OptiPlex 7770/7470/5270 Re-imaging guide for Windows

Computer Model: OptiPlex 7760/7460/5260

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury or death

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Contents

Installation overview 5

Introduction 6

Order of reinstallation 7

Updating or Resetting the BIOS 9

Flashing the BIOS 9

Clearing CMOS settings 9

Trusted Platform Module (TPM) security 9

Reinstalling the operating system 11

Reinstalling drivers and Applications 12

Displaying drivers and applications on your computer 12

Reinstallation sequence for drivers and applications 13

1. Intel Chipset Device Software Driver 13

Downloading and installing these chipset drivers 13

2. Intel Rapid Storage Technology Driver and Management Console 14

Downloading and installing the IRST driver 14

Downloading and installing the IRST APPX 15

3. Audio Driver 15

Downloading and installing the Dell audio driver 15

4. PCI-E memory card reader Driver 16

Downloading and installing the PCI-E memory card reader driver 16

5. Intel Management Engine driver 16

Downloading and installing the Intel Management Engine Components Installer 16

Downloading and installing the Intel Manageability and Security Status Application 17

6. IR Camera Driver 17

Downloading and installing IR Camera driver 17

7. Ethernet Network Controller Driver 18

Downloading and installing the LAN driver 18

8. Wireless Local Network (WLAN) drivers and applications 18

Downloading and installing the Wi-Fi/BT driver 18

9. Graphics..... 19

Downloading and installing the Dell graphics driver..... 19

10. Dell On Screen Display Application 19

Downloading and installing the Dell OSD application..... 19

Getting help and contacting Dell..... 20

Self-help resources 20

Contacting Dell..... 21

Installation overview

NOTE: Dell recommends that you download and install the device drivers from the Dell Drivers & Downloads website. Installing device drivers from a non-Dell website can cause system performance issues, corrupt operating system files, blue screen errors, unexpected shutdown, or infect your computer with malicious software.

Device drivers must be updated when you reinstall the operating system using either CD, DVD, USB key, or when you are facing networking, graphics, sound or other hardware-related problems. Dell recommends that you install or update device drivers if you have performed a factory reset of your Dell computer using the Dell Backup and Recovery application or other factory-reset methods. This ensures that you have the latest device drivers installed on your computer and that the devices function optimally.
Installing or updating device drivers may lead to the following improvements:

- Increase system performance
- Patch security risks
- Expand compatibility
- Fix device issues and support new features

However, if your computer is operating normally and there are no driver issues listed in Windows Device Manager and Windows is not suggesting urgent or recommended driver updates, driver updates are unnecessary. Updating drivers unnecessarily may create new problems. Review the importance of each driver update on the Dell driver downloads page before assessing the need to continue with an update.

Introduction

Re-imaging is the process of removing all software on the computer and reinstalling the removed software. Re-imaging is required when software in the computer is corrupted or damaged and can also be used as a means of removing harmful and malicious software in your computer. This re-imaging guide provides the steps required for re-imaging your computer.

CAUTION: This re-imaging guide is designed for system administrators. Do not attempt to re-image the system if you are not an administrator or are unsure of the procedures. Failure to follow instructions may result in permanent data loss.

NOTE: Information provided in this guide is applicable to computers with Windows only.

This guide assists you in installing Dell-recommended software stack and settings, drivers, and applications, which are tested and validated on the Latitude Notebook. The installation of the listed drivers and applications as described in the guide enhances the optimal performance of your computer.
Dell also provides drivers and applications that are not included with the Windows operating system.

It is always recommended to re-image on a newly-installed operating system and not from any previous image-build. Ensure BIOS settings, including SATA configurations and modes, are appropriately set and the latest drivers and applications are used when re-imaging the computer.

Order of reinstallation

NOTE: Some drivers and application installation steps may not be applicable, depending on the configuration of the computer you have ordered.

To achieve optimal performance, install the drivers and applications in the following sequence:

1. BIOS: Allows the operating system to be loaded into the memory and enables the initial startup process on your computer.
2. Windows operating system: The operating system controls the system's hardware to be a base on which other software can operate on.
3. Intel Chipset Device Software Driver: Allows Windows to communicate and adjust settings on components on the system board.
4. Intel Rapid Storage Technology Driver and APPX: Enables and enhances data storage virtualization for the storage drives installed in the computer.
5. Audio Driver: Enables and enhances the audio controller.
6. PCI-E memory card reader Driver: Enables and enhances the PCI-E memory card reader.
7. Intel Management Engine Components Installer and Intel Manageability and Security Status Application: Intel Management Engine driver enable advance manageability features.
8. Graphics:
   – Enhances and optimizes video performance
   – Enables and provides additional functionality not included in the native VGA driver, including:
      * User-customizable power management features
      * Portability and behavioral profiles
      * Multiple-monitor support
9. Security, which includes:
   – Realtek IR camera: Enables and enhances the infrared camera
10. Dell applications, which includes:
    – Dell on Screen Display Application
11. Networking and Communication, which includes:

– Ethernet Network Controller Driver: Enables and enhances the Ethernet functions

