard/printer using the IrDA interface
- installing the MobileView Mounting Bracket

Mounting and Connecting the Junction Box

The MobileView Junction Box (2727-MRJB1) integrates the MobileView terminal into the control system. It mounts on a DIN rail inside an enclosure and has the following connectors:

Connectors	Description
S1	RJ-45 jack for connecting the MobileView data lines.
S2	9-pin DSUB female connector (for future use).
S3	RJ-45 jack to Ethernet network.
X1	12-pin male connector for connecting the Junction Box Cable.
X2	12-pin male connector (shipped with a female terminal block connector) for connecting the: • 24V dc power supply • emergency stop switch • enabling switches

Junction Box



ATTENTION

The MobileView Junction Box and the MobileView terminal meet the safety class III in accordance with EN 61131-2 and EN 50178.

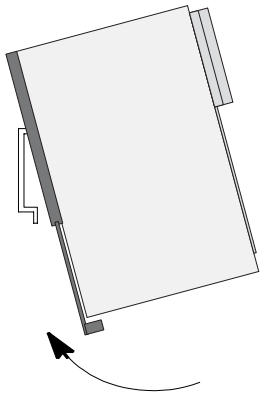
When connecting the terminal, make sure all voltages connected to the MobileView terminal are safety extra low voltages and isolated from the low voltage supply system by a safety transformer or a similar safety component.

DIN Rail Mounting

Mount the MobileView Junction Box inside an enclosure using a DIN rail (not shipped with terminal).

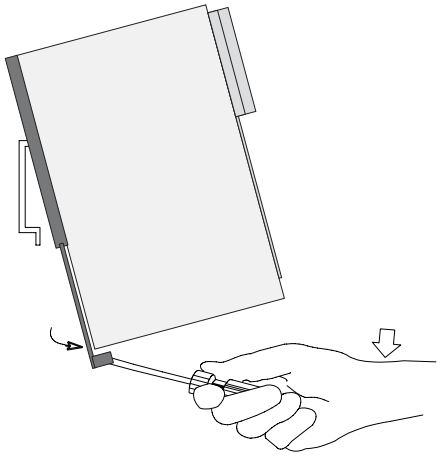
To install the Junction Box on a DIN rail:

1. Mount the DIN rail.
2. Hook the top slot over the DIN rail.
3. While pressing the Junction Box against the DIN rail, snap the Junction Box into position.

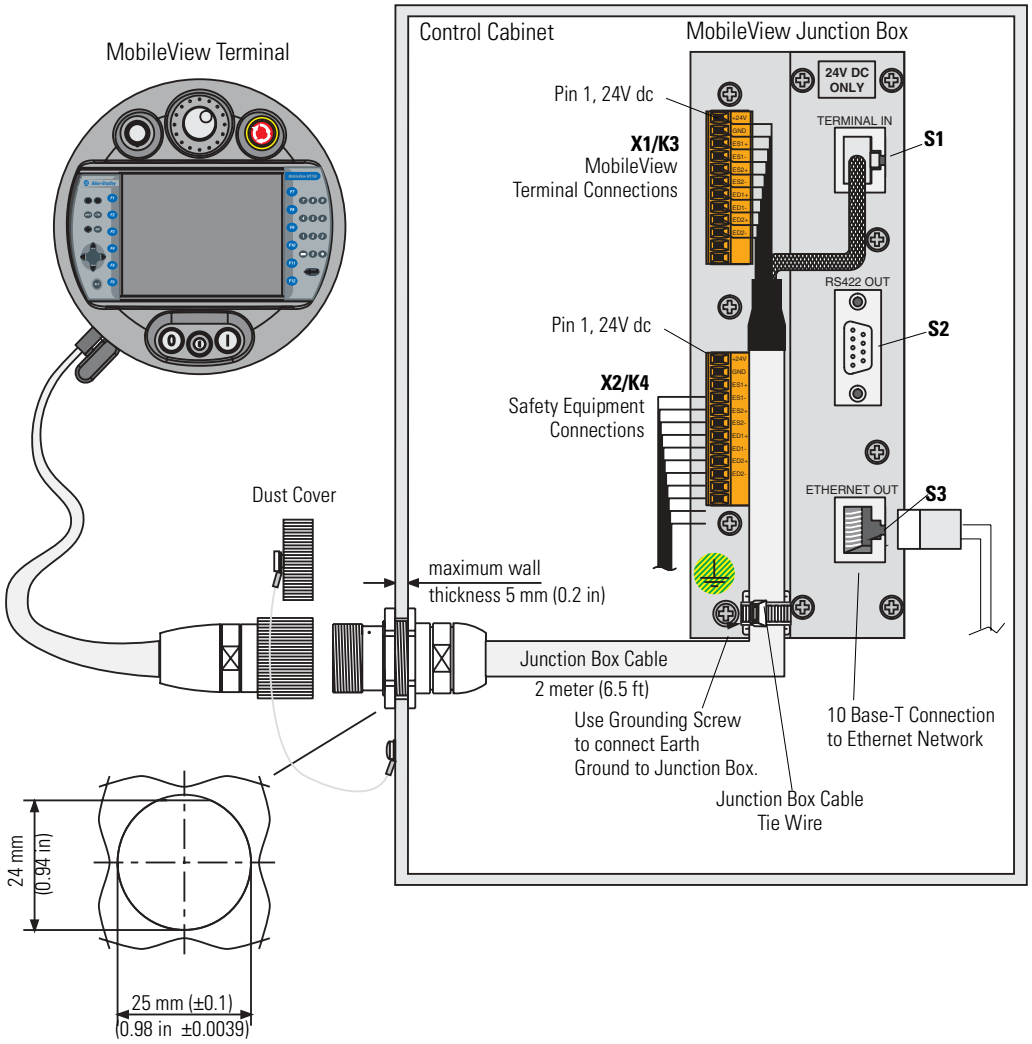


To remove the Junction Box from the DIN rail:

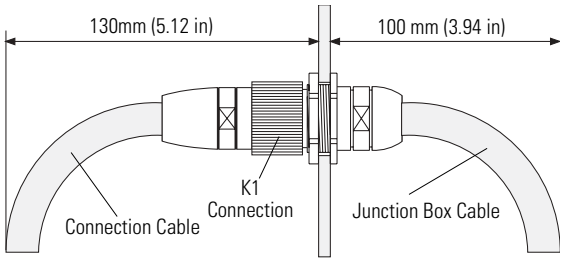
1. Place a screwdriver in the DIN rail latch at the bottom of the Junction Box.
2. Holding the Junction Box, pry downward on the latch until the Junction Box is released from the DIN rail.



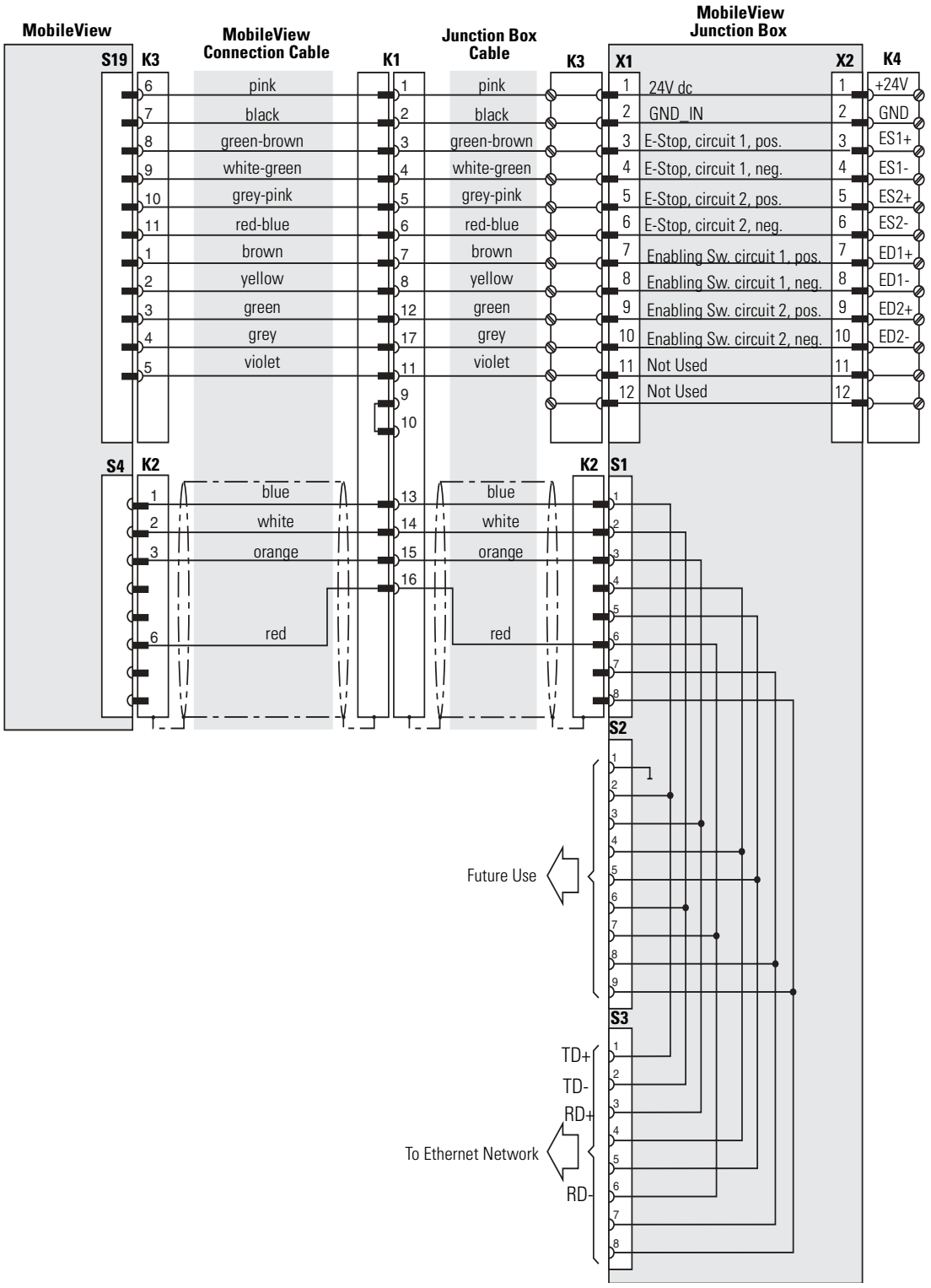
Connecting the MobileView to the Junction Box



Cable Clearance on both sides of Enclosure Wall



Junction Box Pinout and Wiring



Power Supply Requirements

Electrical Specifications	
24V dc Power Supply	Use a 24V dc Safety Extra Low Voltage power supply. Supply Voltage Range: 18V dc to 32V dc Current Consumption: 300mA at 24V dc Peak Inrush Current: 5.6 A maximum
Grounding	Connect Earth Ground to the Junction Box using the Earth Ground Screw (shown on previous page 3-4).

ATTENTION

- The device meets the safety class III in accordance with EN 61131-2 and EN 50178. The 24V power supply for the equipment must provide appropriate isolation between the safety-extra-low-voltage circuits and dangerous-contact voltage circuits (for example, by safety transformers or similar facilities).
- The power supply circuit must be protected with a 3.15 A fuse.
- The nominal supply voltage of the MobileView terminal (without MobileView Connection Cable) is 24V dc (supply voltage range: 18-32V dc) with a typical input current of 300 mA.

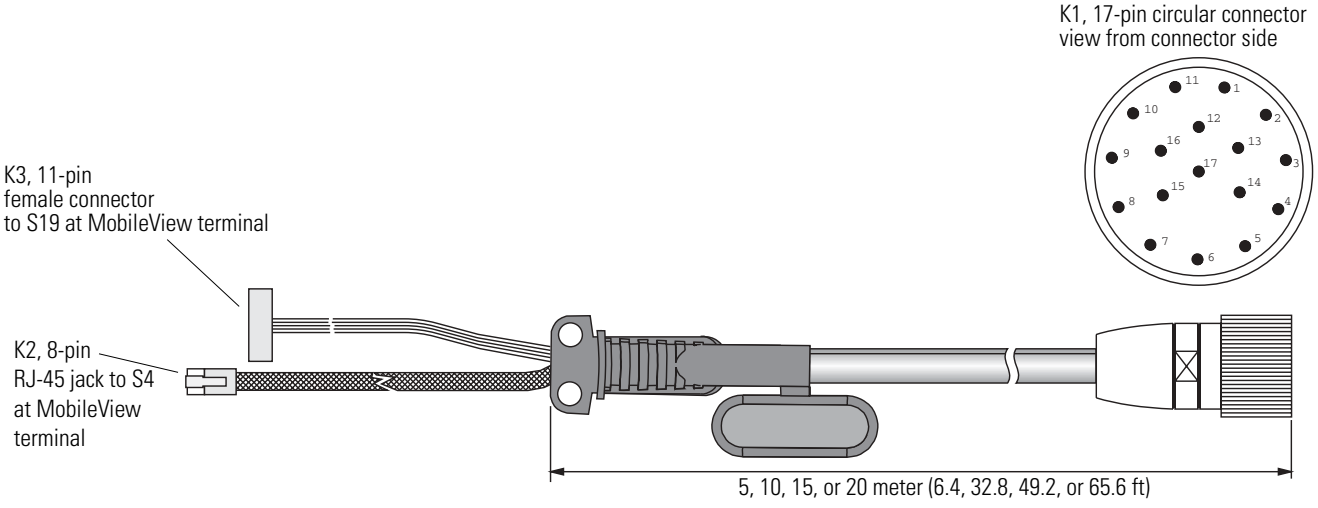
  When planning the power supply, consider the voltage drop in the connection cable. Specifications of power supply lines in the connection cable are:

  - Cross section: AWG24 (0.24mm^2)
  - Material: zinc-coated copper strand
  - Line resistance: ≤90 Ohm/km (≤145 Ohm/mile)

MobileView Connection Cable

The Mobile Connection Cable (2727-MRTxx) connects the MobileView terminal to the MobileView Junction Box Cable (2727-MREX1). The Connection Cable is 5, 10, 15, or 20 meters (6.4, 32.8, 49.2 or 65.6 ft). This cable withstands water, cleaning agents, motor oil, drilling oils, grease, lubricants and condensates containing hydrochloric acid.

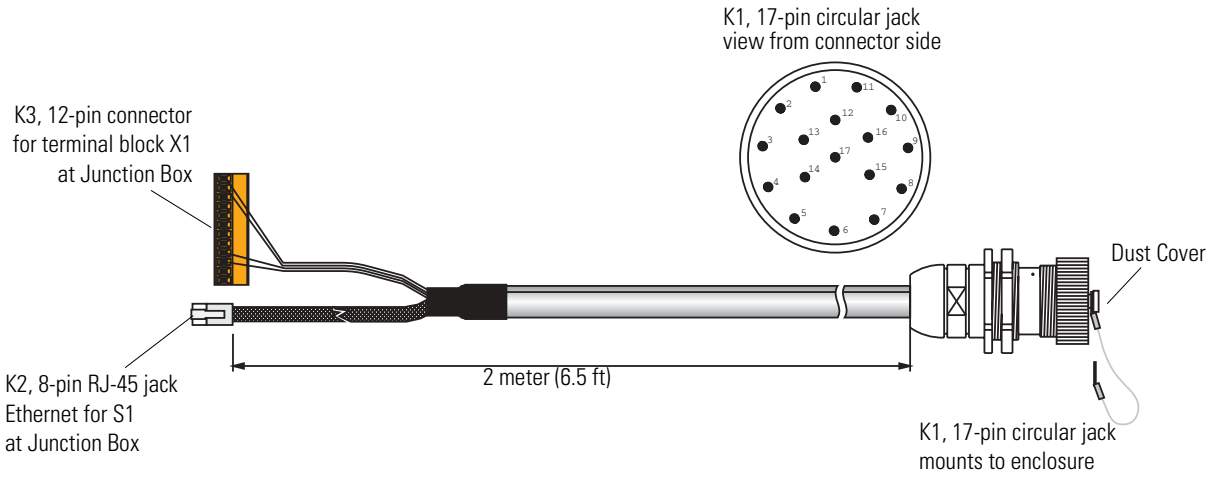
K1 17-pin Circular Connector Pin #	MobileView Connection Cable Wire Color		K3, 11-pin Female Connector to S19 in Terminal	K2, 8-pin RJ-45 Jack Ethernet to S4 in Terminal	Signal Description
1	pink	-->>	6	-	24V DC
2	black	-->>	7	-	GND_IN
3	green-brown	-->>	8	-	E-stop, circuit 1, positive
4	white-green	-->>	9	-	E-stop, circuit 1, negative
5	grey-pink	-->>	10	-	E-stop, circuit 2, positive
6	red-blue	-->>	11	-	E-stop, circuit 2, negative
7	brown	-->>	1	-	enabling switch, circuit 1, positive
8	yellow	-->>	2	-	enabling switch, circuit 1, negative
12	green	-->>	3	-	enabling switch, circuit 2, positive
17	grey	-->>	4	-	enabling switch, circuit 2, negative
9	bridge to pin 10	-->>	-	-	not used
10	bridge to pin 9	-->>	-	-	not used
11	violet	-->>	5	-	not used
13	blue	-->>	-	1	TD+ (transmit)
14	white	-->>	-	2	TD- (transmit)
15	orange	-->>	-	3	RD+ (receive)
16	red	-->>	-	6	RD- (receive)



MobileView Junction Box Cable

The MobileView Junction Box Cable (2727-MREX1) connects the Junction Box to the circular jack in the wall of the enclosure. The cable length is 2 meters (6.5 ft.). When the MobileView terminal is not connected to the Junction Box, the dust cover provides protection for the 17-pin connector.

