



Procedure for Upgrading ML910™ RUGGED NOTEBOOK Firmware and Software from R1.0 to R1.1

Purpose and Requirements

This procedure provides step-by-step instructions for a qualified computer technician or administrator to upgrade the firmware and software components of the Motorola ML910™ RUGGED NOTEBOOK COMPUTER (ML910), in order to support customers wishing to change the Operating System (OS) from Microsoft® Windows® XP Professional (XP Pro) to Windows® Vista™ Business edition (Vista). Note that R1.1 specifically supports the Business edition; other versions of Vista have not been certified for use on the ML910. **The BIOS (Basic Input/Output System) upgrade procedures below are to be performed prior to upgrading or installing the new operating system.**

Note

This procedure does not cover the installation of the Operating System, which follows the standard procedure from Microsoft for the Windows Vista Business edition you must license, plus the addition of device drivers for the ML910 notebook that are approved for Vista. These drivers are included with R1.1 ML910 notebooks on the Drivers and Manual DVD or can be ordered from Motorola (part number HKVN4005B).

The Release 1.0 notebook was certified to support XP Pro and shipped with a Certificate of Authenticity (COA, or license) for that OS only. Release 1.1 adds important enhancements to also support Vista. Thus, this upgrade may be done prior to the migration to Vista and the ML910 notebook will continue to support XP Pro.¹

The Release 1.1 notebook supports both Vista and XP Pro, so customers that order the "Downgrade-to-XP Pro" option can migrate to Vista later without performing *this* upgrade procedure. Release 1.1 notebooks include the Microsoft Vista COA and the Vista recovery discs, which will enable migration to Vista without requiring additional licenses or upgrades. As well, since the Vista COA was provided by Motorola, activation of Vista will be automatic.

Warning

The Vista recovery discs supplied with R1.1 notebooks can not be used to upgrade R1.0 units since they do not include a Vista COA.

The required ML910 firmware and application software files are available for download from Motorola at www.Motorola.com/ML910. This upgrade package does not include the Windows Vista Business OS. Motorola does not offer Microsoft upgrades and R1.0 customers must procure this from other sources. For R1.0 notebooks, part of the upgrade to Vista will require on-line or by-telephone license activation through Microsoft.

¹ This upgrade is not necessary if you plan to continue to run XP Pro. If you do upgrade to R1.1 then you will also need to update the XP Pro drivers from the R1.1 ML910 Driver DVD to continue to run XP Pro.

What You Will Need

CD or DVD Burner In addition to the Motorola firmware and software files, a CD or DVD burner is required to create a bootable disc needed to update the System BIOS and EC (Embedded Controller) BIOS. The ML910 you plan to upgrade may already include an optional drive in its media bay; either the Combo (CD RW / DVD) or the Dual (CD RW / DVD RW) drive can burn CDs. Only the Dual drive can burn DVDs. External media burners may be used as well.

CD/DVD Burning Application The R1.0 ML910 notebook initially was shipped with a copy of Nero 7 Essentials, which was later updated to Nero 8 Essentials. Either version can be used to create the bootable disc for the downloaded ISO² file. This procedure assumes Nero 8 Essentials will be used, but Nero 7 operation is similar, and most CD/DVD burning software can write ISO files to disc.

CD or DVD Media A blank CD-R or CD-RW disc to become the bootable disc. The following DVD formats are compatible with the Dual drive: DVD±R, DVD±RW and DVD±R DL.

CD Reader If the ML910 notebook does not already have its own Combo or Dual drive installed, you can either temporarily install one in its media bay or use an external drive connected through one of the notebook's USB³ ports.

High-Speed Internet Access Since the upgrade package is very large (over 50MB) we recommend it be downloaded over a high-speed network.

Experience in Performing Upgrade Procedures These instructions are written with the understanding that the person performing the upgrade is already familiar with the terms and similar computer support procedures, and is able to adapt to variations that may be encountered, due to customer-applied configurations, policies, etc.

Caution

It is critically important that the System BIOS and EC BIOS procedures be performed with the utmost care. Among other precautions, make sure the ML910 is securely plugged into a reliable AC power source. If this FLASH procedure should be interrupted and fail, there is no "undo" or recovery procedure. The ML910 would need to be returned to Motorola's Service Depot for repair.

Support If you are unsure of any step in this procedure or otherwise need Motorola support, please call the Motorola System Support Center (SSC) at **1-800 221-7144**. You may key in **2, 2** and **1** to bypass the greeting and be directed to the ML910 support team.

² ISO (International Organization for Standardization) refers to a standardized file format (.iso) used for optical discs.

