

K2 Summit/Solo/Media Server Field Kit Upgrade Instructions

This document applies to first generation K2 Summit Production Client, K2 Summit 3G Production Client, K2 Solo 3G Media Server, K2 Media Server, and Grass Valley Control Point PC.

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Grass Valley Web Site

The <http://www.grassvalley.com/support> web site offers the following:

Online User Documentation — Current versions of product catalogs, brochures, data sheets, ordering guides, planning guides, manuals, and release notes in .pdf format can be downloaded.

FAQ Database — Solutions to problems and troubleshooting efforts can be found by searching our Frequently Asked Questions (FAQ) database.

Software Downloads — Download software updates, drivers, and patches.



END-OF-LIFE PRODUCT RECYCLING NOTICE

Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive, the United States Environmental Protection Agency, and U.S. state and local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight. However, you are responsible for the removal of the equipment from your facility and packing the equipment to make it ready for pickup.



For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the U.S. and Canada please call 800-547-8949, and ask to be connected to the EH&S Department. Additional information concerning the program can be found at: www.grassvalley.com/about/environmental-policy

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Contents

Upgrade instructions.....	5
Safety Summaries.....	5
Installing software and CPU carrier module upgrades.....	6
Saving settings.....	6
Replace CPU carrier module.....	7
Replace CompactFlash boot media.....	7
Reimage K2 Summit/Solo system.....	8
Restore settings after generic reimage.....	10
Restore network configuration.....	10
Create the Control Team.....	10
Name team and loopback.....	14
Reorder adapters.....	15
Enhance network bandwidth.....	16
Disable Large Send Offloads.....	16
Disable CPU Power Technology.....	17
Install the Discovery Agent on a K2 Summit/Solo system.....	18
If you install software with SiteConfig.....	18
Leave the embedded security solution Update mode.....	19
Install software using SiteConfig.....	19
Restore licensing.....	20
If you install software manually.....	20
Install software manually.....	20
Leave the embedded security solution Update mode.....	21
Restore licensing.....	21
Install Multi-Path I/O software.....	22
Install the Fibre Channel card driver.....	23
Install the LSI Fibre Channel card driver.....	24
Install the ATTO Fibre Channel card driver.....	25
Final steps for software and CPU carrier module upgrades.....	26
Install codec module upgrade.....	27
Replace codec module and power supplies.....	27
Upgrading a K2 Media Server to version 9.x.....	29
Upgrading a Control Point PC.....	32
Re-image Control Point PC.....	32
Set BIOS prerequisites.....	32
Configure Virtual Machine.....	32
Setting up Windows on the Virtual Machine.....	34
Logging on to the Virtual Machine.....	34
License NetCentral on the Virtual Machine.....	35
Adding a license to the Virtual Machine.....	36
Installing a two channel upgrade.....	37
Installing the two channel codec license.....	39
Requesting a license.....	39
Adding a license.....	40
Installing a MPEG/Multi-Cam codec option upgrade.....	41
K2 Summit System Procedures.....	44
K2 Summit system procedures.....	44
Carrier module removal.....	44
Power supply module removal.....	45

Front bezel assembly removal K2 Summit.....	45
CompactFlash boot media removal K2 Summit.....	46
Manage Embedded Security Update mode.....	47
K2 Solo Media Server procedures.....	48
Front bezel removal K2 Solo.....	48
CompactFlash boot media removal K2 Solo.....	48
Trademarks and Agreements.....	49
Trademarks.....	49
JPEG acknowledgment.....	49

Upgrade instructions

Use these installation instructions to upgrade your K2 system. Refer to the section in this document that applies to the upgrade kit that you received.

Upgrade kit	Section
K2-XDP2-CPU-FK	Installing software and CPU carrier module upgrades on page 6.
K2-XDP2-V9-FK	Installing software and CPU carrier module upgrades on page 6.
K2-XDP2-3G-FK	Install codec module upgrade on page 27.
K2-XDPSVR-V9-FK	Upgrading a K2 Media Server to version 9.x on page 29.
CP-XDP2-V9-FK	Upgrading a Control Point PC on page 32.
K2-XDP2-2IO-FK	Installing a two channel upgrade on page 37.
K2-XDP2-AVC-2CH-FK	Installing the two channel codec license on page 39.
K2-XDP2-MPG2-MC-FK	Installing a MPEG/Multi-Cam codec option upgrade on page 41.

Safety Summaries

⚠ WARNING: *In order to avoid personal injury and prevent damage to this product and its peripheral products, be sure to review all safety and ESD precautions listed in the K2 product Service Manual.*

Installing software and CPU carrier module upgrades

Tools and materials needed:

- Hardware as provided by upgrade kit. See descriptions below.
- Torx tool with T15 magnetic tip

This section provides instructions for the following field kits:

Upgrade Nomenclature	Description
K2-XDP2-CPU-FK	Processor upgrade Field Kit. Includes updated Type III CPU carrier module required for advanced features such as ShareFlex. NOT AVAILABLE for K2-SOLO models.
K2-XDP2-V9-FK	K2 Summit / K2 Solo 9.x Upgrade Field Kit. Includes 9.x system software license, 16GB CompactFlash system drive with image, and 16GB USB recovery flash drive with Acronis backup software and new Windows Embedded System 7 license with Embedded Security Solution. Requires Type II or Type III CPU carrier module.

For any upgrade from a software version lower than 9.0 to a 9.x version, you must reimage the system and do all the steps as directed in the procedure to ensure the system is properly initialized.

⚠ CAUTION: *This system contains board-level components that must be protected from static discharge and physical shock. Wear a wrist strap grounded to the system chassis when handling system components.*

Work through the tasks in this section sequentially.

Saving settings

Do this task for both software and CPU carrier module upgrade kits.

Before doing this task, on the 16GB USB Recovery Flash Drive that you received with the kit, write the serial number of the K2 Summit/Solo system to identify it as belonging to that individual system.

NOTE: *Do not attempt to use a single Recovery Flash Drive on multiple systems. This can overwrite saved settings and lose the ability to restore settings on one or more systems. Also, software licensing requires one Recovery Flash Drive for each system.*

1. If you are working on a K2 client SAN-attached system, record iSCSI bandwidth settings, so you can reconfigure after removing and readding to SAN.
2. Make sure you are logged in to the K2 Summit/Solo system with administrator privileges.
3. Connect the USB Recovery Flash Drive to a USB port on the K2 Summit/Solo system.
4. On the USB Recovery Flash Drive, navigate to the following location:

`\tools\SaveRestoreScripts.`

NOTE: *Do not attempt to use the same Recovery Flash Drive on multiple systems.*

5. Run the following and wait for the process to complete:

```
ssave.bat
```

This saves current settings onto the USB Recovery Flash Drive in the `\settings` directory.

6. Disconnect the USB Recovery Flash Drive.

Next, do one of the following:

- If you are installing K2-XDP2-V9-FK on a K2 Summit 3G system with mSATA system drive, skip ahead and reimage.
- If you are installing K2-XDP2-V9-FK on a K2 Summit/Solo system with CompactFlash system drive, skip ahead and replace the CompactFlash boot media with the new larger 16GB CF.
- If you are installing K2-XDP2-CPU-FK on a K2 Summit system, replace the CPU carrier module.

Replace CPU carrier module

Do this task if installing K2-XDP2-CPU-FK on a K2 Summit system.

NOTE: Do not attempt to replace the CPU carrier module on a K2 Solo Media Server. K2-XDP2-CPU-FK does not apply to K2 Solo Media Server.

1. Shutdown the K2 Summit system.
2. Disconnect all power cables from the K2 Summit system.
3. Press the power button on the K2 Summit system to drain off power from boards.
4. Remove any cables connected to the CPU carrier module.
5. Replace the current CPU carrier module with the new CPU carrier module.
6. Reconnect cables to the CPU carrier module.
7. Reconnect power cables.

Next, do one of the following:

- If you are installing K2-XDP2-V9-FK on a K2 Summit 3G system with mSATA system drive, skip ahead and reimage.
- If you are installing K2-XDP2-V9-FK on a K2 Summit/Solo system with CompactFlash system drive, replace the CompactFlash boot media with the new larger 16GB CF.

Related Topics

[Carrier module removal](#) on page 44

Replace CompactFlash boot media

Do not do this task if:

- A K2 Summit 3G system with mSATA system drive.

Do this task if:

- A K2 Summit/Solo system with CompactFlash system drive.

Before doing this task, make sure the K2 Summit/Solo system is powered off.