K1, 17-pin Circular Jack Pin #	MobileView Junction Box Cable Wire Color		K2, 8-pin RJ-45 Jack to S1 at Junction Box	K3, 12-pin Terminal Block to X1 at Junction Box	Signal Description
1	pink	-->	-	1	24V DC
2	black	-->	-	2	GND_IN
3	green-brown	-->	-	3	E-stop, circuit 1, positive
4	white-green	-->	-	4	E-stop, circuit 1, negative
5	grey-pink	-->	-	5	E-stop, circuit 2, positive
6	red-blue	-->	-	6	E-stop, circuit 2, negative
7	brown	-->	-	7	enabling switch, circuit 1, positive
8	yellow	-->	-	8	enabling switch, circuit 1, negative
12	green	-->	-	9	enabling switch, circuit 2, positive
17	grey	-->	-	10	enabling switch, circuit 2, negative
9	-	-->	-		not used
10	-	-->	-	12	not used
11	violet	-->	-	11	not used
13	blue	-->	1	-	TD+ (transmit)
14	white	-->	2	-	TD- (transmit)
15	orange	-->	3	-	RD+ (receive)
16	red	-->	6	-	RD- (receive)



Accessing/Wiring the MobileView Connection Compartment

Removing the Back Cover

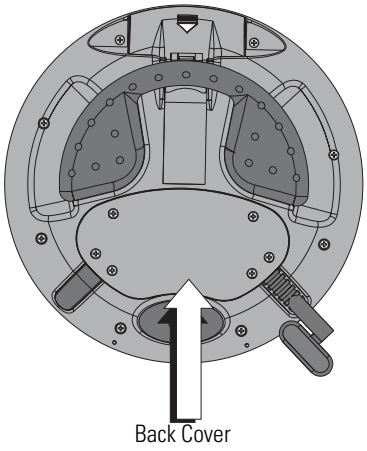
This section shows how to remove the back cover of the MobileView terminal. Once the back cover is removed, you have access to the area which contains all of the connectors.

ATTENTION

Turn off the power supply before removing the back cover of the MobileView terminal.

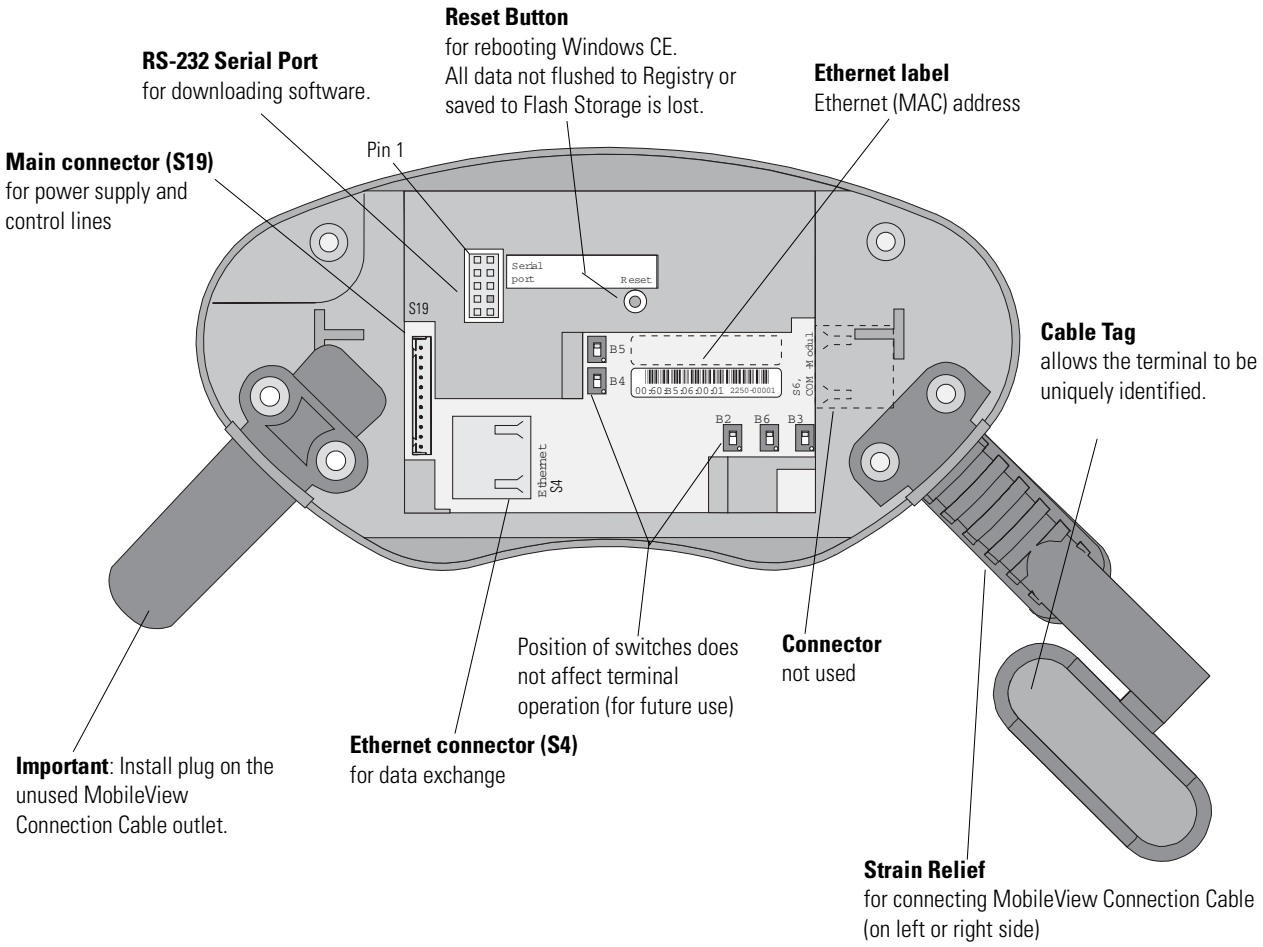
When the back cover is removed, the MobileView terminal is sensitive to electrostatic discharge (ESD).

1. Place the terminal on a stable, flat surface.
2. Remove the 6 screws that secure the back cover to the MobileView terminal.
3. Carefully lift off the back cover and place it on a secure surface.



Connection Compartment Details

The following illustration shows what the connection compartment of the MobileView terminal looks like with the back cover removed.



Attaching the MobileView Connection Cable

You can attach the Connection Cable on either side of the terminal for right or left-hand operation. To relocate the cable, simply grasp the strain relief and/or the plug and slide off of mount with a rocking motion.

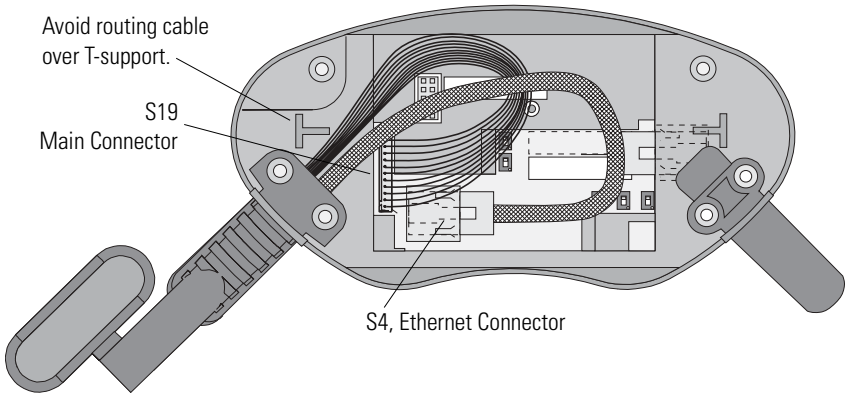
IMPORTANT

Make sure the K3, 11-pin female connector clicks completely into S19, Main Connector when plugged in. Ensure proper seating of K2, 8-pin RJ-45 jack into S4, Ethernet Connector.

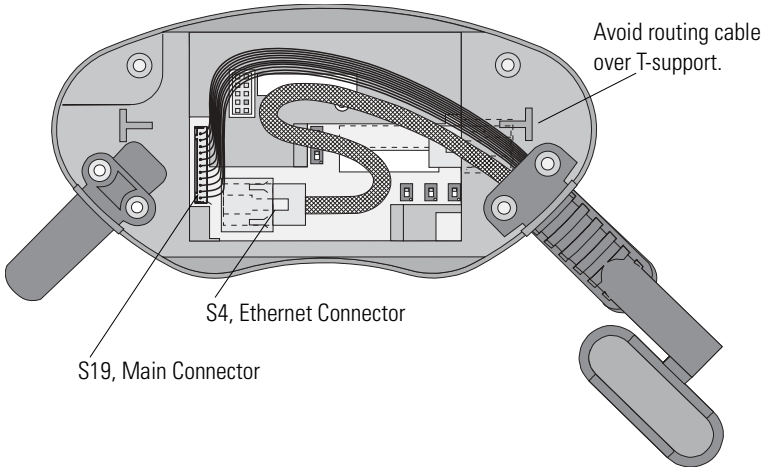
To avoid pinching the cable with the back cover, avoid laying the cable on top of the T-supports.

After routing the cable, secure the back cover to the terminal. To maintain IP54 degree protection, tighten the 6 screws to a torque of 4.42 in-lb.

Attaching Connection Cable on Right Side



Attaching Connection Cable on Left Side



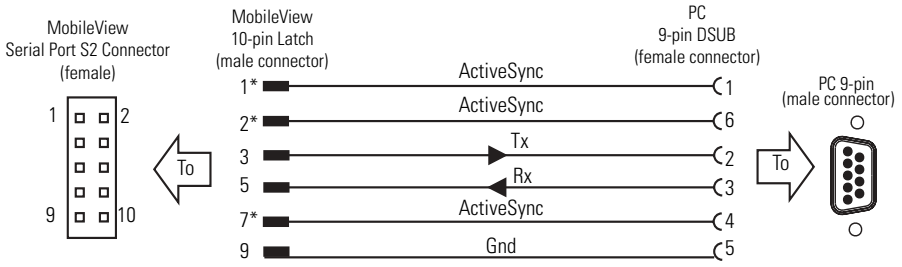
Connecting a Computer using the RS-232 Serial Port

Use the RS-232 Serial Port in the MobileView terminal to download software or to modify/transmit data between the MobileView terminal and computer using Active Sync software.

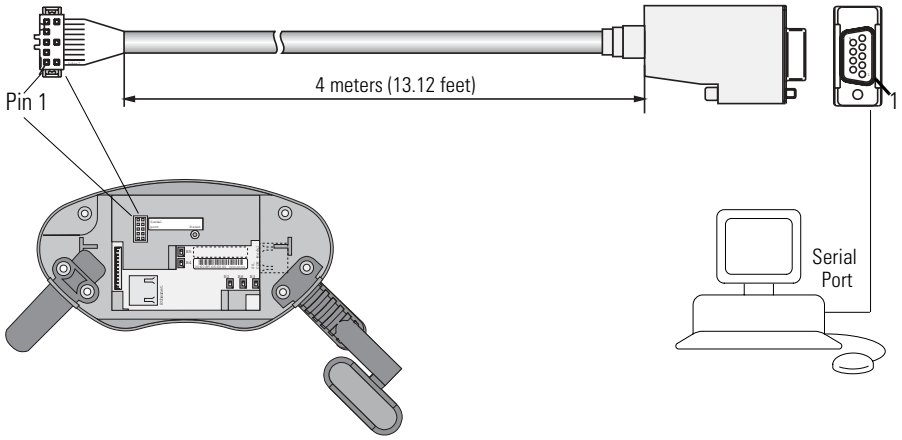
The RS-232 Serial Port uses these fixed communication parameters:

- 115200 baud
- 8 data bits
- 1 stop bit
- No parity
- No handshake

The MobileView Download Cable (Catalog Number 2727-MRC1) connects the MobileView terminal to the serial port of your computer.



* Pins 1, 2 and 7 are connected together on the CPU board in the MobileView terminal. They are used for the ActiveSync signal. If you make your own cable, do not eliminate these 3 wires.



Making an Ethernet Connection

The MobileView terminal is equipped with a 10Base-T interface which supports TCP/IP protocol at 10MBaud for half-duplex communications.

The Ethernet connector at S3 on the Junction Box provides a connection to an Ethernet network. The connector uses an 8-pin modular jack connector. Pinouts are as follows:

Pin #	Ethernet Signal
1	TD+
2	TD-
3	RD+
4	Not Used
5	Not Used
6	RD-
7	Not Used
8	Not Used

Using the PC Card Slot

The PC card slot is a factory installed option and supports Type I, II, and III PC cards. The following PC cards are available from Allen-Bradley. The terminal does not support SRAM cards, CardBus cards, or cards that use 12 volts for programming.

Catalog No.	Description
2711-NM28	8M flash ATA card for storing applications.
2711-NM216	16M flash ATA card for storing applications.
2711-NM232	32M flash ATA card for storing applications.

Inserting the PC Card

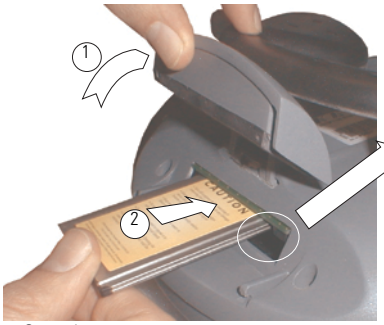
1

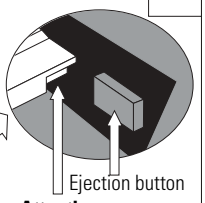
Lay the MobileView with the display facing down onto a flat, clean table, preferably on Electrostatic Discharge (ESD) pad. Take care not to damage the terminal and its elements.

2

Unlock the PC card cover as shown (until the locking lever is released)

3

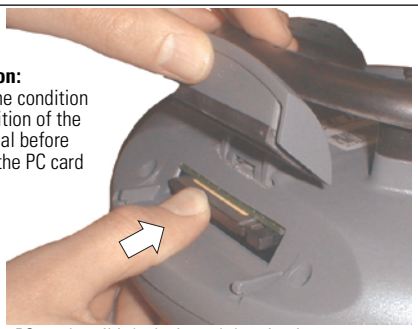




1. Open the cover.
2. Insert the PC card as shown.

Attention:
Verify that this corner is inserted into the slot on the side of the ejection button.

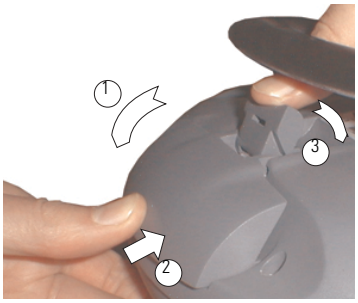
4



Attention:
Check the condition and position of the cover seal before closing the PC card cover.

Insert the PC card until it locks in and the ejection button pops out.

5



1. Close the cover.
2. and 3. Lock the cover as shown.

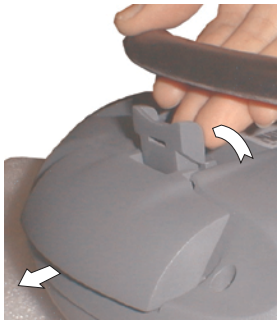
6

Must snap completely.

Press down the cover until it snaps in completely to meet the protection degree IP54.

Removing the PC Card

1

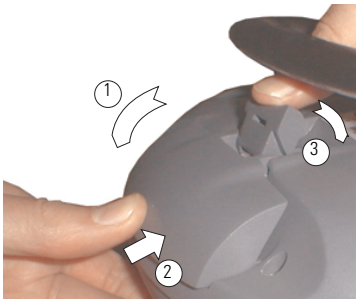


Unlock the PC card cover as shown (until the locking lever is released).

2

1. Open the PC card cover.
2. Press the ejection button of the PC card slot.
3. Remove the PC Card

3



1. Close the cover.
2. and 3. Lock the cover as shown.

4

Press down the cover until it snaps in completely to meet the protection degree IP54.

Connecting a Keyboard / Printer Using the IrDA Interface

The IrDA keyboard/printer interface is built into the lower rim of the MobileView terminal (see page 1-3) and supports communication with:

- keyboards
- printers

The port is located for convenient operation with an IrDA keyboard.

To use a standard PC keyboard with the IrDA port, you must use a converter (PS2 keypad to IrDA).

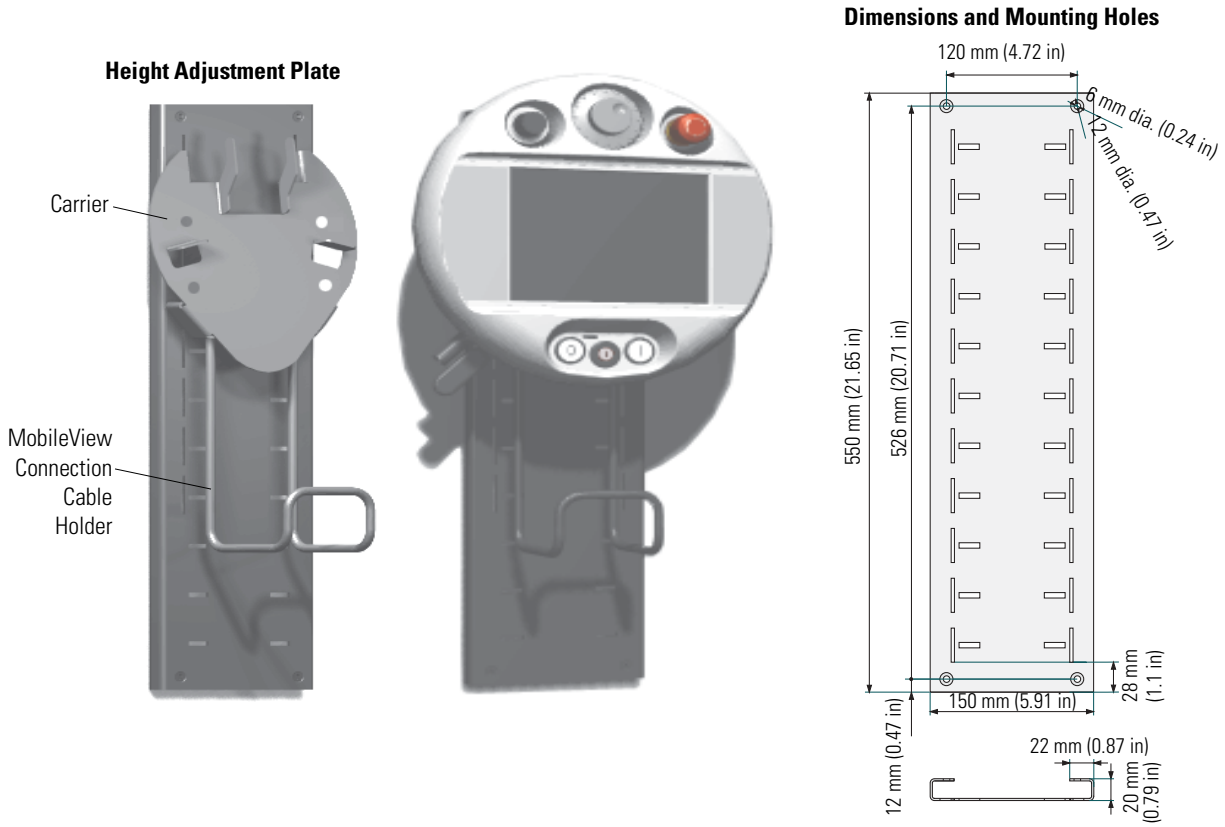
To print using the IrDA port, you must orient the MobileView towards the IrDA port of the printer. The printer must be PCL compatible.