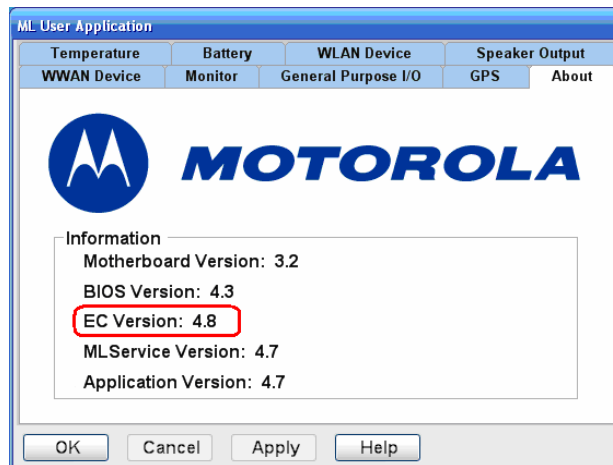
³ USB (Universal Serial Bus) refers to the standard serial interface receptacles found on most newer computers. The ML910 notebook includes three USB ports.

Step-by-Step Procedure

Important Before you begin this procedure confirm that the current version of EC BIOS running on the ML910 notebook is 4.8 or later. If it is version 4.7 or earlier, you will need to upgrade the EC BIOS to version 4.8 prior to upgrading your ML910 to R1.1. Please contact the SSC to obtain EC BIOS version 4.8. **You can not upgrade directly from version 4.7 (or prior) to version 5.1 (or later), you must first upgrade to version 4.8.**

To determine the EC BIOS version:

- Double click on the **ML User Application** icon in the System Tray.
- Check the **EC version** where highlighted below.



If you intend to use the Nero 8 Essentials application, install it if it has not already been installed. You may select a "Typical" installation, which is sufficient for this procedure.

Caution

As a standard practice when performing procedures like this, it is recommended that critical user data be backed up in the event an error or problem occurs.

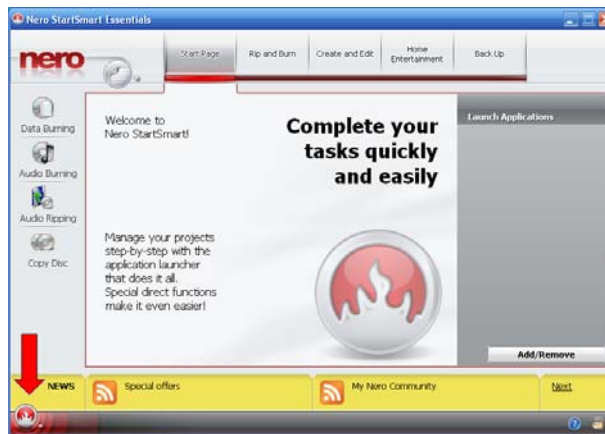
Perform Procedures I, II and III (if required) in order.

I. System BIOS and EC BIOS Upgrade Procedure

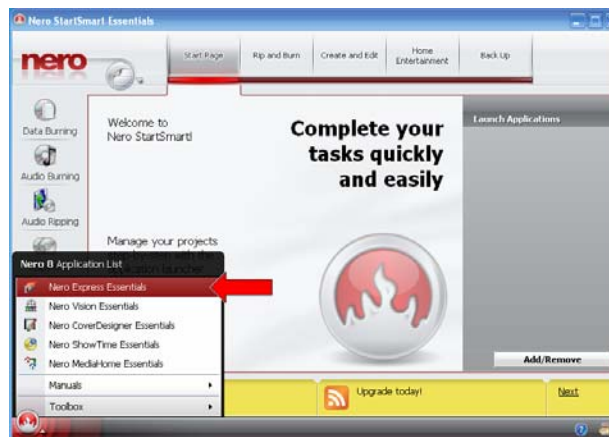
1. Download the **ML910™ Rugged Notebook R1.0 to R1.1 Upgrade Package** from www.Motorola.com/ML910 and extract the files to a folder on the desktop. The bootable ISO image is **ML910R11.iso**. This image contains:
 - a. System BIOS 5.1 (or later)
 - b. EC BIOS 5.1 (or later)
 - c. ML User Application 5.2 (or later)

The files in the extracted **MLAA** folder will be used later in Procedure III.

