

Instructions



MTS4UP UPG, GBE, CF, EP, QB2, or VS MTS400 Series Upgrade Kits

075-0912-01

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

www.tektronix.com



075091201

Copyright © Tektronix. All rights reserved. Licensed software products are owned by Tektronix or its subsidiaries or suppliers, and are protected by national copyright laws and international treaty provisions.

Tektronix products are covered by U.S. and foreign patents, issued and pending. Information in this publication supercedes that in all previously published material. Specifications and price change privileges reserved.

TEKTRONIX and TEK are registered trademarks of Tektronix, Inc.

Contacting Tektronix

Tektronix, Inc.
14200 SW Karl Braun Drive
P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, service, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

Table of Contents

General Safety Summary	iii
Service Safety Summary	v
Kit Description	1
Upgrade Kits Covered by These Instructions	1
Products	2
Minimum Tool and Equipment List	2
Kit Parts Lists	3
Upgrade Instructions	7
Option UPG Software Upgrade Instructions	7
Verify Operation	12
Upgrading Hardware	12
MTS4UP GBE Upgrade Instructions	14
MTS4UP CF, EP, QB2, or VS Upgrade Instructions	15
Replace the Cabinet	18
Restore the Operating System	19
Software Upgrade Instructions	26
Verify Operation	32
Software Key Upgrade Instructions	32
Verify Operation	32

General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

To avoid potential hazards, use this product only as specified.

Only qualified personnel should perform service procedures.

To Avoid Fire or Personal Injury

Use Proper Power Cord. Use only the power cord specified for this product and certified for the country of use.

Ground the Product. This product is grounded through the grounding conductor of the power cord. To avoid electric shock, the grounding conductor must be connected to earth ground. Before making connections to the input or output terminals of the product, ensure that the product is properly grounded.

Ground Equipment connected to the Product. Ensure that any equipment connected to this product is grounded and at the same potential.

Observe All Terminal Ratings. To avoid fire or shock hazard, observe all ratings and markings on the product. Consult the product manual for further ratings information before making connections to the product.

Power Disconnect. The power cord disconnects the product from the power source. Do not block the power cord; it must remain accessible to the user at all times.

Do Not Operate Without Covers. Do not operate this product with covers or panels removed.

Use Proper Fuse. Use only the fuse type and rating specified for this product.

Avoid Exposed Circuitry. Do not touch exposed connections and components when power is present.

Do Not Operate With Suspected Failures. If you suspect there is damage to this product, have it inspected by qualified service personnel.

Do Not Operate in Wet/Damp Conditions.

Do Not Operate in an Explosive Atmosphere.

Keep Product Surfaces Clean and Dry.

Provide Proper Ventilation. Refer to the manual's installation instructions for details on installing the product so it has proper ventilation.

Terms in this Manual

These terms may appear in this manual:



WARNING. *Warning statements identify conditions or practices that could result in injury or loss of life.*



CAUTION. *Caution statements identify conditions or practices that could result in damage to this product or other property.*

Symbols and Terms on the Product

These terms may appear on the product:

- DANGER indicates an injury hazard immediately accessible as you read the marking.
- WARNING indicates an injury hazard not immediately accessible as you read the marking.
- CAUTION indicates a hazard to property including the product.

The following symbols may appear on the product:



Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary*, and the *General Safety Summary* located in the *RSA6100A Service* manual (Tektronix part number 071-1914-xx) before performing any service procedures.

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Kit Description

This document provides instructions for performing hardware and/or software and option key upgrades on the following Tektronix products:

- MTS400 Series MPEG Test System
- MTS4SA MPEG Test System

Upgrade Kits Covered by These Instructions

- **MTS4UP UPG** - This kit provides a software upgrade for your MTS4xx. This upgrade is included with all of the hardware updates, or may be ordered separately.

As the user of an MTS400 Series MPEG Test System you will be familiar with the software key (or dongle) that must be attached to your unit before you can open any of the MTS applications. Two styles of software key are available, each performs the same function: parallel port or (MTS4SA only) USB. The option key string supplied with this upgrade kit is generated using the serial number of the software key and the list of options to be licensed.

NOTE. Only the software applications already installed on your MPEG test system will be available after the upgrade. If additional applications are required, contact your Tektronix representative.

- **MTS4UP GBE** - This kit adds a Gigabit Ethernet interface and IP Analysis software to your MTS400 or MTS430 (SFP required). This kit may be combined with any of the following hardware upgrade kits.

There are also four optical length input options available with option GbE:

- **MTS4UP LX** - Adds a 1000Base-LX wavelength optical port with LC connector (single mode 1310 nm)
- **MTS4UP SX** - Adds a 1000Base-SX short wavelength optical port with LC connector (multimode 850 nm).
- **MTS4UP ZX** - Adds a 1000Base-ZX wavelength optical port with LC connector (multimode 1550 nm).
- **MTS4UP CU** - adds a 1000Base-T electrical port with RJ45 connector.

- **MTS4UP CF** - This kit adds a COFDM DVB-T interface to your MTS400 Series instrument. This kit may only be combined with the MTS4UP GBE kit.
- **MTS4UP EP** - This kit adds a QPSK/8PSK interface to your MTS400 Series instrument. This kit may only be combined with the MTS4UP GBE kit.
- **MTS4UP QB2** - This kit adds a QAM B interface to your MTS400 Series instrument. This kit may only be combined with the MTS4UP GBE kit.
- **MTS4UP VS** - This kit adds an 8VSB interface to your MTS400 Series instrument. This kit may only be combined with the MTS4UP GBE kit.

Products

These kits apply to the MTS400 and MTS430 MPEG Test Systems. The MTS4UP UPG software upgrade can also be used with an MTS4SA installation.

Minimum Tool and Equipment List

No tools are required to perform the software upgrade. The hardware upgrades will require:

Required tools and equipment	Part number
Anti-static wrist strap	Standard equipment
Screwdriver handle with T-15 TORX tip	Standard equipment

Kit Parts Lists

MTS4UP UPG The MTS4UP UPG software upgrade kit contains these parts:

Quantity	Part number	Description
1 Each	020-2654-xx	DOCUMENTATION KIT; ENGLISH GETTING STARTED MANUAL W/DOCUMENTATION CD-ROM; MTS400 SERIES
1 Each	063-3814-xx	SOFTWARE PKG; APPLICATION INSTALL CD-ROM; MTS400 SERIES
1 Each	NS	IMPORTANT DOCUMENTS ENVELOPE, WITH PRODUCT OPTION KEY
1 Each	071-1507-xx	MANUAL, TECH; USER, VOLUME 1 AND 2; MTS400 SERIES
1 Each	071-1726-xx	MANUAL, TECH; RELEASE NOTES; MTS400 SERIES
1 Each	075-0912-01	KIT INSTRUCTION; MTS4UP UPG, GBE, CF, EP, QB2, or VS

NS - Not Saleable

MTS4UP GBE The MTS4UP GBE upgrade kit contains all the parts listed for the MTS4UP UPG software upgrade kit, and these additional parts:

Quantity	Part number	Description
1 Each	672-6300-xx	ASSEMBLY, CHEETAH II SPE-0028-03-002 AND OPTICAL EAGLE BOARD; PMC-0005-03-001, SAFETY CONTROLLED
1 Each	063-3971-xx	SOFTWARE PKG; MICROSOFT WINDOWS XP PROFESSIONAL, W/SP2B RECOVERY MEDIA AND NERO BURNING SOFTWARE, VER 1.4; MTS400 SERIES
2 Each	211-0722-00	SCREW, CAP; 6-32 X 0.75, HEX SKT, SST

MTS4UP CF The MTS4UP CF upgrade kit contains all the parts listed for the MTS4UP UPG software upgrade kit, and these additional parts:

Quantity	Part number	Description
1 Each	672-1780-xx	TESTED SET, BASE BAND AND COFDM; SAFETY CONTROLLED
1 Each	174-5336-xx	CABLE ASSEMBLY;5-PIN;RS232 INTERFACE BETWEEN SBC AND RF CARD; 12.5 INCH L +/- .500; SAFETY CONTROLLED
1 Each	174-5135-xx	CABLE ASSY;RF , BNC TO BNC;75 OHM
1 Each	015-0688-xx	ADAPTER, RF; BNC JACK TO F PLUG
1 Each	063-3971-xx	SOFTWARE PKG; MICROSOFT WINDOWS XP PROFESSIONAL,W/SP2B RECOVERY MEDIA AND NERO BURNING SOFTWARE, VER 1.4;MTS400 SERIES
2 Each	211-0722-00	SCREW,CAP; 6-32 X 0.75,HEX SKT,SST