The IrDA port is assigned to the COM 3 or COM 4 interface port.

Protocol: Only the HP-SIR (Low Speed) coding is used (LPM Mode enabled). The maximum baud rate is 115.2K baud.

Installing the Mounting Bracket

The MobileView Mounting Bracket (2727-MRMB1) is used for stationary operation or storage of the MobileView terminal. The following illustration shows the mounting bracket with and without the terminal mounted.



The carrier is adjustable in 8 positions over a height of 320 mm (12.60 in). It is important to attach the carrier at all 4 points on the height adjustment plate. Mount the cable holder on the carrier using the screws shipped with the bracket.

Use suitable screws (not shipped with product) to mount the height adjustment plate.

Configuring the MobileView Terminal

Chapter Objectives

This chapter shows how to:

- configure settings of the MobileView hardware using the MV Configuration Tool
- verify operating and control elements
- transfer data with a Personal Computer
- install programs
- save registry settings

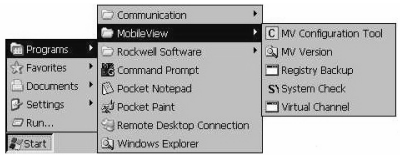
IMPORTANT Settings not made with the MV Configuration Tool, must be saved using the Registry Backup utility found in **Start>Programs>MobileView** folder. See page 4-15.

Using the MobileView Configuration Tool

Use the MobileView Configuration Tool to:

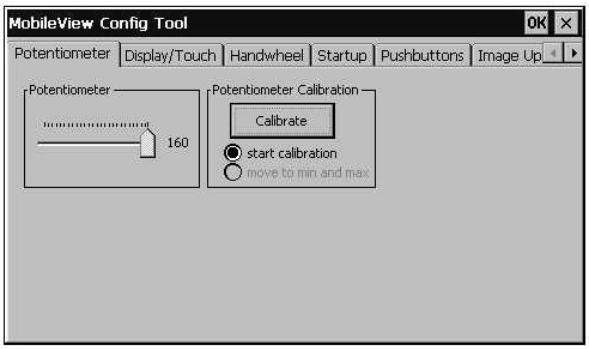
- calibrate and test operating elements
- adjust display
- calibrate the touch screen
- set start-up functions

To activate the tool from the Start menu, select:



Start>Programs>MobileView>MV Configuration Tool

The **MobileView Config Tool** dialog opens with the default Potentiometer tab selected.



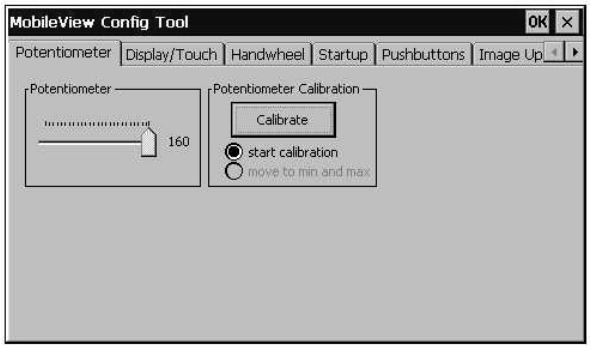
After making configuration changes and exiting the MobileView Config Tool dialog, you will be prompted to write the registry changes to Flash memory. You must do this to retain changes through power cycles.

The following dialog appears.

Tap the **Yes** button to save the configuration to Flash memory.

Calibrating the Potentiometer

The **Potentiometer** tab allows calibration of the potentiometer.



To start calibration, tap the **Calibrate** button. The radio button indicator prompts you to move the potentiometer to the:

- Min (Minimum) position, full travel in the counter clockwise direction and then to
- Max (Maximum) position, full travel in the clockwise direction.

After moving the potentiometer to the Min and then the Max position, tap the **Calibrate** button again to complete the calibration. The value to the right of the Potentiometer slide bar should read 127 and the slide bar pointer should be centered on the rightmost tick line.

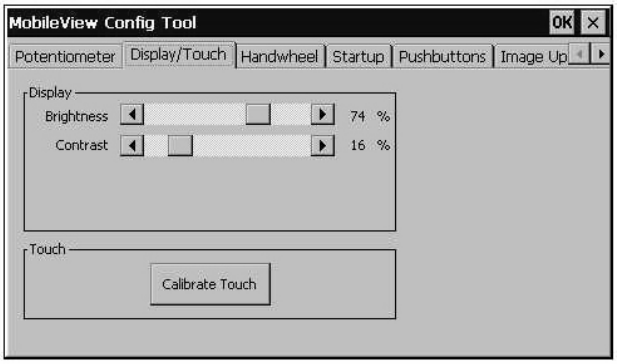
To verify calibration, move the potentiometer knob to the Min and Max positions. The slide bar value should read as a linear value from 0 to 127.

Adjusting Display and Touch Screen Settings

The **Display/Touch** tab lets you control the brightness and contrast of the display, and calibrate the touch screen.

Display Configuration

To adjust the brightness and contrast, simply move the associated scroll bars and/or tap buttons.



Screen Saver

To set the screen saver, select **Start>Settings>Control Panel** and run Display Settings. The screen saver will extend the life of the backlight.

The screen saver will be enabled if there is no keypad, touch screen, or operator activity for a time period exceeding the Idle Time setting in the **Backlight tab** of the **Display Settings**. The screen saver backlight brightness can also be set. To turn off the backlight while on external power, enter a turn-off time of 30 seconds to 30 minutes.

Once in screen saver mode, the first keypad key or touch screen activation will deactivate the screen saver but not activate the buttons or functions assigned to the keypad key or touch screen touch cells. The handwheel, keyswitch, pushbutton, and potentiometer operators will deactivate the screen saver but remain fully functional while screen saver mode is active. The emergency stop button and enable switches are also fully functional in screen saver mode but will not deactivate the screen saver.

Touch Screen Calibration

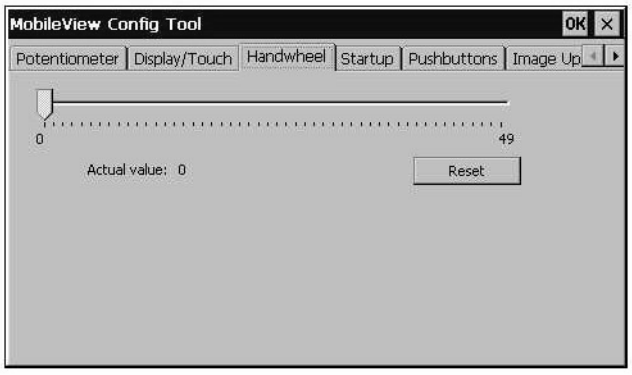
To calibrate the touch screen, tap the **Calibrate Touch** button. An image with a white background, a cross hair target in the center of the screen, and instructions at the top, will appear. Simply follow the instructions to complete the calibration. For best results use a stylus.

ATTENTION

Do not use a sharp object, such as a screw driver when operating the touch screen. Using sharp objects may damage the touch screen.

Setting the Handwheel to Zero

The **Handwheel** tab calibrates the electronic handwheel of the MobileView terminal.



The handwheel registers a 16-bit value (-32768 to +32768) which can be processed in the target application as needed and is calibrated for 50 pulses per revolution. Every single increment of the handwheel is equal to a value of 1.

To calibrate the handwheel:

1. Move the handwheel to the desired start position.

2. Tap the **Reset** button on the Handwheel tab of the MobileView Config dialog.

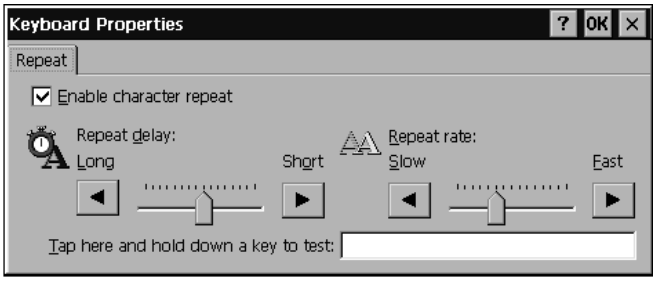
   The handwheel slide bar will move to the leftmost tick mark and the actual value will be reset to a start value of 0.

Configure Keypad Settings

You can adjust the keypad auto-repeat rate through the Keyboard Properties dialog in the Control Panel.

To set the auto-repeat rates:

1. Select **Start>Settings>Control Panel**.
2. Double-tap **Keyboard**.

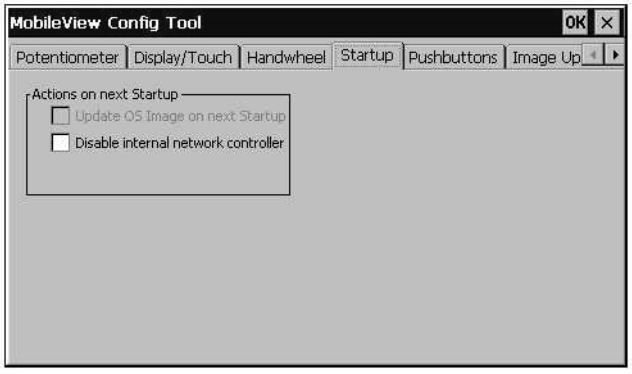


3. Tap the **Enable character repeat** check box.
4. Select the desired **Repeat delay** and **Repeat rate** settings and then tap **OK** to save the changes and exit the dialog.

TIP The Keypad auto-repeat rate settings are for the physical left and right membrane keypads only. You cannot configure the on-screen, alphanumeric input panel.

Configuring Startup Settings

The **Startup** tab determines what occurs after a restart or power cycle of the MobileView terminal.



You can select the following startup actions for the MobileView terminal:

- *Update OS Image on Next Startup* - Loads the OS (Operating System) image from the BOOTP Server via the network the next time the MobileView is started.

IMPORTANT The Ethernet connection must have been established, the BOOTP Server must be correctly configured, and an OS image file must be available. See the MobileView G750/MT750 Flash Update documentation for more information.

- Disable internal network controller: - Deactivates the internal Ethernet interface CELAN1:Onboard Ethernet at the next startup.

  To enable the network controller after disabling:

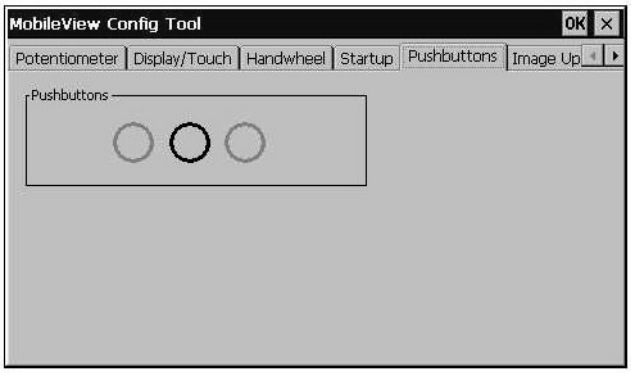
  a. Deselect "Disable Internal Network Controller".

  b. Perform a registry backup by selecting **Start>Programs>MobileView>Registry Backup**.

  c. Cycle power to the MobileView terminal.

Activating/Testing Pushbutton LEDs

The **Pushbuttons** tab allows activation of the push button LEDs, that are present, on the MobileView terminal.



Tap one of the 3 pushbutton targets to switch the corresponding LED to Flashing, On, or Off. The first tap switches the LED to Flashing, the second tap switches the LED to On, and the third tap switches the LED to Off.

IMPORTANT This activation test utility activates the push button LEDs only. The push button and keyswitch position states are not affected.

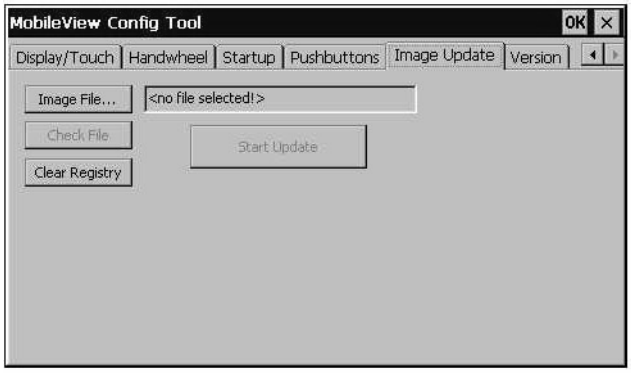
Loading a New Image File

The **Image Update** tab allows selection, validation, and loading of a new WinCE Flash image file to the MobileView terminal.

You can update the image directly from a PC card or using an Ethernet or Serial connection download the update file to the MobileView Terminal. Do not remove the PC card until the image update procedure is complete.

Interruptions may occur when downloading large files over Ethernet connections using two or more switches.

1. Tap the **Image Update** tab.

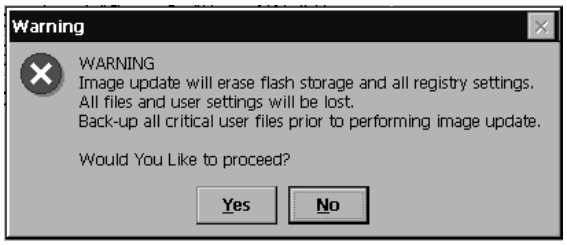


2. Tap the **Image File** button. Browse and select the .bin file, then tap the **Start Update** button.

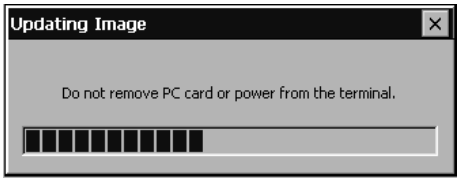
IMPORTANT If the IPSM is still formatting the flash area, you will see the message, "PSM is active. Do you want to deactivate PSM and reset the device?". Follow the bulleted procedure. If this message does not appear, proceed with step 3.

- Tap the **OK** button to stop the IPSM. The message "PSM deactivate" appears.
- Tap the **OK** button to quit and reset the terminal. If the terminal did not reset, the file SoftReset.exe will not copy to the terminal's root directory.
- Select **Start>Programs>MobileView>MV Configuration Tool**
- Repeat step 1.

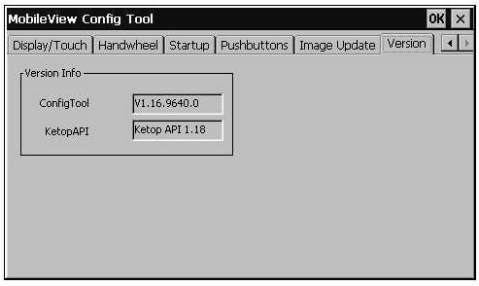
3. Tap **Yes** to continue past two warnings.



4. The image update starts.
   The Updating Image dialog shows the progress of the update.



Tool Version



ATTENTION

After starting an update, do not cycle power or remove the PC card until the update is complete. If the update is interrupted, the terminal will become inactive and can only be initialized and updated using the BootP server. Contact Technical Support for more information.

When the update is complete, the following dialog appears.

5. Tap the **OK** button to reset the terminal.

   A dialog displays the message “erasing PSM, please wait...”.

   When this operation is complete, the terminal resets.

6. The update is complete. You can calibrate the touch screen and safely remove the PC card from the terminal.

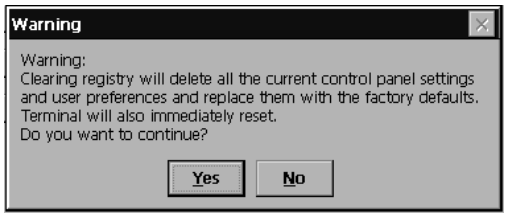
Clearing the Registry

IMPORTANT All modifications made to the registry since product delivery will be deleted.

To clear the registry and restore factory default settings:

1. Tap the **Clear Registry** button on the **Image Update** tab.

   A warning dialog appears letting you know that the current settings will be replaced with the factory default settings and that the terminal will reset.



2. Tap **Yes** to continue. The terminal resets.

Checking the Operating and Control Elements

You can verify the operating and control elements of the MobileView terminal using the System Check software. You can check the following operating and control elements:

- Override potentiometer (option)
- Electronic handwheel (option)
- Membrane Keypad
- Touch screen
- Display

ATTENTION

Any changes to the contrast or brightness setting in the display backlight system check will be applied to the MobileView terminal and the configuration tool.

- Illuminated push button (option)
- Key switch (option)
- IPSM Flash file system

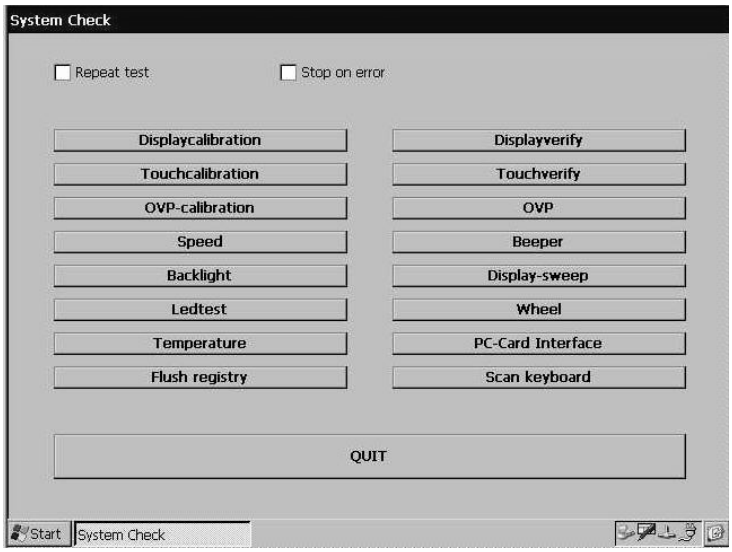
The following safety elements **cannot** be checked with this utility:

- Emergency stop switch
- Enabling switches

The System Check software also lets you check the MobileView terminal data, such as the CPU memory, interface module, or operating elements.