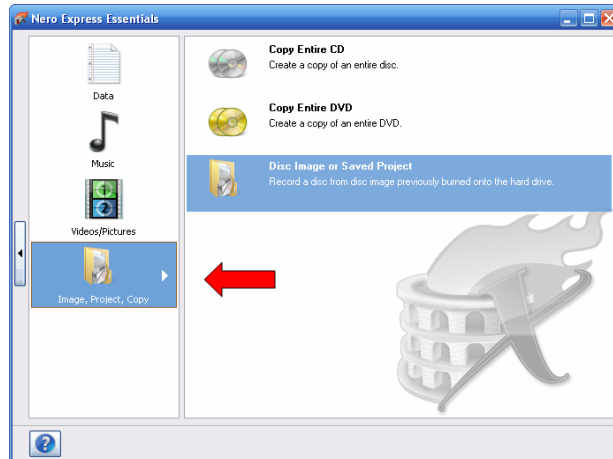
2. Launch Nero 8 StartSmart Essentials from the Windows Programs menu or shortcut on the desktop.
3. Click on the icon in the lower left corner of the window as highlighted below, to launch the Nero Application List.



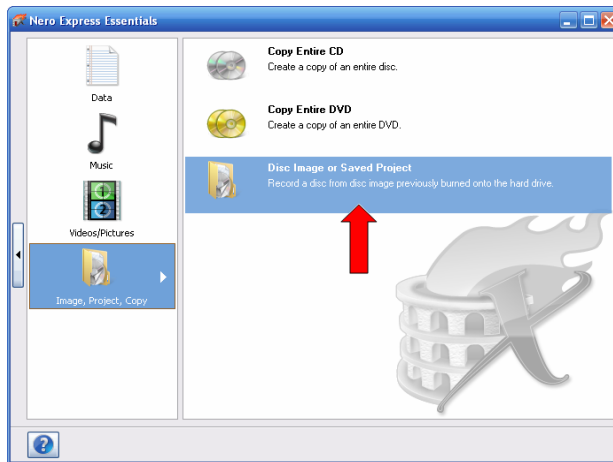
4. Launch Nero Express Essentials from the Application List.



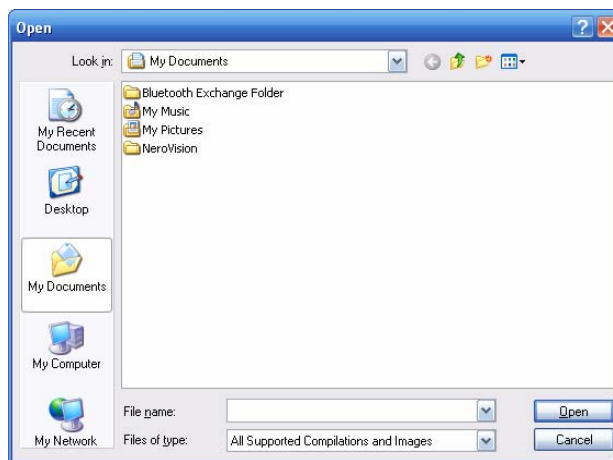
5. Click on “Image, Project, Copy”.



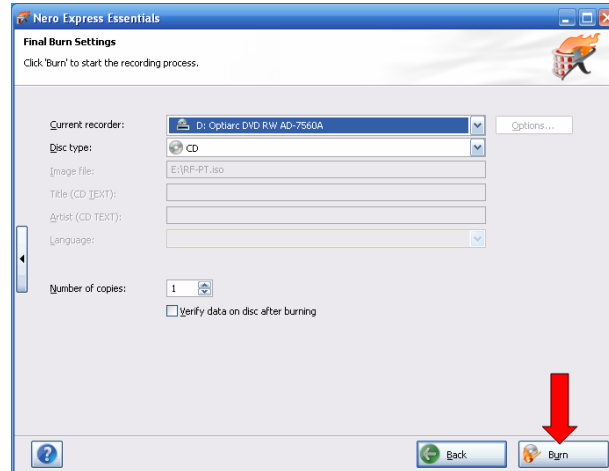
6. Click on “Disc Image or Saved Project”.



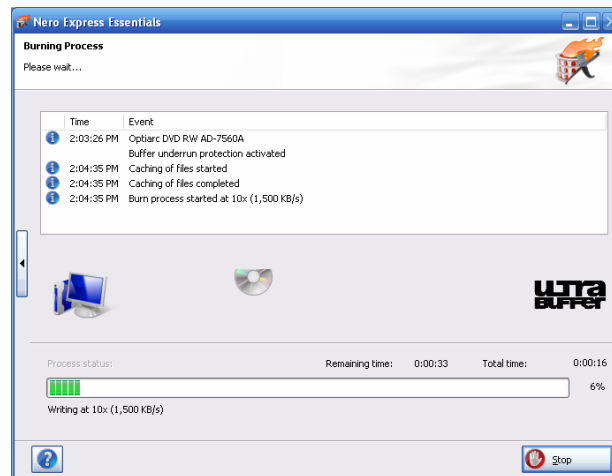
7. Browse to the folder where the downloaded ISO bootable file is located and select it.