MTS4UP EP The MTS4UP EP upgrade kit contains all the parts listed for the MTS4UP UPG software upgrade kit and these additional parts:

Quantity	Part number	Description
1 Each	672-1781-xx	TESTED SET, BASE BAND AND 8PSK; SAFETY CONTROLLED
1 Each	174-5336-xx	CABLE ASSEMBLY;5-PIN;RS232 INTERFACE BETWEEN SBC AND RF CARD; 12.5 INCH L +/- .500; SAFETY CONTROLLED
1 Each	174-5135-xx	CABLE ASSY;RF , BNC TO BNC;75 OHM
1 Each	063-3971-xx	SOFTWARE PKG; MICROSOFT WINDOWS XP PROFESSIONAL,W/SP2B RECOVERY MEDIA AND NERO BURNING SOFTWARE, VER 1.4;MTS400 SERIES
2 Each	211-0722-00	SCREW,CAP; 6-32 X 0.75,HEX SKT,SST

MTS4UP QB2 The MTS4UP QB2 upgrade kit contains all the parts listed for the MTS4UP UPG software upgrade kit and these additional parts:

Quantity	Part number	Description
1 Each	672-1782-xx	TESTED SET, BASE BAND AND QB2; SAFETY CONTROLLED
1 Each	174-5336-xx	CABLE ASSEMBLY;5-PIN;RS232 INTERFACE BETWEEN SBC AND RF CARD; 12.5 INCH L +/- .500; SAFETY CONTROLLED
1 Each	174-5135-xx	CABLE ASSY;RF , BNC TO BNC;75 OHM
1 Each	063-3971-xx	SOFTWARE PKG; MICROSOFT WINDOWS XP PROFESSIONAL,W/SP2B RECOVERY MEDIA AND NERO BURNING SOFTWARE, VER 1.4;MTS400 SERIES
2 Each	211-0722-00	SCREW,CAP; 6-32 X 0.75,HEX SKT,SST

MTS4UP VS The MTS4UP VS upgrade kit contains all the parts listed for the MTS4UP UPG software upgrade kit, and these additional parts:

Quantity	Part number	Description
1 Each	672-1783-xx	TESTED SET, BASE BAND AND 8VSB; SAFETY CONTROLLED
1 Each	174-5336-xx	CABLE ASSEMBLY;5-PIN;RS232 INTERFACE BETWEEN SBC AND RF CARD; 12.5 INCH L +/- .500; SAFETY CONTROLLED
1 Each	174-5135-xx	CABLE ASSY;RF , BNC TO BNC;75 OHM
1 Each	015-0688-xx	ADAPTER, RF; BNC JACK TO F PLUG
1 Each	063-3971-xx	SOFTWARE PKG; MICROSOFT WINDOWS XP PROFESSIONAL,W/SP2B RECOVERY MEDIA AND NERO BURNING SOFTWARE, VER 1.4;MTS400 SERIES
2 Each	211-0722-00	SCREW,CAP; 6-32 X 0.75,HEX SKT,SST

Upgrade Instructions

These instructions are for personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual. Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation assistance.



CAUTION. *To prevent static discharge damage, service the product only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist strap, grounded foot strap, and static resistant apparel while installing this kit.*

If you are installing an MTS4UP UPG software upgrade *only*, follow the procedure below. If you are installing any of the hardware options, go to Upgrading Hardware on page 12.

Option UPG Software Upgrade Instructions

Perform the following steps to upgrade the MTS400 Series software and software key:

1. Ensure that the instrument or PC to be upgraded is switched on and has completed the start-up process.
2. Ensure that the software key (dongle) is attached to your instrument.
3. Insert the *MTS400 Series Application Install CD-ROM* supplied with this kit into the CD-ROM drive of the instrument or PC to be upgraded. The CD-ROM will autostart and display the Welcome screen shown in Figure 1.

NOTE. *If the CD-ROM fails to autostart, use Windows Explorer to locate and run the following file on the CD-ROM: start.exe.*

4. Click **Next** to initiate the upgrade process (see Figure 1).

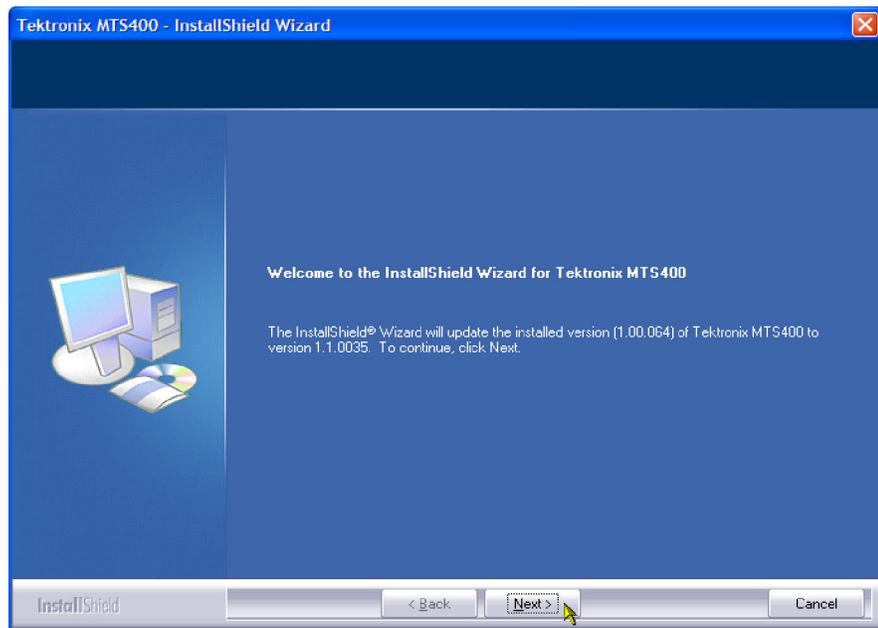


Figure 1: InstallShield Wizard welcome screen

5. Allow the installation process to proceed. The average installation time is approximately five minutes.

NOTE. A number of dialog boxes are displayed during the installation process. Normally, no user intervention is required.

6. When the upgrade installation is complete, the Update Complete screen is displayed as shown in Figure 2.

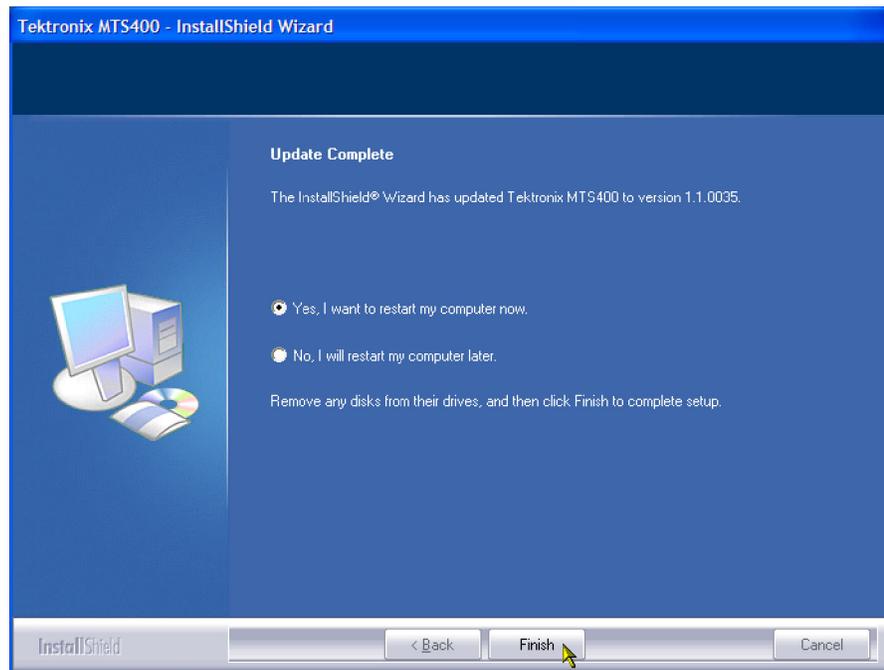


Figure 2: InstallShield Wizard update complete screen

7. Select the **Yes, I want to restart my computer now** option, and then click **Finish**. The instrument or PC will shut down and then restart.
8. When the unit has completed the start-up process, the Tektronix Option Update wizard will start automatically (see Figure 3).