1. Remove the front bezel assembly.
2. Replace the current CompactFlash boot media with the new CompactFlash boot media.
3. Replace the front bezel assembly.

Next, reimage the K2 Summit/Solo system.

Related Topics

[Front bezel assembly removal K2 Summit](#) on page 45

[CompactFlash boot media removal K2 Summit](#) on page 46

[Front bezel removal K2 Solo](#) on page 48

[CompactFlash boot media removal K2 Solo](#) on page 48

Reimage K2 Summit/Solo system

Do this task for both software and CPU carrier module upgrade kits.

Before doing this task, make sure that you have done the following:

- Saved settings using the *ssave.bat* script.
 - Replaced hardware, as supplied by your upgrade kit.
 - Reconnected cables.
 - Back up the iSCSI-SVR (FSM TOE) licenses prior to reimage the file system server (FSM).
1. If you have not already done so, connect keyboard, monitor, and mouse.
 2. Do the following:
 - a) Insert the Recovery Flash Drive into a USB port.
 - b) Restart the machine, or power on if currently shut down.

The machine boots from the Recovery Flash Drive, into a version of Windows stored on the drive.

A MS-DOS command window opens.
 - c) When prompted with a list of options, type 2 to select the Acronis option and then press **Enter**.

The Acronis program loads.
 3. In the Acronis main window, click **Recovery**.

The Restore Data Wizard opens.
 4. On the Welcome page, click **Next**.
 5. On the Backup Archive Selection page, do the following:
 - a) In the tree view expand the node for *Computer/SummitBoot9_0_2_1803 (D:)*. This is the Recovery Flash Drive.
 - b) In the Images folder, select the correct version of the image file such as *Summit_WES7_7.0.13.tib*.
 - c) Click **Next**.
 6. On the Restoration Type Selection page, select **Restore disks or partitions** and then click **Next**.
 7. On the Partition or Disk to Restore page, select **MBR and Track 0** and then click **Next**.

8. On the Disk Selection page, select **Disk 1** and then click **Next**.
NOTE: Verify capacity to make sure you select the boot media card (CompactFlash or mSATA) and not a media drive. The boot media has a much smaller capacity and has an interface identified as "IDE (0) Primary Master".
9. On the Next Selection page, select **Yes, I want to restore another partition or hard disk drive** and then click **Next**.
10. On the Partition or Disk to Restore page, select **(C:)** and then click **Next**.
11. On the Restored Partitions Resizing page, select **Yes, I want to resize partitions** and then click **Next**.
12. On the Restored Location page, select **(C:)** and then click **Next**.
NOTE: Verify capacity to make sure you select the boot media card (CompactFlash or mSATA) and not a media drive. The boot media has a much smaller capacity and has an interface identified as "IDE (0) Primary Master".
13. On the Restored Partition Type page, select **Active** and then click **Next**.
14. Do one of the following:
 - If the Restored Partition Size page does not appear. Skip ahead to the Next Selection page.
 - If the Restored Partition Size page appears. Continue with the next step.
15. On the Restored Partition Size page, do one of the following:
 - If **Free space after** reports 0 bytes, leave settings as they are. Click **Next**.
 - If **Free space after** does not report 0 bytes, increase **Partition size** until **Free space after** reports 0 bytes. Click **Next**.
16. On the Next Selection page, select **No, I do not** and then click **Next**.
17. On the Restoration Options page, do not make any selections. Click **Next**.
18. On the "...ready to proceed..." page, verify that you are restoring the correct image to the correct location. Click **Proceed**.
19. On the Operation Progress page, observe the progress report.
20. When a message appears indicating a successful recovery, click **OK**.
21. Click **Operations | Exit** to exit the Acronis True Image program.
The machine restarts automatically.
22. Remove the recovery media while the machine is shutting down.
23. Upon startup, wait for initialization processes to complete. This can take several minutes, during which time USB keyboard/mouse input is not operational. The system might automatically restart. Do not attempt to shutdown or otherwise interfere with initialization processes.
24. When prompted, enter the K2 Summit system machine name.
Make sure the name is identical to the name it previously had.
After start up, one or more device discovery windows can open. Allow processes to complete without interference. Refer to Release Notes for information on compatible driver versions. If a Fibre Channel card driver, ignore until instructed later in this process.
At first start up after reimage, the system is in Embedded Security Update mode by default.

Next, restore settings.

Restore settings after generic reimage

Do this task for both software and CPU carrier module upgrade kits.

This task assumes that you have saved settings using `ssave.bat` before reimaging the K2 Summit/Solo system, and that the reimage (Acronis) process is complete.

NOTE: Do not attempt to use a single Recovery Flash Drive on multiple systems. This can overwrite saved settings and lose the ability to restore settings on one or more systems. Also, software licensing requires one Recovery Flash Drive for each system.

1. If you have not already done so, start the K2 Summit/Solo system and log on with administrator privileges.
The administrator password is `adminGV!`.
2. Connect the USB Recovery Flash Drive to a USB port on the K2 Summit/Solo system.
3. From the USB Recovery Flash Drive, run the following and wait for the process to complete:

```
Tools\SaveRestoreScripts\srestore.bat
```

Next, restore network configuration.

Restore network configuration

Do this task for both software and CPU carrier module upgrade kits.

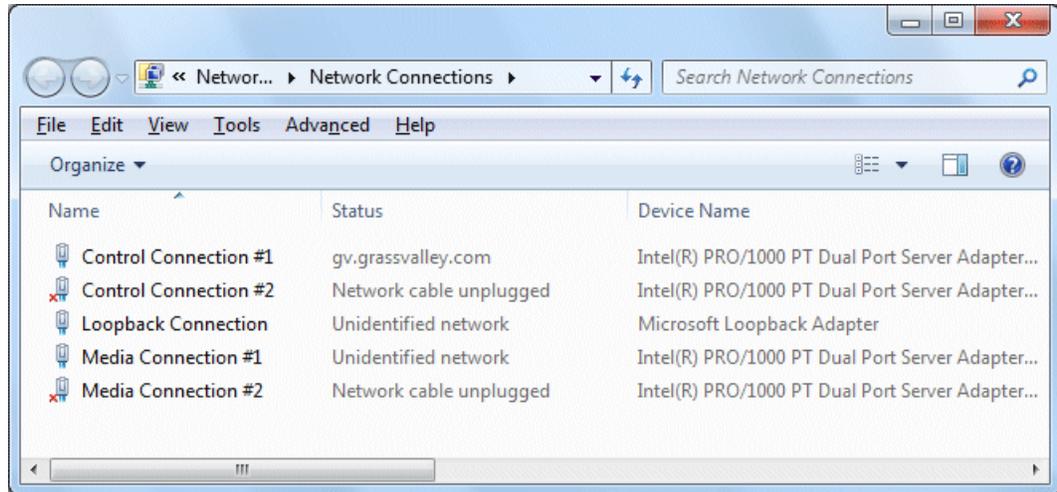
Work through the tasks in this section sequentially to restore the default network configuration. As you do so, refer to `C:\ipconfig.txt` for the complete listing of the network settings that the K2 Summit/Solo system had before reimaging.

Create the Control Team

NOTE: Team control ports only. Do not team media ports.

1. Open Network Connections, if it is not already open.
 - a) From the Windows **Start** menu, in the **Run** or the **Search programs and files** box, type `ncpa.cpl` and press **Enter**.

