Honeywell

Wyse Z90DE7 Thin Client Planning Installation and Service Guide

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Contents

1 About this guide

This guide contains instructions for trained technicians to install the Dell Wyse Z90DE7 Thin Client as a desktop solution or in Honeywell consoles such as Classic console, Z/EZ console, and Icon series console.

It provides the procedures for to installing the Dell Wyse Z90DE7 Thin Client with the physical host systems and virtual systems. In addition, it contains procedures for configuring the Dell Wyse Z90DE7 Thin Client as Remote Peripheral Solution.

Revision history

Version	Date	Description
A	June, 2014	Initial release
B	September, 2014	Updated for Experion Orion Console
C	January 2015	Updated for two Canvys touch screens and two non-touch screens

Related documents

The *Experion Virtualization Planning and Implementation Guide* is required as reference when installing or operating the Dell Wyse Z90DE7 Thin Client.

1.1 Abbreviations

The following table lists the various acronyms and abbreviations used in this document.

Term	Definition
BIOS	Basic Input/Output System is the firmware code on the motherboard of a computer.
DB-9	A 9-pin D-subminiature or D-type connector used for servers and PCs.
DDC	Display Data Channel is a collection of digital communication protocols. These protocols are used for communicating the display modes (supported by the display of a computer) to the graphics adapter. It also enables the computer to adjust its brightness, contrast, and other monitor parameters.
DP	DisplayPort is a digital display interface used for transmitting audio, USB, and other forms of data. In addition, it is used for connecting a video source to a display device such as a monitor.
DVI-D	Digital Visual/Video Interface-Digital only. It is a video display interface used for connecting a digital video source to a display device such as a monitor.
DVI-I	Digital Visual/Video Interface-Integrated. It is a video display interface used for connecting a digital or analog video source to a display device such as a monitor (for DVI-A, DVI-D, and DVI-I to monitors).
eSATA	External Serial Advanced Technology Attachment is an interface that provides fast data transfer for external storage devices.
ES-C	Experion Console Station. This is the formal marketing name for the Console Station product. In addition to the Experion server, this station has direct access to process controllers.
ESD	Electrostatic Discharge. It is the sparking between an electrically charged object and a conductor or between two electrically charged objects.
ES-F	Experion Flex Station. It is a station that connects to Experion servers using either a static or a rotary connection.
ES-T	Experion Console Station TPN connected. An Experion Console Station that includes TPS components, including an LCNP4 card so that it can communicate over the TPS network.
FPD	Flat Panel Displays are screens with flat front surfaces (LCD monitor).
FTE	Fault Tolerant Ethernet is the control network designed to provide not only fault-tolerance, but also the fast response, determinism, and security required for industrial control applications.
HD-15	High-density, 15-pin connector for VGA monitors.
Host system	Host systems are the physical or virtual systems running Experion R4xx.x software on Microsoft Windows 7 32-bit /64-bit or Microsoft Windows 2008 R2 operating systems.
Hz	It is the International Standard (IS) symbol for Hertz, the unit of frequency.
ICA	Independent Computing Architecture is a proprietary protocol that lays down a specification for passing data between server and clients, but is not bound to any specific platform.
IKB	Integrated Keyboard is a specialized process control keyboard, having imbedded QWERTY keyboard in the middle of two OEP sections.
KVM	Keyboard, Video, and Mouse is a switch connecting multiple computers to one device set.
LCD	Liquid Crystal Display is a flat panel display that uses the light modulating properties of liquid crystals.
LCN	Local Control Network (LCN) is a coaxial and, sometimes additionally, a fiber optic network that provides the data path for communication between the TPS system nodes.
LCNP	Local Control Network Processor (GUS)
LED	Light Emitting Diode is a semiconductor light source used as indicator lamps in various devices.
MIM	Manual Input Module is one of the several input modules for Icon Series console.
OEP	Operator Entry Panel is a specialized process control keyboard. Legacy Operator keyboard similar to a US stations.
p/n	Part number

1 ABOUT THIS GUIDE

Term	Definition
POST	Power On Self Test refers to routines which run immediately after many digital electronic devices are powered on.
PS/2	Personal System/2 is an interface standard for keyboard and mouse.
QWERTY	Computer type keyboard – starts at left with the letters Q W E R T Y.
RDP	Remote Desktop Protocol is developed by Microsoft and provides graphical user interface (GUI) to another computer.
RPP	Redundant Port Protector is also known as Redundant Link Protector. The thin client is connected to the switch gear. The RPP is an optional component for the Dell Wyse Z90DE7 Thin Client and protects the switch gear against cable, port, and switch failures.
RPS	Remote Peripheral Solution. It is a peripheral device that allows you to remotely access a computer. It separates the keyboard, mouse, audio peripherals, and display screens up to a few meters from the rest of the computer through a network using a network cable or a fiber-optic cable.
SATA	Serial Advanced Technology Attachment. It is a computer bus interface used for connecting host bus adapters to mass storage devices such as hard disk drives and optical drives.
SAW	Surface Acoustic Wave touch screen technology.
TCX	Wyse TCX software suite. Each software solution in the suite delivers an enhancement component designed to work seamlessly within Microsoft® Terminal Services, Citrix® XenApp, Citrix® XenDesktop, and VMware View environments.
USB	Universal Serial Bus. It is an industry standard defined for cables, connectors, and communication protocols used in a bus. It is used for connecting, communicating, and supplying power between computers and electronic devices.

2 Introduction

Related topics

“System overview” on page 10

2.1 System overview

The following image illustrates the front and rear view of the Dell Wyse Z90DE7 Thin Client.

The Honeywell-supplied Thin Client kits can be used as:

- A Thin Client for connecting host systems running in the virtual environment as part of the Honeywell virtualization system.
- A Remote Peripheral Solution (RPS) for connecting physical (non-virtual) Experion workstation computers located remotely from keyboards and monitors.

A Thin Client extends the audio, video, and USB signals through a network cable connection to the CPU of a remote computer (physical computer or virtual machines). An operator sitting at a remote location, away from physical host system can use the Thin Client for monitor, sound, keyboard, and mouse control. This configuration allows the flexibility of separating the CPU and hard disks from user interfaces (such as monitors, keyboard, mouse, and audio hardware) without losing signal integrity. This can also substantially reduce noise and heat in the control room while providing additional security for the remote computer.

Honeywell Thin Client solution is based on the Dell Wyse Z90DE7 Thin Client which provides remote connectivity of audio, video and USB input devices to physical and virtual hardware platforms through an Ethernet connection using Windows® Remote Desktop Protocol (RDP) and Dell Wyse TCX USB redirection software. Dell Wyse Z90DE7 Thin Client supports the following Microsoft operating systems.

- Microsoft Windows 7 Professional (32-bit)
- Microsoft Windows 7 Professional (64-bit)
- Microsoft Windows Server 2008 R2

The features of the Dell Wyse Z90DE7 Thin Client solution are as follows:

- Supports single, dual, and quad monitors configuration.

- Provides mounting offerings for desktop and Honeywell consoles such as Icon series, Z/EZ, Classic, and Experion Orion console.
- Supports Honeywell standard I/O peripherals such as monitors, IKB, and OEP.
- Provides support for Serial-based peripherals such as the Honeywell IKB and OEP using the USB port of the thin client (using Serial-USB conversion cable).
- Provides network redundancy (limited) through a separate Redundant Port Protector (TP-THNPP1) that can be purchased to work with the Honeywell Fault-Tolerant Ethernet network topology. With the simple network and monitor setup, the device is essentially plug and play.

The Dell Wyse Z90DE7 Thin Client has 6 USB ports and supports multiple USB peripherals including the following:

- Honeywell OEP and serial IKB keyboards with Honeywell-qualified serial to USB cable.
- Honeywell USB IKB
- 4k UHD monitors
- Honeywell-qualified USB SAW touch monitors*
- Honeywell-qualified USB Smart card reader

*Only USB ELO and EETI SAW touch monitors are supported. Serial SAW, Carrol, and Micro touch monitors are not supported

In addition, the Dell Wyse Z90DE7 Thin Client supports the following peripherals.

- Honeywell-sold non-touch monitors
- Honeywell-qualified Redundant Port Protector (RPP)
- Remote audio devices

You can establish unlimited number of RDP sessions using the Dell Wyse Z90DE7 Thin Client. However, the number of RDP session is limited to one when you use the Dell Wyse Z90DE7 Thin Client along with the OEP/IKB keyboards or Smart card readers. These devices establish a 1:1 relationship with the RDP connection. This is because, once the device is connected to remote host system through RDP, subsequent RDP sessions are not allowed to use the device. To use the Honeywell keyboards and Smart card readers on a separate remote host system, you must close the currently connected RDP session.

The Dell Wyse Z90DE7 Thin Client runs with a Honeywell customized Windows® Embedded Standard 7 (WES7) image that is locked down to only allow Windows RDP session connections. All other executables are prevented from running on the device. This provides an extremely small attack surface that is controlled even further by the built-in WES7 File Based Write Filter (FBWF) which prevents any changes to the flash drive from persisting after reboot. There is also a custom Honeywell USB storage disable application on the unit which prevents any USB storage devices from being recognized when plugged into any USB port. The custom Honeywell locked down WES7 image essentially prevents the need of security patch maintenance.

Each Dell Wyse Z90DE7 Thin Client is provided with a backup/recovery image on a USB flash drive that can be stored for safe keeping. When you want to restore the image, follow the instructions for re-flashing the image using the USB flash drive and the Dell Wyse Z90DE7 Thin Client will be completely restored.

Honeywell continuously monitors all updates that get released by Microsoft and provides the updates if they are applicable for the customized WES7 image. You can download the update to the USB flash drive and flash it on to the Dell Wyse Z90DE7 Thin Client.

2.1.1 Getting started with Dell Wyse Z90DE7 Thin Client

This section describes the high level tasks that must be performed after receiving the Dell Wyse Z90DE7 Thin Client solution kit.

After receiving the Dell Wyse Z90DE7 Thin Client solution kit

1. Verify that you have received all the components listed in the Rev A bill of material (BOM). Refer to the section “System components” on page 12 for the list of Rev A bill of material (BOM).
2. Review the specific configuration requirements from section “Workstation configuration” on page 30 and plan your Thin Client setup.
3. Obtain any optional parts required for completing your Thin Client setup. Refer to the section “Optional hardware” on page 16 and procure the required parts.
4. Install the Dell Wyse Z90DE7 Thin Client as a desktop solution or in Honeywell consoles per your requirement.

   Refer to the section “Installing the Dell Wyse Z90DE7 Thin Client hardware” on page 29 for further information.
5. Connect the cables and monitors to the workstation. Refer to the section “Connecting peripherals” on page 46.
6. Configure the host system. Refer to the section “Configuring the host systems” on page 19.
7. Configure the Dell Wyse Z90DE7 Thin Client. Refer to the section “Configuring the Dell Wyse Z90DE7 Thin Client ” on page 49.

2.1.2 System components

The Dell Wyse Z90DE7 Thin Client is available in seven versions. The following model numbers are the versions of Dell Wyse Z90DE7 Thin Client for dual / quad screen RPS.

Honeywell model numbers	Description
TP-THNCL2-100	Dell Wyse Z90DE7 Thin Client dual video kit for Desktop. *regional power cable for “ship to” destination
TP-THNCL2-200	Dell Wyse Z90DE7 Thin Client dual video kit for Icon Series console.
TP-THNCL2-300	Dell Wyse Z90DE7 Thin Client dual video kit for Z/EZ console and Classic console.
TP-THNCL3-100	Dell Wyse Z90DE7 Thin Client quad video kit for Desktop.
TP-THNCL3-200	Dell Wyse Z90DE7 Thin Client quad video kit for Icon Series console.
TP-THNCL3-500	Dell Wyse Z90DE7 Thin Client quad video kit for Experion Orion console.

TP-THNCL2-XXX Honeywell model number

The Honeywell model number TP-THNCL2-XXX provides remote support for six USB devices, stereo audio, up to two video displays at resolutions up to 1920 x 1200 (analog and digital) per display. Following table describes Rev A bill of material (BOM) for the Honeywell model number TP-THNCL2-XXX.

Attention

After you receive the Dell Wyse Z90DE7 Thin Client kit, verify the components received in the kit against the bill of material (BOM).

Serial number	**Honeywell part number**	**Description**	**TAB-100** *Desktop*	**TAB-200** *Icon*	**TAB-300** *Z/EZ/CL*
1	51155591-100	Dell Wyse Z90DE7 Thin Client w/North American power cable	1	1	1
2	51153745-100	USB to Serial DB9 adapter cable	1	1	1
3	51199478-100	Icon Series - Recloseable fastener 6 IN	-	3	3
4	51199478-200	Icon Series - Recloseable fastener 3.5 IN	-	2	2
5	51199478-300	Icon Series - Recloseable fastener 1.5 IN		1	1
6	51154656-300	USB 2.0 to eSATA 6ft Adapter cable	-	2	2
7	51454480-100	Mounting shelf	-	-	1

8	51307256-100	AC power cord 3 FT Note This power cord is for the optional RPP TP-THNPP1.	-	1	1
9	51195168-616	SCR BLK M5X16 THD FRM	-	-	4
10	51109933-003	Washer, M5 Serrated	-	-	4
11	51190879-008	Panduit ABM2S-A-C Sticky Tie Mount 1 inc	-	9	9
12	51190879-001	Standard Tie wrap	-	9	9
13	51203060-100	Monitor VESA mounting plate	-	1	1
14	51108572-100	Spacer aluminum 10 MM	-	4	4
15	51108888-520	HEX HD Screw:M4X20MM	-	4	4
16	51154500	Read Me First	1	1	1
17	51153979-100	Adapter for USB-PS2	1	-	1
18	51155591-902	DP to DVI Adapter	1	1	1
19	51155591-903	TCX Server Suite Media with License	1	1	1
20	51155591-904	Kingston’s Data Traveler 32GB USB3.0 Flash Drive with custom image	1	1	1
21	51155591-906	AC Power cord IEC-60320-C5 to IEC-60320-C14 1.5m	-	1	1
22	51155591-907	Continental Europe Power Cord IEC-60320-C5	1	-	-
23	51155591-909	Honeywell Custom Image BZB0_2248_16GB	1	1	1

TP-THNCL3-XXX Honeywell model number

The TP-THNCL3-XXX Honeywell model numbers provides remote support for six USB devices, stereo audio, up to four video displays at resolutions up to twice the display port 1.1a, (2560 x 1600), four times the display port 1.2, (3840 x 2400). Following table describes the Rev A bill of material (BOM) for the Honeywell model number TP-THNCL3-XXX.