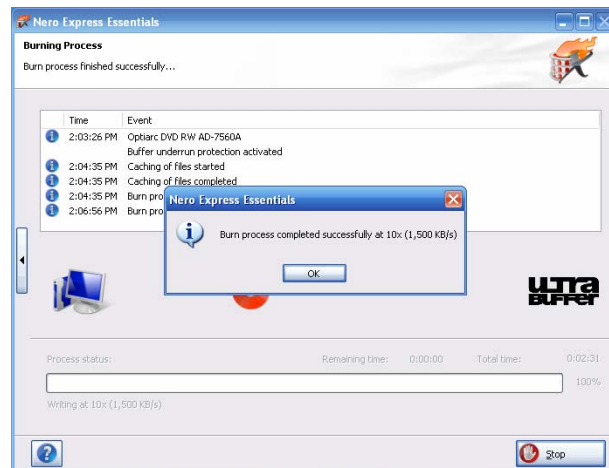
8. Insert a blank CD/DVD disc into the drive and click the **Burn** button to create the bootable media.



9. Burning process and status are displayed.



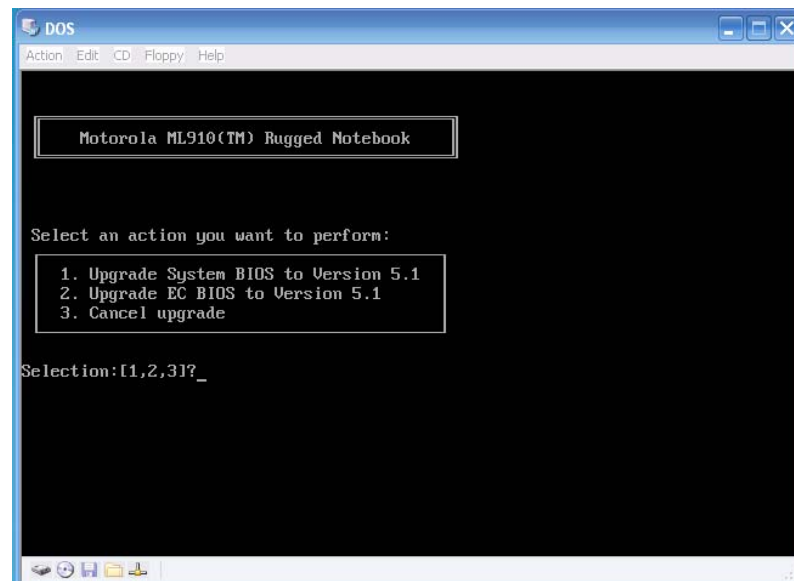
10. Burn process completed successfully message should display. The bootable disc is now ready to begin the upgrade.



11. In order for your notebook to boot from this disc, the Boot Device Priority Sequence must be set in the System BIOS to place the optical drive you intend to use at a higher priority than any other available drive, usually the standard Hard Disk Drive. Please refer to the ML910™ Rugged Notebook User Guide (6871008P31), Chapter 5, for complete instructions on how to access and use the BIOS Setup Utility, to check and change the Boot Device Priority if necessary.
12. **Confirm that your EC BIOS version is 4.8 or later**, then reboot your notebook using the bootable disc that you just created.

Caution

It is critically important that the System BIOS and EC BIOS procedures be performed with the utmost care. Among other precautions, make sure the ML910 is securely plugged into a reliable AC power source. If this FLASH procedure should be interrupted and fail, there is no “undo” or recovery procedure. The ML910 would need to be returned to Motorola’s Service Depot for repair.



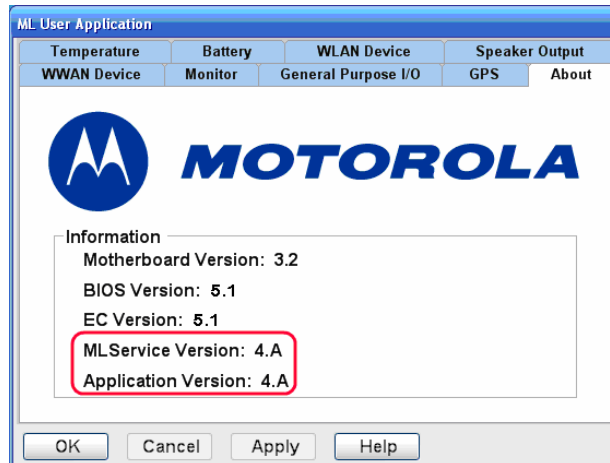
13. Choose option “2” and then choose “Y” (Yes) to upgrade the EC BIOS to version 5.1 (or later).
14. **After the EC BIOS update is completed**, the system will restart automatically using the bootable disc.
15. Choose option “1” and then chose “Y” (Yes) to upgrade the System BIOS to version 5.1 (or later).
16. **After the System BIOS update is completed**, eject and remove the bootable disc and restart the system, allowing it to boot-up in the Windows mode.