– Wireless Local Area Network Adapters (WLAN): Enables and enhances the wireless adapter

– Bluetooth: Enables and enhances the Bluetooth adapter

12. Dell Client Command Suite

NOTE: Dell Client Command Suite is the new name of our industry leading Client Systems Management tools. These tools make Dell commercial client systems the world's most manageable client devices. **Click on a link for more details**

Updating or Resetting the BIOS

Flashing the BIOS

It is recommended to flash BIOS when an update is available or when you replace the system board. To flash the BIOS:

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads → Find it myself**.
5. Select the operating system installed on your computer.
6. Scroll down the page and expand **BIOS**.
7. Click **Download** to download the latest version of the BIOS for your computer.
8. After the download is complete, navigate to the folder where you saved the BIOS update file.
9. Double-click the BIOS update file icon and follow the instructions on the screen.

Clearing CMOS settings

If, flashing your computer with the latest BIOS update results in your computer being unable to boot, a BIOS reset is necessary. Clearing the CMOS settings will reset the BIOS to factory settings. For more information about clearing the CMOS settings, see your computer's *Service Manual*.

Trusted Platform Module (TPM) security

TPM must be enabled in the BIOS setup program for it to be deployed on the computer. Follow these steps to enable and configure the TPM:

1. Turn on or restart your computer.
2. Press F2 when the Dell logo is displayed on the screen to enter the BIOS setup program.

The BIOS setup program is displayed.

3. On the left pane, select **Security → TPM Security → Clear TPM**.
4. Select or clear any of the following options to enable or disable it, respectively:
   – **Enabled (Default)**: The BIOS enables the TPM during POST and it can be accessed by the operating system.

   – **Disabled**: The BIOS will not enable the TPM during POST and it cannot be accessed by the operating system.

   – **TPM on**: The TPM is enabled and activated.

   – **Clear**: The BIOS clears the information stored in the TPM.
5. Save the settings and exit.

Reinstalling the operating system

The 64-bit Windows 10 operating system is validated for use on this computer. You can reset or reinstall the operating system under different scenarios. For more information about reinstalling the operating system, see the knowledge base article SLN297920 at www.dell.com/support.

Before attempting a reinstall of your operating system, Dell recommends that you backup all data as described in the knowledge base article located here.

Reinstalling drivers and Applications

Drivers and applications are software that enables Windows (or another operating system) to communicate with the hardware devices and software in your computer. Devices such as video and sound cards require drivers to function correctly within Windows and require applications to enable users to adjust hardware settings.
The Windows reinstallation includes drivers for most devices, but device-specific drivers may have to be downloaded and installed separately. Dell recommends that you download the device drivers for your Dell computer from Drivers & Downloads.
Applications must be downloaded and installed separately. Dell recommends that you download the required applications for your Dell computer from the Dell Download Center.

Displaying drivers and applications on your computer

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click Drivers & downloads → Find it myself.
5. Select the Windows operating system installed on your computer to get a list of the drivers and applications available on your computer.

Reinstallation sequence for drivers and applications

Driver installation is critical if you have reinstalled the Windows operating system on your Dell computer. Install the drivers in the correct sequence for your computer to function correctly. In some scenarios, you may have to reinstall or update the device driver if you are encountering any issues with a specific device.
For more information, see the Dell knowledge-based article SLN148687 at www.dell.com/support.com.

NOTE: Windows 10 operating system includes the touchpad drivers— no other touchpad driver installation is required.

NOTE: Windows 10 operating system includes the webcam drivers—no additional webcam driver installation is required. For video capture or streaming, users can install webcam software available from third-party providers.

Dell recommends installing drivers or applications in the following sequence.

1. Intel Chipset Device Software Driver

The Windows operating system may not include the updated Intel chipset driver set for Dell computers. These Intel chipset drivers are available on Dell's support site www.dell.com/support.

Downloading and installing these chipset drivers

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**
5. Scroll down the page and select **Chipset** in Category

6. Click **Download** to download software package for your computer.
7. After the download is complete, navigate to the folder where you saved the chipset driver files.
8. Double-click the file icon and follow the instructions on the screen.

2. Intel Rapid Storage Technology Driver and Management Console

The IRST software package enables and enhances high-performance Serial ATA (SATA) and SATA RAID capabilities for supported operating systems. The IRST software package provides an added protection against data loss in the event of a hard drive failure.

NOTE: The following conditions must be met before you can install IRST on your computer.

- Your computer has a RAID I/O controller hub (ICH). If your computer does not have a RAID ICH, you cannot install IRST unless a third-party RAID controller card is installed.
- Your RAID controller is enabled by default.

CAUTION: If a SATA hard drive is already installed, enabling the RAID controller might cause your computer to display a blue screen and an error code followed by a system reboot. To enable RAID, reinstall the operating system.

Downloading and installing the IRST driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**.
5. Scroll down the page and select **Serial ATA** in Category.
6. Click **Download** to download the software package for your computer.

7. After the download is complete, navigate to the folder where you saved the file.
8. Double-click the file icon and follow the instructions on the screen.