Serial number	**Honeywell part number**	**Description**	**TAB-100** *Desktop*	**TAB-200** *Icon*	**TAB-500** *Orion*
1	51155591-100	Dell Wyse Z90DE7 Thin Client w/North American power cable	1	1	1
2	51155591-901	AMD E6760 PCIe w/6 mDP ports	1	1	1
3	51153745-100	USB to Serial DB9 adapter cable	1	1	1
4	51199478-100	Icon Series - Recloseable fastener 6 IN	-	2	2
5	51199478-200	Icon Series - Recloseable fastener 3.5 IN		2	2
6	51199478-300	Icon Series - Recloseable fastener 1.5 IN	-	1	1
7	51154656-300	USB 2.0 to eSATA 6ft adapter cable	-	2	-
8	51307256-100	AC power cord 3 FT Note This power cord is for the optional RPP TP-THNPP1.	-	1	-

9	51190879-008	Panduit ABM2S-A-C Sticky Tie Mount 1 inc	-	9	9
10	51190879-001	Standard Tie wrap	-	9	9
11	51203060-100	Monitor VESA mounting plate	-	1	1
12	51108572-100	Spacer aluminum 10 MM	-	4	4
13	51108888-520	HEX HD screw:M4X20MM	-	4	4
14	51154500	Read Me First	1	1	1
15	51153979-100	ADPTR USB-PS2	1	-	-
16	51155591-903	TCX Server Suite Media with License	1	1	1
17	51155591-904	Kingston's Data Traveler 32GB USB3.0 Flash Drive with custom image	1	1	1
18	51155591-905	AMD mDP to DVI Active Adapter cable	4	4	—
19	51155591-906	AC Power cord IEC-60320-C5 to IEC-60320-C14 1.5m	-	1	-
20	51155591-907	Continental Europe Power Cord IEC-60320-C5	1	-	1
21	51155591-908	DisplayPort (version 1.2 or greater) to mDP cable to support Experion Orion 4k monitors	-	-	1
22	51155591-909	Honeywell Custom Image BZB0_2248_16GB	1	1	1

Attention

After you receive the Dell Wyse Z90DE7 Thin Client kit, verify the components received in the kit against the bill of material (BOM).

2.1.3 Software requirements

Dell Wyse Z90DE7 Thin Client uses the TCX suite software solution to support Honeywell peripherals such as OEP/IKB keyboards by enhancing the industry standard Windows Remote Desktop Protocol. Wyse TCX suite software adds several key features that improves the quality of the user experience, while reducing server and network load to achieve rich audio and video. The Wyse TCX suite enables multiple monitor support, rich multimedia playback, seamless USB device access, high quality bi-directional audio capabilities, and rich flash playback for Dell Wyse Z90DE7 Thin Client.

2.1.4 Cable specification

Dell Wyse Z90DE7 Thin Client supports CAT5 network cable specification to interface with the network. The CAT5 network cable supports a maximum length of 100 meter for a point-to-point (POP) connection. However, if you require a cable length beyond 100 meter, you can use the fiber optic option between network switches to allow network communication distances up to 75 km.

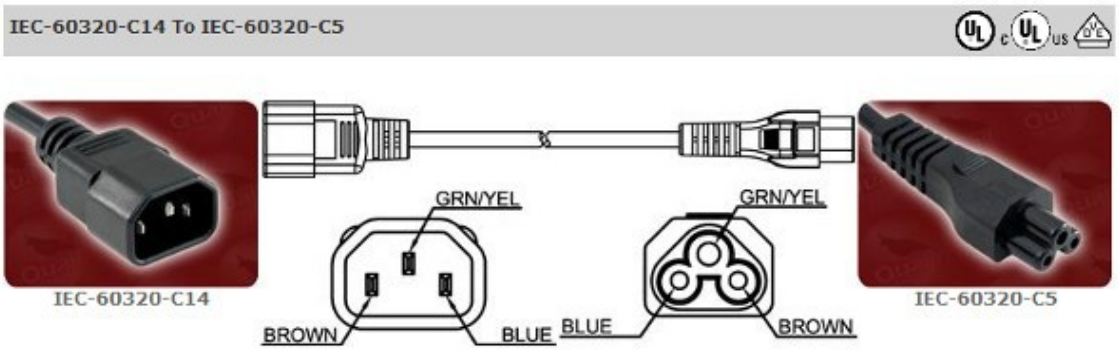
Attention

The bill of material (BOM) of the Honeywell model numbers TP-THNCL2-XXX and TP-THNCL3-XXX does not include CAT5 network cable. You must procure the CAT5 cable separately.

Power cable for Honeywell consoles (TAB-906)

The IEC-60320-C14 to IEC-60320-C5 power cord is used to power the Dell Wyse Z90DE7 Thin Client in Honeywell Icon series, Z/EZ, and Classic consoles. This is a standard power cable that can be acquired from

many different cable companies. The following image illustrates the IEC-60320-C14 to IEC-60320-C5 power cord.



Following table describes the specification for the IEC-60320-C14 to IEC-60320-C5 power cord.

Specification	Description
Adapter style	Power cable
Length	1.5m
Gauge	18 + 1.0mm²
Male Connector A	IEC-60320-C14
Female Connector B	IEC-60320-C5
Color	Black
Voltage	100-240 VAC, 50/60 Hz

The Dell Wyse Z90DE7 Thin Client is shipped with AC power cables for European and USA regions. For other geographical regions, a universal power plug adapter in compliance with local codes must be purchased separately.

2.1.5 Adapter specification

This section provides the specification for the adapters shipped with the Dell Wyse Z90DE7 Thin Client.

DP to DVI-I adapter (TAB - 902)

The Display Port-to-DVI adapter converts a Display Port video output to DVI. The adapter supports uncompressed High-Definition digital video up to 1080p and up to 1920x1200 video resolution. Following table describes the specification for DP to DVI-I adapter (TAB-902).

Specification	Description
Product description	DisplayPort-to-DVI Adapter - display adapter
Type	Display adapter
Cable features	Latched
Connector(s)	1 x 20 pin DisplayPort - male
Connector(s) (Other Side)	1 x 29 pin digital DVI - female

mDP to DVI adapter (TAB - 905)

The Mini DisplayPort (mDP) to DVI adapter cable connects a DVI computer monitor to a device with a Mini DisplayPort output while saving the expense of upgrading the monitor for compatibility. Following table describes the specification for mDP to DVI adapter (TAB - 905).

Specification	Description
Product description	Adapter
Audio	No
Converter type	Active
Connector A	1 x Mini-DisplayPort (20 pin) - male
Connector B	1 x DVI-I (Dual Link 29 pin) - female
Maximum Digital Resolutions	1920x1200

DP to mDP cable for 4k monitors (TAB - 908)

The Display Port-to-mini Display Port adapter cable converts a Display Port video output to mDP. The cable supports Ultra high definition 4k UHD digital video up to 2160p which is up to 3840 x 2160 video resolution to support the Honeywell Experion Orion console. Following table describes the specification for DP to mDP cable for 4k monitors (TAB - 908).

Specification	Description
Product description	DisplayPort-to-mDP cable - display adapter
Length	4 meter (~13 feet)
Connector(s)	1 x 20 pin DisplayPort version 1.2 (support a display resolution and refresh rate of 3840 X 2160 @ 60Hz) or greater- male
Connector(s) (Other Side)	1 x Mini-DisplayPort (20 pin) - male

2.1.6 Optional hardware

The optional hardware for Dell Wyse Z90DE7 Thin Client are as follows. The optional hardware is not shipped with the Dell Wyse Z90DE7 Thin Client and must be ordered separately using the Honeywell part number or manufacturer part number.

- **DP to VGA converter**: Dell Wyse Z90DE7 Thin Client (TP-THNCL2-xxx) can be interfaced with VGA (analog) signal monitors. However, Honeywell does not provide the required converter for integration. You must order the display port to VGA converter separately using the Honeywell part number 51150648-100.
- **USB HUB**: Dell Wyse Z90DE7 Thin Client (TP-THNCL2-xxx) can be interfaced with more than 6 USB devices. However, Honeywell does not provide the 7 Port USB HUB. You must order the 7 Port USB HUB separately using the Honeywell part number TP-USBH01-400.
- **USB to serial converter**: Dell Wyse Z90DE7 Thin Client (TP-THNCL2-xxx) can be interfaced with SAW touchscreen monitors. However, Honeywell does not provide the required USB to Serial converter. You must order the USB to Serial converter separately using the Honeywell part number 51153735-100.
- **Horizontal feet**: Honeywell ships the Dell Wyse Z90DE7 Thin Client with vertical feet. Dell Wyse Z90DE7 Thin Client can be mounted in horizontal position when used for Desktop mounting. You must order the horizontal feet from Wyse using the Wyse part number 920312-02L.
- **Redundant Port Protector**: For the TP-THNCL2-XXX and TP-THNCL3-XXX TAB numbers, the Redundant Port Protector is optional and must be procured separately using Honeywell model number TP-THNPP1.

2.1.7 Unsupported devices

Dell Wyse Z90DE7 Thin Client does not support the following devices.

- Printers and Parallel Operation Keyboard (POK)
- IDE CD / DVD Popup drive
- ZIP Drive installed in Honeywell consoles

- Carroll or Micro touch or SAW serial touchscreen
- Finger printer reader

Dell Wyse Z90DE7 Thin Client does not support the following:

- Mixing multiple technology touchscreen monitor like SAW and Carroll or Micro touch.
- Mixing multiple resolutions. All monitors must be set at the same resolution.

Attention

If you are using the Elo 1915 SAW serial touchscreen monitor, then you must remove the serial touchscreen cable and use USB touchscreen cable. The USB touchscreen cable is shipped with the monitor.

3 Configuring the host systems

This section provides the steps for configuring host systems. The host systems must be configured using Administrator account.

Related topics

“Disabling the audio controller on a physical host system” on page 20
“Installing the RDP hotfix 8.0” on page 21
“Installing the TCX server suite software ” on page 24
“Allowing RDP through Windows Firewall” on page 27

3.1 Disabling the audio controller on a physical host system

You must disable the audio controller only on physical host system. This section is not applicable for virtual host systems.

To disable the audio controller on physical host system

1. Click **Start** > **Control Panel** > **Programs** > **Programs and Features**.
   The **Programs and Features** window appears.
2. Search for the audio driver installed on your physical host system and then click **Uninstall**.
   The audio driver uninstalls.
3. Restart the physical host system.
4. When the host system restarts, press **F2** to enter the BIOS setup.
5. In the BIOS setup, using the Up and Down arrow keys disable the audio controller.
6. Save the settings and exit the BIOS setup.

3.2 Installing the RDP hotfix 8.0

The RDP hotfix 8.0 is required while connecting monitor(s) with a total resolution greater than 4096 x 2048 on Microsoft Windows 7 host systems through RDP.

The RDP hotfix 8.0 must be installed only on Microsoft Windows 7 Professional (32-bit) and Microsoft Windows 7 Professional (64-bit) operating system.

Prerequisites

Verify if the RDP hotfix 8.0 is already installed on your host system before installing the RDP hotfix 8.0.

To verify if the RDP hotfix 8.0 is already installed on your host system perform the following:

1. From the **Control Panel**, click **System and Security** > **Windows Update**.

   The **Windows Update** window appears.
2. In the left pane, click **View update history**.

   The **View update history** window appears.
3. Click **Installed Updates**.

   The **Installed Updates** window appears.
4. In the **Search** field, type the following KB number for RDP hotfix 8.0.

   - KB2574819
   - KB2592687
5. If the RDP hotfix 8.0 is already installed on your host system, then the search result displays the update. To continue with the installation, go to section “Updating the local group policy” on page 22.

   If the search does not display any results, then it implies that the RDP hotfix 8.0 is not installed on the host system. Perform the following steps to install the RDP hotfix 8.0.

To install the RDP hotfix 8.0

1 Log on to the host system using Administrator account.

2 Insert the software media shipped along with the Dell Wyse Z90DE7 Thin Client kit in the DVD drive.

3 Navigate to the path `<Drive>\RDP 8.0 Updates\` in the software media where the RDP hotfix 8.0 is saved.

4 Depending on the type of operating system, perform the following:

- For Microsoft Windows 7 Professional (32-bit): double-click **Windows6.1-KB2574819-v2-X86**.
- For Microsoft Windows 7 Professional (64-bit): double-click **Windows6.1-KB2574819-v2-X64**.