To run this software, select:

Start>Programs>MobileView>System Check



Transferring Data with a Personal Computer

This section shows how to transmit data between the MobileView terminal and a PC using the MicroSoft ActiveSync software. It shows how to:

- verify serial port availability
- install the Microsoft ActiveSync software
- connect the MobileView terminal to a PC
- disconnect communications

Verifying Serial Port Availability

To verify that your PC serial port is available:

1. For Windows 95, Windows 98 and Windows NT systems:
   On your PC, select **Start>Settings>Control Panel**.

   For Windows 2000 systems:
   On your PC, right-click **My Computer**, select **Manage** and then **Device Manager**.

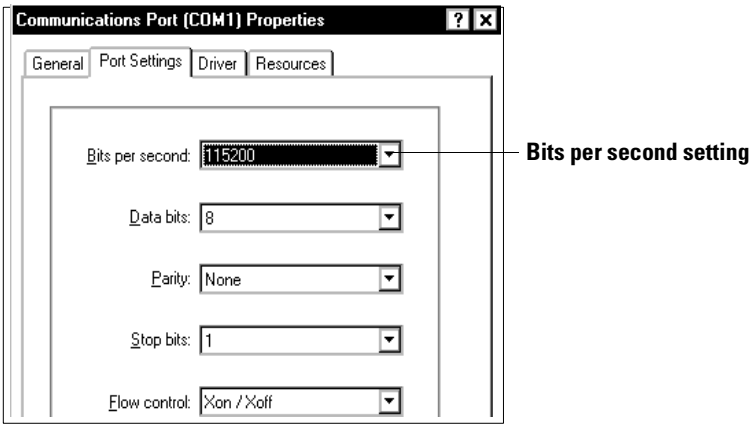
2. For Windows 95 and Windows 98 systems:
   Double-click the **System** icon and select **Device Manager** tab.

   For Windows NT systems:
   Double-click the **Ports** icon.

   For Windows 2000 systems:
   Double-click **Ports** from the menu.

3. View the devices by type or number. Double-click the desired port.

4. Click the **Port Settings** tab or the Settings button and set the **Bits Per Second** or Baud Rate to match MobileView settings.



5. Click **OK** to apply any changes and close the windows.

Installing Microsoft ActiveSync Software

Microsoft ActiveSync enables you to connect the IDA to your PC. ActiveSync version 3.1 or greater is required. Download ActiveSync from the Internet at www.microsoft.com/pocketpc/downloads/activesync.asp and follow Microsoft's installation instructions. When the software installation is complete, continue by following the procedure below.

Connecting the MobileView Terminal to a PC

To connect the MobileView terminal to a PC:

1. Remove the back cover of the MobileView terminal.

2. Plug the MobileView Download Cable (Catalog Number 2727-MRC1) into the RS-232 Port (note the location of pin 1). See page 3-12.

3. If ActiveSync or the Get Connected window is not open already on the PC, follow these steps:
   - Select **Start>Programs>Communication>ActiveSync>OK** on the PC. The ActiveSync window opens.
   - In the ActiveSync window, select **File**, **Get Connected** from the menu bar. The Get Connected window will open.

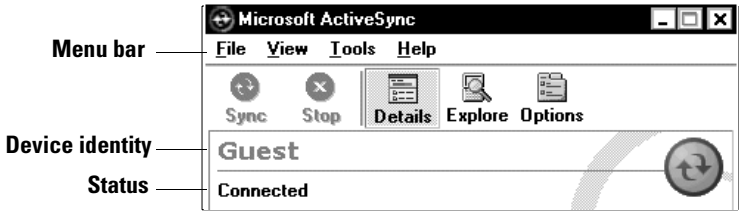
4. In the Get Connected window, click the **Next** button.

5. On the MobileView Terminal, select **Start>Programs>Communications>ActiveSync.** MobileView Terminal opens a connection status box. On the PC, the Get Connected window instructs you to wait while Setup locates your mobile device. When the PC and MobileView connect, the MobileView connection status box closes. The PC's ActiveSync window shows "Connected" and a New Partnership window will open.

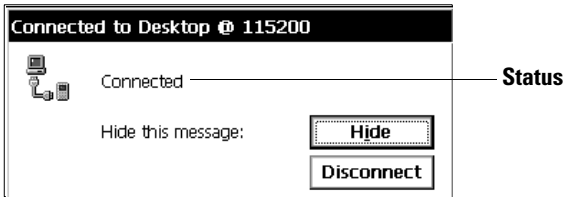
6. In the New Partnership window on the PC, click **No** in response to the question "Would you like to set up a partnership?" Then, click the **Next** button.

7. The New Partnership window closes and the ActiveSync window shows you are connected as “Guest”.

Connection Status Box on the PC



Connection Status Box on the MobileView Terminal



8. Once you are connected, you can use Windows Explorer to transfer files between your PC directories and your Mobile Device directories.

TIP

If the connection fails, try it again, making sure you follow steps 3 and 4 in close sequence. If the connection still fails, use the ActiveSync Troubleshooter, which provides diagnostic steps to identify and correct problems. On the ActiveSync Help menu, tap **Microsoft ActiveSync Help**. Double-click the **ActiveSync Troubleshooter** book, then double-click **ActiveSync Troubleshooter**.

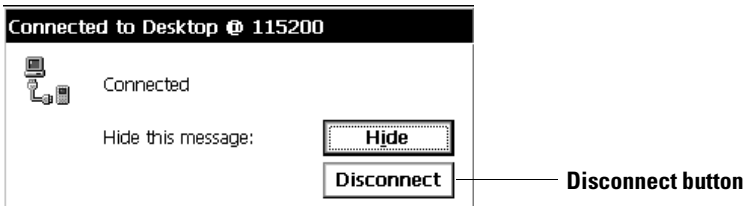
If communication problems occur:

- restart the ActiveSync software on the PC.
- reduce the baud rate on the MobileView terminal by selecting **Start>Settings>Network and Dial-up Connections** and then select the com1_115K connection. Then select **File>Properties**. Select the configure tab and then select the desired baud rate from the Baud Rate pull-down menu.

Disconnecting Communication

To disconnect communication between the MobileView and PC:

1. If the connection status box is minimized on the MobileView, double-tap the **Connection** icon at the bottom of the MobileView terminal screen to open it.



2. Tap the **Disconnect** button. Communication disconnects and the connection status box closes.

3. The ActiveSync window on the PC will show a status of "Not Connected". This may take some time before it is displayed.

Installing Programs

You can install programs using the ActiveSync software on a PC (covered in the previous section) or a PC card.

- **For PC program transfers**, use Windows Explorer on the PC. The MobileView terminal will appear as a MobileView device directory.
- **For PC card transfers**, insert the PC card in the PC card slot of the MobileView terminal and use Windows Explorer on the MobileView terminal. The PC card image will appear as "Storage Card" directory under the root directory.

IMPORTANT The "Flash Storage" directory is the only directory stored in flash. Programs and data installed in other directories are lost when power is cycled to the MobileView terminal. Save all data you want to retain in the "Flash Storage" directory.

IMPORTANT Many programs store their drivers in the Windows directory, but this directory is not saved. These programs will not function after you turn off the MobileView terminal. Relocate drivers to the "Flash Storage" directory.

Saving Registry Settings

ATTENTION

Any hardware configuration or Ethernet network configuration changes must be saved using the Registry Backup or they will be lost during a MobileView terminal power cycle.

To save the current registry settings:

1. Tap the **Start** button and select **Programs>MobileView>Registry Backup**.

To save the registry, tap the **OK** button. Saving the registry may take 15 seconds. The registry backup will automatically close.

Using RSView ME Station

Chapter Objectives

This chapter shows how to use RSView ME Station on your MobileView 2727-G7P20D1Q6 or 2727-G7P20D3Q7 terminal. It shows how to:

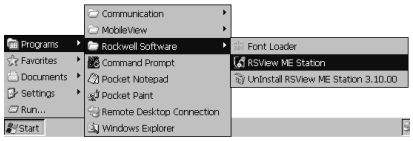
- configure startup options
- start RSView ME Station
- load an ME application
- run an ME application
- view application settings
- modify terminal settings

Startup Options for RSView ME Station

RSView ME Station can be started:

- without loading or running an .MER application
- automatically loading an .MER application
- automatically loading and running an .MER application

Start RSView without Loading or Running .MER Application



To start RSView ME Runtime without loading or running an .MER application:

- select the RSView ME Station icon from the desktop
- select RSView ME Station from the Start menu

  Programs>Rockwell Software>RSView ME Station

- type MERuntime.exe and its path in the Run dialog of the Windows Start menu.

  Path to MERuntime.exe

  If the path to RSView ME contains spaces, you must enclose the path in double quotes.

  Example:

  "Flash Storage\Rockwell Software\RSViewME\MERuntime.exe"

If you copy the RSView ME Station shortcut from the desktop to the Windows Startup folder (\Flash Storage\Windows\Startup), RSView ME station will automatically run on startup.

Start RSView and Load .MER Application

To start RSView ME Station and automatically load an .MER application:

- select the RSView ME Station icon from the desktop
- select RSView ME Station from the Start menu:
  Programs>Rockwell Software>RSView ME Station
- type the appropriate shortcut path in the Run dialog on the Windows Start menu.

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER

  If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

Example:
"Flash Storage\Rockwell Software\RSViewME\MERuntime.exe" "Flash Storage\Rockwell\Software\RSViewME\Runtime\MYAPP.MER"

If you place a shortcut to the .MER application into the Windows Startup (\Flash Storage\Windows\Startup) folder, the ME Runtime will automatically start and load the .MER application on terminal startup.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main RSView ME Configuration Mode screen will open.

Start RSView and Run .MER Application

To start RSView ME Station and automatically run an .MER application:

- type the appropriate shortcut path in the Run dialog on the Windows Start menu.

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r

  If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

Example:

"Flash Storage\Rockwell Software\RSViewME\MERuntime.exe" "Flash Storage\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r**

If you place a shortcut with the above command line in the Windows Startup folder (\Flash Storage\Windows\Startup), the ME Runtime will start and automatically run the .MER application.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main RSView ME Configuration Mode screen will open and display the following message:

Unable to load application

Other Shortcut Paths for RSView ME Station

IMPORTANT If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

- To run the .MER application and delete its log files without replacing the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d

Example:

"Flash Storage\Rockwell Software\RSViewME\MERuntime.exe" "Flash Storage\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r/d**

- To run the .MER application and replace the terminal's communication configuration with that of the applications without deleting its log files, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/o

Example:

"Flash Storage\Rockwell Software\RSViewME\MERuntime.exe" "Flash Storage\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r/o**

- To run the .MER application, delete its log files, and replace the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d/o

Example:

"Flash Storage\Rockwell Software\RSViewME\MERuntime.exe" "Flash Storage\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r/d/o**

Starting RSView ME from the desktop

If RSView ME Station does not automatically run on startup, you can access it from the Windows Start menu or the desktop icon.

To start RSView ME Station:

- select RSView ME Station from the Windows Start menu.
  Start>Programs>Rockwell Software>RSView ME Station
- select the RSView ME Station icon on the desktop.

To access RSView ME Station from a running application:

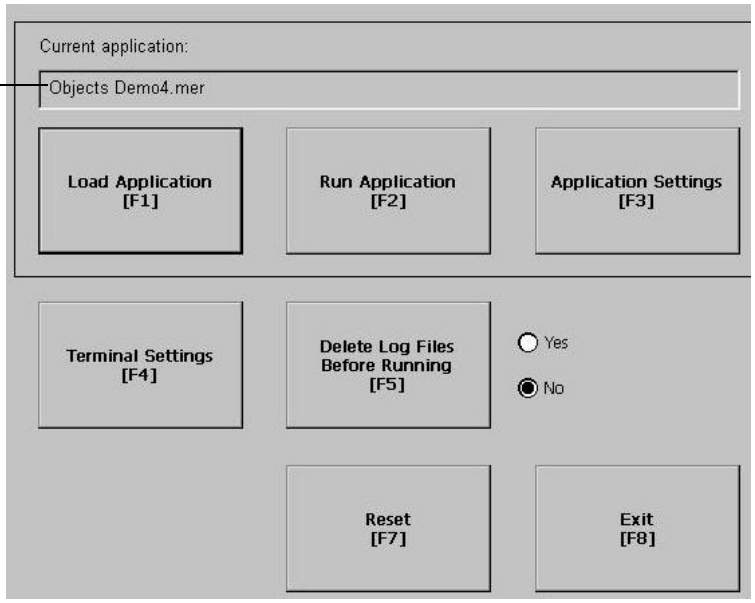
- press the Goto Configuration Mode button.

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.



Main Screen Button	Description
Load Application (F1)	Opens another screen where you 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 MobileView 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 files will be deleted before the application runs. If you select No, log files are not deleted.
Reset (F7)	Resets the terminal. The action that occurs on startup depends on whether shortcut paths are defined in the Windows Startup folder.
Exit (F8)	Exits RSView ME Station.

Screen Buttons

RSView ME Station uses screen buttons for data entry and navigation.

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

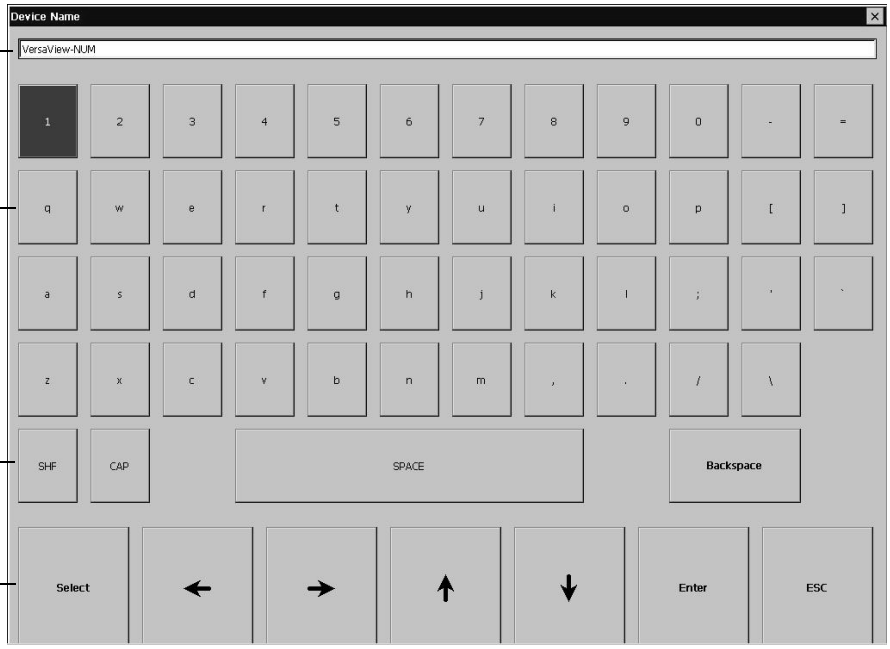
Besides operation specific buttons which are used to modify configuration data, most screens have a combination of the following buttons.

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 keys 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.
→ ← ↑ ↓	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.

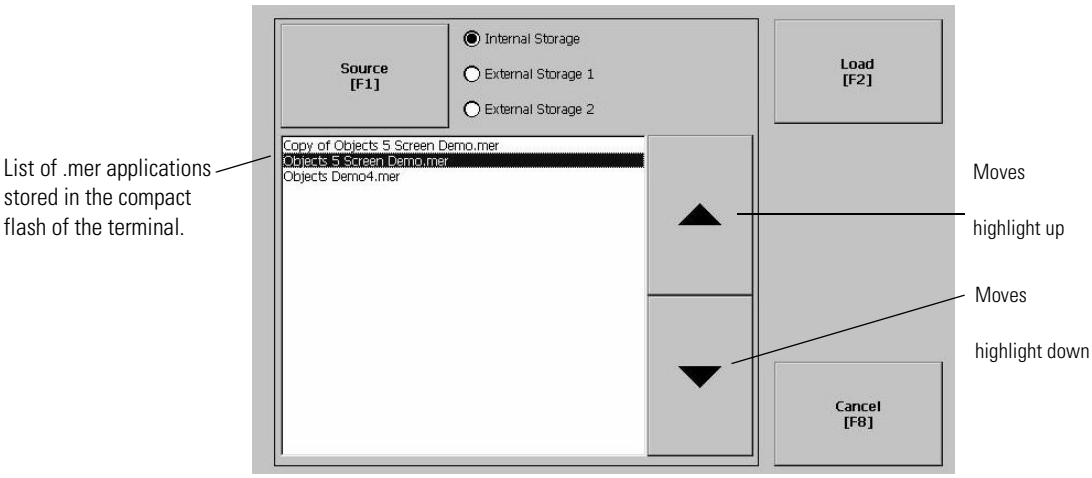
To enter characters in the Display Area:

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 entered data.

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 Flash in the MobileView terminal.
   - External Storage 1 - the External PCMCIA Flash card loaded in the card slot of the terminal.
   - External Storage 2 - not supported by MobileView products.
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 RSView ME Station screen.

Running an Application

To run a loaded application, select the **Run Application** button on the main RSView ME Station 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.

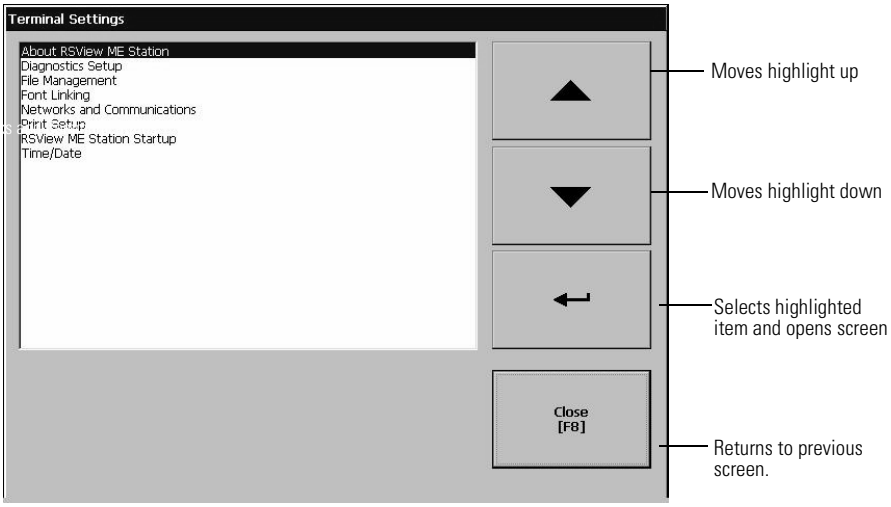
Application Settings

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 MobileView terminal.