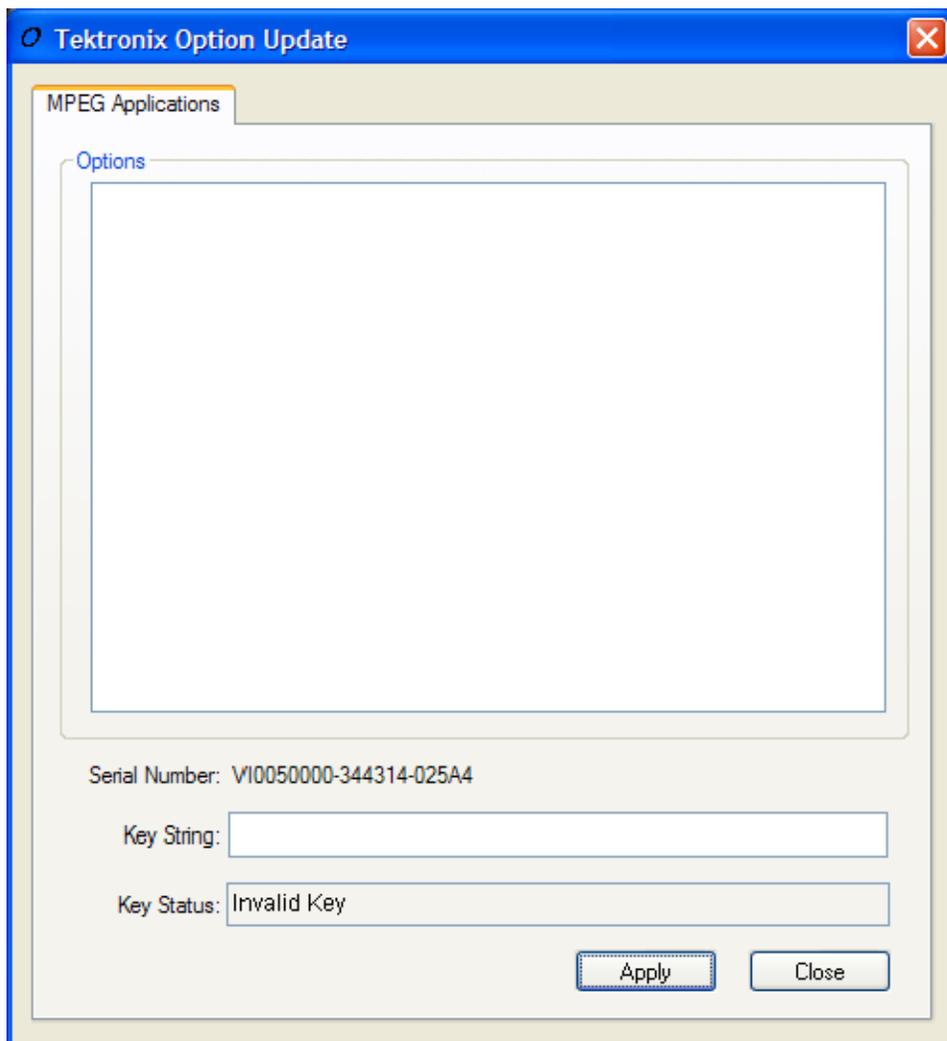


Figure 3: Tektronix Option Update Wizard - Initial view

Note that the Serial Number of the software key has been detected, but the Key Status is invalid because no KeyString has been entered.

9. In the Tektronix Option Update dialog box, enter the Option Key String, found on the Product Option Key label supplied with these upgrade instructions, in the Key String field. Click **Apply**.

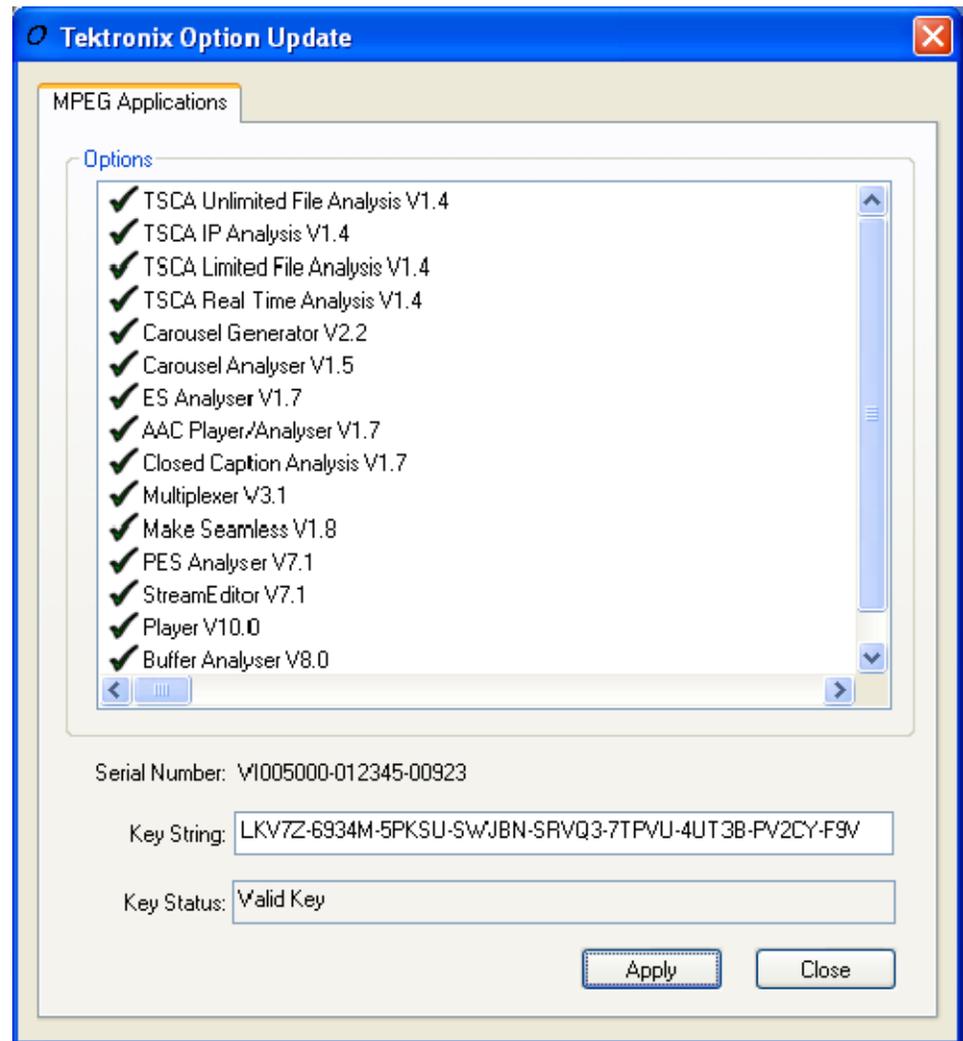


Figure 4: Tektronix Option Update Wizard - Complete

10. Inspect and verify the list of licensed options (see Figure 24).
11. Close the Tektronix Option Update wizard.
12. Peel the backing off of the Product Option Key label and apply it to the instrument rear panel, as shown in Figure 5. If there is already an option key label on the rear panel apply the new one over the old one.

The upgrade is now complete.



Figure 5: Product Option key label location

Verify Operation

To verify operation of the upgraded applications, open and close each installed application in turn.

If any licensed application fails to open correctly, contact your Tektronix representative.

Upgrading Hardware

Use the following procedure to install any of the hardware upgrades.

Accessing the Module Bay



WARNING. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power. Failure to do so can cause injury or death.

In order to install any of the hardware upgrades you must first remove the cabinet and the circuit board retaining plate. Follow these steps to access the module bay:

1. Power down the system and unplug the power cord.

2. Disconnect any cables from the rear panel. Note the location of any cables for reinstallation.
3. Install the protective cover on the front of the instrument and place the cabinet on the working surface with the rear panel facing up.
4. Remove the handle from the side of the instrument and remove the four feet from the rear of the instrument. Retain the screws for reinstallation.



WARNING. *To prevent damage to the EMI shielding and injury to yourself, use care when touching the EMI shielding strips around the front of the chassis. If you accidentally bend the “fingers” of the strip, it could create sharp protruding edges, which may cut you as you handle the chassis.*

5. Use a wrench as a lever to pry the cabinet loose from the chassis. Loosen each side alternately until the cabinet is released from the EMI gasket.
6. Slide the cabinet up and off the chassis.
7. Set the instrument onto the work surface so the bottom is down, as shown in Figure 6.
8. Remove the five T-15 screws securing the circuit board retaining plate to the chassis and lift it away (see Figure 6).