The **Windows Update Standalone Installer** dialog box appears.

5 Click **Yes**.
The **Updates are being installed** page appears.

Once the updates are installed, the **Installation Complete** page appears.

6 Click **Restart Now**.
The host system restarts automatically.

7 Log on to the host system using Administrator account.

8 Navigate to the path `<Drive>\RDP 8.0 Updates\` where the RDP hotfix 8.0 updates are saved.

9 Depending on the type of operating system perform the following:

- For Microsoft Windows 7 Professional (32-bit): double-click **Windows6.1-KB2592687-X86**.
- For Microsoft Windows 7 Professional (64-bit): double-click **Windows6.1-KB2592687-X64**.

The **Windows Update Standalone Installer** dialog box appears.

10 Click **Yes**.
The **Updates are being installed** page appears.
Once the updates are installed, the **Installation Complete** page appears.
11 Click **Restart Now**.
The host system restarts automatically.

3.2.1 Updating the local group policy

You must update the local group policy setting for enabling the RDP hotfix 8.0. The local group policy setting is applicable only for Microsoft Windows 7 Professional (32-bit) and Microsoft Windows 7 Professional (64-bit) operating systems. Do not perform this setting if you are running Microsoft Windows Server 2008 R2 operating system.

To update the local group policy

1 Log on to the host system using Administrator account.
2 Click **Start**.
3 In the **Search** field, type **GPEDIT.MSC**, and then press **Enter**.
The **Local Group Policy Editor** dialog box appears.
4 On the left pane, from **Window Configuration** click **Administrative Templates**.
The **Administrative Templates** screen appears in the right pane.
5 Click **Windows Component** > **Remote Desktop Services** > **Remote Desktop Session Host** > **Connection**.
The **Connection** screen appears.
6 Right-click **Select RDP transport protocols** and then click **Edit**.
The **Select RDP transport protocols** dialog box appears.
7 Click **Enabled** check box.
8 From **Select Transport Type** list, select **Use both UDP and TCP** option.
9 Click **Apply** and then click **OK**.
10 In the **Local Group Policy Editor** dialog box; click **Window Configuration** > **Administrative Templates** > **Windows Component** > **Remote Desktop Services** > **Remote Desktop Session Host** > **Remote Session Environment**.
The **Remote Session Environment** screen appears.
11 Double-click **Enable Remote Desktop Protocol 8.0**.
The **Enable Remote Desktop Protocol 8.0** dialog box appears.
12 Click **Enabled** check box.
13 Click **Apply** and then click **OK**.
14 Close the **Local Group Policy Editor** dialog box.
15 Restart the host system.
16 Log on to the host system using Administrator account.
17 Click **Start**, right-click **Computer**, and then click **Manage**.
The **Computer Management** dialog box appears.
18 From the left pane, click **Local Users and Groups**.
The **Local Users and Groups** appears in the right pane.
19 Double-click **Users**.
A list of users accounts appear.

> **Attention**
> If you have more than one user then add all the users to the RDP group.

20 Double-click on the appropriate user.
The selected user **Properties** dialog box appears.

21 Click **Member of** tab.

22 Click **Add**.
The **Select Groups** dialog box appears.

23 Click **Advanced**.
The **Select Groups** dialog box appears.

24 Click **Find Now**.
The search results appears at the bottom of the dialog box.

25 From **Search results list**, double-click **Remote Desktop users**.
The selected **Remote Desktop users** appear in the **Enter the object names to select** field.

26 Click **OK** and close all the opened dialog boxes.

3.2.2 Verifying the RDP version

After you install the RDP hotfix 8.0 on Microsoft Windows 7 Professional (32-bit) and Microsoft Windows 7 Professional (64-bit) operating systems, you must verify if the RDP hotfix 8.0 is applied.

To verify the RDP version

1 Log on to the host system using Administrator account.

2 Click **Start**.

3 In the **Search** field, type **mstsc**, and then press **Enter**.
The **Remote Desktop Connection** dialog box appears.

4 Right-click the title bar and click **About**.
The **About Remote Desktop Connection** dialog box appears.

5 Ensure that the **Remote Desktop Protocol 8.0 supported** text appears on the dialog box.
This implies that the RDP hotfix 8.0 is applied and is running.

3.3 Installing the TCX server suite software

The TCX software is required to intensify the RDP for allowing USB redirection, which is necessary for Honeywell OEP/IKB keyboards and Smart Card readers to function. TCX software can be installed on both Microsoft Windows 7 Professional (32-bit)/Microsoft Windows 7 Professional (64-bit) and Microsoft Windows Server 2008 R2 operating systems.

3.3.1 Installing the Wyse TCX suite on host systems

The procedure for installing the Wyse TCX suite on host systems is common for Microsoft Windows 7 Professional (32-bit) or Microsoft Windows 7 Professional (64-bit) and Microsoft Windows Server 2008 R2 operating systems.

Prerequisites

The Wyse TCX suite license key is printed on the TCX Server CD envelope. Make a note of the license key.

To install the Wyse TCX suite on host systems

1 Log on to the host system with Administrator account.

2 Insert the software media provided along with the Dell Wyse Z90DE7 Thin Client.

3 On the software media, browse to the `<Drive:>\TCX Suite Software` folder where the Wyse TCX suite installation package is saved.

4 Depending on the operating system installed on the host system perform the following:

- For **Microsoft Windows 7 Professional (32-bit)**: Double-click **TCX_Wyse TCX Server Suite_prod32**.
- For **Microsoft Windows 7 Professional (64-bit)**: Double-click **TCX_Wyse TCX Server Suite_prod64**.
- For **Microsoft Windows Server 2008 R2**: Double-click **TCX_Wyse TCX Server Suite_prod64**.

The **Wyse TCX Server Suite** dialog box appears.

5 If the **User Account Control (UAC)** is not disabled before installing the Wyse TCX suite software, then the following message appears.

User Account Control (UAC) Setting in the system is currently ON. This is preventing TCX Suite installation/uninstallation. To proceed with the installation/uninstallation UAC needs to be turned OFF.

Click 'Yes' to turn OFF UAC and reboot the system. TCX Suite installation/uninstallation will continue automatically after reboot.

Click No to abort the installation/uninstallation.

6 Click **Yes**.
The **User Account Control** dialog box appears.

7 Click **Yes**.
The system restarts automatically.

8 Log on to the host system with Administrator account.
The UAC is disabled and the system continues with the installation of Wyse TCX suite software.

> **Note**
> If the system does not continue with the installation of Wyse TCX suite software, then browse to the `<Drive:>\TCX Suite Software` folder where the Wyse TCX suite installation package is saved and double-click the installer.

The **Wyse TCX Server Suite** window appears.

9 Click **Next**.
The **License Agreement** page appears.

10 Click **I Accept the terms in the license agreement**.

11 Click **Next**.
The **License Information** page appears.

12 Type the license key and click **Next**.
The **Setup Type** page appears.

13 Click **Custom Install**.
The **Custom Setup** page appears.

14 Ensure the following options are selected and then click **Next**.

- **USB**
- **Multimedia**
- **Flash**

The **Summary** page appears.

15 Click **Install**.
The **Windows Security Alert** page appears.

16 Click the following options.

- **Private networks, such as my home or work network**
- **Public networks, such as those in airports and coffee shops**

17 Click **Allow access**.
The **Installing the Wyse TCX Server Suite** page appears.

18 If a message about Flash Player plug-in appears, click **OK**.
A dialog box with the message **Would you like to install this device software** appears.

19 Click **Always trust software from "Wyse Technology LLC"** check box.

20 Click **Install**.
The **Install Complete** page appears.

21 Click **Finish** to complete the Wyse TCX suite software installation.

22 Restart the host system.

23 Log on to the host system with Administrator account.
Once the Wyse TCX suite software installation completed, the system automatically enables **User Account Control (UAC)** and restores the previous setting.

24 Perform the following only if you are running Microsoft Windows Server 2008 R2 operating system.

a Click **Start** right-click the **Wyse TCX - Server Configuration** and click **Run as administrator**.
The **Wyse TCX - Server Configuration** dialog box appears.

b From the **USB** tab, clear the **Show security warnings** check box.

25 Close the **Wyse TCX - Server Configuration** dialog box.

3.3.2 Verifying the Wyse TCX suite installation

To verify the Wyse TCX suite

1 Log on to the host system using Administrator account.

2 Choose **Start** > **Control Panel** > **System and security** > **Administrative Tools**.
The **Administrative Tools** dialog box appears.

3 Double-click **Services**.
The **Services** dialog box appears.

4 Ensure that the **Wyse Technology Inc USB Virtualizer** service is listed and that the service is running.

3.3.3 Verifying the Wyse TCX suite license and software version

To verify the Wyse TCX suite license and software version

1. Log on to the host system using Administrator account.
2. Click **Start** > **All Programs** > **Wyse** > **WyseTCX Server Suite Configuration**.
   The **TCX Server Suite Configuration Utility** dialog box appears.
3. Click the **General** tab.
4. Click **About Wyse TCX suite**.
   The **About Wyse TCX Suite** dialog box appears.
5. Ensure the term **Production Version** appears on the **About Wyse TCX Suite** dialog box.
   The term **Production Version** indicates that a valid Wyse TCX suite software version is installed.

3.4 Allowing RDP through Windows Firewall

The Windows Firewall setting must be enabled before you establish a RDP with the host system through the Dell Wyse Z90DE7 Thin Client. The Windows Firewall allows the Thin Client to communicate with the host system through RDP.

The procedure for modifying the Windows Firewall settings is same for Microsoft Windows 7 Professional (32-bit), Microsoft Windows 7 Professional (64-bit), and Microsoft Windows Server 2008 R2.

To allow RDP through Windows Firewall

1. Log on to the host system using Administrator account.
2. Click **Start** > **Control Panel** > **System and Security** > **Windows Firewall**.
   The **Windows Firewall** dialog box appears.
3. On the left pane, click **Allow a program or feature through Windows Firewall**.
   The **Allowed Programs** dialog box appears.
4. Click **Change settings**.
   The **Change settings** dialog box appears.
5. Click the **Remote Desktop** and **Remote Desktop - RemoteFX** options and then click **OK**.
6. Close all open dialog boxes.

4 Installing the Dell Wyse Z90DE7 Thin Client hardware

Related topics

4.1 Workstation configuration

Honeywell recommends desktop mounting option for Dell Wyse Z90DE7 Thin Client. Based on the usage scenario, you can mount the Dell Wyse Z90DE7 Thin Client on a vertical mounting stand or on a horizontal mounting stand. By default, each Dell Wyse Z90DE7 Thin Client is shipped with vertical mounting stand. If you want to use the horizontal mounting stand, you must procure it separately using the Wyse part number 920312-02L.

The following image illustrates the interconnection of the Dell Wyse Z90DE7 Thin Client for desktop configurations without Redundant Port Protector.

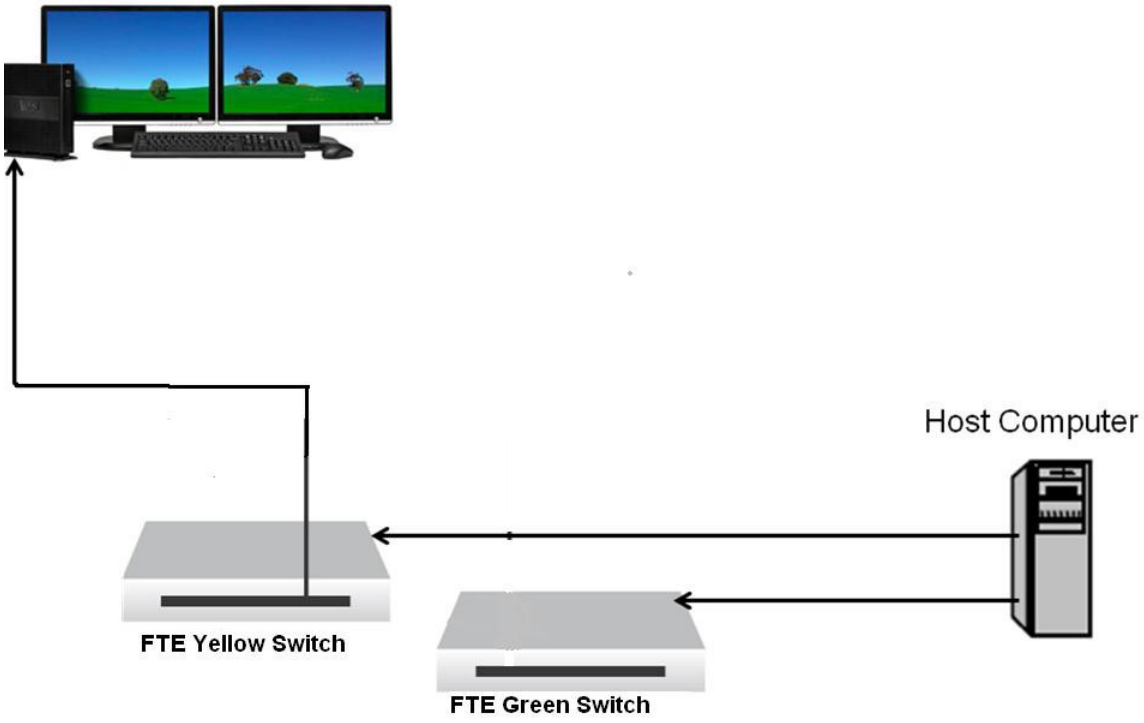


Figure 1: Dell Wyse Z90DE7 Thin Client desktop configurations without Redundant Port Protector

The following image illustrates the interconnection of the Dell Wyse Z90DE7 Thin Client for desktop configurations with Redundant Port Protector.