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

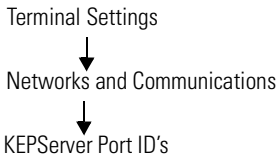


Terminal Setting	Description
About RSView ME Station	Describes the RSView ME Station software installed in the MobileView 2727-G7P20D1Q6 and 2727-G7P20D1Q7 terminals .
Diagnostics Setup	Forwards diagnostic messages form a remote log destination to a computer running diagnostics.
File Management	Copies or deletes application files or font files from a storage location.
Font Linking	Links a font file to a base font loaded on the terminal.
Networks and Communications	Configures network connections and communication settings specific to the application.
Print Setup	Configures settings for printing displays, alarm messages, and diagnostics messages generated by the application.
RSView ME Station Startup	Specifies whether the terminal starts up in configure or run mode. Also lets you enable/disable tests to run on the terminal at startup.
Time/Date	Sets the date, time.

Networks and Communications

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

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



KEPServer Port ID's

To access the KEPServer Port ID's screen, you must have KEPServer Enterprise installed on your terminal. Otherwise, you will get an error message when accessing this screen.

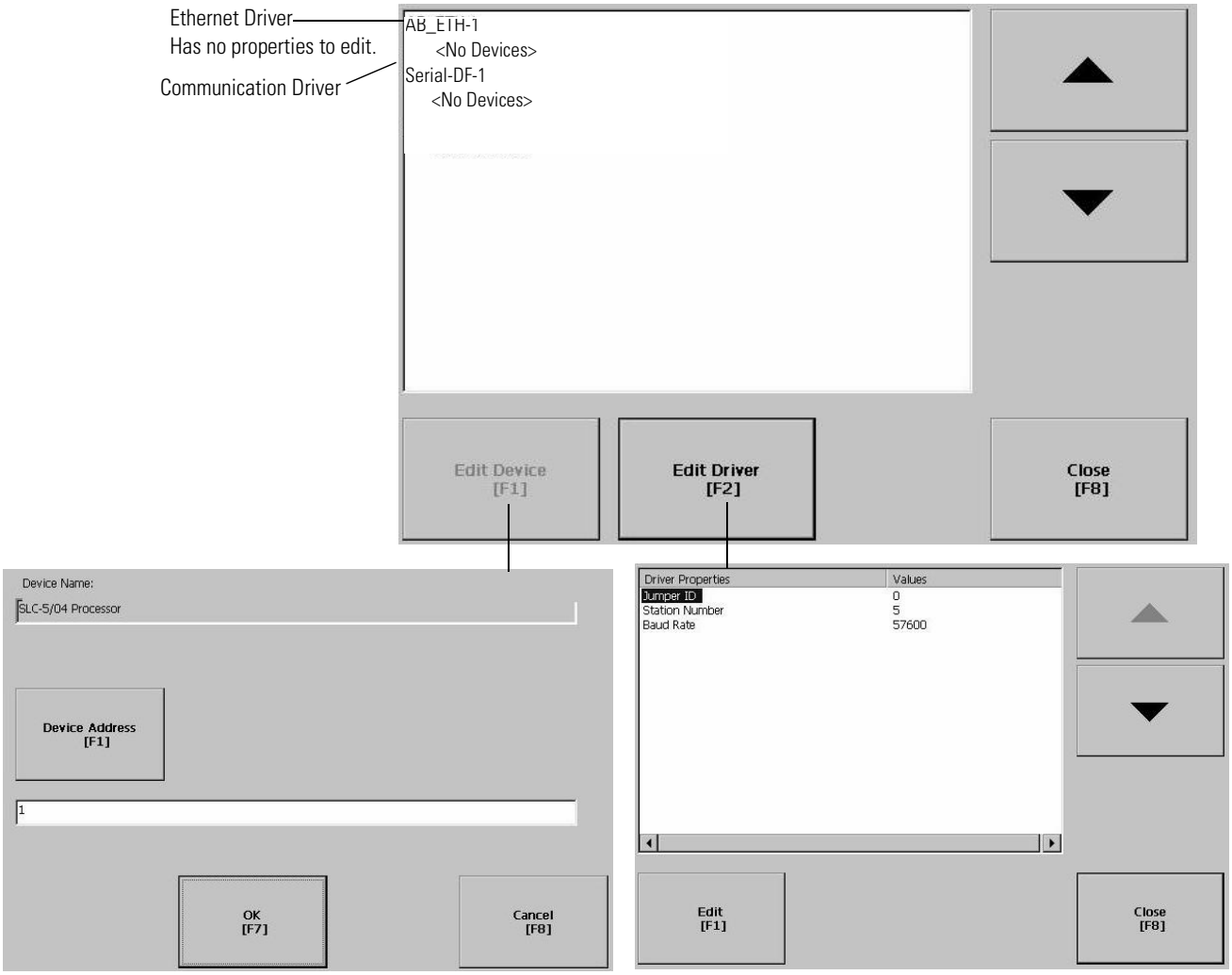
Terminal Settings
↓
Networks and Communications
↓
RSLinx Enterprise Communications

RSLinx Enterprise Communications

The RSLinx Enterprise 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.



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 not take effect until the terminal is rebooted.

Terminal Settings
↓
Networks and Communications
↓
Network Connections

Network Connections

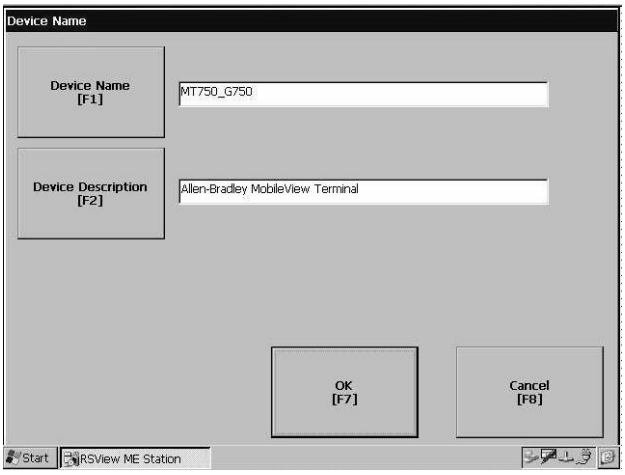
The Network Connections screen lets you configure the following for the MobileView terminal:

- Device Name
- Network Adapters
- Network Identification

Terminal Settings
↓
Networks and Communications
↓
Network Connections
↓
Device Name

Device Name

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



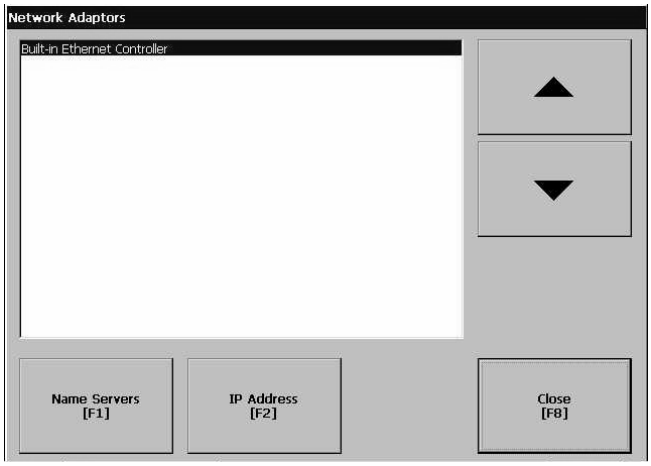
Field	Description	Valid Values
Device Name	Name that identifies the MobileView terminal to other computers on the network.	15 characters maximum, without spaces
Device Description	Provides a description of the terminal.	50 characters maximum

Terminal Settings
↓
Networks and Communications
↓
Network Connections
↓
Network Adapters

Network Adapters

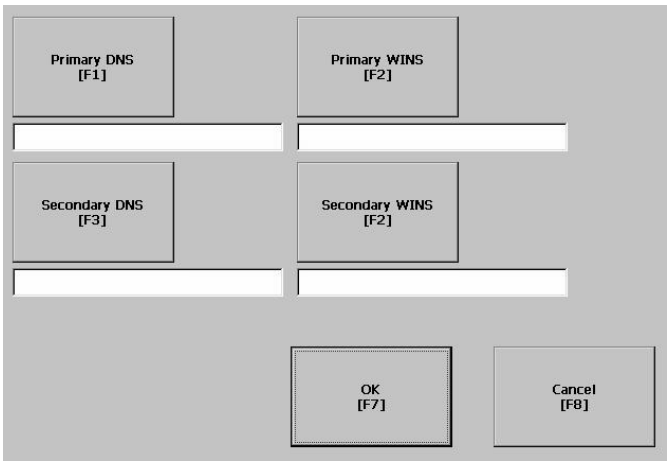
The Network Adapters screen configures driver settings for all network adapters installed on the terminal. The only network adapter on the MobileView terminal is the Built-in Ethernet Controller.

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



Name Servers

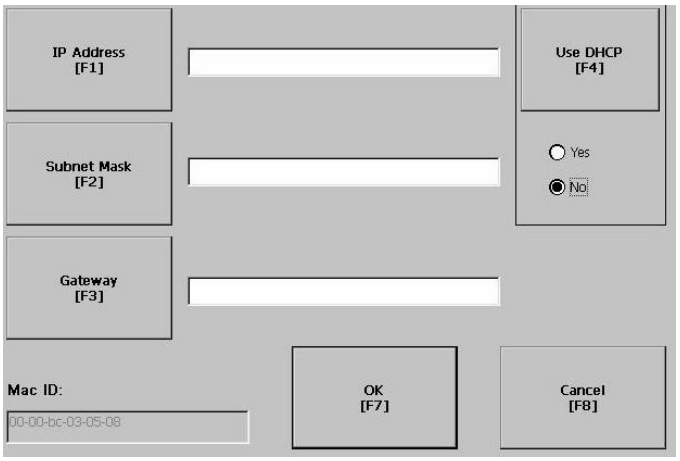
Defines Name Server addresses for the Network Adapter. These addresses are automatically assigned if DHCP is enabled for the network adapter.



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 MobileView is connected to does not automatically assign an IP address, you can assign the address in this screen.

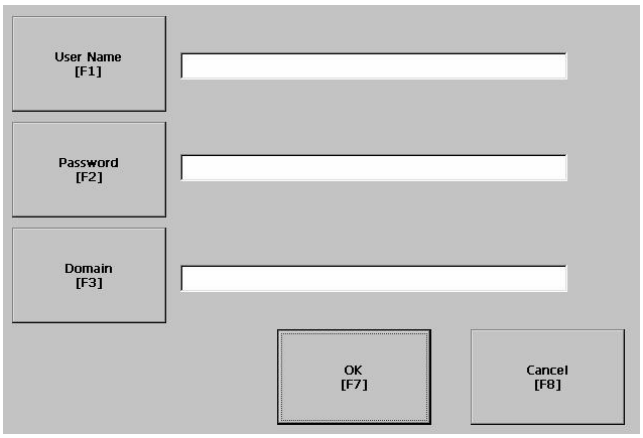


Field	Description	Valid Values
Use DHCP	Enables or disables DHCP (Dynamic Host Configuration Protocol) settings. DHCP automatically allocates network devices and configurations to newly attached devices on the network. If DHCP is set to Yes, the MobileView is automatically assigned an IP address, Subnet 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 MobileView 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
↓
Networks and Communications
↓
Network Connections
↓
Network Identification

Network Identification

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

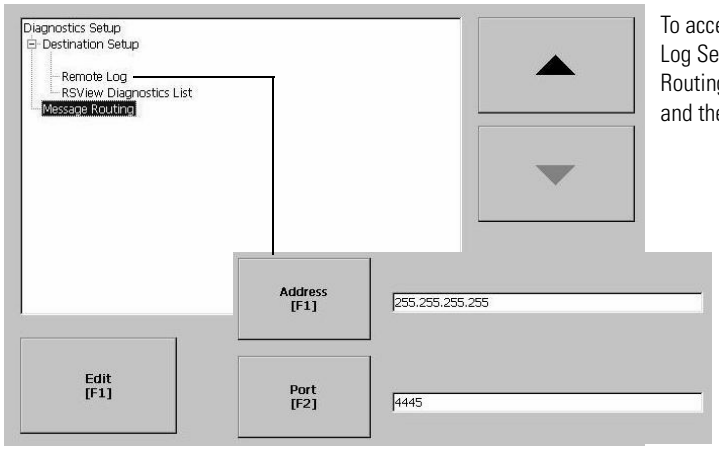


Field	Description	Valid Values
User Name	Identifies the user to the network.	70 characters maximum
Password	Characters that gain access to network along with the user name.	No character limitation
Domain Name	Provided by network administrator.	15 characters maximum

Diagnostic Setup

Terminal Settings
↓
Diagnostic Setup

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



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.

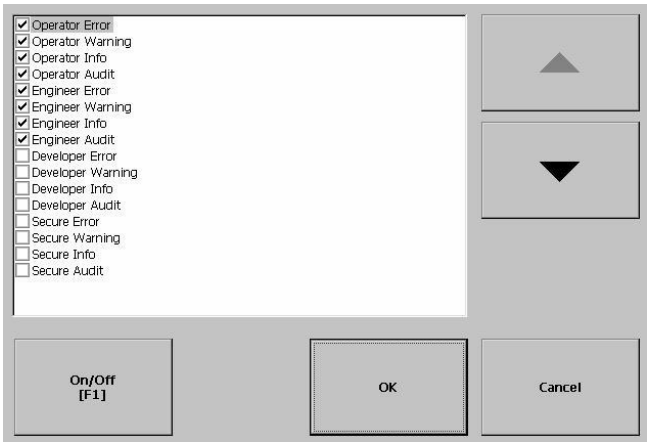
Field	Description	Valid Values
Address	Address of the remote Windows 2000/XP computer.	xxx.xxx.xxx.xxx
Port	The port used to communicate with the remote Windows 2000/XP computer.	4445 (default)

Message Routing

The Message Routing screen lets you access the following screens:

- Remote Log
- RSView Diagnostics List

Each 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

Terminal Settings
↓
File Management
↓
Delete Files

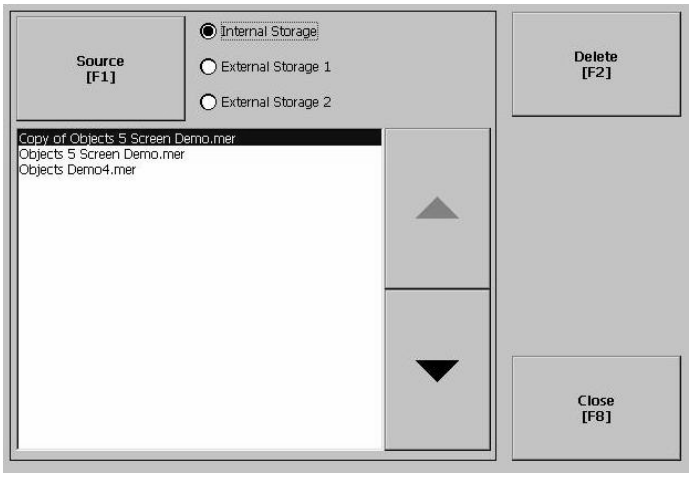
Delete Files

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 MobileView 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 you want to delete.
   - Internal Storage - the Internal Flash in the MobileView terminal.
   - External Storage 1 - the External PCMCIA Flash card loaded in the card slot of the terminal.
   - External Storage 2 - not supported by MobileView products.
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 MobileView 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

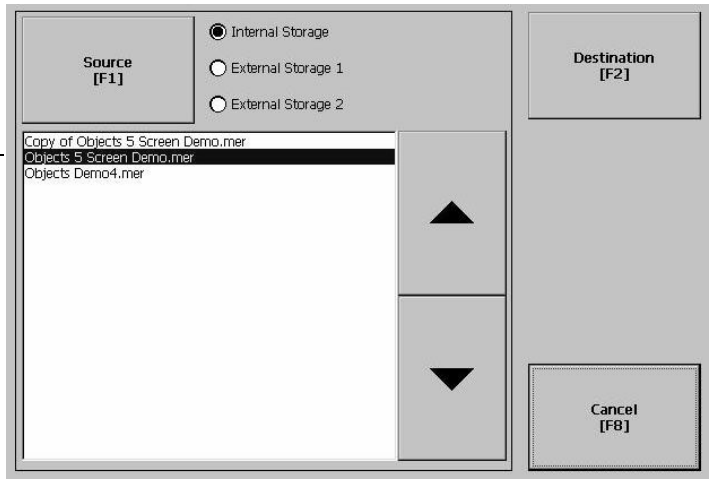
From the Copy Files screen, you can select options to:

- 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.

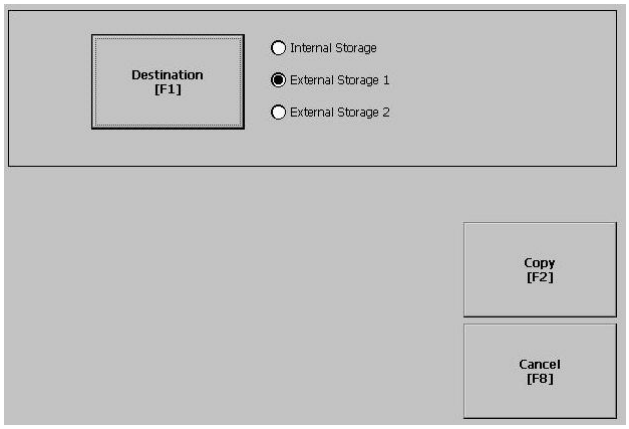
Copy Applications or Fonts

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

List of files stored in Internal Flash of terminal.



1. Select the **Source** button to select the location of the application or font file you want to copy.
   - Internal Storage - the Internal Flash in the MobileView terminal.
   - External Storage 1 - the External PCMCIA Flash card loaded in the card slot of the terminal.
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. The destination cannot be the same as the source location.
   - Internal Storage - the Internal Flash in the MobileView terminal.
   - External Storage 1 - the External PCMCIA Flash card loaded in the card slot of the terminal.