Note

At this point, if you plan to do a “clean install” of Windows Vista, you should do that now before proceeding to the next step since this would otherwise delete the ML Application upgrades you will install next.

II. ML User Application Upgrade Procedure

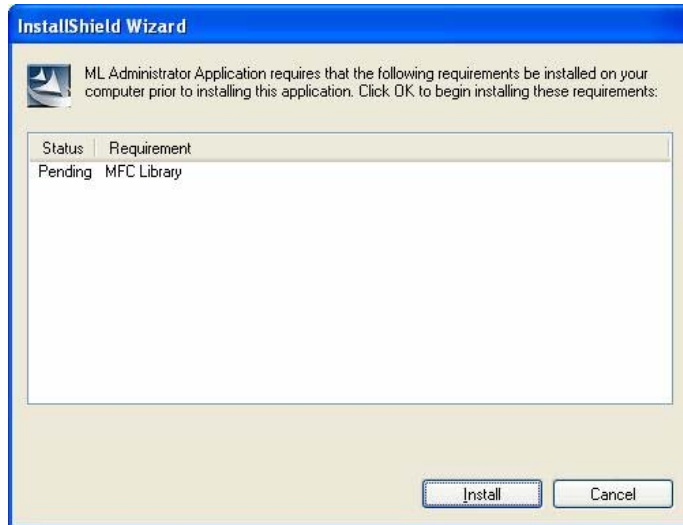
1. Confirm the version number of an existing ML910 **ML User Applications** (MLUA). The **ML User Application** and **MLService** would have been deleted by a clean installation of Windows Vista. If so, skip to Step 4 below.
 - a. Double click on the **ML User Application** icon in the System Tray
 - b. Check the version as highlighted below.



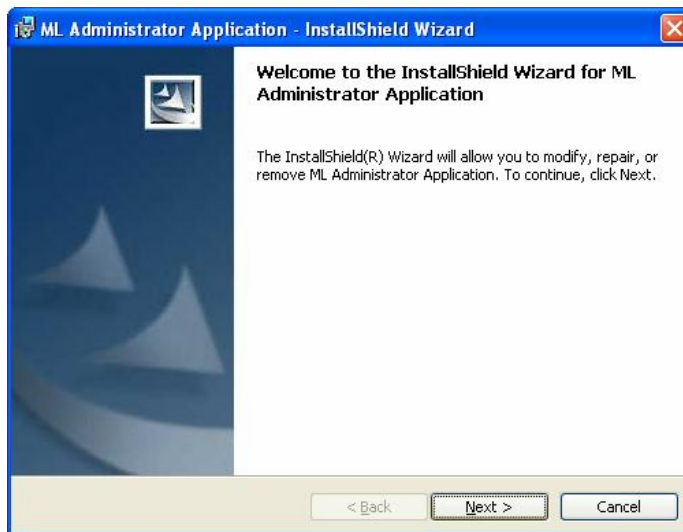
An upgrade to ML910 R1.1 requires version 5.2 or later.

2. Uninstall the existing version of these ML Applications.
 - a. Click **Start > Control Panel > Add or Remove Programs**.
 - b. Select **ML User Application** and click **Remove** to uninstall.
 - c. If **ML Administrator Application** is installed, select it and click **Remove** to uninstall.
 - d. Select **MLService** and click **Remove** to uninstall.
3. Restart the system in Windows mode.
4. Insert the upgrade disc and locate the ML Applications upgrade package in the **ML APPLICATION\MLUA** folder.
5. In the **MLUA** folder double-click on **MLUASETUP.EXE**.