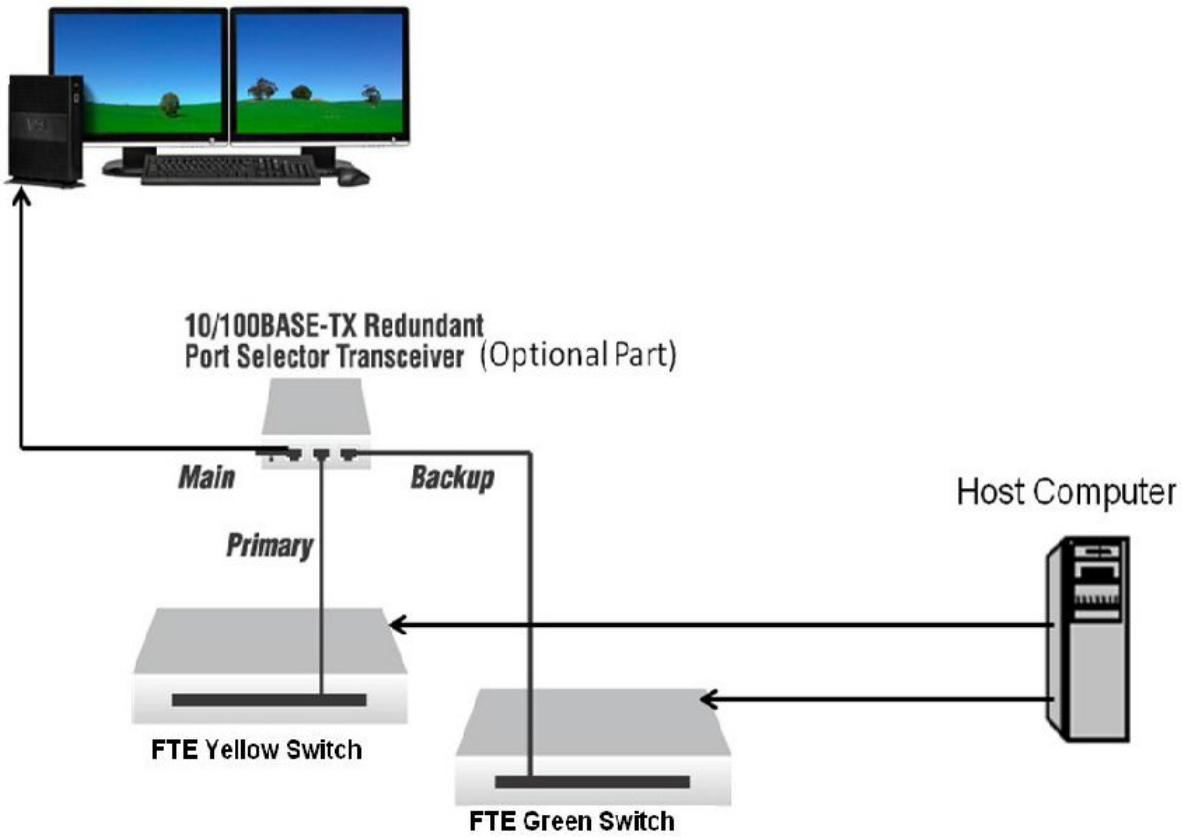


Figure 2: Dell Wyse Z90DE7 Thin Client desktop configurations with Redundant Port Protector

Redundant Port Protector for Dell Wyse Z90DE7 Thin Client is optional. Dell Wyse Z90DE7 Thin Client uses a 10/100 ethernet fault-tolerant transceiver as an optional Redundant Port Protector. Redundant Port Protector significantly reduces network downtime, adding a new level of redundancy to 10/100 ethernet connections. It also provides a redundant path for critical 10/100 devices.

In a 10/100 ethernet network, the redundant transceiver has three ports: one for the critical (main) device, one for the default (primary) path for the critical device, and another (backup) for the backup path. It is a smart device that does not send any signal on a path that is not active. If the primary path loses its link, then the transceiver immediately (in less than one microsecond) switches to the backup path. When the primary path re-establishes its link, the Redundant Port Protector automatically switches back to the primary path. Optional functionality, controlled through a dip switch, allows the unit to move from the fault-tolerant mode to a 3-port switch mode. For this, the dip switch must be configured as follows:

- DIP Switch1: [DOWN POSITION] - Auto Negotiation OFF
- DIP Switch2: Speed = [UP POSITION] - 100Base -TX ENABLED
- DIP Switch3: Duplex = [UP POSITION] - Full Duplex ENABLED
- DIP Switch4: Redundancy = [UP POSITION] - Redundancy ENABLED

4.2 Connecting redundant port protector (RPP)

To connect the redundant port protector (RPP)

1 If you want to use redundant port protector with Dell Wyse Z90DE7 Thin Client for fault-tolerant connection then perform the following:

- Connect the Yellow FTE network cable (connected to the FTE Yellow switch) to the primary link (port 2) of the Redundant Link Protector.
- Connect the Green FTE network cable (connected to the FTE Green switch) to the secondary/backup link (port 3) of the RPP.

Refer to the image “Figure 2: Dell Wyse Z90DE7 Thin Client desktop configurations with Redundant Port Protector” to connect the RPP to the Yellow and Green FTE network cables.

2 Connect the LAN connection on the RPP to the network port that is item 9 in “Figure 1”.

3 To achieve optimal network connectivity between the Dell Wyse Z90DE7 Thin Client and the Experion/TPS host system, configure the DIP switches on the transition networks RPP as follows:

- DIP Switch1: [DOWN POSITION] - Auto Negotiation OFF
- DIP Switch2: Speed = [UP POSITION] - 100Base -TX ENABLED
- DIP Switch3: Duplex = [UP POSITION] - Full Duplex ENABLED
- DIP Switch4: Redundancy = [UP POSITION] - Redundancy ENABLED

4 Connect the RPP-supplied power adapter to the RPP and turn on the RPP.

5 Do not turn on the Dell Wyse Z90DE7 Thin Client.

To continue the installation, go to “Connecting peripherals” on page 46.

4.3 Install Dell Wyse Z90DE7 Thin Client as desktop solution

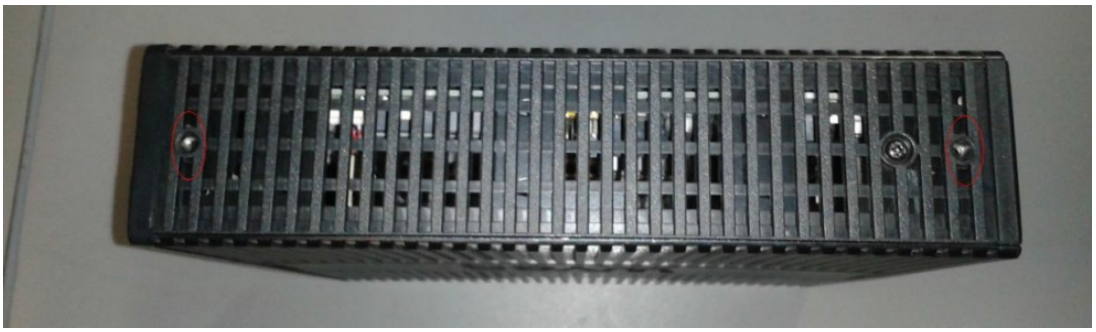
This section describes the tasks for installing Dell Wyse Z90DE7 Thin Client as a desktop solution.

4.3.1 Assembling the Dell Wyse Z90DE7 Thin Client vertical mounting stand

Each Dell Wyse Z90DE7 Thin Client is shipped with a vertical mounting stand for operations. You must assemble the vertical mounting stand which is shipped with your Dell Wyse Z90DE7 Thin Client.

Perform the following steps to mount the Dell Wyse Z90DE7 Thin Client on the vertical mounting stand.

1 Locate the thumb screw hole at the bottom of the Dell Wyse Z90DE7 Thin Client as illustrated in the following image.



2 Place the vertical mounting stand at the bottom of the Dell Wyse Z90DE7 Thin Client.

3 Position the vertical mounting stand firmly to align the screw holes on the feet with the mounting holes on the Dell Wyse Z90DE7 Thin Client. Place the two thumb screws back into the holes and tighten it using a screwdriver, as illustrated in the following image.

4.3.2 Installing the Dell Wyse Z90DE7 Thin Client as desktop solution

Prerequisites

- Ensure that the desktop station and all the supported devices are turned off and removed from the power supply.
- When you install the Dell Wyse Z90DE7 Thin Client, ensure that you do not block any of the vent openings.
- Verify that the following tasks are completed before connecting the Dell Wyse Z90DE7 Thin Client to the desktop station.
    - Remove the host system from the desktop station and place it at the required location.
    - Re-route the FTE and the LCN cables to connect them to the host system.

To install Dell Wyse Z90DE7 Thin Client as desktop station

1 Identify the place where you want to place the Dell Wyse Z90DE7 Thin Client.

2 Ensure that all the peripherals such as monitor, keyboard, mouse, and so on has sufficient cable length to interface with the Dell Wyse Z90DE7 Thin Client.

3 Connect the peripherals to the Dell Wyse Z90DE7 Thin Client. Refer to the section “Connecting peripherals” on page 46.

4 If you do not want to use Redundant Port Protector for fault-tolerant connection then connect the Dell Wyse Z90DE7 Thin Client to a FTE Yellow switch using a CAT5 Ethernet cable.

Connect the CAT5 Ethernet cable to the network port (item 9).

4.4 Preparing the Dell Wyse Z90DE7 Thin Client for mounting in Honeywell consoles

This section provides the tasks that must be performed before mounting the Dell Wyse Z90DE7 Thin Client in Honeywell consoles.

4.4.1 Installing the VESA mounting plate

Install the VESA mounting plate on Dell Wyse Z90DE7 Thin Client before installing the Dell Wyse Z90DE7 Thin Client mounting shelf in Classic console, Z/EZ console, Icon series console, and Experion Orion console.

Prerequisites

Ensure that you have the following:

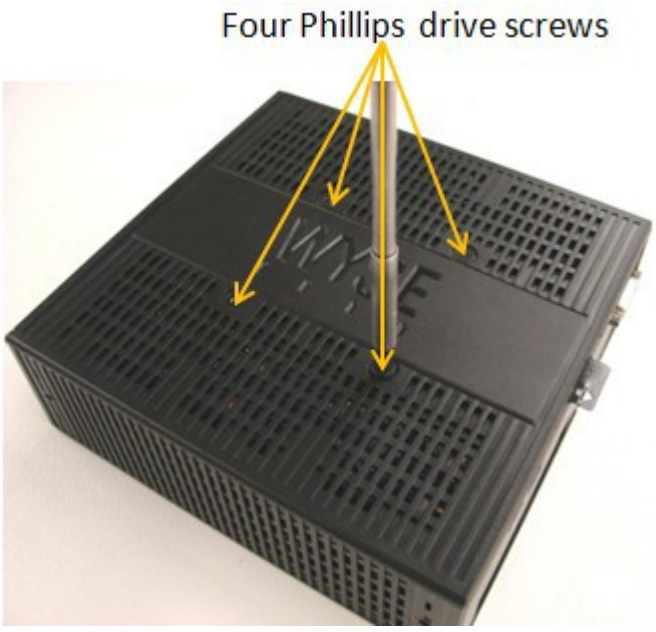
- One VESA mounting plate (P/N 51203060-100)
- Four aluminum spacers (P/N 51108572-100)
- Four Hex head machine screws (P/N 51108888-516)
- Two dual lock fastener kits, P/N 51199478-100

To install the VESA mounting plate

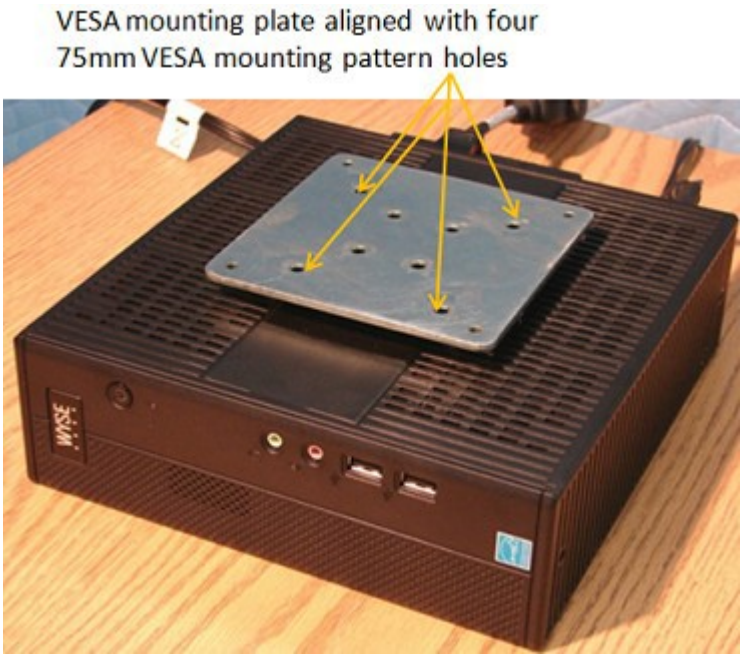
1 Place the Dell Wyse Z90DE7 Thin Client on a flat surface.