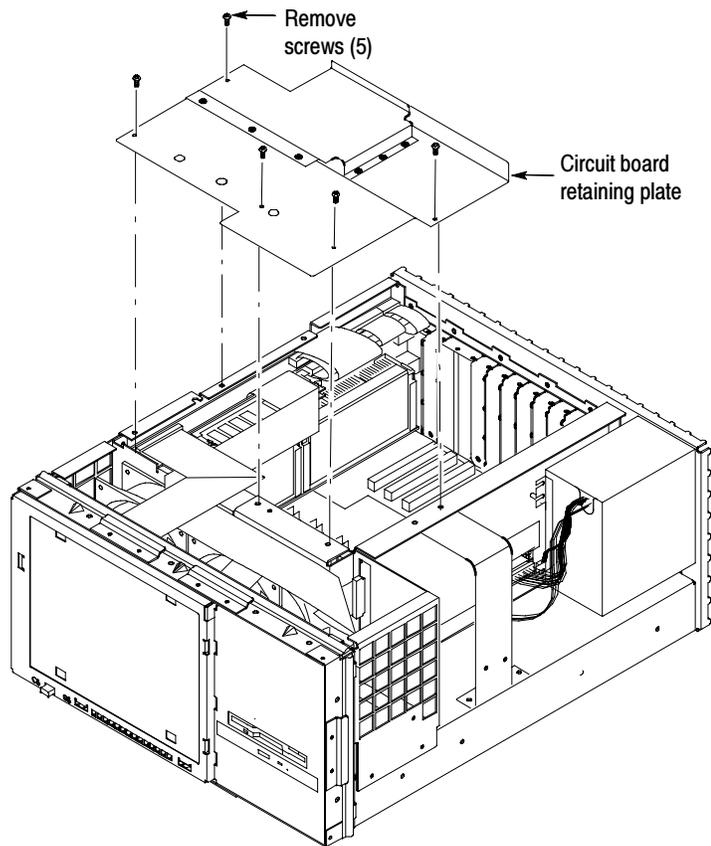


Figure 6: Removing the circuit board retaining plate

If you are installing an MTS4UP GBE Gigabit Ethernet input upgrade, with or without any of the other hardware upgrades, continue with the process below.

If you are installing an MTS4UP CF, MTS4UP EP, MTS4UP QB2, or MTS4UP VS upgrade without an MTS4UP GBE, go to page 15.

MTS4UP GBE Upgrade Instructions

Perform the following steps to install the MTS4UP GBE Gigabit Ethernet interface:

1. Turn the instrument so the rear panel is facing you.
2. Remove the two blank panels covering slots 2 and 3.
3. Align the Gigabit Ethernet interface module over the slot 2 connector, with the card edge engaged in the slot 2 card guide, and slide the module down into slot 2 (see Figure 7).

4. Press down firmly to engage the module into the connector (see Figure 7).

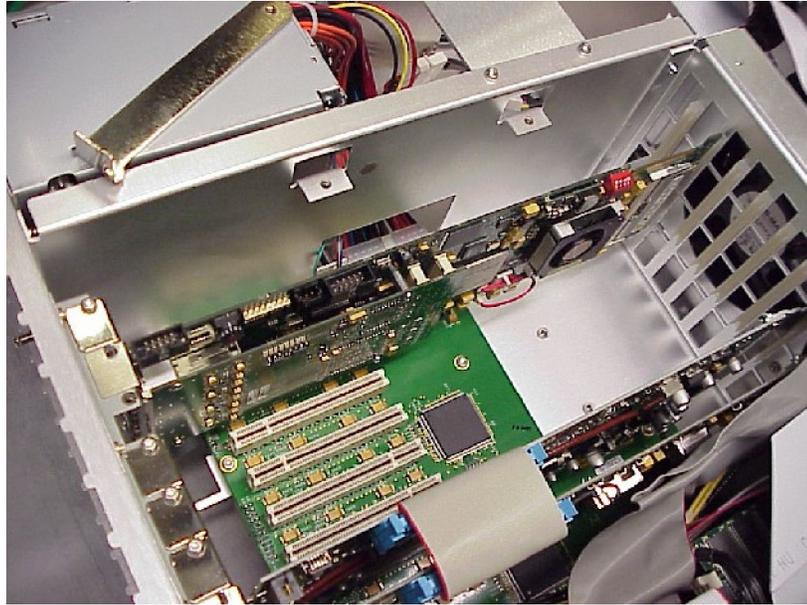


Figure 7: Gigabit Ethernet module in place

5. Secure the Gigabit Ethernet module in place, using the screws that held the slot 2 blank panel in place.
6. Replace the slot 3 blank panel.

If you are installing any of the other hardware options at this time continue with the following procedure. Otherwise, go to *Restore the Operating System* on page 19.

MTS4UP CF, EP, QB2, or VS Upgrade Instructions

These hardware upgrades are all installed in a similar manner, and must be installed in slot 4.

1. Remove the three blank panels covering slots 4, 5, and 6.
2. Align the hardware upgrade module over the slot 4 connector, with the edge of the long card engaged in the slot 4 card guide, and slide the module down into slot 4.
3. Press down firmly to engage the module into the slot 4 connector (see Figure 8).

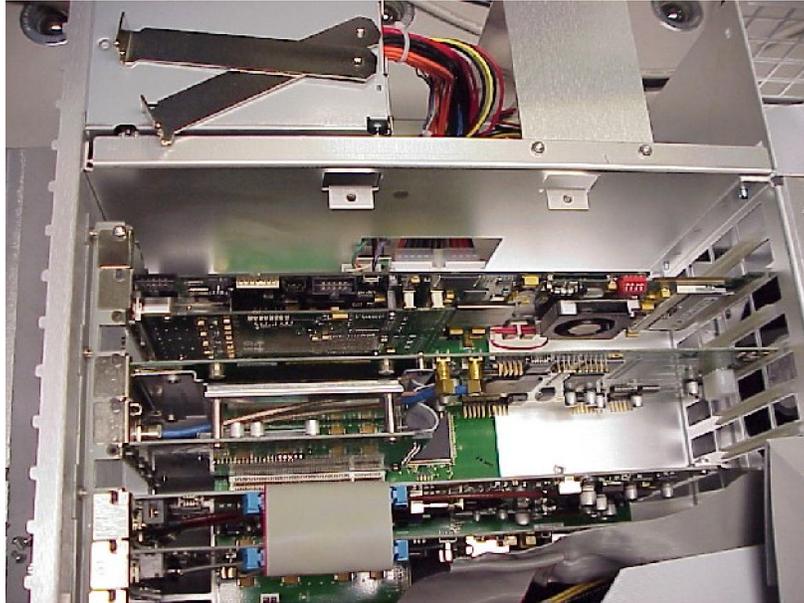


Figure 8: Hardware upgrade module installed in slot 4

4. Secure the hardware upgrade module in place, using the screws that held the slot 4 and 5 blank panels in place.
5. Attach the 2x5 connector end of the interface cable provided in the kit to the COM2 connector on the controller board in slot 11, as shown in Figure 9. This connector is keyed and can only be installed one way.
6. Connect the other end of the interface cable to J14 on the hardware upgrade module, as shown in Figure 10.

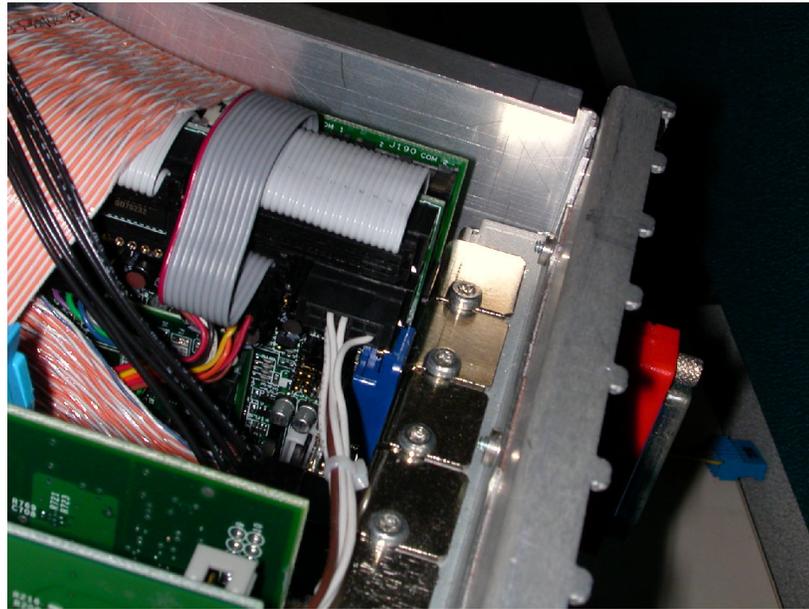


Figure 9: Interface cable connected to controller board



Figure 10: Interface cable connected to the hardware upgrade module

Replace the Cabinet

Replace the circuit board retaining plate and the cabinet by reversing the *Accessing the Module Bay* instructions on page 12.