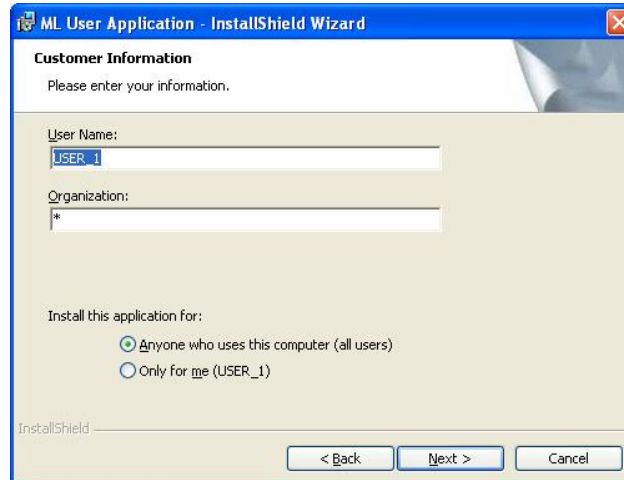
6. Click the **Install** button to continue.



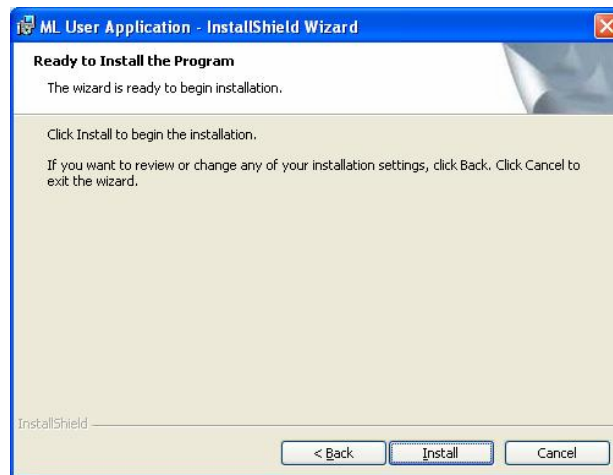
7. Click **Next >** to continue.



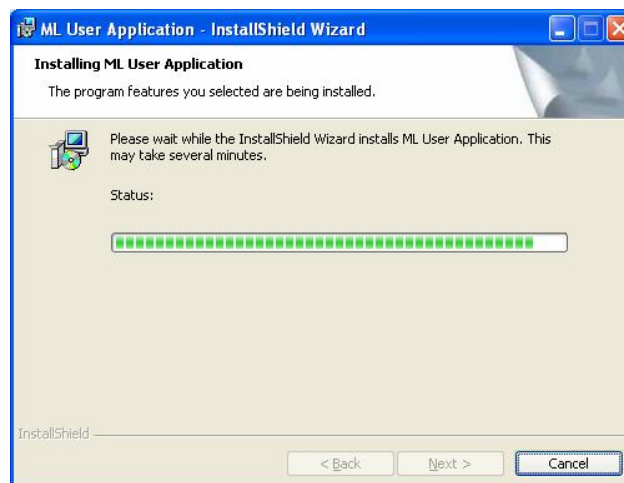
8. Key in the User Name and select the appropriate options, then click **Next >** to continue.



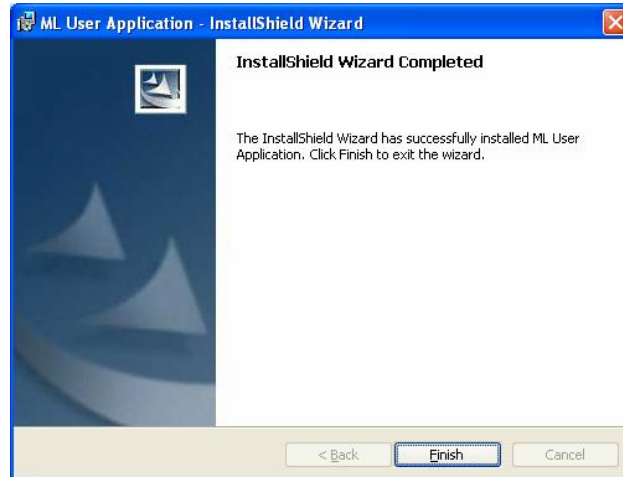
9. Click **Install** to continue.



10. Wait while the **ML User Application** is being installed.



11. Click on the **Finish** button after the **ML User Application** has successfully installed.



12. If you do not intend to install the **ML Administrator Application** the upgrade is complete, otherwise proceed to the next section (III. ML Administrator Application Upgrade Procedure).
13. Restart the system in BIOS Setup mode if you wish to reset the Boot Device Priority Sequence. Also, restore any security or policy configurations that may have been disabled in order to perform this upgrade.