2 Place the Dell Wyse Z90DE7 Thin Client on its side such that you can access the four Phillips drive screws installed in the 75mm VESA mounting pattern.

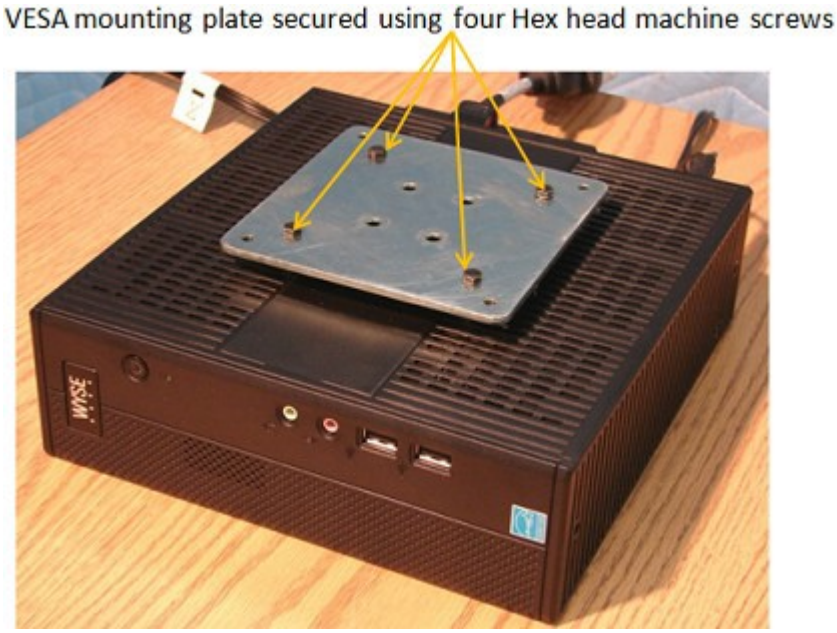
3 Remove the four Phillips drive screws installed in the 75mm VESA mounting pattern.
Discard the four screws as they are not reused.



4 Align the four 10mm aluminum spacers with the threaded holes forming the 75mm VESA interface in the Dell Wyse Z90DE7 Thin Client. Place the VESA mounting plate on top of the four standoffs and align the holes in the plate with those forming the 75mm VESA interface.



5 Using four aluminum spacers (P/N 51108572-100) and Hex head machine screws (P/N 51108888-516) secure the VESA mounting plate to the Dell Wyse Z90DE7 Thin Client.



This completes the installation of the VESA mounting plate.

4.4.2 Installing the dual lock fasteners

Install the dual lock fastener (P/N 51199478-100) on the Dell Wyse Z90DE7 Thin Client and all its components. The dual lock fastener secures the Dell Wyse Z90DE7 Thin Client on the mounting shelf or Icon series console.

To install the dual lock fastener

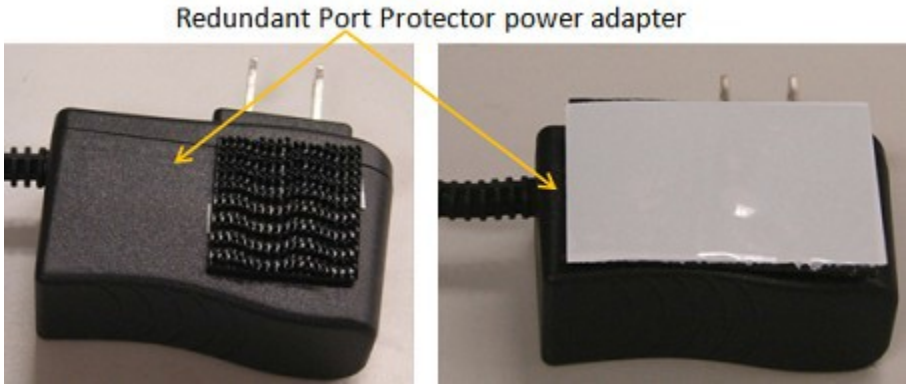
1 Place the four 1” x 1” adhesive backed squares on the surface of the VESA mounting plate.

2 Place the two 2” wide x 6” long adhesive backed dual lock fastener above the four 1” x 1” adhesive backed squares as illustrated.

One of the 2” x 6” adhesive backed dual lock fastener is cut in half and one half is used on each side of the 6” long section.

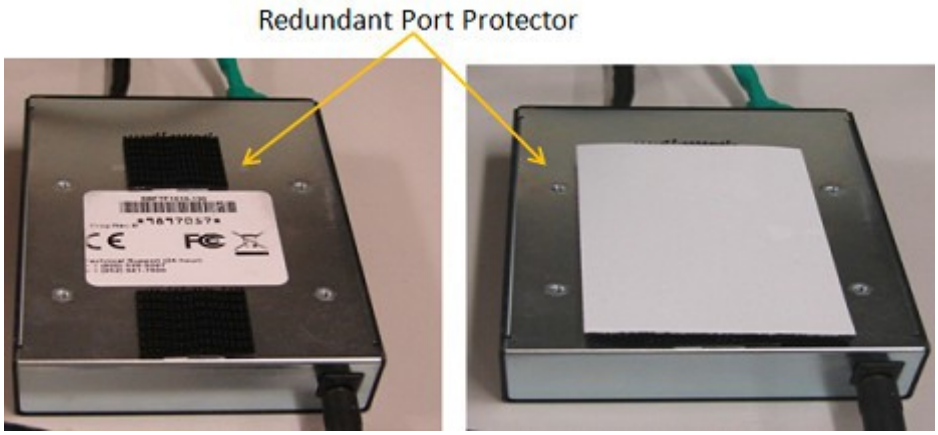
3 Place the one 1” x 1” adhesive backed square (P/N 51199478-300) on side of the Redundant Port Protector power adapter.

4 Stick the 2” wide x 1.5” rectangle adhesive dual lock fastener (P/N 51199478-300) above the 1” x 1” adhesive backed squares as illustrated.



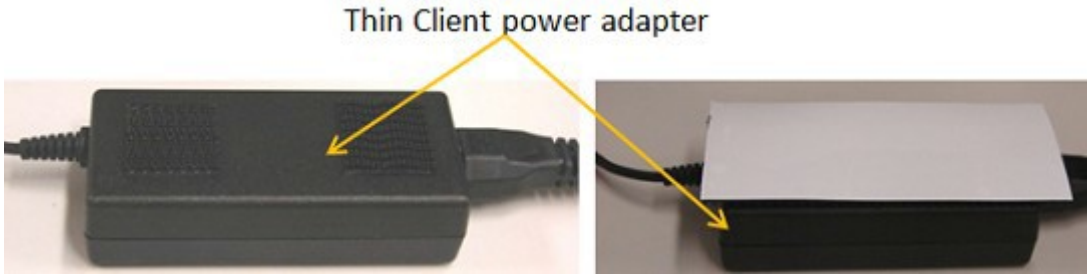
5 Place two 1" x 1" dual lock fastener squares on the Redundant Port Protector.

6 Place the 2” wide x 3.5” long adhesive backed dual lock fastener above the 1” x 1” adhesive backed squares as illustrated.



7 Place two 1" x 1" dual lock fastener squares on the Thin client power adapter.

8 Place the 2” wide x 3.5” long adhesive backed dual lock fastener above the 1” x 1” adhesive backed squares as illustrated.



4.4.3 Mounting Dell Wyse Z90DE7 Thin Client and its components on the mounting shelf

To mount the Dell Wyse Z90DE7 Thin Client and its components on the mounting shelf

1 Remove the release liners from the dual lock fastener and place each unit on the mounting shelf.

2 Remove the release liners from the dual lock fastener and position the Dell Wyse Z90DE7 Thin Client on the mounting shelf. Place the Dell Wyse Z90DE7 Thin Client such that the distance between its front surface and the front surface of the mounting shelf is approximately 25mm [1”].

3 Place the OEP adapter at the top surface of the mounting shelf such that the distance between its left end and the side of the mounting bracket is 3.35”.

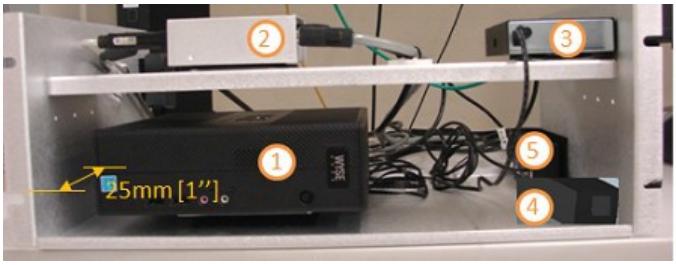
4 Place the Redundant Port Protector (RPP) such that the Ethernet cables are facing rearward and the side of the RPP is against the right side of the shelf.

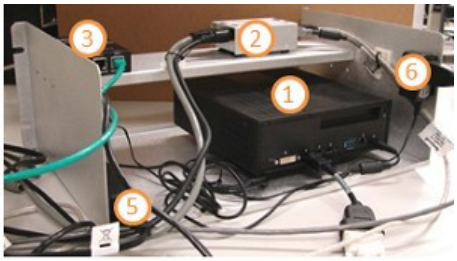
5 Place the OEP power adapter at the bottom surface of the mounting shelf. Ensure that its widest side contacts the right side of the mounting shelf (when viewed from the front) and the end that accepts the AC power cord faces rearward.

6 Place the Thin Client power adapter at the bottom of the mounting shelf immediately next to the OEP power adapter. Ensure that its label faces inward and the end that accepts the AC power cord faces rearward.

7 Place the Redundant Port Protector (RPP) power adapter on the left wall of the shelf behind and above the Thin Client with the AC power cord interface facing rearward.

8 Routing cables from the rear of the mounting shelf, as illustrated.





The items numbered in the image are as follows:

1. Dell Wyse Z90DE7 Thin Client
2. OEP adapter
3. Redundant Port Protector
4. Thin Client power adapter
5. OEP power adapter
6. Redundant Port Protector power adapter

4.5 Installing Dell Wyse Z90DE7 Thin Client mounting shelf in Classic console

Prerequisites

Before installing the Dell Wyse Z90DE7 Thin Client mounting shelf in Classic console, you must refer to the section “Preparing the Dell Wyse Z90DE7 Thin Client for mounting in Honeywell consoles” on page 35 and perform the following:

- Install the VESA mounting plate.
- Install dual lock fastener.
- Mount the Dell Wyse Z90DE7 Thin Client and its components on the mounting shelf.

To install the Dell Wyse Z90DE7 Thin Client mounting shelf in Classic console

1 Remove the rear door of the Classic console.

2 Slide the mounting shelf containing the Dell Wyse Z90DE7 Thin Client into the Classic console equipment bay until its flanges contact the vertical mounting rails.

3 Fasten the mounting shelf to the vertical mounting rails with four (4) M5 thread forming screws, P/N 51195168-616, and four (4) M5 serrated washers, P/N 51109933-003.

4 Route and connect the three AC power cords to the Classic console power entry unit.

5 Route and connect the Ethernet network cable to the RPP.

6 Route and connect all non-USB keyboard cables to the OEP adapter.

7 Route and connect all other cables to their respective ports on the Dell Wyse Z90DE7 Thin Client.

4.6 Installing Dell Wyse Z90DE7 Thin Client mounting shelf in Z/EZ console

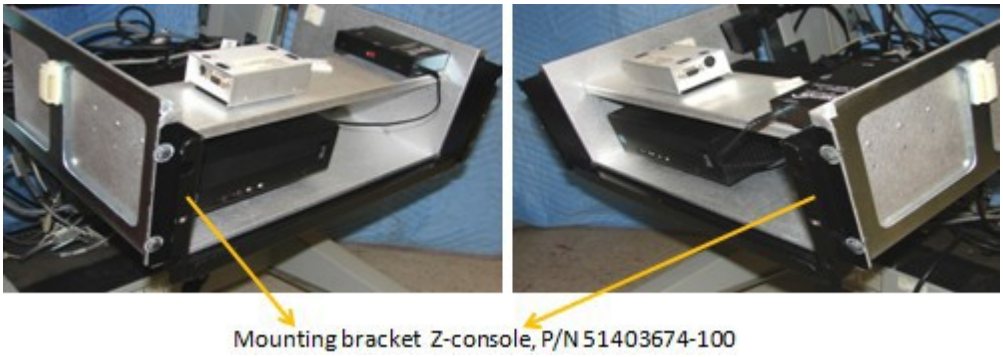
Prerequisites

Before installing the Dell Wyse Z90DE7 Thin Client mounting shelf in Z/EZ console, you must refer to the section “Preparing the Dell Wyse Z90DE7 Thin Client for mounting in Honeywell consoles” on page 35 and perform the following:

- Install the VESA mounting plate.
- Install dual lock fastener.
- Mount the Dell Wyse Z90DE7 Thin Client and its components on the mounting shelf.

To install Dell Wyse Z90DE7 Thin Client mounting shelf in Z/EZ console

1 Install the Dell Wyse Z90DE7 Thin Client mounting shelf on right and left module mounting brackets of the Z/EZ console.



2 Mount the Dell Wyse Z90DE7 Thin Client mounting shelf in the structure created by the two Z/EZ-console module mounting brackets and the mounting bracket Z-Console, P/N 51403674-100. The flanges of the Dell Wyse Z90DE7 Thin Client mounting shelf must be “sandwiched” between the flanges of the module mounting brackets and the mounting bracket Z-console.