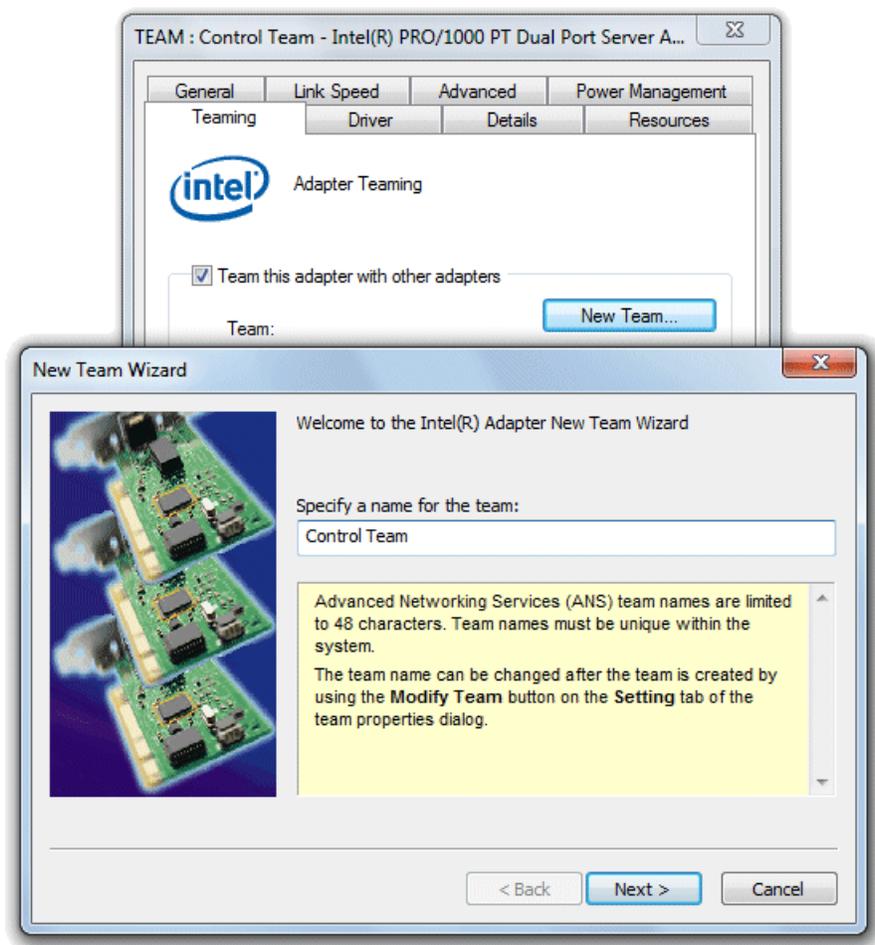
2. In Network Connections, view **Details** and identify the adapter name that maps to Control Connection #1 and the adapter name that maps to Control Connection #2.



3. Right-click the adapter name that maps to Control Connection #1.
4. Select **Properties**, then click **Configure**.

The Properties dialog box opens.

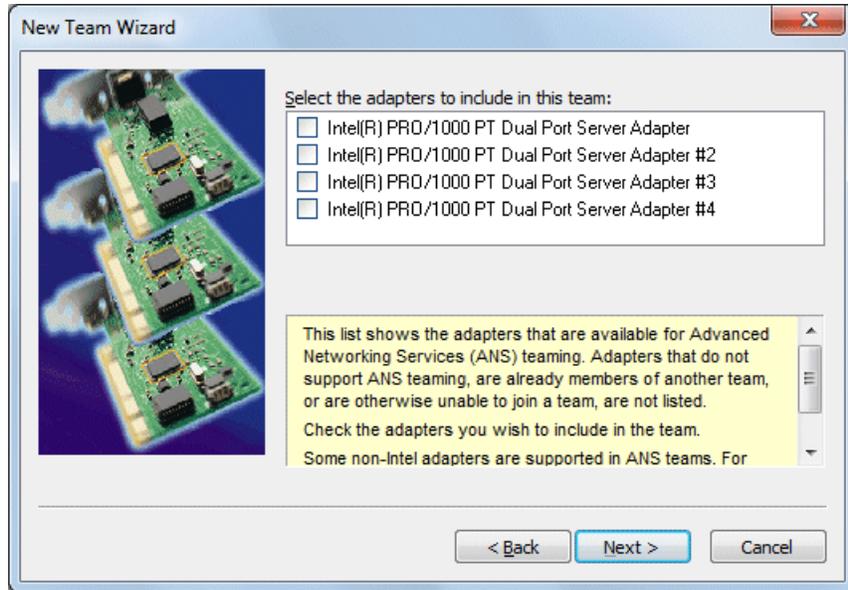
5. Select the **Teaming** tab.



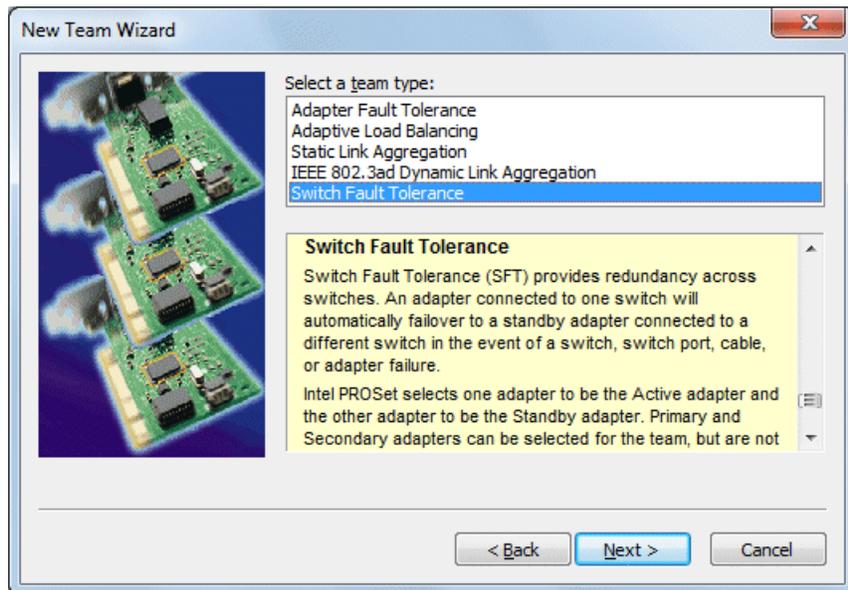
6. Select **Team this adapter with other adapters**, then click **New Team**. The New Team Wizard opens.

7. Enter Control Team.

Click **Next**.



8. Select the check box for the adapter name that maps to Control Connection #1 and for the adapter name that maps to Control Connection #2. Click **Next**.



9. Select **Switch Fault Tolerance**. Click **Next**.

10. Click **Finish** and wait a few seconds for the adapters to be teamed.

11. Open the Modify Team dialog box as follows:
 - a) In **Device Manager | Network Adapters**, right-click **Control Team** and select **Properties**. The Properties dialog box opens.
 - b) Select the **Settings** tab.
 - c) Click **Modify Team**. A dialog box opens.
12. On the **Adapters** tab, do the following:
 - a) Select the top entry, which is the adapter name that maps to Control Connection #1 and click **Set Primary**.
 - b) Select the adapter name that maps to Control Connection #2 and click **Set Secondary**.
13. Click **OK** and **OK** and to close dialog boxes.
14. Restart the K2 Summit/Solo system.

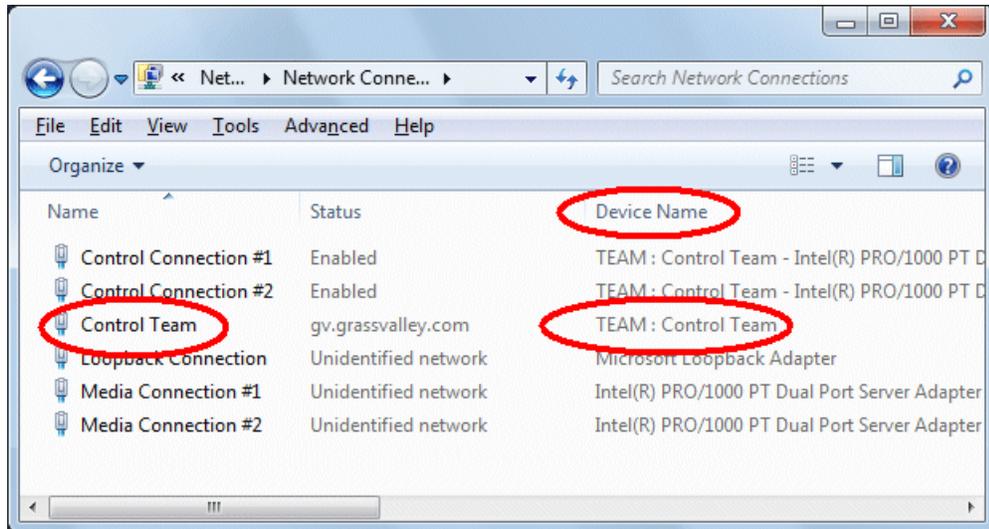
If continuing with network configuration, your next task is to name team and loopback.

Name team and loopback

Before beginning this task, make sure of the following:

- Adapters are named
- The control team is created

1. On the Windows desktop right-click **Start | Control Panel | Network and Sharing Center | Change adapter settings**. The Network Connections window opens.