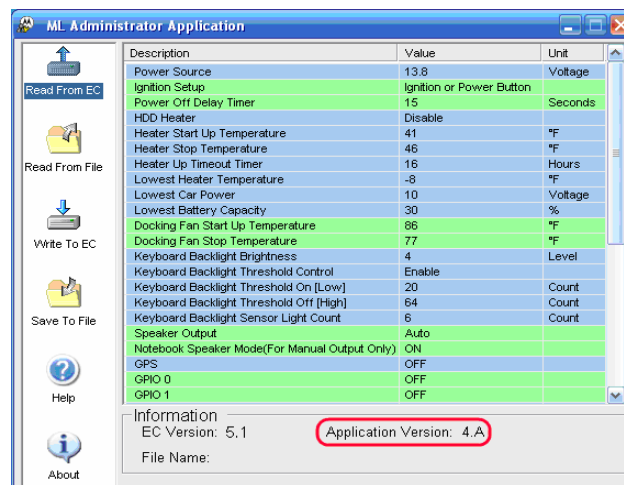
III. ML Administrator Application Upgrade Procedure (Optional)

ML Administrator Application (MLAA) is intended for use by System Administrator (SA) personnel to configure the parameters of various functions in the notebook, like the default configuration that automatically loads when the ML910 notebook is turned on. As such, this application is normally installed only when needed by System Administrators and then removed.

You may install MLAA on only the systems you wish to use or include these controls.

Note: This procedure assumes that the **ML User Application (MLUA)** version 5.2 is already installed on the target system.

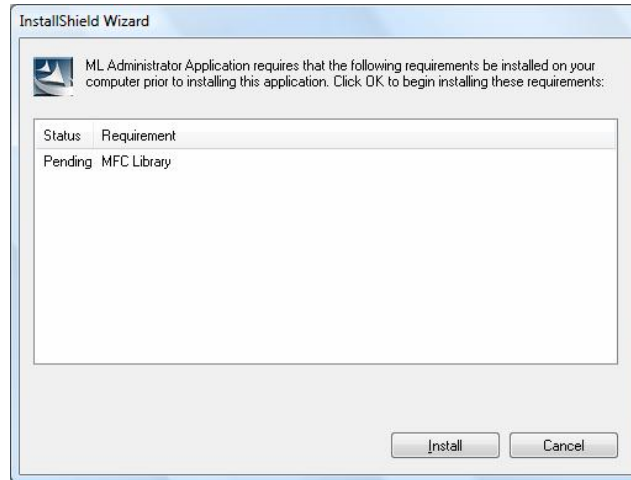
1. If the **ML Administrator Application** was present on notebook being upgraded, it would have been uninstalled in the previous procedure, Step 2.c, or deleted by a clean installation of Windows Vista. If so, skip to Step 3 below.
 - a. Double click on **ML Administrator Application** icon on the Desktop.
 - b. Check the version where highlighted below.



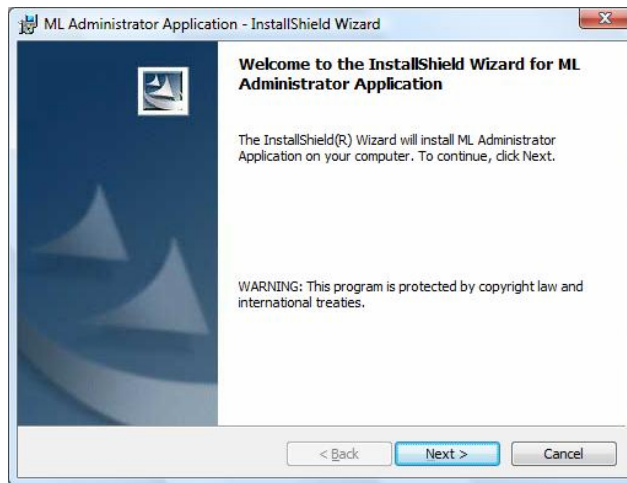
An upgrade to ML910 R1.1 requires version 5.2 or later.

2. Uninstall the existing version of the ML Administrator Application
 - a. Click **Start > Control Panel > Add or Remove Programs**.
 - b. Select **ML Administrator Application** and click **Remove** to uninstall.
3. Open the folder on the desktop where the extracted files from the upgrade package were saved. Locate and open the **MLAA** folder. You may choose to copy these on to a USB FLASH drive if you wish to install MLAA selectively on different notebooks. The two files need to be kept in the same directory/folder, and are:
 - a. **MLAASetup.exe**
 - b. **vcredist_x86.exe**
4. Double-click on **MLAASetup.exe**.