3 Secure the mounting bracket Z-console and Dell Wyse Z90DE7 Thin Client mounting shelf with four M5 thread forming screws, P/N 51195168-616, and four M5 serrated washers, P/N 51109933-003.

4 Slide the electronics enclosure cover over the Z/EZ module mounting brackets and Dell Wyse Z90DE7 Thin Client mounting shelf until the molded rectangular protrusions engage the rectangular cutouts in the bottom surface of the mounting bracket Z-console.

5 Route and connect the three AC power cords to the Z/EZ console power entry unit.

6 Route and connect the Ethernet network cable to the RPP.

7 Route and connect all non-USB keyboard cables to the OEP adapter.

8 Route and connect all other cables to their respective ports on the Dell Wyse Z90DE7 Thin Client.

9 Place the rear cover (P/N 51405058-100) in front of the Dell Wyse Z90DE7 Thin Client mounting shelf and install it using two captivated panel fasteners.

4.7 Installing Dell Wyse Z90DE7 Thin Client in Experion Orion console

Prerequisites

Before installing the Dell Wyse Z90DE7 Thin Client and its components in Experion Orion console, you must refer to the section “Preparing the Dell Wyse Z90DE7 Thin Client for mounting in Honeywell consoles” on page 35 and perform the following:

- Install the VESA mounting plate.
- Install the dual lock fasteners on the Dell Wyse Z90DE7 Thin Client and its components.

The instruction for installing the Dell Wyse Z90DE7 Thin Client in the Experion Orion console equipment tray is similar to the instructions for Icon series console. Refer to the section “Installing Dell Wyse Z90DE7 Thin Client in Icon series console” on page 44, for instruction.

4.8 Installing Dell Wyse Z90DE7 Thin Client in Icon series console

Prerequisites

Before installing the Dell Wyse Z90DE7 Thin Client and its components in Icon series console, you must refer to the section “Preparing the Dell Wyse Z90DE7 Thin Client for mounting in Honeywell consoles” on page 35 and perform the following:

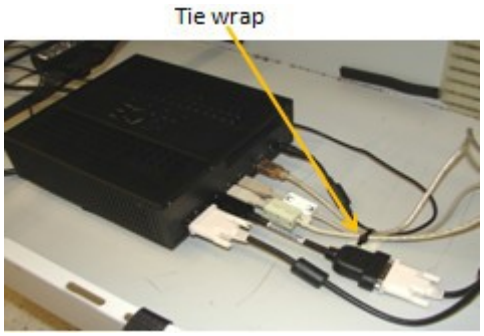
- Install the VESA mounting plate.
- Install the dual lock fasteners on the Dell Wyse Z90DE7 Thin Client and its components.

To install Dell Wyse Z90DE7 Thin Client mounting shelf in Icon series console

1 Clean and remove the grease at the center on the inside surface of the Icon console electronics enclosure, as illustrated.

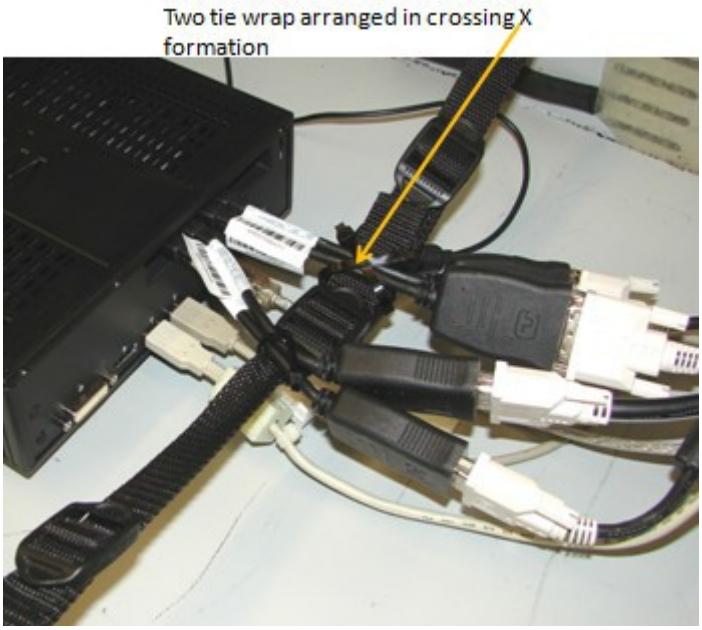
2 Remove the release liner from the pattern of adhesive backed dual lock fastener sections stuck to the Dell Wyse Z90DE7 Thin Client and place it on the Icon series console.

3 For dual monitor applications, use a tie wrap and an adhesive backed tie wrap anchor to provide mechanical strain relief for the cables.



4 For quad video applications, use two tie wraps to provide mechanical strain relief for each set of two mini display port-to-DVI cable dongles.

5 Arrange the two tie wraps in a crossing “X” formation over the cable dongles to secure them to the top of the electronics enclosure strap.



6 Remove the release liner from the adhesive backed dual lock fastener on the Thin Client power adapter and position the side that accepts the AC power cord toward the bottom of the electronics enclosure.

7 Attach the RPP and its power adapter to a cleaned area of the Icon console electronics enclosure to the left of the Dell Wyse Z90DE7 Thin Client.

8 Use tie wraps and adhesive backed tie wrap anchors to provide mechanical strain relief for the cables.

4.9 Connecting peripherals

Refer to the following figure for connecting the peripherals.

Figure 3: Dell Wyse Z90DE7 Thin Client overview

The numbered items of the Dell Wyse Z90DE7 Thin Client are as follows:

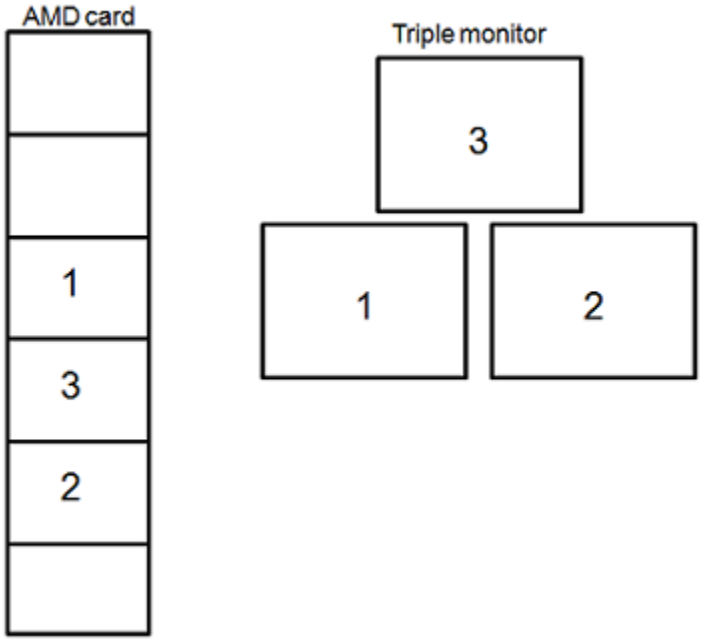
1. Power on/off button/light
2. Line out/Speaker out
3. Microphone in
4. USB port (2.0)
5. DVI-I #1 port (1x DVI-D or 1x VGA)
6. Display port
7. USB port (2.0)
8. USB (3.0)
9. Network port, 10/100/1000BaseT
10. +19V Power adapter input
11. Lock receptacle
12. Slot for inserting AMD Radeon E6760 graphic card

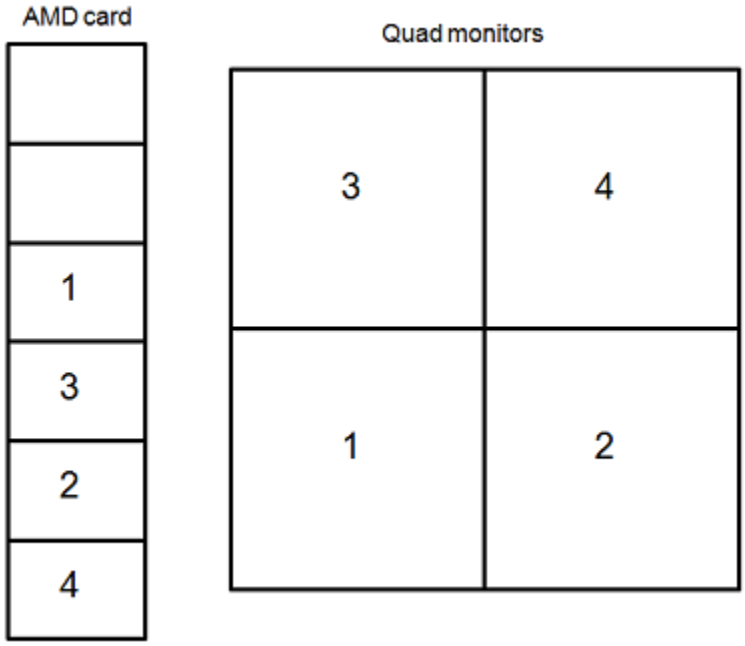
To connect cables to the Dell Wyse Z90DE7 Thin Client

1. Connect the power cord to 19 V power adapter input (item 10).
2. Connect the QWERTY USB keyboard or mouse to the USB 3.0 ports (item 8).
3. For connecting monitors perform the following:

To connect USB touch monitor

1. Connect the USB cable to the touch monitor controller
2. Connect the USB portion to any USB 2.0 port (item 4 or 7)

Option	Description
For single monitor mode	• Connect the analog/VGA monitor to the DVI-I port (item 5) at the rear of Dell Wyse Z90DE7 Thin Client using DVI to VGA converter. • Connect the DVI monitor to the Display port (item 6) at the rear of the Dell Wyse Z90DE7 Thin Client using DP to DVI converter. • Connect the VGA monitor to the Display port (item 6) at the rear of the Dell Wyse Z90DE7 Thin Client using DP to VGA converter.
For dual monitor mode	• Connect the primary analog or VGA monitor to the Display port (item 6) at the rear of Dell Wyse Z90DE7 Thin Client using DP to VGA converter. • Connect the secondary analog/VGA monitor to the DVI-I port (item 5) at the rear of Dell Wyse Z90DE7 Thin Client using DVI to VGA converter. **Attention** The DVI to VGA converter or DP to VGA converter is not provided with the Dell Wyse Z90DE7 Thin Client (TP-THNCL2-XXX or TP-THNCL3-XXX) and must be ordered separately using the Honeywell part number 51150648-100.
For triple monitor mode	Connect the mini display ports of the AMD card to the monitors as follows: • Mini display port 1 to Monitor 1 • Mini display port 2 to Monitor 2 • Mini display port 3 to Monitor 3 The following image illustrated the AMD card and the monitors connection. 

Option	Description
For quad monitor mode	Connect the mini display ports of the AMD card to the monitors as follows: • Mini display port 1 to Monitor 4 • Mini display port 2 to Monitor 2 • Mini display port 3 to Monitor 3 • Mini display port 4 to Monitor 1 The following image illustrated the AMD card and the monitors connection. 

1 Connect the CAT5 cable to the network port (item 9).

2 After connecting the cables of the peripheral devices to Dell Wyse Z90DE7 Thin Client, turn on the Dell Wyse Z90DE7 Thin Client using the power button at the front of the device.

The status LED indicates the state of the Dell Wyse Z90DE7 Thin Client. For more information, refer to the manufacture's documentation.

5 Configuring the Dell Wyse Z90DE7 Thin Client

The section provides the steps for configuring Dell Wyse Z90DE7 Thin Client.

Related topics

5.1 Changing the BIOS password

Honeywell recommends that you change the default BIOS password for security reasons.

To change the BIOS password

1. Turn on the Dell Wyse Z90DE7 Thin Client.
2. When the Dell Wyse Z90DE7 Thin Client reboots, press and hold **Delete** key to enter the BIOS.
3. In the Password field, type **Fireport** and then press the **Enter** key.
   The **Phoenix SecureCore Tiano Setup** window appears.
4. Using the Left and Right arrow keys navigate to the **Security** tab.
5. Using the Up and Down arrow key, select **Set Supervisory Password** and then press **Enter** key.
   The **Set Supervisory Password** dialog appears.
6. In the **Enter Current Password** field, type **Fireport**.
7. Press **Enter** key.
   The control comes to the **Enter New Password** field.
8. In the **Enter New Password** field, type the required password and then press **Enter** key.
   The control comes to the **Confirm New Password** field.
9. In the **Confirm New Password** field, type the new password and the press **Enter** key.
   The **Notice** dialog box appears with the message **Changes have been saved**.
10. Press **Enter** key.
11. Using the Left and Right arrow keys navigate to the **Exit** tab.
12. Using the Up and Down arrow key, select **Exit Saving Changes** and then press **Enter** key.
    The **Setup Confirmation** dialog box appears.
13. Select **Yes** and then press **Enter** key.

5.2 Disabling the WES7 File-Based Write Filter (FBWF)

Disable the WES7 File-Based Write Filter (FBWF) for saving the configuration changes done to Dell Wyse Z90DE7 Thin Client. If the FBWF is not disabled, any configuration changes done to the Dell Wyse Z90DE7 Thin Client will be lost once the Dell Wyse Z90DE7 Thin Client is restarted.

To disable the WES7 File-Based Write Filter (FBWF)

1 Turn on the Dell Wyse Z90DE7 Thin Client.
The Dell Wyse Z90DE7 Thin Client automatically logs on to the User account.

2 To log off from the User account, click **Start**, press and hold the **Shift** key and then click **Log Off**.
Press and hold the **Shift** key till the Log in screen appears.