Downloading and installing the IRST APPX

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**.
5. Scroll down the page and select **Serial ATA** in Category.
6. Click **Download** to download the IRST APPX for your computer.
7. After the download is complete, navigate to the folder where you saved the file.

3. Audio Driver

The Windows operating system does not include the audio driver recommended by Dell. Install the HD audio driver that is available for download on the Dell support site.

Downloading and installing the Dell audio driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**.
5. Scroll down the page and select **Audio** in Category**.**
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you saved the file.
8. Double-click the audio driver file icon and follow the instructions on the screen.

4. PCI-E memory card reader Driver

The Windows operating system does not include the media-card reader driver. Install the Realtek driver, that is available for download on the Dell support site.

Downloading and installing the PCI-E memory card reader driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**
5. Scroll down the page and select **Chipset** in Category.
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you saved the file.
8. Double-click the card reader driver file icon and follow the instructions on the screen.

5. Intel Management Engine driver

Intel Management Engine driver enable advance manageability features. To obtain manageability functionality, install the relevant Intel ME drivers from the Dell support site.

Downloading and installing the Intel Management Engine Components Installer

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**
5. Scroll down the page and select **Chipset** in Category.

6. Click **Download** to download software package for your computer.
7. After the download is complete, navigate to the folder where you saved the file.
8. Double-click the file icon and follow the instructions on the screen.

Downloading and installing the Intel Manageability and Security Status Application

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**
5. Scroll down the page and select **Chipset** in Category.
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you file.

Double-click the file icon and follow the instructions on the screen

6. IR Camera Driver

IR Camera driver enable all advanced Camera features in your computer. The software package is available on the Dell support site.

Downloading and installing IR Camera driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**.
5. Scroll down the page and select **Input** in Category.
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you saved IR

Camera driver

8. Double-click the file icon and follow the instructions on the screen.

7. Ethernet Network Controller Driver

Ethernet Network Controller driver enable Ethernet features in your computer. The software package is available on the Dell support site.

Downloading and installing the LAN driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.
4. Click **Drivers & downloads**
5. Scroll down the page and select **Network** in Category.
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you saved file.
8. Double-click the file icon and follow the instructions on the screen.

8. Wireless Local Network (WLAN) drivers and applications

Windows operating systems do not provide native device driver support for WLAN controllers on Dell computers. To obtain wireless network functionality, install the relevant WLAN drivers from the Dell support site. WLAN applications, which provide additional features including enterprise authentication enhancements can also be installed from the Dell support site.

Downloading and installing the Wi-Fi/BT driver

1. Turn on the computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

4. Click **Drivers & downloads**.
5. Scroll down the page and select **Network** in Category.
6. Click **Download** to download the Wi-Fi/BT driver for your computer.
7. After the download is complete, navigate to the folder where you saved file.
8. Double-click the file icon and follow the instructions on the screen.

9. Graphics

The Windows operating system includes the VGA graphics driver only. For optimal graphics performance, install the Dell graphics driver applicable to your computer that is available for download on the Dell support site.

Downloading and installing the Dell graphics driver

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click **Submit**.

NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

4. Click **Drivers & downloads**
5. Scroll down the page and select **Video** in Category.
6. Click **Download** to download the software package for your computer.
7. After the download is complete, navigate to the folder where you saved the file.
8. Double-click the file icon and follow the instructions on the screen.

10. Dell on Screen Display Application

This package provides the application for the Dell OSD. The software package is available on the Dell support site.

Downloading and installing the Dell OSD application

1. Turn on your computer.
2. Go to www.dell.com/support.
3. Click **Product support**, enter the Service Tag of your computer, and then click

Submit.

NOTE: If you do not have the Service Tag, use the auto-detect feature or manually browse for your computer model.

4. Click **Drivers & downloads**
5. Scroll down the page and select **Application** in Category.
6. Click **Download** to download the application for your computer.
7. After the download is complete, navigate to the folder where you file.
8. Double-click the file icon and follow the instructions on the screen.

.NET Framework

The .NET Framework is a software framework, which is bundled with Windows operating systems. The .NET Framework is intended to be used by most applications created for the Windows platform.

Getting help and contacting Dell

Self-help resources

You can get information and help on Dell products and services using these self-help resources:

Table 1. Self-help resources

Information about Dell products and services	www.dell.com
Dell Help & Support app	
Tips	
Contact Support	In Windows search, type Help and Support, and press Enter.
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux

Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on. www.dell.com/support

Dell knowledge base articles for a variety of computer concerns

1. Go to www.dell.com/support. .
2. Type the subject or keyword in the **Search** box.
3. Click **Search** to retrieve the related articles.

Learn and know the following information about your product:

- Product specifications
- Operating system

See *Me and My Dell* at www.dell.com/support/manuals.

- Setting up and using your product
- Data backup
- Troubleshooting and diagnostics
- Factory and system restore
- BIOS information

To locate the *Me and My Dell* relevant to your product identifies your product through one of the following:

- Select **Detect Product**.
- Locate your product through the drop-down menu under **View Products.**
- Enter the **Service Tag number** or **Product ID** in the search bar.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

NOTE: Availability varies by country and product, and some services may not be available in your country.

NOTE: If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.