CAUTION. *To prevent damage to the instrument, make sure that the internal cables do not catch when you slide the cabinet back onto the chassis. Make sure that the edges of the cabinet go under the retaining tabs around the front of the chassis. You may have to push on the side of the cabinet to get all of the edges under the tabs and over the EMI gasket.*

At the rear of the chassis, you may have to push on the sides of the cabinet to get the rear of the cabinet to fit over the edges of the chassis and EMI gasket.

Restore the Operating System

After installing the hardware upgrade, you must restore the operating system to install the new application software and drivers required for the hardware.



CAUTION. *To avoid losing access to your licensed applications, you must use the MTS400 Series system Recovery media supplied with this upgrade kit.*

MTS400 Series system Operating System Restore

To restore the MTS400 Series system operating system, use the following steps. This restore process is effective only if the hard disk drive is still good. The process will restore the operations system and the application software. (The process should take less than one hour.)



CAUTION. *To prevent data loss, back up your hard drive before you restore the MTS400 Series system. All data on the hard drive will be destroyed during the system restore process.*

1. Start the MTS400 Series system.
2. During the boot process, insert the *MTS400 Series System Operating System Restore DVD* in the CD-ROM drive. The system will autostart the recovery application when the boot process finishes, see Figure 11.

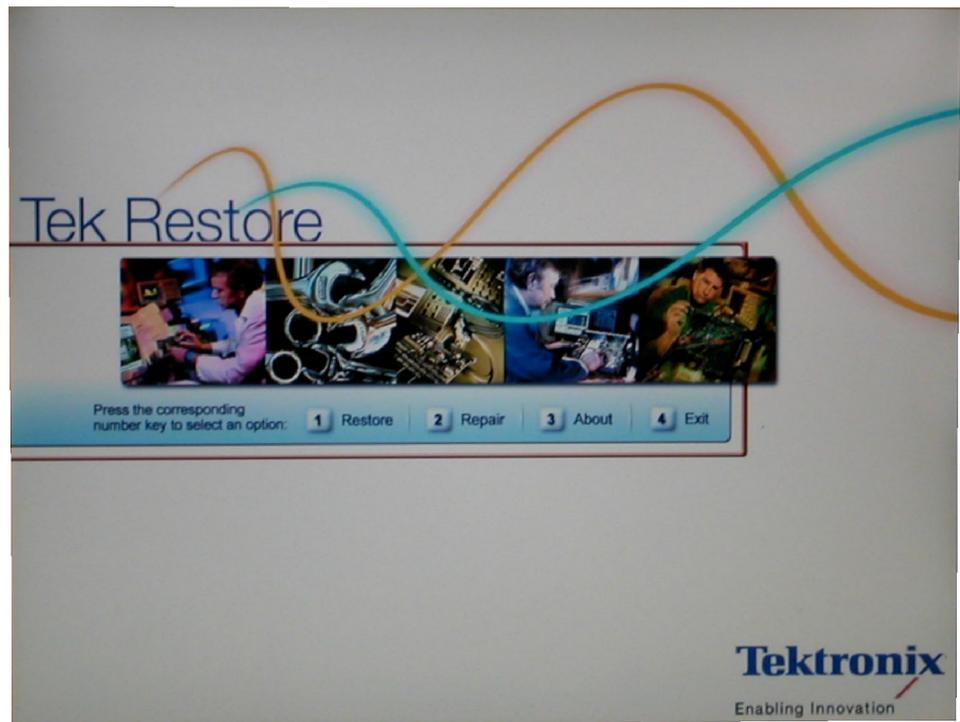


Figure 11: Operating system recovery application

3. Press the “1” key to begin the system restore process. The Acquiring Device... dialog box will appear briefly and display a progress bar.
4. When the system restore is complete, press any key and then press the “4” key, see Figure 12.

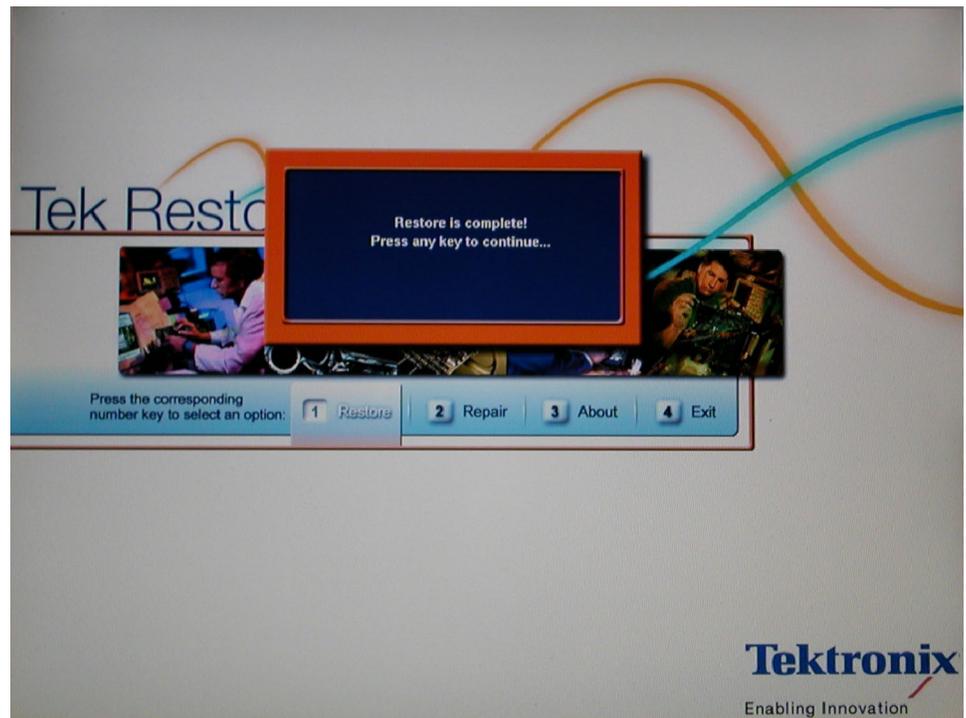


Figure 12: Restore Complete

5. When prompted, press the “Y” key to reboot the instrument. Remove the DVD from the CD-ROM drive while the system is rebooting.
6. On startup, the system will prompt you to set up Windows XP. Follow the onscreen procedure, accepting the license agreement and defaults where necessary.

NOTE. The screen will go blank for a few minutes during this process. Do not turn the instrument off.

7. The system will restart on its own.

Reinstate the SCSI Drives

After restoring the operating system, confirm that the SCSI drives (drives E and F) have been recognized by the system. Figure 13 shows the drives in Windows Explorer.

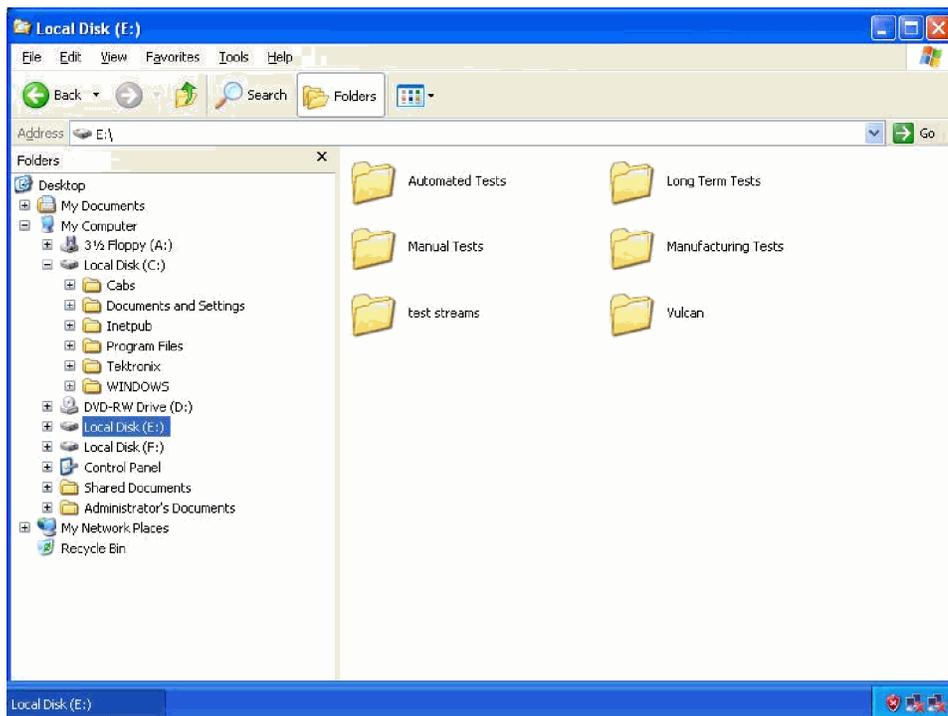


Figure 13: SCSI drives automatically recognized

If drives E and F are not listed in Windows Explorer, complete the following procedure to allow them to be recognized by the system.