3 Click **Administrator** account.

4 In the **Password** field, type **Wyse#123**.

5 Press **Enter**.
The Dell Wyse Z90DE7 Thin Client logs on to the Administrator account.

6 On the desktop, double-click the red **FBWF disable** icon.
This disables the WES7 File-Based Write Filter (FBWF).

7 The **Dell Wyse Z90DE7 Thin Client** restarts automatically and logs on to the user account.
Log off from the user account and log on to the Dell Wyse Z90DE7 Thin Client using Administrator Account. Use the same instructions as mention in steps 2-5 above.
Note: Honeywell recommends you to turn off automatic logon during setup procedures.

8 Click **Start** > **Control Panel** > **Winlog**.
The **Specify Logon Information** dialog box appears.

9 Clear the **Enable Auto Logon** check box.

10 Click **OK**.
The message **Please logoff for changes to take effect** appears.

11 Click **OK** and close all open windows.

5.3 Changing the Administrator and User account passwords

For security reasons, Honeywell recommends you to change the default account passwords.

To change the Administrator password

1 Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.
2 Click **Start** > **Control Panel** > **User Accounts**
The **User Accounts** page appears.
3 Click **Change your password**.
The **Change your password** screen appears.
4 In **Current password** field, type **Wyse#123**.
5 In **New password** field, type the required password.
6 In **Confirm new password** field, type the previously entered new password.
7 Click **Change password**.

To change the User account password

1 Log on to the Dell Wyse Z90DE7 Thin Client using User account.
2 Click **Start** > **Control Panel** > **User Accounts** > **Manage another account**
The **User Accounts** dialog box appears.
3 Click **Users** tab.
4 Select the User name and then click **Reset Password**.
For User account you must also modify the password under the auto login application Winlog.
5 Click **Start** > **Control Panel** > **Winlog**
Modify the Winlog application password to match the updated User Accounts password.

5.4 Configuring displays

Refer to the section “Connecting peripherals” on page 46 for connection the monitor cables to the Dell Wyse Z90DE7 Thin Client.

Perform this procedure when you have more than one monitor attached to the Dell Wyse Z90DE7 Thin Client.

To configure displays

1 Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.

2 Right-click on the desktop, and select **Screen resolution**.
The **Screen resolution** window appears.

3 Click **Identify**, to identify your screen numbers.

4 Set all the monitors at the same **Resolution**.

5 The displays appearing in the **Change the appearance of your display** area must be identical to how you arrange your physical monitors.
Align the screen as described in the following table.

Dual display monitors	Triple display monitors	Quad display monitors
If dual monitors are placed horizontally, then click display 2 and drag it next to display 1.	Arrange the displays in the order 1, 2 in the lower tier and 3 in the upper tier	Arrange the displays in the order 1, 2 in the lower tier and 3, 4 in the upper tier
If dual monitors are placed vertically, then click display 2 and drag it above display 1.		

6 Click **Apply**, and then click **OK**.

7 Close all the open windows.

Attention
After establishing the remote desktop connection, if the screen does not occupy the entire space on the monitor, then refer to the section “Adjusting the monitor” on page 67 and perform the tasks to adjust the screen display.

5.5 Calibrating SAW touchscreens

The Dell Wyse Z90DE7 Thin Client provides touch screen configuration applications to support Honeywell-qualified Surface Acoustic Wave (SAW) touch monitors. Dell Wyse Z90DE7 Thin Client supports the following two types of SAW touchscreens.

- Elo touchscreen
- EETI/eGalax touchscreen

Prerequisites

Ensure to use the USB 2.0 ports instead of USB 3.0 ports for connecting the touchscreen interface.

To calibrate the Elo touchscreen

1. Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.
2. In the notification area, at the far right of the taskbar, right-click the **Elo** icon and then click **Align**.
3. The **Calibration** screen appears.
4. Touch the calibration points appearing on the screen.
5. In the notification area, at the far right of the taskbar, right-click the **Elo** icon and then click **Elo Touchscreen Properties.**
6. The **Elo Touchscreen Properties** dialog box appears.
7. Click the **Properties** tab and then click **Advanced**.
8. The **Advanced** dialog box appears.
9. Select the **Enable right click on hold** check box.
10. Click **Apply** and then click **OK**.
11. Close all open windows.

5.6 Calibrating SAW touchscreens

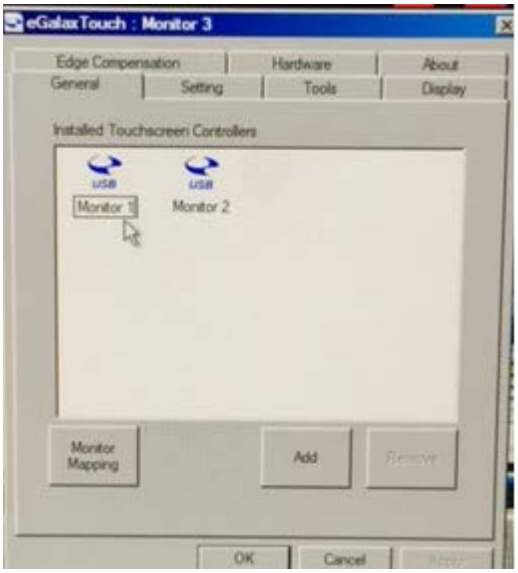
To calibrate the EETI SAW Canvys touchscreen

1 Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.

2 In the notification area, at the far right of the taskbar, right-click the **eGalax** icon and then click **Calibration Utility**

3 The **eGalaxTouch USB Controller** screen appears.

4 In the **General** tab, if you have **multiple touch monitors**, it is recommended that you select the **USB controller name** and rename it to a meaningful name to identify which touch monitor it is applicable to.



5 Click **Monitor Mapping**. The **Please touch here** screen appears.

6 Touch the calibration points appearing on the screen. If the monitor mapping appears on a monitor that is not a **Canvys touch monitor**, press the space bar to skip to the next monitor to map

7 In the **eGalaxTouch USB Controller** screen, **General tab,** if you have **multiple USB controllers** listed, select each controller one by one and follow steps 8 through 12.

8 Click the **Tools** tab

9 Click the **4 Points Calibration option**. The **4 Points Calibration screen** appears.

10 Touch the calibration points appearing on the screen.

11 The message "**4 point calibration completed**" appears.

12 Click **OK**.

13 In the notification area, at the far right of the taskbar, right-click the **eGalax icon** and then click **Mouse Mode > Click On Touch.**

14 Close all open windows**.**

5.7 Configuring the network settings

You must configure the network setting before establishing a remote desktop connection.

To configure the network settings

1. Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.
2. Click **Start** > **Control Panel** > **Network and sharing Center >** > **Change Adapter Settings**.
   The **Network Connections** window appears.
3. Right-click **Local Area Connection** and then click **Properties**.
   The **Local Area Connection** dialog box appears.
4. If the Dell Wyse Z90DE7 Thin Client network is plugged directly into a Level 2 network, you must modify the Speed and Duplex of the NIC card to "100Mbps Full Duplex" to prevent any connection issues. Perform the following tasks for modifying the Speed and Duplex of the NIC card.
   a. Right-click the **Realtek PCIe GBE Family Controller** NIC card and then click **Properties**.
   b. Click **Configure**.
      The **Realtek PCIe GBE Family Controller** properties dialog box appears.
   c. Click the **Advanced** tab
   d. From the **Property** list, scroll down and select the **Speed & Duplex**.
   e. From the **Value** list, select **100Mbps Full Duplex**.
   f. Click **OK**.
5. In the **Networking** tab, select **Internet Protocol Version 4(TCP/IPv4)** and click **Properties**.
   The **Internet Protocol Version 4(TCP/IPv4) Properties** dialog box appears.
6. Click the **General** tab and verify/set the IPv4 properties for the Local Area Connection.
7. Set the **IP address**, **Subnet mask** and **Default gateway** assigned to this node. If required, set the **DNS servers**.
8. Click **OK** and then click **Close**.
9. Close all the open windows.

5.8 Configuring the date and time

To configure the date and time

1. Log on to the Dell Wyse Z90DE7 Thin Client using Administrator account.
2. Click **Start** > **Control Panel** > **Date and Time**.
   The **Date and Time** dialog box appears.
3. Click **Change Date and Time**.
   The **Date and Time Settings** dialog box appears.
4. Set the date and time as required.
5. Close all the open windows.

5.9 Verifying the USB storage device option

Honeywell recommends you to disable the USB storage device option so that the Dell Wyse Z90DE7 Thin Client does not recognize when you connect a USB to the Dell Wyse Z90DE7 Thin Client. The USB storage devices are disabled by default on Dell Wyse Z90DE7 Thin Client.

To verify that the USB storage device option is disabled

1 Log on to the Dell Wyse Z90DE7 Thin Client using Administrator privileges.

2 On desktop, double-click the **Local USB Access Control** application icon.

3 Ensure that the **Allow use of USB storage devices on this computer** option is cleared.

4 Click **Apply** and then click **OK**.

This prevents the recognition of any USB storage devices plugged into the Dell Wyse Z90DE7 Thin Client when it is logged on to the WES7 operating system.

5.10Enabling the WES7 File-Based Write Filter (FBWF)

Once the complete setup is done, you must enable the WES7 File-Based Write Filter (FBWF) for securing the Dell Wyse Z90DE7 Thin Client from saving any changes. If you try saving anything to the C: drive, the write-filter redirects those changes to RAM. If the system faces any issues due to a change, just restart the system to restore it to the original state. This is the WES7 security feature that prevents the need of antivirus software.

To enable the WES7 File-Based Write Filter (FBWF)

1 Start the Dell Wyse Z90DE7 Thin Client.
The Dell Wyse Z90DE7 Thin Client automatically logs on to the User account.

2 Press the **Shift** key to log off from the User account.

3 Log on to the Dell Wyse Z90DE7 Thin Client with Administrator account by using the default password.

4 Click **Control Panel** > **Winlog**.

5 Click the **Enable Auto logon** check box.

6 On the desktop, double-click the green **FBWF Enable** icon.
This enables the WES7 File-Based Write Filter (FBWF).

7 The Dell Wyse Z90DE7 Thin Client restarts automatically and logs on to the User account.
To verify if the FBWF is enabled, after the Dell Wyse Z90DE7 Thin Client restarts, ensure that the green FBWF icon appears in the notification area, at the far right of the taskbar.

5.11Establishing remote desktop connection

To establish remote desktop connection

1 Log on to the Dell Wyse Z90DE7 Thin Client.

2 Perform the following based on the number of monitors.

Operating system	Single monitor	Dual/triple/quad monitor
Microsoft Windows 7 Professional (32-bit)	From desktop, click **Remote Desktop Connection** shortcut icon.	1. From the desktop, click **RDP Span**. The **Command prompt** screen appears. 2. Press **Enter**.
Microsoft Windows 7 Professional (64-bit)		
Microsoft Windows Server 2008 R2		1. From desktop, click **Remote Desktop Connection** shortcut icon. 2. Click **Display** tab. 3. Click **Use all my monitors for remote session** check box.

The **Remote Desktop Connection** dialog box appears.

3 In the **Computer** field, type the IP address or computer name of the system that you want to remotely access.

4 In the **User name** field, type the User name.

5 Click **Options** to expand the RDP options.

6 For using IKB/OEP, click the **Local Resources** tab.

7 Click **More** and ensure that the **Ports** and **Other supported Plug and Play (PnP) devices** are enabled.

8 Click the **Display** tab, from **Choose the color depth of the remote session** list, select **Highest Quality (32-bit)**.

9 For establishing the remote desktop connection, click **Connect**.
The **Enter your credentials** dialog box appears.

10 In the **Password** field, type the password and then click **OK**.
For Microsoft Windows 7 Professional (32-bit) or Microsoft Windows 7 Professional (64-bit) host systems, ensure that the Wireless symbol appears as illustrated.

If the Wireless symbol is not appearing then the RDP hotfix 8.0 is not configured properly on your host system. In such instance, refer to the section “Updating the local group policy” on page 22 and perform all the steps to update the local group policy. Establish the remote desktop connection once again and ensure the Wireless symbol appears.

5.12 Connecting card readers to Dell Wyse Z90DE7 Thin Client

You must connect the Smart card reader to the USB port of the Dell Wyse Z90DE7 Thin Client. Once the card is connected, from the host system, establish a remote desktop connection and verify if the card reader is detected.

Configuring Smart card reader

Prerequisites

Ensure that the Smart card reader drivers are installed on the host system. When an RDP is established to the host system, the drivers help the host system to automatically detect the Smart card reader connected to the Dell Wyse Z90DE7 Thin Client.

To configure the Smart card reader

1 Connect the Smart card reader to the USB port of Dell Wyse Z90DE7 Thin Client.

The host system automatically detects the smart reader when you establish a remote desktop connection through the Dell Wyse Z90DE7 Thin Client.

2 Establish the remote desktop connection.

3 Log on to the host system using Administrator account.

4 Depending on the operating system perform the following:

For Microsoft Windows 7 32-bit/64-bit	For Microsoft Windows Server 2008 R2
1. Click **Start**, right-click **Computer** and then click **Manage**. The **Computer Management** window appears. 2. On the left pane, click **Device Manager**. The **Device Manager** dialog box appears.	1. Click **Start**, right-click **Computer** and then click **Manage**. The **Server Management** window appears. 2. On the left pane, from **Diagnostics** click **Device Manager**. The **Device Manager** dialog box appears.

5 Expand the **Universal Serial Bus controller** option.

A list of all the devices connected to the USB port appears.