2. For the Control Team and the loopback, select adapter names in the “Device Name” column and rename them as follows:
 - a) Select the adapter name.
 - b) Select **File | Rename** to enter rename mode.
 - c) Type the name, as specified in the following table:

In the Device Name column, select this adapter name...	And rename it as follows:
TEAM : Control Team	Control Team

3. Do one of the following:
 - If you intend to use SiteConfig for device discovery and IP address configuration, you do not need to set an IP address for the Control Team at this time. You are done with this procedure.
 - If you are not using SiteConfig, set an IP address for the Control Team at this time. Use standard Windows procedures.

NOTE: Do not set IP addresses for the two Media Connections.

If continuing with network configuration, your next task is to reorder adapters.

Reorder adapters

Before beginning this task, make sure of the following:

- Adapters are named correctly
 - The control team is created
 - The team and loopback are named
1. Open Network Connections, if it is not already open.
 - a) From the Windows **Start** menu, in the **Run** or the **Search programs and files** box, type `ncpa . cpl` and press **Enter**.
The Network Connections window opens.
 2. Select **Advanced**, then **Advanced Settings...**

3. On the **Adapters and Bindings** tab, depending on the K2 system storage, order adapters as follows:

Internal or direct-connect storage	Shared (SAN) storage
Loopback	Control Team
Control Team	Control Connection #1
Control Connection #1	Control Connection #2
Control Connection #2	Media Connection #1
Media Connection #1	Media Connection #2
Media Connection #2	Loopback
1394 Connection	1394 Connection

If controlled by Dyno Production Assistant, refer to Dyno PA documentation for adapter order.

4. Click **OK** to close and accept the changes.
5. Close Network Connections.

Network configuration is complete.

Next, enhance network bandwidth.

Enhance network bandwidth

On K2 Summit/Solo systems with K2 system software 9.x, the on-board network adapters have a performance limitation that causes them to function at half the expected bandwidth. On most systems, there are no symptoms related to this limitation, as network traffic is below the limitation. Systems using ShareFlex or having other requirements for high network bandwidth might be impacted to some degree. Symptoms include general network bandwidth restrictions, slow iSCSI I/O performance, slower than expected FTP traffic, and other slowness not caused by other factors.

Grass Valley requires that you remove the limitation and enhance the network performance. Once the limitation is removed, the change persists throughout normal software upgrades. However, if you reimaged the K2 Summit/Solo system you must check and reapply the change if necessary.

To remove the limitation, disable "Large Send Offloads" on the network adapters and disable "CPU Power Technology" in the BIOS.

Refer to Grass Valley Knowledge Base Article [#000011688](#) for more information.

Disable Large Send Offloads

1. From the Windows operating **Start** menu, open **Control Panel**.
2. In **Control Panel**, open **Network and Sharing Center**.

3. In **Network and Sharing Center**, select **Change adapter settings**.
Network Connections opens and displays network adapters, including the following:
 - Control Connection #1
 - Control Connection #2
 - Media Connection #1
 - Media Connection #2
4. For each Control Connection and each Media Connection, do the following:
 - a) Right-click the connection and select **Properties**.
The **Connection Properties** dialog box opens.
 - b) In the **Connection Properties** dialog box, click **Configure**.
The **Adapter Properties** dialog box opens.
 - c) In the **Adapter Properties** dialog box, click the **Advanced** tab.
 - d) On the Advanced tab, in the Settings list select **Large Send Offload v2 (IPv4)** and then in the Value drop-down list select **Disabled**.
 - e) Click **OK** to save settings and close.
 - f) Repeat these steps for each Control Connection and each Media Connection.

Next, disable CPU power technology.

Disable CPU Power Technology

1. Restart the K2 Summit/Solo system.
2. During the BIOS startup screen, press **F2** repeatedly until **Entering Setup...** appears.
The BIOS screen opens.
3. On the BIOS screen, use arrow keys and select the **Advanced** tab.
4. On the Advanced tab select **CPU Core Configuration** and then press **Enter**.
The CPU Core Configuration screen opens.
5. On the CPU Core Configuration screen, select **Power Technology** and then press **Enter**.
A **Power Technology** dialog box opens.
6. In the **Power Technology** dialog box select **Disable** and then press **Enter**.
7. Press **F4** to save and exit.
A **Save & Exit Setup** dialog box opens.
8. In the **Save & Exit Setup** dialog box, select **Yes** and then press **Enter**.
9. The K2 Summit/Solo system restarts.

Next, install the SiteConfig Discovery Agent.

Install the Discovery Agent on a K2 Summit/Solo system

Do this task for both software and CPU carrier module upgrade kits.

Find the Discovery Agent installation files on the USB Recovery Flash Drive you received with the upgrade kit. The files are in the `\release\DiscoveryAgent` folder.

1. Navigate to your SiteConfig files.
2. To launch the program that installs the ProductFrame Discovery Agent Service do the following:
 - a) Copy the `Discovery Agent` directory to the device.
 - b) In the directory, double-click the `DiscoveryAgentServiceSetup.msi` file.
The setup program launches to install the SiteConfig Discovery Agent.
 - c) Follow the setup wizard.
3. When presented with a list of device types, select one of the following as appropriate:
 - K2SummitSanClient
 - K2SummitStandaloneClient
 - K2SoloStandaloneClient
4. Complete the setup wizard and restart the device.
The restart is required after the installation.

Next, do one of the following:

- Install software using SiteConfig.
- Install software manually.

If you install software with SiteConfig

Do not do the tasks in this section if:

- You install/upgrade software on the K2 Summit/Solo system manually, rather than using SiteConfig.

Do the tasks in this section if:

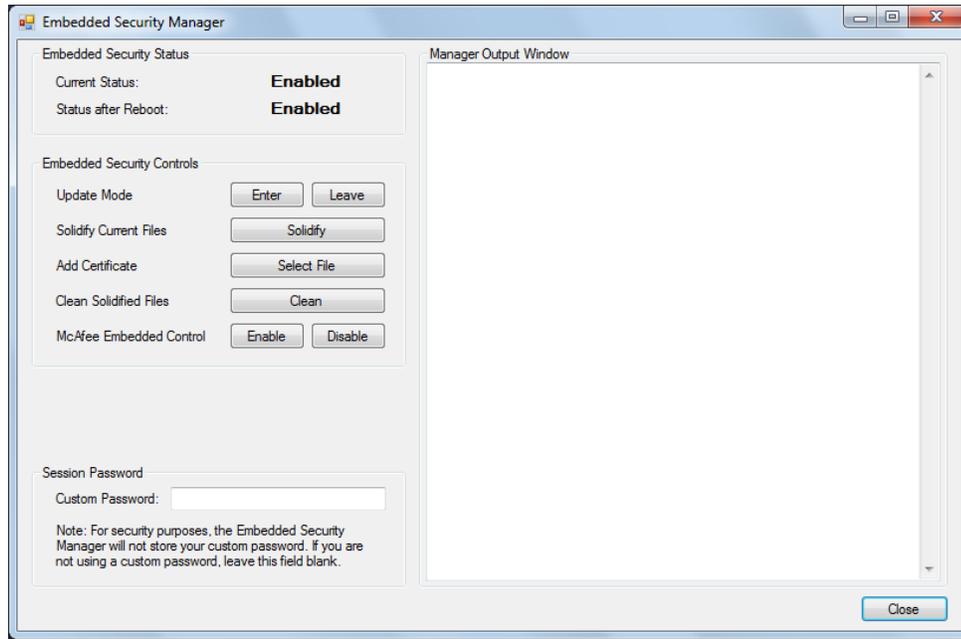
- You use SiteConfig to install/upgrade software on the K2 Summit/Solo system.

NOTE: You must use the same install/upgrade method now, either SiteConfig or manual, as you will use for installations and upgrades in the future. Do not switch between methods, using one method now and a different method for future installations and upgrades.

Follow the task in this section sequentially.

Leave the embedded security solution Update mode

1. From the Windows desktop, click **Start | All Programs | Grass Valley | Embedded Security Manager**. Embedded Security Manager opens.



Interpret Current Status as follows:

- **Enabled:** Embedded Security is enabled but is not in Update mode.
 - **Update:** Embedded Security is enabled and is in Update mode, ready for software installation.
2. Under **Update**, manage the Update mode as follows:
 - Click **Leave** to take Embedded Security out of Update mode.

A restart is not required after you leave the Update mode.

Install software using SiteConfig

1. Find SNFS software, K2 software, and "K2 Release Notes" on the USB Recovery Flash Drive that you received with the upgrade kit.
2. If you have reimaged 32-bit Windows XP K2 Summit system so that it is now a 64-bit Windows 7 system, do the following:
 - a) Remove the K2 Summit system from the SiteConfig system descriptions.
 - b) Add the K2 Summit system as a 64-bit system to the SiteConfig system description.SiteConfig generates an "RPES Service Error 2" if you do not do this step.