1. Open the Windows Disk Management window (**Start > Control Panel > Performance and Maintenance > Administrative Tools > Computer Management > Storage > Disk management**).

Note that Disk 0 and Disk 1 are described as Foreign, as shown in Figure 14.

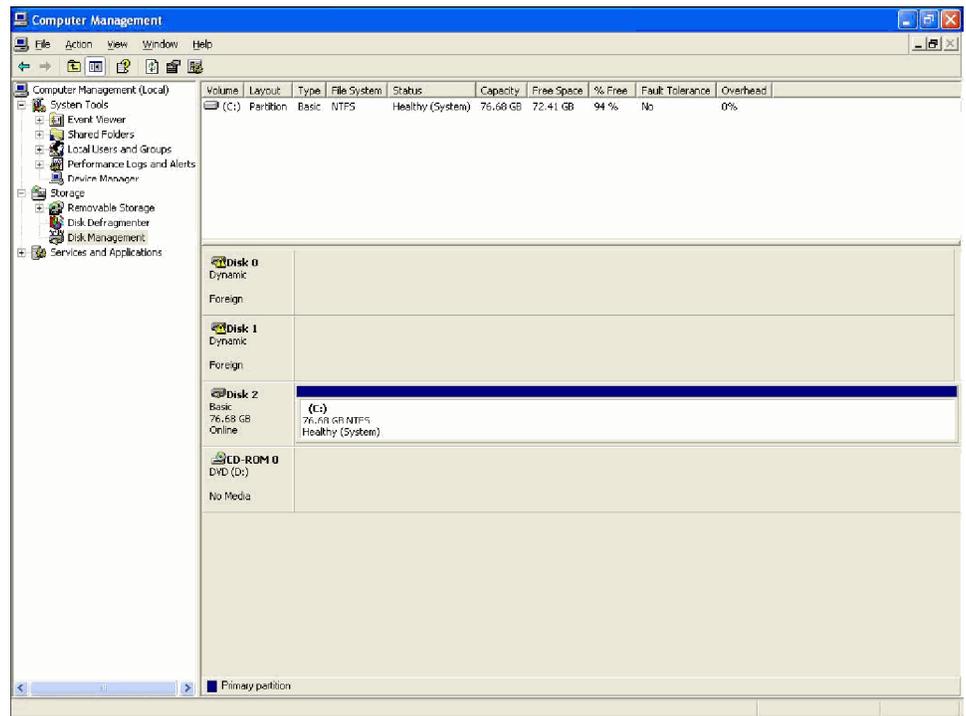


Figure 14: Computer Management - SCSI drives, foreign

2. Right-click on Disk 0 or Disk 1 and select **Import Foreign Disks...** from the shortcut menu (see Figure 15).

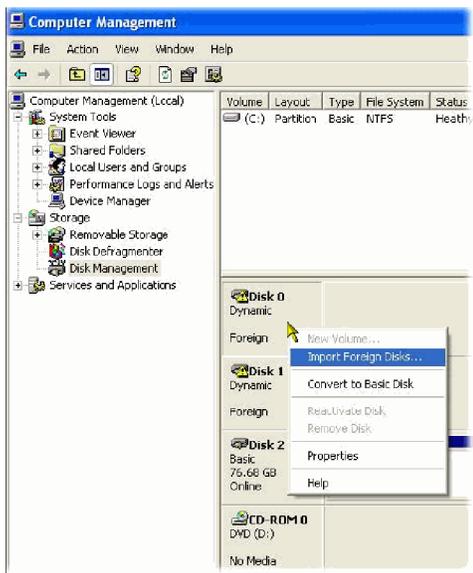


Figure 15: Select Import Foreign Disks...

3. In the Import Foreign Disks dialog box, ensure that the disk group is checked and select OK. See Figure 16.

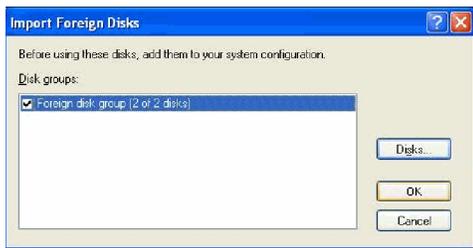


Figure 16: Import Foreign Disks dialog box

4. In the Foreign Disk Volumes dialog box, select OK. See Figure 17.

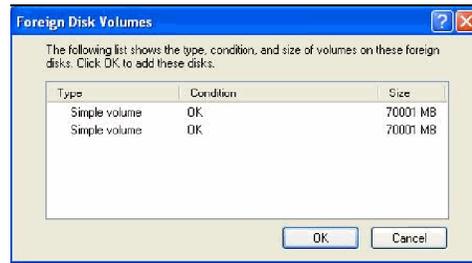


Figure 17: Foreign Disk Volumes dialog box

5. This takes a little time. Wait until the drives appear in the upper window, as shown in Figure 18.

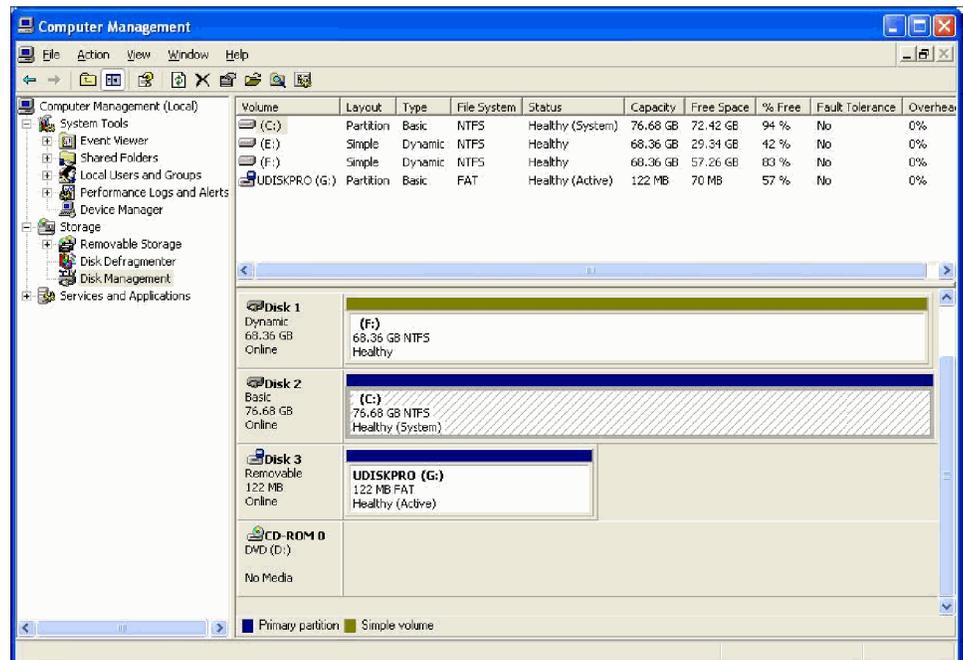


Figure 18: SCSI drives manually recognized

If the SCSI drives fail to import, follow this procedure:

1. Copy the file “SCSIKeyDel.reg” from the restore DVD to your C: drive.
2. Double click the file to initiate it.
3. When prompted to add information to the registry, press “Yes.”
4. When the information successfully entered message appears, press “OK.”

5. Reboot the MTS400 platform.
6. Import the SCSI drives again, using the procedure above, starting on page 22.

This completes the *MTS400 Operating System Restore Procedure*. Close the Computer Management window. You must now upgrade the software, as described in the following procedure.

Software Upgrade Instructions

Perform the following steps to upgrade the MTS400 Series software and software key:

1. Ensure that the instrument or PC to be upgraded is switched on and has completed the start-up process.
2. Ensure that the software key (dongle) is attached to your instrument.
3. Insert the *MTS400 Series Application Install CD-ROM* supplied with this kit into the CD-ROM drive of the instrument or PC to be upgraded. The CD-ROM will autostart and display the Welcome screen shown in Figure 19.

NOTE. *If the CD-ROM fails to autostart, use Windows Explorer to locate and run the following file on the CD-ROM: start.exe.*

4. Click **Next**.
 - If you have not installed Option GBE, just accept the defaults during the upgrade process and reboot when complete. Go to step 13 on page 29.
 - If you have installed Option GBE the Setup Type dialog box will be displayed, which allows you to select the type of installation (see Figure 20). Continue to step 5.