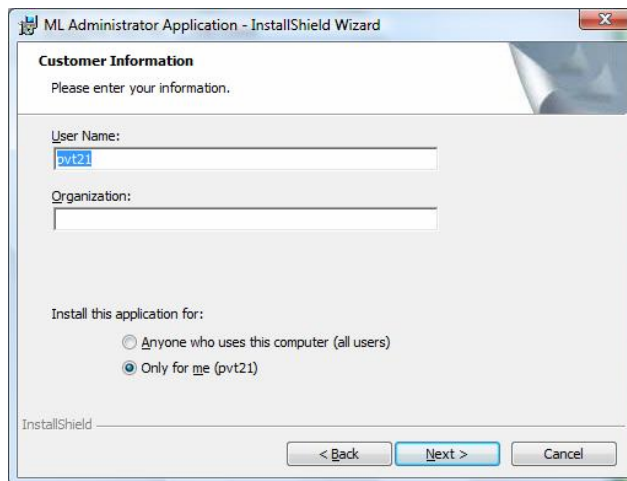
5. Click the **I**nstall button to continue.



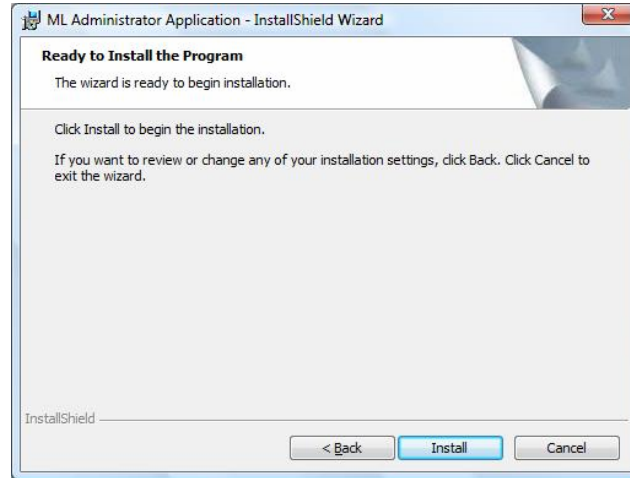
6. Click **N**ext > to continue.



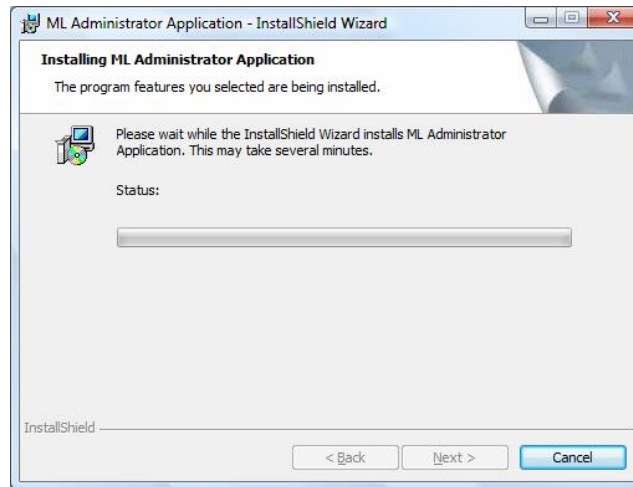
7. Key in the User Name and select the appropriate options, then click **N**ext > to continue.



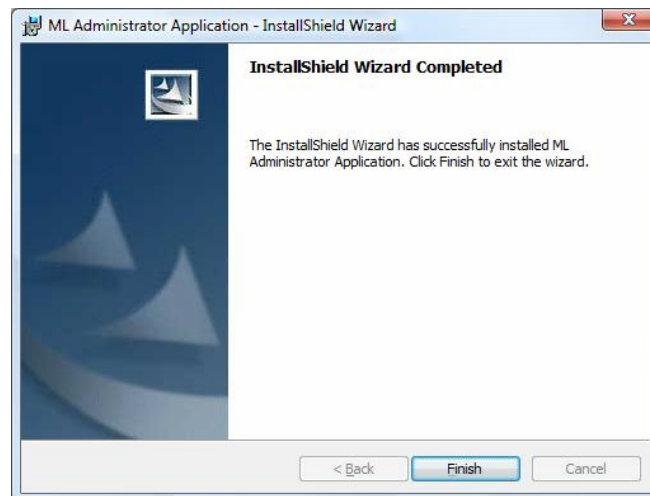
8. Click **I**nstall to continue



9. Please wait while **ML Administrator Application** is being installed.



10. Click on the **F**inish button when **ML Administrator Application** is successfully installed.



11. The upgrade procedure is complete. Restart the system in BIOS Setup mode if you wish to reset the Boot Device Priority Sequence. Also, restore any security or policy configurations that may have been disabled in order to perform this upgrade.