3. Use your normal methodology with SiteConfig to install the following software:
 - SNFS software
 - K2 system software

NOTE: When checking software, if an "Unable to copy... to target" error appears for a device that has Grass Valley Embedded Security, put Embedded Security in Update mode.

Next, restore licensing.

Restore licensing

1. On the Windows desktop, click **License Manager**.
SabreTooth License Manger opens.
2. If the License Manager says the licenses are not for this machine then the hardware for the network interfaces has changed. Contact Grass Valley Customer Service to order new replacement licenses.

Next, from the following list, do those tasks that apply to the K2 Summit/Solo system. Follow instructions in related topics later in this document as necessary.

- If a K2 Summit system with direct-connect storage or shared storage on a redundant K2 SAN, install MPIO software.
- If a K2 Summit system with a Fibre Channel card, install the Fibre Channel card driver.

If none of the tasks above apply to the K2 Summit/Solo system, skip ahead and do final steps.

If you install software manually

Do not do the tasks in this section if:

- You use SiteConfig to install/upgrade software on the K2 Summit/Solo system.

Do the tasks in this section if:

- You install/upgrade software on the K2 Summit/Solo system manually, rather than using SiteConfig.

NOTE: You must use the same install/upgrade method now, either SiteConfig or manual, as you will use for installations and upgrades in the future. Do not switch between methods, using one method now and a different method for future installations and upgrades.

Follow the task in this section sequentially.

Install software manually

Do not do this task if:

- You use SiteConfig to install/upgrade software on the K2 Summit/Solo system.

Do this task if:

- You install/upgrade software on the K2 Summit/Solo system manually, rather than using SiteConfig.

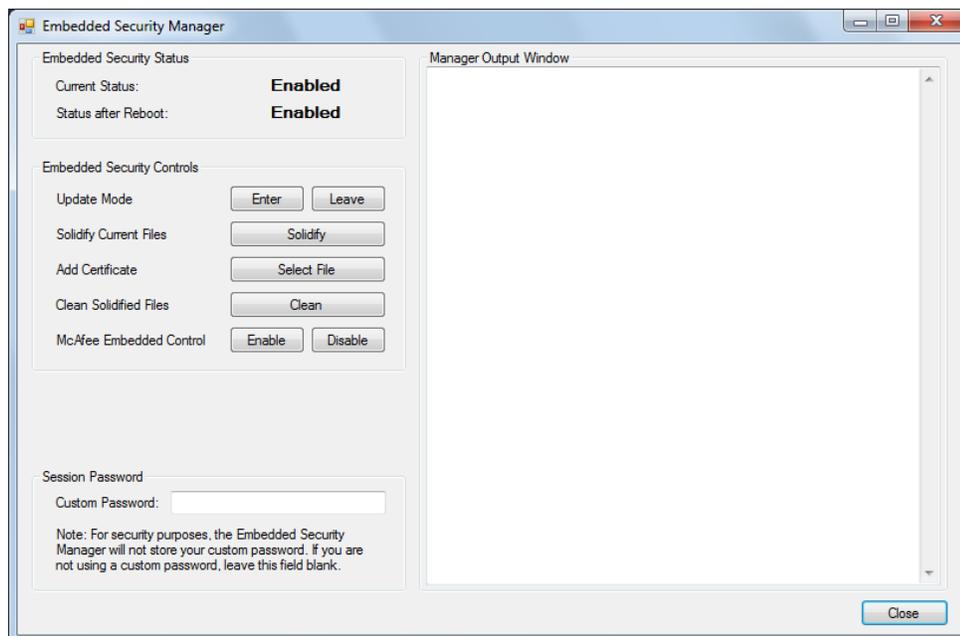
NOTE: You must use the same install/upgrade method now, either SiteConfig or manual, as you will use for installations and upgrades in the future. Do not switch between methods, using one method now and a different method for future installations and upgrades.

Find K2 software, SNFS software, and "K2 Release Notes" on the USB Recovery Flash Drive that you received with the upgrade kit.

1. Install SNFS software. Refer to "K2 Release Notes" for procedures.
SNFS uses the settings restored from `srestore.bat`.
2. Install K2 software. Refer to "K2 Release Notes" for procedures.

Leave the embedded security solution Update mode

1. From the Windows desktop, click **Start | All Programs | Grass Valley | Embedded Security Manager**. Embedded Security Manager opens.



Interpret Current Status as follows:

- **Enabled:** Embedded Security is enabled but is not in Update mode.
 - **Update:** Embedded Security is enabled and is in Update mode, ready for software installation.
2. Under **Update**, manage the Update mode as follows:
 - Click **Leave** to take Embedded Security out of Update mode.

A restart is not required after you leave the Update mode.

Restore licensing

1. On the Windows desktop, click **License Manager**.
SabreTooth License Manger opens.

2. If the License Manager says the licenses are not for this machine then the hardware for the network interfaces has changed. Contact Grass Valley Customer Service to order new replacement licenses.

Next, from the following list, do those tasks that apply to the K2 Summit/Solo system. Follow instructions in related topics later in this document as necessary.

- If a K2 Summit system with direct-connect storage or shared storage on a redundant K2 SAN, install MPIO software.
- If a K2 Summit system with a Fibre Channel card, install the Fibre Channel card driver.

If none of the tasks above apply to the K2 Summit/Solo system, skip ahead and do final steps.

Install Multi-Path I/O software

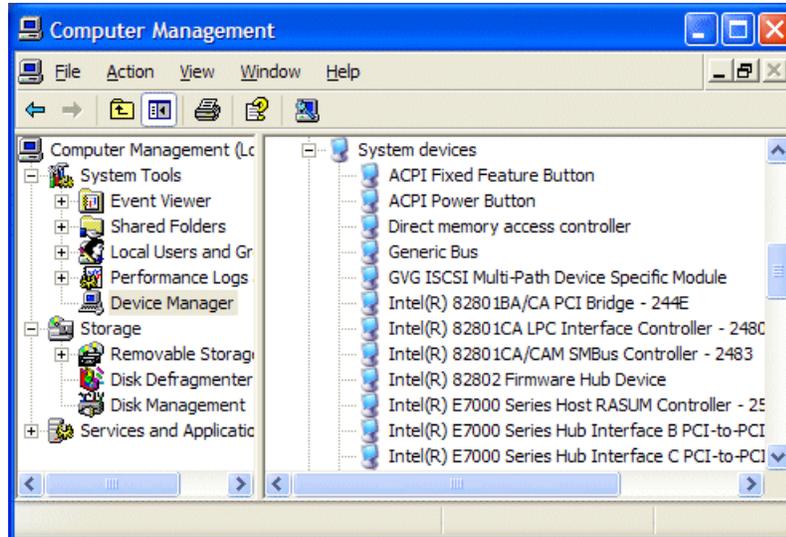
Do this task on a 64-bit K2 Summit system with direct-connect storage or shared storage on a redundant K2 SAN.

1. Access the Windows desktop on the computer on which you are installing MPIO.
You can do this locally with a connected keyboard, mouse, and monitor or remotely via the Windows Remote Desktop Connection.
2. Access the Windows desktop on the computer on which you are installing MPIO.
You can do this locally with a connected keyboard, mouse, and monitor or remotely via the Windows Remote Desktop Connection.
3. Stop all media access. If AppCenter is open, close it.
4. Click **Start | Run**, type `cmd` and press **Enter**.
The MS-DOS command prompt window opens.
5. From the command prompt, navigate to the `C:\profile\mpio` directory.
6. Type the following at the command prompt:

```
gdsminstall64.exe -i
```
7. Restart the computer on which you installed MPIO.

8. After restart, to verify that the software is installed, on the Windows desktop right-click **My Computer** and select **Manage**.

The Computer Management window opens.



9. In the left pane select **Device Manager**.
10. In the right pane open the **System devices** node and verify that **GVG ISCSI Multi-Path Device Specific Module** is listed.

Next, do one of the following:

- If the K2 Summit system does not have a Fibre Channel card, skip ahead and do final steps.
- If the K2 Summit system has a Fibre Channel card, install the Fibre Channel card driver.

Install the Fibre Channel card driver

If the K2 Summit system is on a redundant K2 SAN or is connected to direct-connect storage, make sure that MPIO software is installed.

If your K2 Summit system has the optional Fibre Channel card, the driver for the Fibre Channel card is not installed on the recovery image provided by Grass Valley for that K2 Summit system. Therefore, after restoring the image, you must install the Fibre Channel card driver.