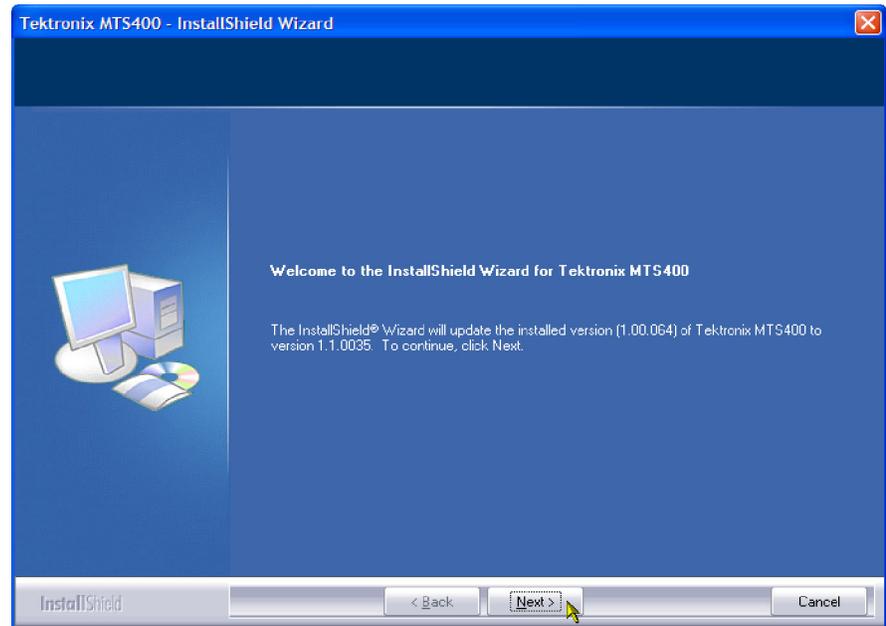


Figure 19: InstallShield Wizard welcome screen

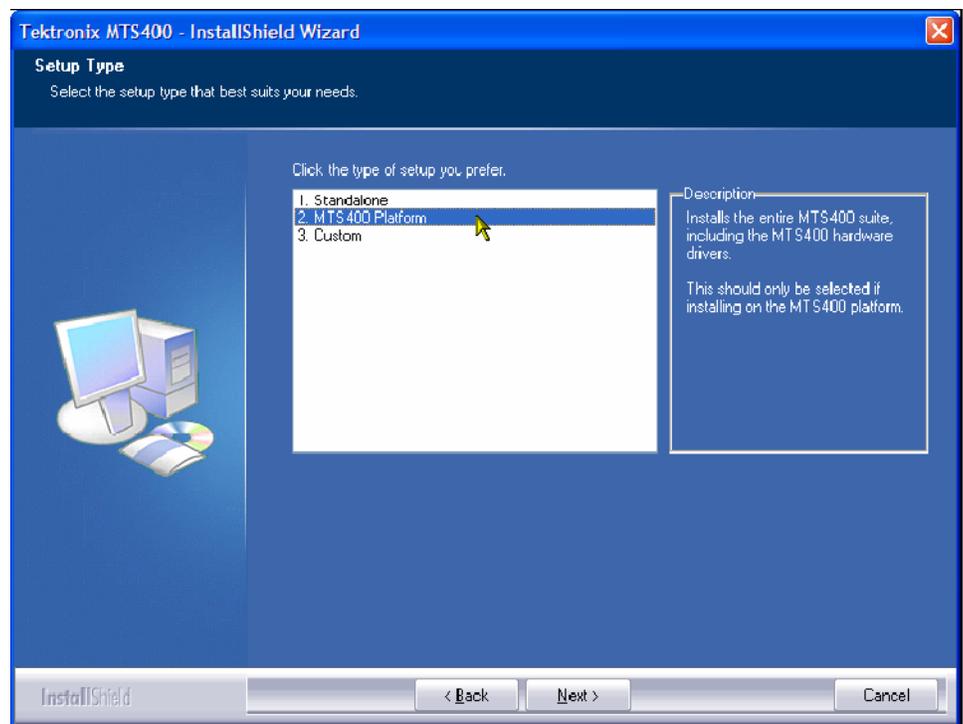


Figure 20: MTS400 Installation - Setup Type

5. Choose **2. MTS400 PLATFORM** and select **Next**.
6. Allow the installation process to proceed. The average installation time is approximately five minutes.

NOTE. A number of dialog boxes are displayed during the installation process. Normally, no user intervention is required.

7. Allow the installation process to proceed until the WinPcap Setup dialog box is displayed, See Figure 21.

NOTE. If WinPcap has been previously installed, the following message will be displayed:

WinPcap 3.1 is already installed on this machine.
The installation will be aborted.

Select **OK** to abort the WinPcap installation and continue with the MTS400 installation.

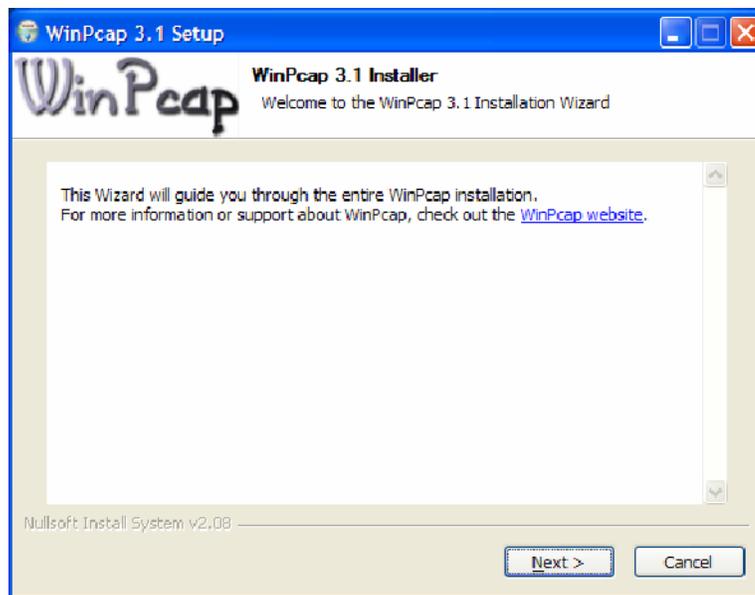


Figure 21: WinPcap Setup dialog

8. In the WinPcap Setup dialog box, select **Next**.

9. The WinPcap License agreement is displayed. Read the agreement and select **I Agree** if you agree.
10. When the WinPcap completed dialog appears, click **FINISH**.
11. When the upgrade installation is complete, the Update Complete screen is displayed as shown in Figure 22.

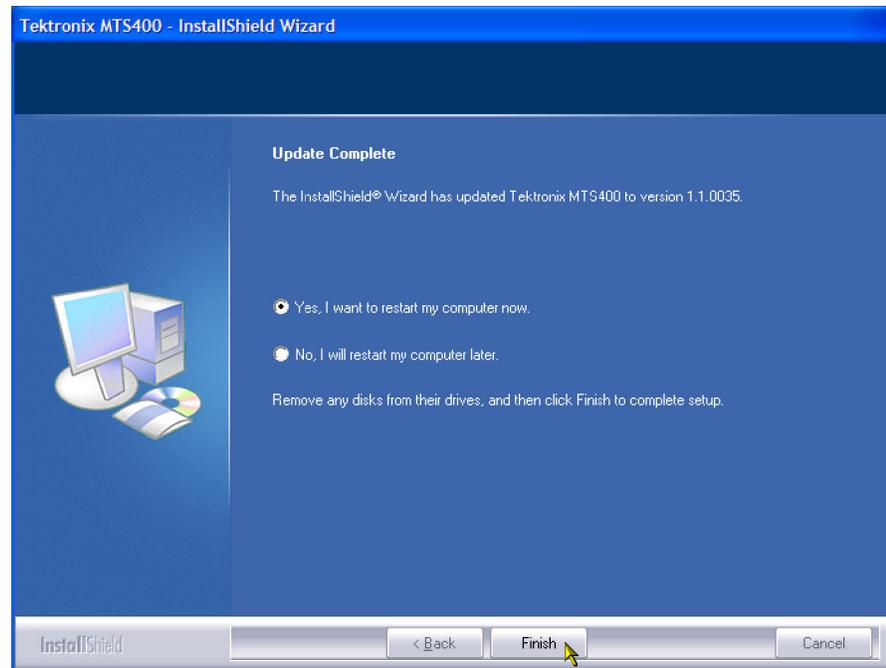


Figure 22: InstallShield Wizard update complete screen

12. Select the **Yes, I want to restart my computer now** option, and then click **Finish**. The instrument or PC will shut down and then restart.
13. After the unit has completed the start-up process, start the Tektronix Option Update wizard by selecting **Start > Programs > Tektronix MTS400 > OptionKey Wizard**. The Option Update window should open, as shown in Figure 23.