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.

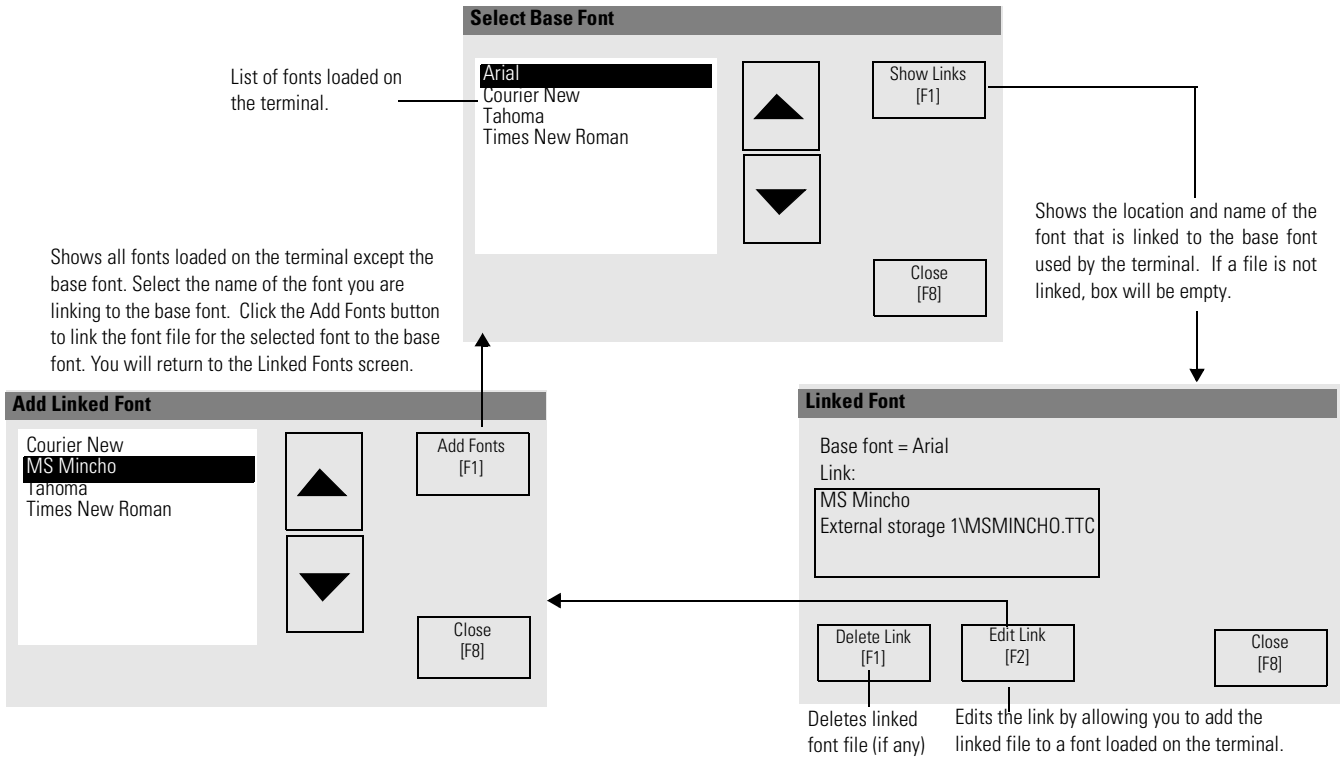
5. Select **Yes** or **No**.

Font Linking

Terminal Settings
↓
Font Linking

Font linking allows you to run a translated application on the terminal by linking a font file to the base font (for example, linking a Chinese font file to the base font Arial).

For more details on pre-installed terminal fonts and additional fonts available for downloading, see Appendix C.



Print Setup

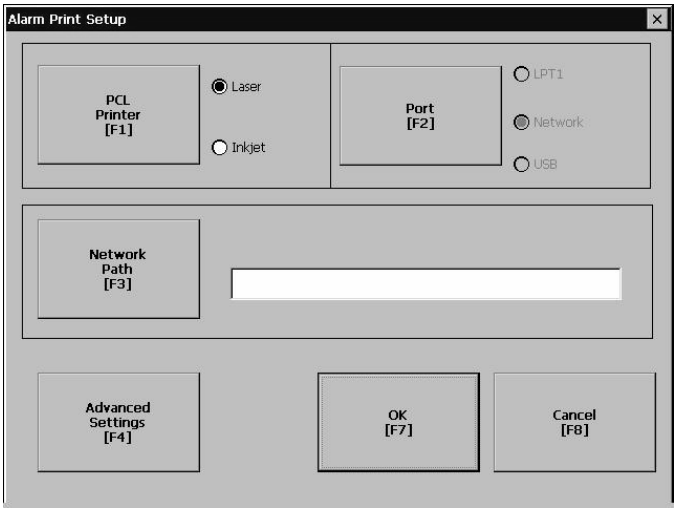
The Print Setup screen lets you access screens to configure print options for:

- Displays
- Alarms
- Diagnostic messages.

Terminal Settings
↓
Print Setup

Display, Alarm, and Diagnostic Print Setup

The 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)
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.	

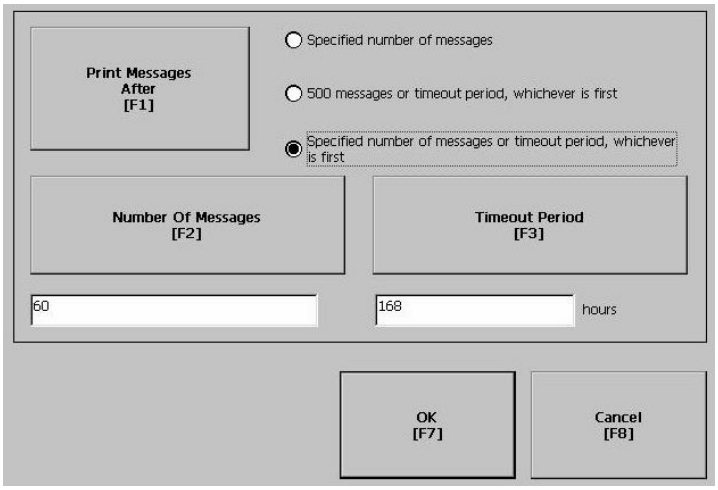
Advanced Settings for Display Print Setup

Select the **Advanced Settings** button to:

- change print orientation (portrait 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 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

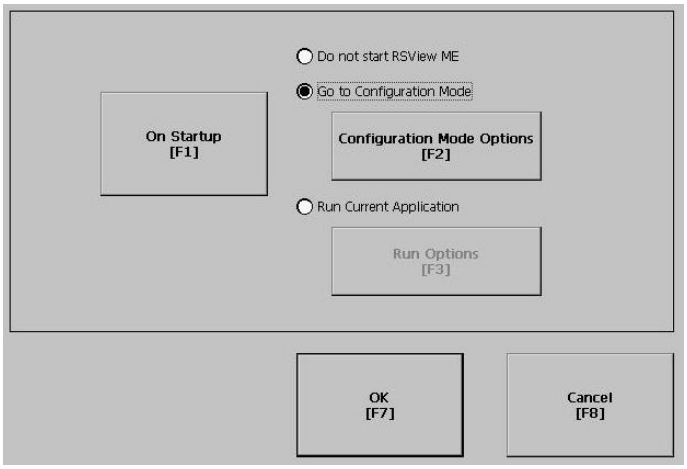
Terminal Settings
↓
RSView ME Station Startup

RSView ME Station Startup

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

- Do not start RSView ME Station
- Go to Configure Mode of RSView ME
- 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

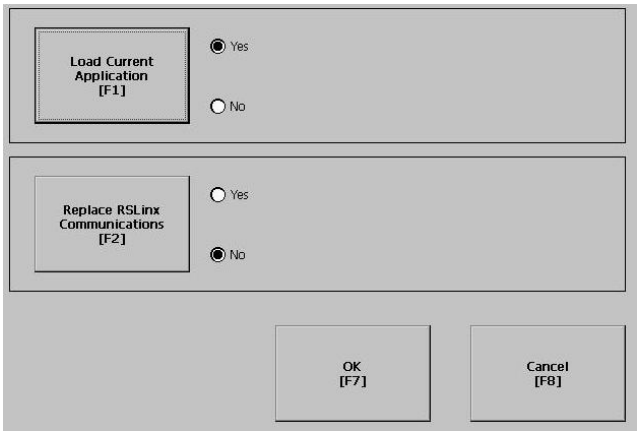
The Configuration Mode Options screen specifies whether the MobileView will boot up in Configure Mode:

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

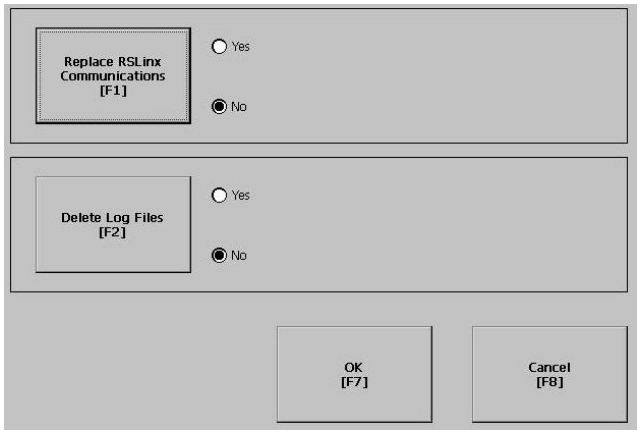
  If you select **Yes** to replace the terminal's communication configuration with that of the application, any changes made to the device addresses or driver properties in the RSLinx Communications screen will be lost.

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



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.

Time/Date/Regional Settings

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

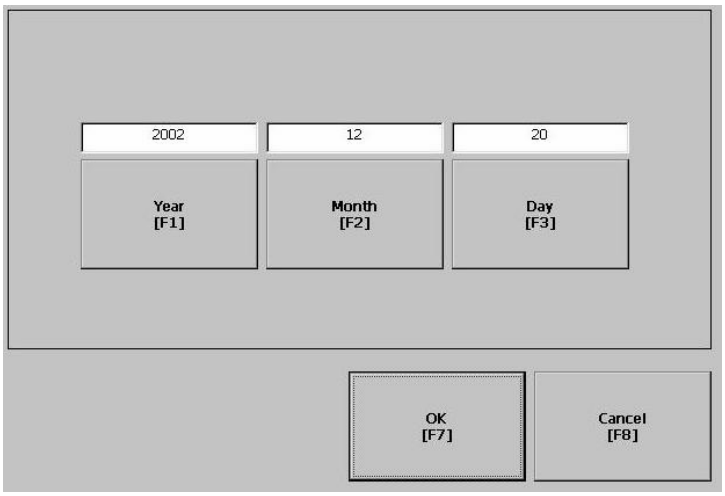
- date
- regional settings
- time
- time zone

TIP Time/Date/Regional Setting information is not saved during a reboot.

Terminal Settings
↓
Time/Date
↓
Date

Date

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

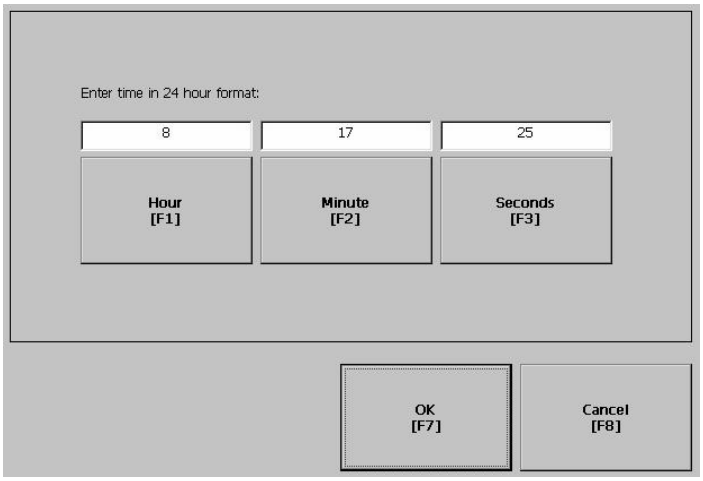


Field	Description	Valid Values
Year	The current year in a 4-digit format.	1980 - 2099
Month	The current month.	1 - 12
Day	The current day. The day of the month is validated based on the month.	0 - 31

Terminal Settings
↓
Time/Date
↓
Time

Time

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

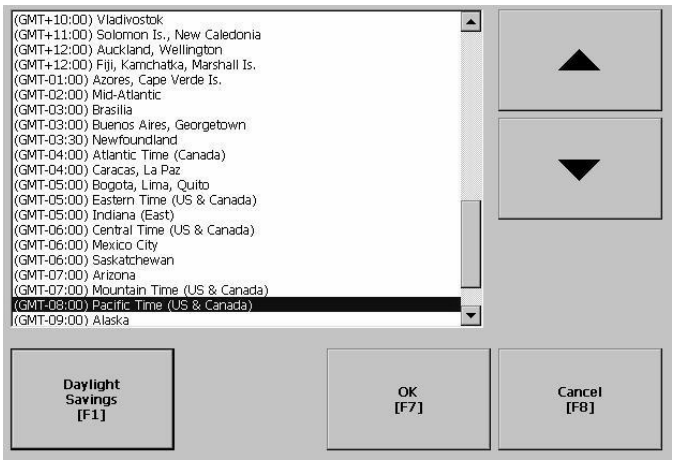


Field	Description	Valid Values
Hour	The current hour in 24-hour format.	0 - 23
Minute	The current minute in 24-hour format.	0 - 59
Seconds	The current second in 24-hour format.	0 - 59

Terminal Settings
↓
Time/Date
↓
Time Zone

Time Zone

The Time Zone screen shows the current time zone that is installed on the MobileView 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.

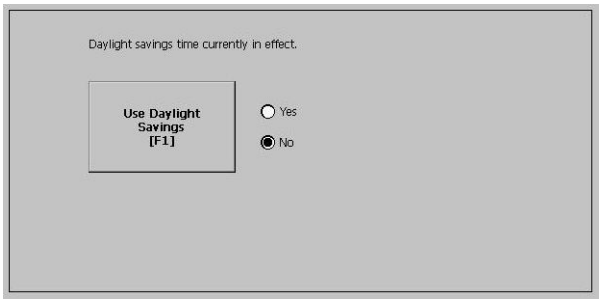


Language	Default Time Zone
English	(GMT -05:00) Eastern Time (US & Canada)
French	(GMT +01:00) Brussels, Copenhagen, Madrid, Paris
German	(GMT +01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
Japanese	(GMT +09:00) Osaka, Sapporo, Tokyo

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.



CE Thin Client Operating Instructions

Chapter Objectives

This chapter provides instructions on how to:

- start up or power on the MobileView terminal
- start an auto launch sequence
- configure Ethernet network settings
- save registry settings
- start terminal services
- shut down or power off the MobileView terminal
- setting the date and time

Starting Up/Powering On the Terminal

To start up or power on the MobileView terminal:

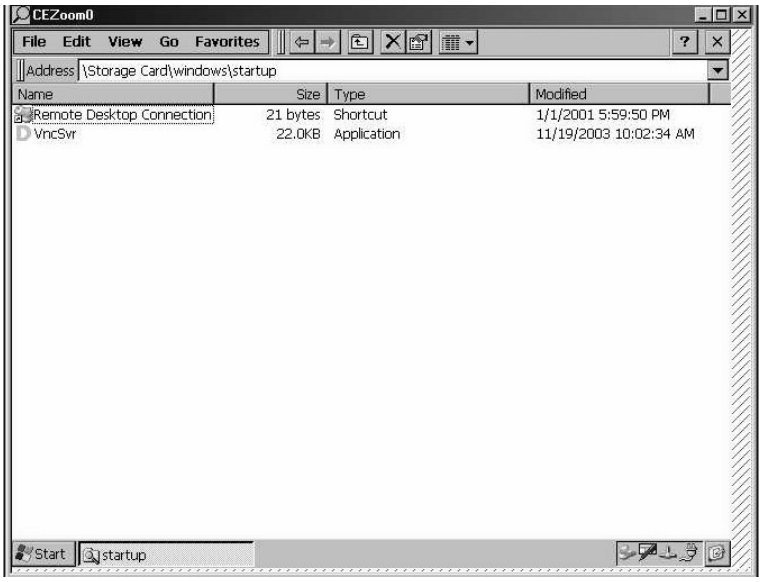
1. Attach the MobileView Connection Cable to the Junction Box Cable as shown on page 3-4. Tighten threaded coupling until it is finger tight.

2. Check the MobileView terminal for a start-up screen.

If the start-up screen does not appear, check the 24V dc power source and cable connections at the Junction Box and MobileView terminal.

Setting Auto Start

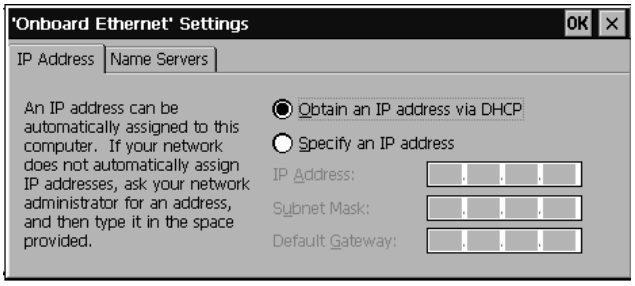
To configure the Auto Start sequence, copy the **Remote Desktop Connection** shortcut from the desktop to the Windows Startup folder (**storage card\windows\startup)**.



Configuring Ethernet Network Settings

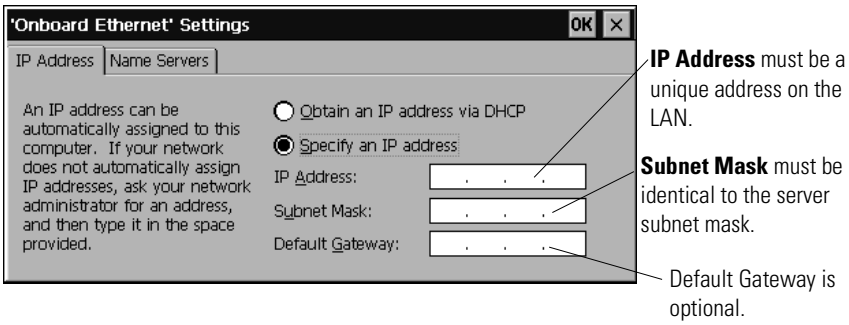
To configure the onboard Ethernet communications hardware of your MobileView terminal:

1. Tap the **Start** button and select **Settings>Control Panel**.
2. Double-tap the **Network and Dial-up Connections** icon.
3. Double-tap the CELAN1 icon.