A K2 Summit system can have one of the following types of Fibre Channel cards:

- LSI
- ATTO

Depending on the type of Fibre Channel card in the K2 Summit system, do the appropriate task from this section to install the Fibre Channel card driver.

Install the LSI Fibre Channel card driver

1. Make sure that you have access to the Fibre Channel card driver file. K2 software installation copies the driver to the local K2 Summit system, in `C:\Windows`. In that location, look for `LSI_SCSIPOINT_1.21.25.00`, then do one of the following:
 - If the file is present, continue with the next step in this procedure.
 - If the file is not present, procure the file from `ftp://ftp.grassvalley.com/pub/K2/Microcode_and_Drivers/LSI_SCSIPOINT`. The filename is `LSI_SCSIPOINT_1.21.25.00.zip`. Then continue with this procedure.
2. Upon restart a Found New Hardware wizard opens for the Fibre Channel controller. Install the driver on the first FC port as follows:
 - a) Select **Install from a list or specific location**. Click **Next**.
 - b) Select **Don't search. I will choose the driver to install** and then click **Next**.
 - c) Select **SCSI and Raid Controllers and Have Disk**.
 - d) Browse to `C:\Windows` and find `LSI_SCSIPOINT_1.21.25.00`. Click **Open** and **OK**.
 - e) Start the driver install by selecting **Next**.
 - f) On the Hardware Installation page, click **Continue Anyway**.
 - g) Click **Finish**.
3. If the K2 Summit system has a dual port Fibre Channel card, on the Found New Hardware wizard, install the driver on the second FC port as follows:
 - a) Select **Install from a list or specific location** and then click **Next**.
 - b) Select **Don't search. I will choose the driver to install**. Click **Next**.
 - c) Select **Have Disk**.
 - d) Browse to `C:\Windows` and find `LSI_SCSIPOINT_1.21.25.00`. Click **Open** and **OK**.
 - e) Start the driver install by selecting **Next**.
 - f) On the Hardware Installation page, click **Continue Anyway**.
 - g) Click **Finish**.
4. On the Found New Hardware wizard, install the first LSI Pseudo Device as follows:
 - a) Select **Install from a list or specific location**. Click **Next**.
 - b) Select **Don't search. I will choose the driver to install** and then click **Next**.
 - c) Select **Have Disk**.
 - d) Browse to `C:\Windows` and find `LSI_SCSIPOINT_1.21.25.00`. Click **Open** and **OK**.
 - e) Start the driver install by selecting **Next**.
 - f) On the Hardware Installation page, click **Continue Anyway**.
 - g) Click **Finish**.

5. If the K2 Summit system has a dual port Fibre Channel card, on the Found New Hardware wizard, install the driver on the second LSI Pseudo Device port as follows:
 - a) Select **Install from a list or specific location** and then click **Next**.
 - b) Select **Don't search. I will choose the driver to install** and then click **Next**.
 - c) Select **Have Disk**.
 - d) Browse to *C:\Windows* and find *LSI_SCSIPOINT_1.21.25.00*. Click **Open** and **OK**.
 - e) Start the driver install by selecting **Next**.
 - f) On the Hardware Installation page, click **Continue Anyway**.
 - g) Click **Finish**.
6. If the K2 Summit system is on a redundant K2 SAN or is connected to direct-connect storage, make the following registry settings:

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Symmpi\Parameters\Device]
"DriverParameter"="MPIOMode=2"
"MaximumSGList"=dword:000000ff
"NumberOfRequests"=dword:00000020
```

Next, do final steps.

Install the ATTO Fibre Channel card driver

1. Open Device Manager.
2. Right-click on **K2 Summit Client** and select **Manage**.
3. Click **Device Manager**
4. Install the first Fibre Channel driver as follows:
 - a) Right click on the upper Fibre Channel Controller and select **Update Driver...**
 - b) On the Welcome page, select **No, not this time** and then click **Next**.
 - c) Select **Install from a list or specific location** and then click **Next**.
 - d) Browse to *C:\Profile\Drivers\ Atto 8Gb HBA Drivers\x86*.
 - e) Click **OK**.
 - f) Click **Next**.
 - g) Click **Finish** when prompted.
 - h) In the Found new hardware wizard that will open for the ATTO Phantom device, select **No, not this time**.
 - i) Select **Install from a list or specific location** and then click **Next**.
 - j) Browse to *C:\Profile\Drivers\ Atto 8Gb HBA Drivers* and select the *x86* directory if installing on a 32-bit computer or the *x64* directory if installing on a 64-bit computer.
 - k) Click **OK**.
 - l) Click **Next**.
 - m) Click **Finish** when prompted.

5. Repeat the process for the second Fibre Channel Controller as follows:
 - a) Right-click on the remaining Fibre Channel Controller and select **Update Driver...**
 - b) On the Welcome page, select **No, not this time** and then click **Next**.
 - c) Select **Install from a list or specific location** and then click **Next**.
 - d) Browse to *C:\Profile\Drivers\ Atto 8Gb HBA Drivers* and select the *x86* directory if installing on a 32-bit computer or the *x64* directory if installing on a 64-bit computer..
 - e) Click **OK**.
 - f) Click **Next**.
 - g) Click **Finish** when prompted.
6. Verify that the two "ATTO" devices are now listed under the SCSI and RAID Controllers
7. Close the Device Manager and System windows

Next, do final steps.

Final steps for software and CPU carrier module upgrades

Do this task for both software and CPU carrier module upgrade kits.

1. If you have not already done so, manage the Embedded Security. Make sure Update mode is ended.
2. Check the Windows operating system clock and, if necessary, set it to the correct time.
3. If you installed K2-XDP2-V9-FK, apply the Windows operating system sticker that you received with the upgrade kit. Attach it to the K2 Summit/Solo system, in the same location as the previous Windows operating system sticker.
4. If you are upgrading a K2 Summit SAN-attached system, on the K2 SAN's control point PC, use the K2Config application to add the K2 Summit system back to the SAN.
5. When the K2 Summit/Solo system is fully configured, licensed, and operational, create a first-birthday disk image and store it on the USB Recovery Flash Drive. Refer to the K2 product's Service Manual for procedures.
6. Disconnect the USB Recovery Flash Drive and store it in the front bezel assembly.

If present, discard the previous USB Recovery Flash Drive.

The upgrade process is complete for the following upgrade kits:

- K2-XDP2-CPU-FK
- K2-XDP2-V9-FK

For a K2 Summit system upgraded with the K2-XDP2-CPU-FK kit, if you do any service work or replace any Field Replaceable Units (FRUs), first consult "K2 Summit 3G Production Client Service Manual". This is true even if replacing an original FRU that has not been upgraded. System dependencies involving FRUs require procedures found only in "K2 Summit 3G Production Client Service Manual".

Related Topics

[Manage Embedded Security Update mode](#) on page 47

Install codec module upgrade

Before installing a codec module upgrade, the K2 Summit system must have Type II or Type III CPU carrier module, 16 GB system drive, 16 GB or 32 GB USB Recovery Flash Drive, and K2 software version 9.x or higher.

Tools and materials needed:

- Hardware as provided by upgrade kit. See description below.
- Torx tool with T15 magnetic tip

This section provides instructions for the following field kit:

Upgrade Nomenclature	Description
K2-XDP2-3G-FK	K2 Summit Production Client XDP Series 3G SDI Interface field kit for K2-XDP series platforms. Includes 2ea - 3G codec modules, 2 - ea. 550W power supplies, and installation instructions. NOTE: This kit cannot be used with K2-XDT Series Summit Transmission Clients and Servers or K2-SOLO models.

⚠ CAUTION: *This system contains board-level components that must be protected from static discharge and physical shock. Wear a wrist strap grounded to the system chassis when handling system components.*

Work through the task in this section.

Replace codec module and power supplies

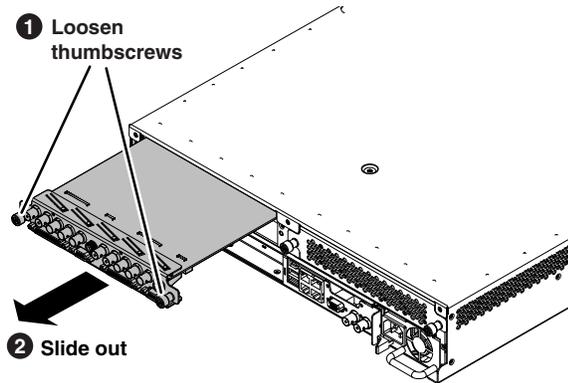
Do this task if installing K2-XDP2-3G-FK on a K2 Summit system.

NOTE: *Do not attempt to replace the CPU carrier module on a K2 Solo Media Server. K2-XDP2-3G-FK does not apply to K2 Solo Media Server.*

Before doing this task, do the following, if not already done:

- Shutdown the K2 Summit system.
 - Disconnect all power cables from the K2 Summit system.
 - Press the power button on the K2 Summit system to drain off power from boards.
1. Remove any cables connected to the codec modules.

2. Access the rear panel and remove as illustrated.



NOTE: With a firm grip on the metal (EMI) bracket, ensure the board is level and parallel to the card guides to avoid damage to the components on the edge opposite the rear panel.

⚠ CAUTION: Improper handling can damage components on the board. Do not allow the board to come in contact with the chassis sheet metal during removal or installation. The components on the edge opposite the rear panel are the most susceptible to damage.

3. Install the new codec modules.
4. Replace the current power supply modules with the new power supply modules.
5. Reconnect cables to the codec modules and power supplies.
6. After installing the card, start up and log on to the K2 Summit system with administrator privileges, then load software onto the codec board as follows:
 - a) Stop all Grass Valley services except for **Grass Valley Host File Service**.
 - b) From the Windows command prompt, navigate to the following directory:

```
C:\profile
```
 - c) Type the following and press **Enter**.

```
srtploder -U
```

This ensures that the board is flashed with the proper version to be compatible with K2 software.

The upgrade process is complete for the following upgrade kit:

- K2-XDP2-3G-FK

For a K2 Summit system upgraded with the K2-XDP2-3G-FK kit, if you do any service work or replace any Field Replaceable Units (FRUs), first consult "K2 Summit 3G Production Client Service Manual". This is true even if replacing an original FRU that has not been upgraded. System dependencies involving FRUs require procedures found only in "K2 Summit 3G Production Client Service Manual".

Related Topics

[Power supply module removal](#) on page 45

Upgrading a K2 Media Server to version 9.x

Software needed:

- K2 software version 9.x. Refer to "K2 Release Notes" to determine your compatible version.
- SNFS software version 4.1
- SNFS software version 4.2

This section provides instructions for the following field kit:

Upgrade Nomenclature	Description
K2-XDPSVR-V9-FK	K2 Server 9.x Upgrade Field Kit. Includes 9.x system software license, 32GB USB Thumb drive with Windows Server 2008 64bit, McAfee Embedded Server; CD with Acronis True Image Server.

Do not do this task if one of the following is true:

- The server has a version 8.1.x or higher disk image and you do not require the Embedded Security solution on the server. If this is the case, you can do a software-only upgrade on the server, as instructed by "K2 Release Notes" upgrade instructions.
- The server is a Dell 1910 or 2850. Version 9.x supports Dell 2950, Dell R610, and newer Dell platforms only.

Do this task if either of the following is true:

- The server has a disk image version lower than 8.1.x.
- You require the Embedded Security solution on the server.

This section provides instructions for servers that have the role of K2 file system server, such as the following:

- K2 SAN system:
 - The FSM on a basic (non-redundant) K2 SAN
 - The two FSMs on a redundant K2 SAN
- K2 Nearline system:
 - The NH server on a basic (non-redundant) system
 - The two NH servers on a redundant system

In addition to the instructions in this section, review "K2 Release Notes" upgrade instructions. When you upgrade the server, do so in the proper sequence with the other devices of the system. Also refer to "K2 SAN Installation and Service Manual" as necessary to accomplish the tasks in this section.

These instructions are for upgrading from a K2 system software 7.4.x or 8.x version to a 9.x version. Part of the upgrade is re-imaging the K2 Media Server. You must do all the steps as directed in the

procedure to ensure the system is properly upgraded. When you upgrade to version 9.x, all connected devices that run K2 system software must also upgrade to version 9.x.

1. Check the current base image version on the K2 Media Server to verify prerequisites stated earlier in this topic.
 - On a 32-bit K2 Media Server, use registry key
`Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Grass Valley Group\Base`
 - On a 64-bit K2 Media Server, use registry key
`Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Grass Valley Group\Base`
2. If you have not already done so, download the required software from the Grass Valley website. Use the following URL and then browse to the required version.
http://www.grassvalley.com/dl/k2_summit
3. On the K2 Media Server, open SabreTooth License Manager. If a K2-ISCSI-SVR license is installed, archive the license to a different location so that you can reinstall the license at the end of this process.
4. From the Control Point PC, remove the server from K2Config.
5. Remove SAN-attached K2 Summit systems and other K2 SAN clients from K2Config.
6. On the K2 Media Server, create a backup recovery disk image of the server's C and D partitions.
7. Restore the server's C partition from the disk image provided on the USB thumb drive you received with the upgrade kit.

NOTE: To preserve existing media, only restore the C partition from the generic disk image.
At first start up after reimage, the system is in Embedded Security Update mode by default.
8. Set up Windows.
9. Restore network configuration.
10. Install SiteConfig Discovery Agent.
11. At the server, manually install SNFS 4.1.
12. Restart the server and wait for all start up processes to complete.
13. Manually uninstall SNFS 4.1.
14. Restart the server and wait for all start up processes to complete.
15. Manually install SNFS 4.2.
16. Restart the server and wait for all start up processes to complete.
17. Manually install K2 9.x software.

While manually installing software, accept any hardware installation or driver/security prompts that appear. Also refer to related topics in "K2 Release Notes".
18. Restart the server and wait for all start up processes to complete.
19. Install Fibre Channel Card driver.
20. If you archived the K2-ISCSI-SVR Sabretooth license earlier in this process, reinstall it on the K2 Media Server.
21. Launch the Embedded Security Manager and select **Leave** to exit out of Update mode.
22. From the Control Point PC, use K2Config and add the server to the K2 SAN.

23. In K2Config, configure the server's File System Server page as follows:

- If a redundant K2 SAN, copy file system config settings from the redundant K2 Media Server, as prompted by K2Config.
- If a basic (non-redundant) K2 SAN, launch Storage Utility, identify a disk, then exit Storage Utility.

NOTE: Do not make a new file system.

K2Config does not allow you to proceed until you do these steps.

24. In K2Config, add SAN-attached K2 Summit systems and other K2 SAN clients.

25. Verify the server operates as expected.

26. Activate Windows within 30 days.

Upgrading a Control Point PC

Software needed:

- K2 software version 9.x.
- SiteConfig software

Refer to "K2 Release Notes" to determine your compatible versions.

This section provides instructions for the following field kit:

Upgrade Nomenclature	Description
CP-XDPCP-V9-FK	K2 Server 9.x Upgrade Field Kit. Includes 9.x system software license, 32GB USB Thumb drive with Windows Server 2008 64bit, Windows Server 2003 HyperV, McAfee Embedded Server, NetCentral 5.2.2; CD with Acronis True Image Server.

These instructions apply to the upgrade of a Grass Valley supplied, Dell platform, Control Point PC. As part of the upgrade you re-image the Control Point PC. On the Windows Server 2008 R2 64-bit image there is a Virtual Machine that has a Windows Server 2003 32-bit operating system. This is required to support NetCentral.

Re-image Control Point PC

1. Make a record of your current NetCentral licenses, as you must request new licenses later in this process.
2. Backup the current Grass Valley Control Point image to an external USB drive.
3. Reimage the Grass Valley Control Point Dell R610 to the image on the USB thumb drive you received with the upgrade kit. At the time of this writing, it is a version C9.0.3 base image.
4. Install K2 Control Point, SiteConfig, and other software as required for your use of the Control Point PC.

Set BIOS prerequisites

1. In the BIOS set **EXECUTE DISABLE** to **ENABLED**.
2. In the BIOS set **VIRTUALIZATION TECHNOLOGY** to **ENABLED**.

Configure Virtual Machine

Before doing this task, verify that the base image is version C9.0.3.

1. Check the current base image version to verify prerequisites stated earlier in this topic.

- On a 64-bit machine, use registry key

`Computer\HKEY_LOCAL_MACHINE\SOFTWARE Wow6432Node\Grass Valley Group\Base`

2. From the Windows desktop, right-click **Computer** and select **Manage**.
Server Manager opens.
3. In the tree-view, expand nodes **Roles | Hyper-V | Hyper-V Manager**.
4. Select **BASEPC**.
5. Under Actions, select **Virtual Network Manager**.