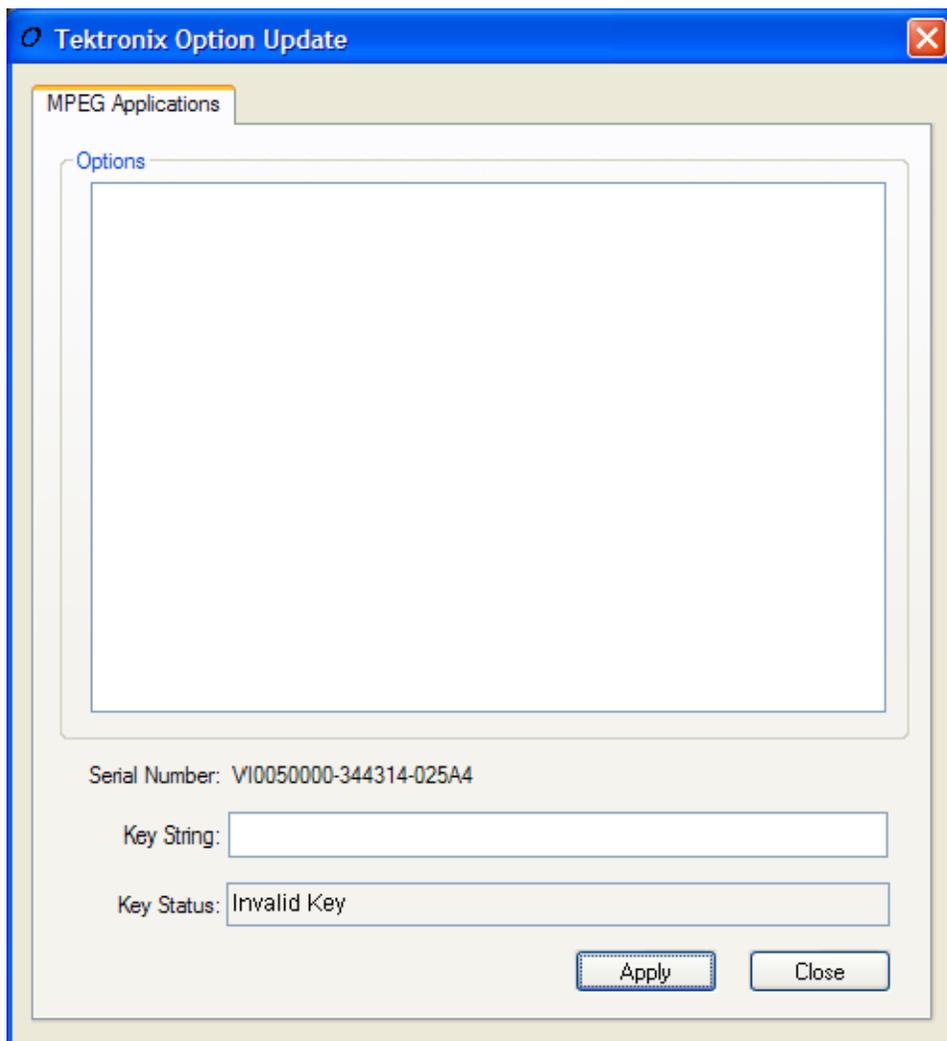


Figure 23: Tektronix Option Update Wizard - Initial view

Note that the Serial Number of the software key has been detected, but the Key Status is invalid because no KeyString has been entered.

14. In the Tektronix Option Update dialog box Key String field, enter the Option Key String, found on the Product Option Key label supplied with these upgrade instructions, and then click **Apply**.
15. Inspect and verify the list of licensed options (see Figure 24).

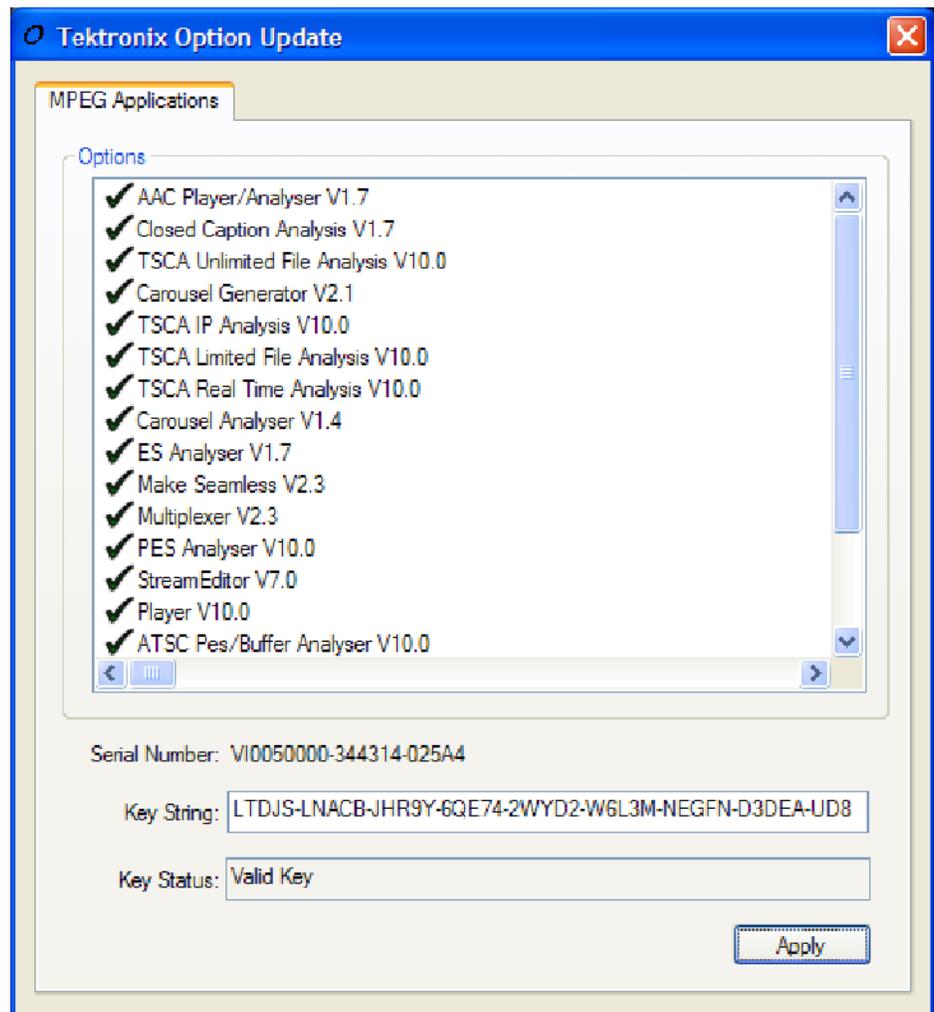


Figure 24: Tektronix Option Update Wizard - Complete

16. Close the Option Key Wizard.
17. Peel the backing off of the Product Option Key label and apply it to the instrument rear panel, as shown in Figure 5. If there is already an option key label on the rear panel, paste the new one over the old one.

The upgrade is now complete. The licensed MTS400 applications will now be available in the Windows Start menu.

Verify Operation

For complete verification, perform the Performance Verification procedure found in the *Specifications and Performance Verification* manual (071-1724-xx), on the documentation CD included in this kit.

If any licensed application fails to open correctly, contact your Tektronix representative.

Software Key Upgrade Instructions

Perform the following steps to upgrade the MTS400 software key. This process can be used where a new application is to be licensed on an MTS400, software version 1.4 or later, but the software does not require an upgrade.:

1. Ensure that the software key (dongle) is attached to your instrument.
2. Switch the instrument on and allow the start-up process to complete.
3. Start the Tektronix Option Update Wizard (**Start > Programs > Tektronix MTS400 > OptionKey Wizard**).
4. In the Tektronix Option Update Wizard dialog box, enter the Option Key String, found on the Product Option Key label supplied with these upgrade instructions, in the Key String field. Click **Apply**.
5. Inspect and verify the list of licensed options.
6. Close the Option Key Wizard.
7. Peel the backing off of the Product Option Key label and apply it to the instrument rear panel, as shown in Figure 5. If there is already an option key label on the rear panel, paste the new one over the old one.

The software key upgrade is now complete.

Verify Operation

To verify operation of the upgraded applications, open and close each installed application in turn.

If any licensed application fails to open correctly, contact your Tektronix representative.

■ End of document ■