4. Tap the **IP Address** tab and select either **Obtain an IP Address via DHCP** or **Specify an IP Address**, depending on your network configuration.

   If you select **Specify an IP Address**, complete the 3 text boxes with information from your network administrator or ISP. Use the on-screen input panel to enter the text. You can access the input panel by tapping the Stylus icon on the task bar.



5. Tap **OK** in the settings dialog. A notification window appears prompting you to either remove and reinstall your card or restart the device for the new settings to take effect. Tap the **OK** button in notification window.

6. Tap **OK** on the Network Configuration dialog and close the Control Panel.

Saving Registry Settings

ATTENTION

Any hardware configuration or Ethernet network configuration changes must be saved using the Registry Backup or they will be lost during a MobileView terminal power cycle.

To save the current registry settings:

1. Tap the **Start** button and select **Programs>MobileView>Registry Backup**.

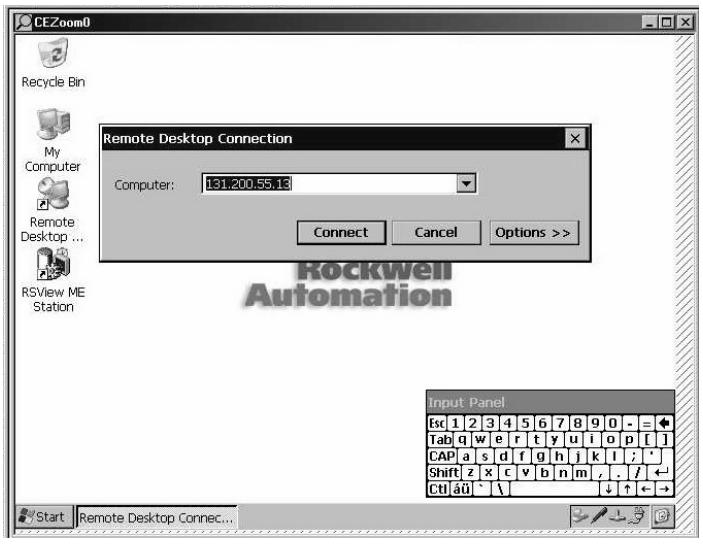
2. To save the registry, tap the **OK** button. Saving the registry may take 15 seconds. The registry backup will automatically close.

Starting Terminal Services

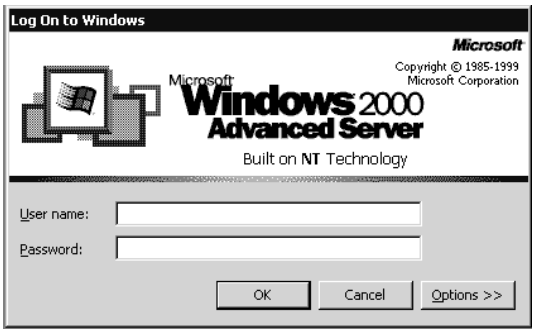
To connect to a terminal server as a CE client:

TIP Before connecting to the server as a client, move the server task bar to the top of screen. This will make it easier to access the client and CE task bars, and size the application screens for optimal viewing on the MobileView terminal.

1. Double-tap the **Remote Desktop Connection** shortcut on the desktop of the MobileView terminal or select the Terminal Server Client application from **Programs>Terminal Server Client** on the **Start** menu.



2. Enter the Terminal Server's Name or a valid TCP/IP address in the **Server** box using the on-screen input panel or select a server name or address from the **Recent Servers** box.
3. Tap the **Connect** button. A server log on window similar to the one below appears.



4. Enter your user name and password to operate as an active CE client.

Shutting Down/Powering Off the Terminal

To shut down or power off the terminal:

1. Close down all applications that are running on CE client.
2. Tap the **Start** button on the CE client task bar. Select **Shutdown** and then **Log Off** to disconnect from the terminal server.
3. Remove 24V dc power from the MobileView junction box or disconnect the MobileView connection cable from the junction box cable.

IMPORTANT The "Flash Storage" directory is the only directory stored in flash. Programs and data installed in other directories are lost when power is cycled to the MobileView terminal. Save all data you want to retain in the "Flash Storage" directory.

Setting the Date and Time

The real-time clock in the MobileView terminal is not backed up by a battery. You must reset the date and time and after every power cycle. Set the date and time by selecting **Start>Settings>Control Panel>Date/Time**.

Windows CE Applications

Chapter Objectives

This chapter covers:

- MobileView software
- generating programs for Windows CE
- virtual channel

MobileView Software

The MobileView terminal is delivered with pre-installed software that is stored in the flash of the device. This image contains the Windows CE operating system core and additional applications.

Operating system:
Windows CE 3.0 for 2727-G7P20D1P4, 2727-G7P20D1P5
Windows CE 4.1 for 2727-G7P20D1Q6, 2727-G7P20D3Q7

- Shell
- System Control
- Net Web Explorer
- ActiveSync

Pre-installed application programs:

- MS Terminal Server Client V1.5
- Pocket Registry Editor
- Pocket Paint V3.0
- Pocket Notepad V2.1.1

Pre-installed drivers:

- PC card wireless LAN card type Orinoco PC Card Silver 11Mbit/s IEEE 802.11b
- PC card for Windows CE standard modem
- IrDA/serial keypad interface for PS-2 keypad for KeyMate by MicroFoundry.

MobileView-specific software:

- Toggle-Sip (Software-Keypad)
- VirtualChannel VC
- MobileView Configuration Tool for configuration of operating and control elements, display, touch screen and registry backup.

Generating Programs for Windows CE

You can easily generate programs for Windows CE. Programming is similar to an application for a standard MS Windows NT PC. Under Windows CE, only the number of available WIN32-APIs is limited.

Two Software Developers Kit SDK are included in on the product CD: Virtual Channel SDK and CE 4.x SDK. The User Manual for the CE 4.x SDK is located on the product CD.

Virtual Channel

The protocol "Virtual Channel" (VC) is used to transmit control and operating element data between a controller (control application running on a server) and one or more MobileView terminals.

The following data can be transmitted via the VC:

Data	Direction Server <--> MT	Value Range	Size (Bytes)	Transmission
Potentiometer	<--	0 to 127	1	Event in case of modification and upon request of the control
Electrical handwheel	<-->	-32768 to +32768	2	Event in case of modification, upon request of the control, and as set command for adjusting
Enable Switch	<--	0/1	1	Event in case of modification
Keys/buttons below display				
Push button LEDS	<-->	On Flashing Off	2	As command from the control and as request from the client to the control.
Contrast, Brightness	<-->	0 to 255	2	As command from the control and as request from the client to the control.
Time for Screen Saver	<-->	0 to 255	1	As command from the control and as a request from the client to the control.
State of Screen Saver	<-->	0 to 1	1	Event or as request from the client to the control.
Volume	<-->	0 to 255	1	As command from the control and as request from the client to the control.
Background Lighting	<-->	0 to 1	1	As command from the control and as request from the client to the control.
WriteToFlash	-->	-	-	Command
PlaySound	-->	0 to 255	1	Command
KeepAlive	<-->	0 to 65535	-	Command

Data transmission between the controller and MobileView terminal is based on the Ethernet connection (TCP/IP protocol, Listening Port **0xCEBA**). All devices must be identified by their IP address.

Several MobileView terminals may be connected to one controller, but only one controller can be connected to a MobileView terminal at any given time.

The VC protocol is an event-driven protocol, i.e. each station can send data at any time without request.

Getting Started

Refer to the MobileView MT750/G750 User Document CD that ships with the terminal for the Virtual Channel Development Kit. The Development Kit includes the API functions, header files, .dll files, and sample code.

Activating the Virtual Channel

To enable the user of the virtual channel:

1. Select **Start>Programs>MobileView>Virtual Channel**

2. Double-tap the K icon on the status bar.

3. Enter server IP address and tap the **Connect** button.

Events Causing the Client to Send Data

- Modification of value of potentiometer (override)
- Modification of handwheel value
- Modification of key status of a key/button
- Data inquiry of server

With each event, the client sends the server a data package containing the information about the type of event as well as the current data of all operating elements. If the client produces several events one after the other, and the server cannot process all of them at once, the server will send one message containing all events.

Events of Server

By sending a package to the client, the server can set the current value of the handwheel, or request the current values (position of handwheel and override potentiometer, as well as state of keys). The server can also read the current states of the values which can be modified by the server.

Data Transmission

Client to Server

```
typedef enum {
      eKVCJoystickIsZero          0x0001
      eKVCJoystickNotZero         0x0002
      eKVCSpaceMouseIsZero        0x0004
      eKVCSpaceMouseNotZero       0x0008
      eKVCHandWheelChanged        0x0010
      eKVCOverrideChanged         0x0020
      eKVCKeyPressed              0x0040
      eKVCKeyReleased             0x0080
      eKVCLedValue                0x0100
      eKVCContrast                0x0200
      eKVCBrightness              0x0300
      eKVCVolume                  0x0400
      eKVCScreensaverTime         0x0500
      eKVCScreensaverState        0x0600
      eKVCBacklightState          0x0700
      eKVCLed                     0x0800
      eKVCJoystickResp            0x0900
      eKVCSpaceMouseResp          0x0A00
      eKVCHandWheelResp           0x0B00
      eKVCOverrideResp            0x0C00
      eKVCAlive                   0xFE00
      eKVCClientDisconnect        0xFF00
} TKVCEvent;

typedef struct {
     UINT16 event;
     struct {
           UINT8 overrideVal;
           UINT8 keyVal;
           TKVCJostickData joystickVal;
           SINT16 handWheelVal;
           TKVCSpaceMouseData spaceMouseVal;
     } data;
} TKVCClientData;

typedef enum {
        eKtpKeyboardLedOff   = 1,
        eKtpKeyboardLedOn    = 2,
        eKtpKeyboardLedBlink = 3
} TKtpLedState;

typedef struct {
     char posX;
     char posY;
      char posZ;
} TKVCJostickData;
```

```
typedef struct {
      UINT16 posX;
      UINT16 posY;
      UINT16 psoZ;
} TKVCSpaceMouseData;

typedef struct {
      SINT16 absVal;
      SINT16 dynVal;
}TKVCHandWheelData;
```

Server to Client

```
typedef enum {
        eKVCSetWheelValue,
        eKVCSetLed
            eKVCSetContrast,
            eKVCSetBrightness,
            eKVCSetVolume,
        eKVCSetScreensaver,

        eKVCGetLed,
        eKVCGetContrast,
        eKVCGetBrightness,
        eKVCGetVolume,
        eKVCGetScreensaver,
        eKVCGetJostickValue,
            eKVCGetSpaceMouseValue,
            eKVCGetOverrideValue,
            eKVCGetWheelValue,

            eKVCSwtichBacklight,
            eKVCGetBacklightState,

            eKVCPlaySound,
            eKVCWriteFlash
            eKVCDisconnect
} TKVCCommand;

typedef struct {
        TKVCCommand command;
        SINT16 param;
} TKVCServerData;
```

Example: Interface on Server

On the server side, the VC protocol is represented by two classes: CKVCServerand CKVCConnection. An object of the CKVCServer class represents the actual server (the "listener") and an object of the CKVCConnection class represents a connection to a client.

"**Server class**"

```
class CKVCServer {
public:

        virtual CKVCConnection* OnClientConnect(const char
        *pIpAdr)= 0;
        virtual int OnClientDisconnect(CKVCConnection
        *pConnection,
                                        TDisconInfo info);

};
```

CKVCConnection* **OnClientConnect**(SOCKET socket, sockaddr_in &sockAdr);

This method is always called when a terminal establishes a connection to the control. The parameters `socket` and `sockAdr` specify the connection parameters of the terminal. This function must return a pointer to an object of the `CKVCConnection` class. A return value of 0 indicates that the control rejects the logon of the terminal.

int **OnClientDisconnect**(CKVCConnection *pConnection, TDisconInfo info);

This method will be called if the server cannot reach the client any more. The cause of the logoff is specified in `info`.

Connections

```
class CKVCConnection {
private:
        char *pIpAdr;
public:

        virtual int Init(CKVCServer *pServer, SOCKET socket,
        SOCKADDR_IN &socketAdr,Tpriority threadPriority);
        virtual int Exit();
        virtual int OnOverrideChange(SINT16 val);
        virtual int OnWheelChange(SINT16 wheelAbsVal);
        virtual int OnKeyboardEvent(TKVCEvent keyEvent, int keyNum);
        virtual int OnSpaceMouseEvent(TKVCEvent event,
                                TKVCSpaceMouseData *pSMData);
        virtual int OnDisconnect(int val);

        virtual int GetWheelVal(TKVCHandWheelData &hwData);
        virutal int GetOverrideVal(SINT16 &overrideVal);
        virtual int GetSpaceMousePos(TKVCSpaceMouseData &smData);
        virtual int GetLedState(UINT8 ledNum,UINT8 &state);

        virtual int GetContrast(UINT8 &contrast);
        virtual int GetBrightness(UINT8 &brightness);
        virtual int GetVolume(UINT8 &volume);
        virutal int GetScreensaverTime(UINT16 &time);
        virtual int GetScreensaverState(UINT8 &state);

        virtual int SetWheelVal(SINT16 val);
        virtual int SetLed(UINT8 ledNum, TKVCLedMode mode);
        virtual int SetContrast(UINT8 contrast);

        virtual int SetBrightness(UINT8 brightness);
        virtual int SetVolume(UINT8 volume);

        virtual int SetScreenSaver(UINT16 screenSaverTime);
        virtual int SwitchBacklight(UINT8 backlightOnOff);

        virtual int WriteToFlash();
        virtual int PlaySound(UINT16 soundNr);
};
```

The methods OnOverrideChange, OnWheelChange, OnKeyboardEvent, OnJoystickEvent and OnSpacemouseEvent will be called if an event has occurred at the corresponding operating element on the client.

int CKVCConnection::**OnOverrideChange**(SINT16 val);
This method will be called if the value of the override potentiometer has changed on the client. The current value is specified in the parameter val.

int CKVCConnection::**OnWheelChange**(SINT16 wheelAbsVal);
The method OnWheelChange will be called if the value of the handwheel has changed. The current value is transferred as an absolute value in the parameter wheelAbsVal.

virtual int **OnKeyboardEvent**(TKVCEvent keyEvent, int keyNum);
The method OnKeyboardEvent will be called if a key has been pressed/released. The key number is specified in keyNum, the state of the key (make, break) in keyEvent.

int CKVCConnection::**OnSpacemouseEvent**(TKVCEvent event,
TKVCSpaceMouseData *pSMData);

The method OnSpacemouseEvent will be called if the space mouse is moved from the 0 position, and if it reaches the 0 position. The current position is transferred in the parameter event, and the current values in the parameter pSMData.

int CKVCConnection::**OnDisconnect**(int val);
The method OnDisconnect will be called if the client terminates the connection with the disconnect message.

int CKVCConnection::**GetWheelVal**(TKVCHandWheelData &hwData);
The method GetWheelVal returns the current position value of the wheel in hwData.absVal, and the modification value since the last call in hwData.dynVal.

int CKVCConnection::**GetOverrideValue**(SINT16 &overrideVal);
The method GetOverrideValue returns the current value of the override potentiometer in the variable overrideVal.

int CKVCConnection::**GetSpaceMousePos**(TKVCSpaceMouseData &smData);
The method GetSpaceMousePos returns the current space mouse position in the variable smData.

int CKVCConnection::**GetLedState**(UINT8 ledNr , UINT8 &state);
The method GetLedState is used to request the current state of the LED transferred in ledNr. The result is returned in state.

int CKVCConnection::**GetContrast**(UINT8 &contrast);
The method GetContrast returns the current value of the contrast setting in the variable contrast.

int CKVCConnection::**GetBrightness**(UINT8 &brightness);
The method GetBrightness returns the current value of the brightness setting in the variable brightness.

int CKVCConnection::**GetVolume**(UINT8 &volume);
The method GetVolume returns the current value of the volume setting in the variable volume.

int CKVCConnection::**GetScreensaverTime**(UINT16 &screensaverTime);
The method GetScreensaverTime returns the current value of the screensaver setting in the variable screensaverTime.

int CKVCConnection::**GetScreensaverState**(UINT8 &state);
The method GetScreensaverstate returns the current state of the screensaver in the variable state.

int CKVCConnection::**GetBacklightState**(UINT8 &state);
The method GetBacklightState returns the current state of the background lighting in the variable state.

int CKVCConnection::**SetWheel**(SINT16 value);
This method sets the value of the handwheel to the value specified in `value` and returns the last value. This value is the initial value for the absolute value returned by `OnWheelChange`.

int CKVCConnection::**SetLed**(UINT8 ledNum, TKVCLedeMode mode);
Calling the method SetLed sets the LED defined in ledNum to the mode transferred in mode.

int CKVCConnection::**SetContrast**(UINT8 contrast);
Calling the method SetContrast changes the value of the contrast setting on the client.

int CKVCConnection::**SetBrightness**(UINT8 brightness);
Calling the method SetBrightness changes the value of the brightness setting on the client.

int CKVCConnection::**SetVolume**(UINT8 volume);
Calling the method SetVolume changes the value of the volume setting on the client.

int CKVCConnection::**SetScreensaver**(UINT16 screensaverTime);
Calling the method SetScreensaver changes the response time of the screensaver on the client.

int CKVCConnection::**SwitchBacklight**(UINT8 backlightOnOff);
Calling the method SwitchBacklight switches on and off the background lighting on the client (backlightOnOff = 1 / backlightOnOff = 0).

int CKVCConnection::**WriteToFlash**();
Calling the method WriteToFlash saves the contents of the Client Windows Registry in the flash memory.

int CKVCConnection::**PlaySound**(UINT16 soundNr);
Calling the method PlaySound starts the reproduction of the sound with the number transferred in soundNr.