6 Ensure that the Smart card reader connected to the Dell Wyse Z90DE7 Thin Client appears in the list of all the devices connected to the USB port.

This ensures that the Smart card reader is connected to the USB port of the Dell Wyse Z90DE7 Thin Client and is running.

If the Smart card reader does not appear, then you must end the remote desktop connection. Remove and reconnect the Smart card reader to Dell Wyse Z90DE7 Thin Client. Log on to the host system using User account and establish the remote desktop connection.

6 Troubleshooting or Servicing

Related topics

6.1 1 Using Dell Wyse Z90DE7 Thin Client with Experion Backup and Restore (EBR) software

The following points must be considered before performing the backup/restore operations using an EBR software on the host systems with Dell Wyse Z90DE7 Thin Client.

1. Do not perform backup and restore operation on Dell Wyse Z90DE7 Thin Client-connected hardware. You must perform the backup/restore operation using the local keyboard, mouse, and monitor connected to the host system.
2. EBR/RPS operations can only be run on Honeywell-qualified host systems that are qualified for that particular Experion release.
3. Do not disconnect the remote setup while EBR operations are performed using video, keyboard, and mouse.
4. While performing backup and restore operations on host systems connected to Dell Wyse Z90DE7 Thin Client, remote hardware does not work.
5. You can create backup on the hard disk or external drive.
6. You can restore the backup image by using the standard EBR recovery disk DVD (not custom recovery disk).

6.2 Migration support

Ensure that you disconnect Dell Wyse Z90DE7 Thin Client from the network before migrating from the previous Experion release to the target Experion release. However, do not remove the hardware or peripherals connected to the Dell Wyse Z90DE7 Thin Client. Perform the migration using the local keyboard, mouse, and monitor connected to the host system.

After completing the migration, enable the remote desktop in the host system and connect the Dell Wyse Z90DE7 Thin Client to the network. To continue with the installation, refer to the section “Configuring the host systems” on page 19.

6.3 Replacing failed thin clients

Thin clients, with no hard drive, no fan, or other moving parts, have a much longer lifespan than standard computers. If you have a failed thin client then contact your nearest Honeywell representative. Refer to section “Support and other contacts” on page 72 to contact your nearest Honeywell representative.

Attention

The virtual machine that the thin client is associated with, does not need to be shut down for thin client replacement.

To replace a failed thin client

1. If possible collect relevant configuration data from defective thin client.
2. Remove the defective thin client from operation.
3. Disconnect any cables and peripheral devices from the thin client.
4. Using the new or replacement thin client, prepare the thin client. For more information, see section “Getting started with Dell Wyse Z90DE7 Thin Client” on page 11.

6.4 Flashing Honeywell custom image on Dell Wyse Z90DE7 Thin Client

The Dell Wyse Z90DE7 Thin Client is provided with a backup of the Honeywell custom WES7 image on the USB flash drive that is shipped with the Dell Wyse Z90DE7 Thin Client (part number 51155591-904). When you have to restore the original Honeywell custom image, use the USB flash drive and flash the Honeywell custom WES7 image on the Dell Wyse Z90DE7 Thin Client. If Honeywell releases an updated custom image, the USB flash drive can be used to obtain the new image and flash to the Dell Wyse Z90DE7 Thin Client. Honeywell provides update instructions at the time a new image is released.

To flash Honeywell custom image on Dell Wyse Z90DE7 Thin Client

1. Plug the USB flash drive in the USB port of Dell Wyse Z90DE7 Thin Client.
2. Restart the system.
3. While the system restarts, press and hold the **P** key.
4. Select **Flash drive**, and then press **Enter** key.
   A dialog box with the message **Do you want to proceed with PUSH operation** appears.
5. Press **Y** key, and then press **Enter** key.
   The process to flash the Honeywell custom image begins and once the process is completed, the system automatically logs into the User account.

   Attention
   Do not remove the USB flash drive till the system restarts and logs into the User account.

6. On the task bar, click the **I** icon.
   The **About Wyse** window appears.
7. Ensure that the **Version 9.05 (build 0858.15B)** and **Windows Embedded Version 6.01 Build (7601) SP1** appears.
8. Remove the USB flash drive from the USB port of Dell Wyse Z90DE7 Thin Client.

6.5 Setting the monitor color depth

After establishing the remote desktop session, if the monitor color is set to less the 32-bit in the display properties, then you must set the color depth on the host system to 32-bit.

To set the monitor color depth

1 Log on to the host system using Administrator account.

2 Click **Start**.

3 In the **Search** field, type **GPEDIT.MSC**, and then press **Enter**.
The **Local Group Policy Editor** dialog box appears.

4 From the left pane click **Administrative Templates**.
The **Administrative Templates** appears in the right pane.

5 Click **Windows Component** > **Remote Desktop Services** > **Remote Desktop Session Host** > **Remote Session Environment**.
The **Remote Session Environment** screen appears.

6 Double-click **Limit maximum color depth**.
The **Limit maximum color depth** dialog box appears.

7 Click **Enabled** check box.

8 The **Color Depth** list appears in the **Options** field.

9 From the **Color Depth** list, select **32 bit**.

10 Click **Apply** and then click **OK**.

11 Close all the open windows.

12 Restart the host system and reestablish the remote desktop connection.

6.6 Adjusting the monitor

After establishing the remote desktop session, if the screen does not occupy the entire space on the monitor, then you must modify the **Screen refresh rate** on the Dell Wyse Z90DE7 Thin Client.

To set the screen refresh rate

1. Log on to theDell Wyse Z90DE7 Thin Client using Administrator account.
2. Right-click on the desktop, and select **Screen resolution**.
   The **Screen resolution** window appears.
3. Click **Advanced settings**.
   The monitor properties dialog box appears.
4. Click the **Monitor** tab.
5. From the **Screen refresh rate** list, select the maximum refresh rate.
   For example, if the present Screen refresh rate is set to 60 Hertz, then select 75 Hertz.
6. Click **Apply** and then click **OK**.
7. Close all the open windows.

6.7 Special considerations

6.7.1 Considerations for connecting IKB (serial/USB) with Dell Wyse Z90DE7 Thin Client

Attention: Starting in Experion releases R400.7, R410.7, R431.1 and R430, the key switch can be accessed through an RDP connection. The following steps will not be necessary on these and future Experion releases

When the IKB is connected to the Dell Wyse Z90DE7 Thin Client; the IKB Key-Switch options (OPER, SUPR, and ENGR) does not work after establishing a RDP connection with a host system through the Dell Wyse Z90DE7 Thin Client. This is because the Sign on Manager does not support the RDP connection through the Dell Wyse Z90DE7 Thin Client.

Workaround

To change the IKB Key-Switch from OPER security to SUPR or ENGR perform the following:

1. Establish a RDP connection to a host system using Dell Wyse Z90DE7 Thin Client.
2. Ensure Sign on Manager is installed and running on the Flex station and Console station about to be tested.
3. Ensure IKB Keyboard is connected to the USB port of the Dell Wyse Z90DE7 Thin Client.
4. Open station and ensure that IKB stb file is selected in the station connection file.
5. Restart station for IKB-Keyboard to take effect.
6. Open the station application window.
7. At the far right of the taskbar, click **Security Level**.

   The **Station Logon** dialog box appears.
8. In the **Password** field, type the password of the required Key-Switch option (SUPR or ENGR) and then click **OK**.

   This changes the IKB Key-Switch from OPER security to SUPR or ENGR.

6.7.2 Considerations for connecting IKB serial with Dell Wyse Z90DE7 Thin Client

Error indication

When you connect the IKB serial to the Dell Wyse Z90DE7 Thin Client and restart the Dell Wyse Z90DE7 Thin Client. The **Delete** key on the IKB serial keyboard does not work in POST (power on self test). The **Delete** key on the IKB serial is used to log on to the Dell Wyse Z90DE7 Thin Client BIOS.

Workaround

Connect the regular QWERTY keyboard to the Dell Wyse Z90DE7 Thin Client for using the **Delete** key.

7 Notices

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7.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions support website at:

http://www.honeywellprocess.com/support

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

hpsdocs@honeywell.com

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

7.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

https://honeywell.com/pages/vulnerabilityreporting.aspx

Submit the requested information to Honeywell using one of the following methods:

- Send an email to security@honeywell.com.

  or

- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

7.3 Support and other contacts

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC).

North America

Country	Phone	Facsimile	Email
Canada and United States	800-822-7673	973-455-5000	askssc@honeywell.com

Northern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Denmark	07:00 – 18:00	80–252165	+45 6980 2349	hpscustomersupport@honeywell.com
Finland	08:00 – 19:00	0800–9–15938	+358 (0)9 2319 4396	hpscustomersupport@honeywell.com
Ireland	06:00 – 17:00	1800939488	+353 (0)1 686 4905	hpscustomersupport@honeywell.com
Netherlands	07:00 – 18:00	0800 020 3498	+31 (0)20 524 1609	hpscustomersupport@honeywell.com
Norway	07:00 – 18:00	800–11478	47–852–287–16	hpscustomersupport@honeywell.com
Sweden	07:00 – 18:00	0200883167	+46 (0)8 509 097 84	hpscustomersupport@honeywell.com
United Kingdom	06:00 – 17:00	08002797226	+44 (0)20 3031 1064	hpscustomersupport@honeywell.com

Southern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Belgium	07:00 – 18:00	080048580	+32 (0)2 791 96 02	hpscustomersupport@honeywell.com
France	07:00 – 18:00	0805100041	+33 (0)1 72 74 33 44	hpscustomersupport@honeywell.com
Luxembourg	07:00 – 18:00	8002–8524	+352 24611292	hpscustomersupport@honeywell.com
Spain	07:00 – 18:00	800099804	+34 91 791 56 25	hpscustomersupport@honeywell.com
Portugal	06:00 – 17:00	800–8–55994	+34 91 791 56 25	hpscustomersupport@honeywell.com

Eastern Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Bulgaria	08:00 – 19:00	700 20771	+359 (0)2 489 7384	hpscustomersupport@honeywell.com
Croatia	07:00 – 18:00	0800 80 6392	+420 227 204 957	hpscustomersupport@honeywell.com
Czech Republic	07:00 – 18:00	800 142 784	+420 227 204 957	hpscustomersupport@honeywell.com
Hungary	07:00 – 18:00	06 800 20 699	+36 (06) 1 577 7371	hpscustomersupport@honeywell.com
Poland	07:00 – 18:00	00 800 121 50 46	+48 22 485 35 10	hpscustomersupport@honeywell.com
Romania	08:00 – 19:00	0 800 800 178	+40 (0)31 710 7590	hpscustomersupport@honeywell.com
Russia Federation	09:00 – 20:00	8.10.80 02-412 50 11	+7 495 796 98 94	hpscustomersupport@honeywell.com

Country	Local Time Business Hours	Phone	Facsimile	Email
Slovakia	07:00 – 18:00	0800 002 340	+421 (0)2 3301 0376	hpscustomersupport@honeywell.com

Central Europe

Country	Local Time Business Hours	Phone	Facsimile	Email
Austria	07:00 – 18:00	0800 006438	+43 (0)1 253 6722 4904	hpscustomersupport@honeywell.com
Germany	07:00 – 18:00	0800 7239098	+49 (0)30 6908 8463	hpscustomersupport@honeywell.com
Greece	08:00 – 19:00	00800 12 9493	+30 21 1 268 6973	hpscustomersupport@honeywell.com
Israel	08:00 – 19:00	1 809 407 309	+972 (0)2 591 6148	hpscustomersupport@honeywell.com
Italy	07:00 – 18:00	8000 35205	+39 06 96681356	hpscustomersupport@honeywell.com
Switzerland	07:00 – 18:00	00 080 035	+41 (0)31 560 41 60	hpscustomersupport@honeywell.com

Middle East and South Africa

Country	Local Time Business Hours	Phone	Email
Bahrain	08:00 – 19:00	8008 1343	hpscustomersupport@honeywell.com
Oman	08:00 – 19:00	8007 7595	hpscustomersupport@honeywell.com
Qatar	08:00 – 19:00	800 5460	hpscustomersupport@honeywell.com
Saudi Arabia	08:00 – 19:00	800 844 5309	hpscustomersupport@honeywell.com
South Africa	07:00 – 18:00	0800 983 634	hpscustomersupport@honeywell.com
Turkey	08:00 – 19:00	00800 448823587	hpscustomersupport@honeywell.com
United Arab Emirates	09:00 – 20:00	8000 444 0300	hpscustomersupport@honeywell.com

Other regions

In other regions, contact your local Honeywell Technical Assistance Center (TAC) for support.

Region	Phone	Facsimile	Email
Pacific	1300-364-822 (toll free within Australia) +61-8-9362-9559 (outside Australia)	+61-8-9362-9564	GTAC@honeywell.com
India	+91-20-6603-2718 / 19 1800-233-5051	+91-20-6603-9800	Global-TAC-India@honeywell.com
Korea	+82-80-782-2255 (toll free within Korea)	+82-2-792-9015	Global-TAC-Korea@honeywell.com
People's Republic of China	+86-21-2219-6888 800-820-0237 400-820-0386		Global-TAC-China@honeywell.com
Singapore	+65-6823-2215	+65-6445-3033	GTAC-SEA@honeywell.com
Japan		+81-3-6730-7228	Global-TAC-JapanJA25@honeywell.com

World Wide Web

Honeywell Process Solutions support website:

http://www.honeywellprocess.com/support

Elsewhere

Contact your nearest Honeywell office.

7.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see http://www.automationcollege.com.