Maintenance and Troubleshooting

Chapter Objectives

This chapter provides information on:

- cleaning the terminal
- handling the terminal
- troubleshooting to correct common operating problems
- what type of information to provide when calling for technical support

Cleaning the MobileView Guard Terminal

- **For the touch screen**, clean gently with a lint-free cloth. Dampen with a mixture of 50% water and 50% isopropyl alcohol. If needed, clean the unit daily with work in harsh environments.
- **For the housing**, dampen a cloth with a mixture of 50% water and 50% isopropyl alcohol or a mild detergent. Use no harsh cleaning additives.

Handling the MobileView Guard Terminal

- The MobileView terminal is a high-quality device that is equipped with state-of-the-art electronics.
- To avoid malfunctions or damage through improper handling, follow these instructions during operation.

ATTENTION

- Do not operate the terminal if the cable is damaged or pinched. To avoid damaging the cable, do not place the cable over or around sharp objects.
- When the terminal is not in use, hang the terminal in the mounting bracket or place inside a cabinet or enclosure.
- To avoid dropping the terminal, do not set the terminal on unstable surfaces and keep the cable clear of high traffic areas.
- To avoid damaging the operating elements, do not set the terminal on its operating side.
- If the terminal falls to the ground, test the emergency stop switch and enabling switch, and verify that the PC card cover closes properly before operating machine/plant.
- Do not set the terminal near heat sources and avoid direct sunlight.
- Avoid exposing the terminal to mechanical vibrations, excessive dust, humidity or strong magnetic fields.
- Use a soft, damp cloth with 50% water and 50% isopropyl alcohol to clean the operating panel and operating elements. Do not use solvents, scouring agents, or scrubbing sponges.
- Prevent foreign objects or liquids from getting into the terminal. Check the protective covers of the device regularly. Make sure all screws are firmly tightened and that the housing and cable entrance is not damaged.
- Turn off the power supply before removing the back cover of the MobileView terminal. When the back cover is removed, the terminal is sensitive to electrostatic discharge (ESD).
- If the terminal exhibits any defect, have the unit thoroughly and fully tested by the manufacturer or authorized repair dealer before operating terminal again.

Troubleshooting the Terminal

The following table lists common problems that may occur with your terminal and solutions to the problems.

Problem	Solution	Page
Terminal will not power up	Check for 24V dc power on K3 and K4 connectors of the MobileView Junction Box.	3-4, 3-6
	Check for a solid connection between the MobileView Connection Cable and the Junction Box Cable at K1 connection point.	3-4
	Check the MobileView Junction Box Cable connections K3/X1 and K4/X2.	3-4
	Check the MobileView Connection Cable connection in Connection Compartment of MobileView terminal.	3-10
Terminal screen is very dim or black	If the screen is somewhat readable, select **Start>Programs>MobileView>MV Configuration Tool**. Tap the Display/Touch tab and try to adjust brightness and contrast.	4-1, 4-3
	If the screen is black: • Tap the touch screen or any of the keypad buttons to de-activate the screen saver. • Check power to the terminal. Follow instructions for problem, Terminal will not power up. • Cycle power to the terminal. If you here a click and the normal jingle sound of Windows CE, the terminal is executing the operating system and the display backlight is most likely defective. Return terminal for repair. • If the screen is blinking or rapidly changing brightness, a corrupted registry or flash image may exist. A flash update may remedy the problem. Follow instructions in the Flash Update documentation. If the flash update does not correct problem, return terminal for repair.	
Difficulty in making selections on touch screen	The touch screen may be out of alignment. Re-calibrate the touch screen.	4-3
Terminal screen is static (locked up). The touch screen and keypad activations do not initiate any changes.	The CE application or Terminal Server Client may not be responding. Attempt a power cycle (shutdown/powerup).	6-1, 6-5
	Check terminal server for proper operation.	
	Check Ethernet communications. See the next problem, "Terminal will not communicate on Ethernet network".	
	Attempt a flash update. Refer to the Flash Update documentation for details.	

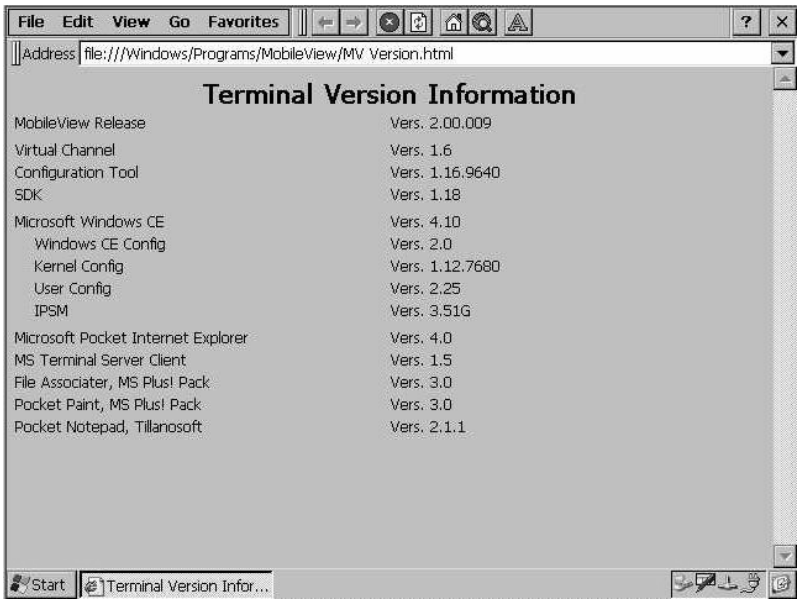
Problem	Solution	Page
Terminal will not communicate on Ethernet network	Check Ethernet cable connections at the MobileView Junction Box and your Ethernet hub.	3-4
	Try to ping the MobileView terminal from a PC in your network to check for correct configuration settings, then check MobileView terminal settings.	6-2
	If you are using a DHCP server, check if the DHCP function is set in the network settings of the MobileView terminal.	6-2
	If you connect to the Ethernet network using fixed settings, verify that the IP Address, Subnet Mask, and Default Gateway network settings are correct in the MobileView terminal.	6-2
	Check the Ethernet connection on the MobileView terminal.	3-9
Program Memory Low	There is inadequate memory to run a program or programs. Select **Start>Settings>Control Panel>System**. Select the **Memory** tab in the System Properties dialog and follow instructions to increase memory to run programs.	

Providing Technical Support Information

For Rockwell Automation support, see back cover. Be prepared to provide the following information:

- detailed description of problem including circumstances of when it occurred (for example, programs that were running, steps that were taken)
- steps you tried to take, if any, to try and resolve problem
- version information for the MobileView terminal. From your MobileView terminal, select:

  Start>Programs>MobileView>MV Version



The MobileView release number is most important, but other version information may also be helpful.

Specifications

General

General	
Processor	Intel StrongARM SA-1110/206 mHz
Operating System 2727-G7P20D1P4, -G7P20D1P5 2727-G7P20D1Q6, -G7P20D3Q7	 Microsoft Windows CE 3.0 Microsoft Windows CE 4.1
Memory 2727-G7P20D1P4, -G7P20D1P5 2727-G7P20D1Q6, -G7P20D3Q7	 16M DRAM/32M Flash 64M DRAM/64M Flash
Display	Passive LCD 7.7-inch VGA with 256 colors
Touch Screen	7.7-inch analog resistive
Keypad	Stainless steel dome membrane switches with tactile feedback
Housing	Double-walled ABS housing, resistive to grease, oil, lubricants, alcohol, silicone free Flammability class: UL 94-V0
Dimensions	
Diameter	290 mm (11.42 inches)
Depth without handle	80 mm (3.15 inches)
Depth with handle	130 mm (5.12 inches)
Weight	1550 grams (3.42 lbs) - without options

Electrical

Electrical	
Nominal Supply Voltage	24V dc safety-extra-low-voltage
Supply Voltage Range	18V dc to 32V dc
Typical Input Current	300mA at 24V dc
Peak Inrush Current	5.6A maximum
Power Supply	10 ms minimum holdup time (EN 61131-2:1994 + A11:1996 + A12:2000 and EN 50178:1997)

Environmental

Environmental	
Operating Temperature	0° to 50°C (32° to 122°F)
Storage Temperature	-25° to +70°C (-13° to +158°F)
Relative Humidity (non-condensing)	5 to 95% RH at 0 to 50°C (32° to 122°F)
Protection Degree	IP54
Vibration (operating)	10 Hz ≤ f < 57 Hz with 0.15 mm (0.0059 in) 57 Hz ≤ f < 150 Hz with 2 g (0.0044 lb)
Shock (operating)	25 g (0.055 lb) / 11 ms IEC 60068-2-27
Drop Test	Resistant to drops on all surfaces from height of 1.0 m (39.4 in) onto a hard surface (EN 61131-2:1994 + A11:1996 + A12:2000)
Altitude	Up to 3000 meters (9.842 feet)

Standard and Agency Certifications

General	
UL 508	Industrial Control Equipment
CSA C22.2 No. 14	Industrial Control Equipment
C-Tick	Marked for all applicable acts

ElectroMagnetic Compatibility	
EN 61000-6-4:2001	EMC generic emission standard, industrial environment
EN 61000-6-2:2001	EMC generic immunity standard, industrial environment
IEC 61131-2 final draft, chapter 7,8	Programmable Controllers - Equipment requirements and tests

Operating Safety	
IEC 61131-2 EN 61131-2:1994 + A11:1996 + A12:2000	Programmable Controllers - Equipment requirements and test
IEC 60204-1, EN 60204-1:1997	Safety of machinery - electrical equipment of machines - general requirements
EN 50178:1997	Electrical equipment for use in power installations.

Machinery Standards	
EN 614-1:1995	Ergonomic Design Principles
EN 894-1:1997, -2, -3	Ergonomic requirements for the design of displays and control actuators
ISO 13849-1:1999, EN 954-1:1996	Safety-related parts of control systems
ISO DIS 12100-1, EN 292-1:1991	Basic concepts, general principles of design
ISO DIS 12100-2, EN 292-2:1991 + A1:1995	Technical principles and specifications
ISO 13850:1996, EN 418:1992	Emergency stop equipment, functional aspects, principles for design
IEC, 60204-1, EN 60204-1:1997	Safety of machinery - Electrical equipment of machines - general requirements

Standards for MobileView in Robot Systems	
EN 775:1992	Industrial Robots
ANSI/RIA R15.06	Industrial Robots and Robot Systems - Safety Requirements
ANSI/RIA R15.02/1	Human Engineering Design Criteria for Hand Held Robot Control Pendants
UL 1740	Robots and Robot Equipment

Standards in Machining Centers	
ISO 11161	Industrial Automation Systems - Safety of integrated manufacturing systems
EN 12417:2001	Machine tools - Safety - Machining Centers

Security Considerations

Ports 137 and 138 are normally open to support the NetBIOS protocol used by Windows CE.NET similar to other Microsoft and IBM network operating systems.

SNMP (Simple Network Management Protocol) is not supported.

IGMP (Internet Group Management Protocol) is used for IPv4 multicast. A multicast is communication between a single sender and multiple receivers on a network. IGMP is used to exchange membership status data between IPv4 routers that support multicasting and members of multicast groups. A router is an intermediary device on a communication network that expedites message delivery by finding the most efficient route for a message packet within a network, or by routing packets from one subnetwork to another. A subnetwork is a separate part of an organization's network identified through IP addressing.

MobileView terminals provide level 2 (full) support for IPv4 multicasting (IGMP version 2) as described in RFC 1112 and RFC 2236.

Security requires a comprehensive application of policies and technology, and an awareness of security needs and potential vulnerabilities. You may also want to consult with Rockwell GMS Network Services for additional assistance.

Available Fonts for Terminal Applications

The following fonts are pre-installed on MobileView, PanelView Plus, and VersaView CE terminals:

- True Type fonts (scalable)
  - Tahoma.ttf (proportional)
  - Courier.ttf (fixed width)
  - Arial.ttf (proportional)
- (23) fonts of various sizes migrated from PanelView Standard and PanelView "e" terminals (various sizes)

To simplify the creation and downloading of .mer application files on these devices, use the above list of fonts when developing screens in RSView Studio.

Additional fonts are available in RSView Studio when developing application screens.

- If the font used to develop screens is not available on the target device, the closest font is selected.
- If bolding or italics is used, and a separate bold or italics font is unavailable, then the target operating system will use an algorithm to produce these affects.

In either case, the device screens will look different than they do in RSView Studio.

Downloading Fonts to Terminal

To use additional fonts on a MobileView, PanelView Plus, VersaView CE device, copy any of the font files on the VersaView CE Accessories CD or the RSView Machine Edition Fonts CD to the following directory on the computer where RSView Studio is installed:

c:\Documents and Settings\All Users\Documents\RSView Enterprise\ME\Runtime

You can now use the File Transfer Utility in RSView Studio to download the font file(s) to the target device:

1. Select **Tools>Transfer Utility**.
2. Select **Source File>True Type Fonts**.
3. Select a font file to download to the device and press the **Download** button.

VersaView CE Accessories CD

The following True Type fonts are included on the VersaView CE Accessories CD:

- Times New Roman.ttf
- Symbol.ttf
- Wingdings.ttf

This CD is not supplied with MobileView or PanelView Plus terminals.

RSView Machine Edition Fonts CD

Additional fonts are available on a CD, titled "RSView Machine Edition Fonts". This CD is available from the Automation Bookstore (www.theautomationbookstore.com) at no charge.

To download fonts to the MobileView, PanelView Plus, or VersaView CE terminal via the network, see the Rockwell Automation Knowledgebase (http://support.rockwell atuomation.com). Select Knowledgebase under Self-Service Support (or Online Tools) and then enter Tech Note ID A66647102.

Fonts	File Name	Size (Bytes)
Arial		
Arial (Subset 1_30)	arial_1_30.ttf	153,720
Arial Black	arialk.ttf	117,028
Arial Bold	arialbd.ttf	288,496
Arial Bold Italic	arialbi.ttf	226,748
Arial Italic	ariali.ttf	207,808
Comic Sans MS		
Comic Sans MS	comic.ttf	126,364
Comic Sans MS Bold	comicbd.ttf	111,476
Courier New		
Courier New (Subset 1_30)	cour_1_30.ttf	162,460
Courier New Bold	courbd.ttf	312,920
Courier New Bold Italic	courbi.ttf	236,148
Courier New Italic	couri.ttf	245,032
Georgia		
Georgia	georgia.ttf	149,628
Georgia Bold	georgiab.ttf	141,032
Georgia Bold Italic	georgiaz.ttf	159,736
Georgia Italic	georgiai.ttf	157,388
Impact	impact.ttf	136,076
Kino	kino.ttf	28,872
MSLogo	mslogo.ttf	2,500
Symbol	symbol.ttf	69,464

Fonts	File Name	Size (Bytes)
Tahoma		
Tahoma (Subset 1_07)	tahoma_1_07.ttf	123,980
Tahoma Bold	tahomabd.ttf	295,432
Times New Roman		
Times New Roman (Subset 1_30)	times_1_30.ttf	184,976
Times New Roman Bold	timesbd.ttf	334,944
Times New Roman Bold Italic	timesbi.ttf	239,692
Times New Roman Italic	timesi.ttf	248,368
Trebuchet MS		
Trebuchet MS	trebuc.ttf	69,688
Trebuchet MS Bold	trebucbd.ttf	66,444
Trebuchet MS Bold Italic	trebucbi.ttf	66,348
Trebuchet MS Italic	trebucit.ttf	72,560
Verdana		
Verdana	verdana.ttf	149,752
Verdana Bold	verdanab.ttf	137,616
Verdana Bold Italic	verdanaz.ttf	154,800
Verdana Italic	verdanai.ttf	155,076
Webdings	webdings.ttf	118,752
Wingding	wingding.ttf	81,000
Chinese (Simplified) Locale Specific Support		
Simsun & NSimSun		
Simsun & NSimSun	simsun.ttc	10,500,400
Simsun & NSimSun (Subset 2_50)	simsun_2_50.ttc	3,051,024
Simsun & NSimSun (Subset 2_60)	simsun_2_60.ttc	3,578,692
Simsun & NSimSun (Subset 2_70)	simsun_2_70.ttc	6,975,948
Simsun & NSimSun (Subset 2_80)	simsun_2_80.ttc	8,116,188
Simsun & NSimSun (Subset 2_90)	simsun_2_90.ttc	9,066,640
SC_Song	sunfon.ttf	4,686,044
Chinese (Traditional) Locale Specific Support		
MingLiU & PMingLiU (Choose 1)		
MingLiU & PMingLiU	mingliu.ttc	8,822,400
MingLiU & PMingLiU (Subset 2_70)	mingliu_2_70.ttc	4,786,488
MingLiU & PMingLiU (Subset 2_80)	mingliu_2_80.ttc	5,772,700
MingLiU & PMingLiU (Subset 2_90)	mingliu_2_90.ttc	7,354,808
MSMing	msming.ttf	3,172,552

Fonts	File Name	Size (Bytes)
Japanese Locale Specific Support		
MS Gothic		
MS Gothic & P Gothic & UI Gothic	msgothic.ttc	8,272,028
MS Gothic & P Gothic & UI Gothic (Subset 1_50)	msgothic_1_50.ttc	4,456,536
MS Gothic & P Gothic & UI Gothic (Subset 1_60)	msgothic_1_60.ttc	6,057,400
MS Gothic & P Gothic & UI Gothic (Subset 1_70)	msgothic_1_70.ttc	3,795,500
MS Gothic & P Gothic & UI Gothic (Subset 1_80)	msgothic_1_80.ttc	5,438,776
MS Gothic & P Gothic & UI Gothic (Subset 1_90)	msgothic_1_90.ttc	6,408,352
MS Gothic & P Gothic (Subset 30)	msgothic30.ttc	4,197,524
MS Gothic & P Gothic (Subset 30_1_19)	msgothic30_1_19.ttc	3,304,056
Korean Locale Specific Support		
GL_CE	gl_ce.ttf	4,130,084
Gulim & GulimChe (Choose 1)		
Gulim & GulimChe (Subset 1_30)	gulim_1_30.ttc	3,010,268
Gulim & GulimChe (Subset 1_40)	gulim_1_40.ttc	4,683,896
Gulim & GulimChe (Subset 1_50)	gulim_1_50.ttc	7,128,756
Gulim & GulimChe (Subset 1_60)	gulim_1_60.ttc	9,360,100

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Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using our products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444
Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640
Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

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