Virtual Network Manager opens.
6. Identify the physical network adapter to use for the Virtual Network. You do this using Windows Network Connections.
 - a) To open Network Connections, from the Windows **Start** menu, in the **Run** or the **Search programs and files** box, type `ncpa.cpl` and press **Enter**.
The Network Connections window opens.
 - b) Find the connection that is the physical network adapter (not a virtual adapter) that you use for connection to your network.
For example, if the connection named "Control Connection" is currently connected to your network, then that is the connection to use for the Virtual Network.
 - c) Take note of the adapter and its number, as specified in the **Device Name** column.
In next steps, you must select this adapter to use it for the Virtual Network.
7. In Virtual Network Manager, click **Add**.
8. Under New Virtual Network, Connection Type, in the **External** drop-down list, select the network adapter that you identified to use for the Virtual Network.
9. Verify that **Allow management operating system to share this network adapter** is selected.
10. Click **Apply** and when prompted to apply network changes, click **Yes**.
Progress is reported for applying changes. Wait until changes are complete.
11. Click **OK** to close the connection set-up.
12. Under BASEPC, select **NetCentral**.
13. Under Actions, NetCentral, select **Settings**.
Setting for NetCentral opens.
14. Under Hardware, click **Memory**.
15. Under Memory management settings, click **Static**.
16. Verify that Static RAM is specified as **2048 MB**.
17. Under Hardware, click **Network Adapter**.
18. In the **Network** drop-down list, select the network you created, which is **New Virtual Network**.
19. Under Management, click **Automatic Start Action**.
20. Select the **Always start this virtual machine automatically** option.
21. Under Management, click **Automatic Stop Action**.
22. Select the **Save the virtual machine state** option.
23. Click **Apply** and **OK**.
24. Verify that the physical network adapter that you used for the Virtual Network is connected to your network.
25. Restart the Control Point PC.

26. From the Windows desktop, right-click **Computer** and select **Manage**.
Server Manager opens.
 27. In the tree-view, expand nodes **Roles | Hyper-V | Hyper-V Manager**.
 28. Select **BASEPC**.
 29. Under BASEPC, verify that the NetCentral Virtual Machine is running.
- Next, do Windows setup on the NetCentral Virtual Machine.

Setting up Windows on the Virtual Machine

Before doing this task, you must configure the NetCentral Virtual Machine on the Control Point PC.

1. From the Windows desktop, right-click **Computer** and select **Manage**.
Server Manager opens.
2. In the tree-view, expand nodes **Roles | Hyper-V | Hyper-V Manager**.
3. Select **BASEPC**.
4. Under BASEPC, verify that the NetCentral Virtual Machine is running.
5. To connect to the NetCentral Virtual Machine, under NetCentral click **Connect**.
A **Virtual Machine Connection** window opens.
If you have not yet done Windows setup, a Windows Setup Wizard is displayed.
6. Work through the Windows Setup Wizard, clicking **Next** and **I accept** and entering other information as desired.
7. On the Product Key page, key in your 25-character Product Key to authenticate your Microsoft Windows Server 2003.
8. On the Workgroup or Computer Domain page, choose one of the following:
 - Workgroup: GRASSVALLEY
 - Computer Domain: Enter your own domain.
9. Click **Finish** to complete the Windows Setup Wizard.
The Virtual Machine restarts.

Next, log on to the Virtual Machine and license NetCentral.

Logging on to the Virtual Machine

Before doing this task, configure the Virtual Machine and set up Windows.

1. From the Control Point PC Windows desktop, right-click **Computer** and select **Manage**.
Server Manager opens.
2. In the tree-view, expand nodes **Roles | Hyper-V | Hyper-V Manager**.
3. Select the Virtual Machine name, as named in Windows setup.
4. Under the Virtual Machine name, verify that the NetCentral Virtual Machine is running.

5. To connect to the NetCentral Virtual Machine, under NetCentral click **Connect**.
A **Virtual Machine Connection** window opens.
6. If a **Welcome to Windows** log on message is displayed, do the following to log on to the Virtual Machine.
 - a) On the **Virtual Machine Connection** window tool bar, click the **Ctrl + Alt + Delete** button.

Ctrl + Alt + Delete is sent to the Virtual Machine.
 - b) Enter your user name and password and click **OK**.
The Virtual Machine Windows desktop opens.

Next, license NetCentral.

License NetCentral on the Virtual Machine

You must request new NetCentral licenses and add them to the Virtual Machine. You do this on the Virtual Machine (not on the Control Point PC), using the SabreTooth License Manager. Because the NetCentral Virtual Machine desktop does not have a License Request Wizard, start by following the instructions in the next topic [If you encounter difficulties when requesting a license](#) on page 35.

Licenses are requested through email and managed through the SabreTooth License Manager, which is installed on the Grass Valley product with the Grass Valley software. The SabreTooth License Manager must be located on the Grass Valley product.

If you encounter difficulties when requesting a license

If you encounter difficulties running the License wizard, or the License wizard is not available, try this alternate method:

1. Generate a unique ID of the device where you will install software, as follows:
 - a) Double click on the License Manager icon on the Windows Desktop.
The SabreTooth License Manager opens.
 - b) Choose **File | Generate Unique Id** the License Manager.
 - c) Click **Copy to clipboard** to copy the generated ID, and **OK** to exit.
2. Prepare an email that includes the following information:
 - Customer Name
 - Customer Email
 - Sales Order Number
 - Unique ID of the device where you will install software.
 - The license types you are requesting.
3. Send the email to NC-Licenses@grassvalley.com.

The SabreTooth license number will be emailed to the email address you specified.

Adding a license to the Virtual Machine

Your software license, *Licenses_<SalesNumber>.txt*, is provided as a text file. Use the License Manager to add this file to your system and enable the desired feature.

1. Double click on the License Manager icon on the Windows Desktop.
The SabreTooth License Manager opens.
2. Do one of the following:
 - Choose **File | Import License** and navigate to the file location to open the text file.
 - Drag and drop the text file onto the License Manager.

You will now see the permanent license in SabreTooth, as well as any other licenses, permanent or temporary, that have been installed on this machine.

3. Restart the Virtual Machine.

You should archive the permanent license to a backup system.

Installing a two channel upgrade

Tools and materials needed:

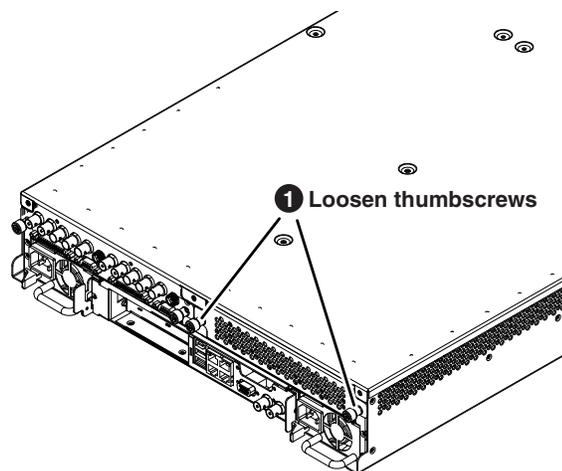
- Upgrade codec module.

This section provides instructions for the following field kits.

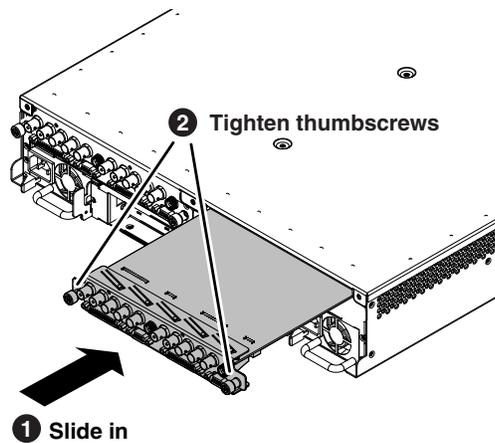
Upgrade Nomenclature	Description
K2-XDP2-2IO-FK	K2 Summit 3G 2 HD/SD channel I/O field kit. Adds 2 HD/SD bi-directional channels to the K2-XDP2-02 or any of the K2- XDP Series clients. When used with the K2-XDP Series clients all codec modules must be replaced with the Summit 3G module.

⚠ CAUTION: *This system contains board-level components that must be protected from static discharge and physical shock. Wear a wrist strap grounded to the system chassis when handling system components.*

1. If you intend to upgrade K2 software along with this Field Kit upgrade, upgrade K2 software first, completing all upgrade processes as documented in "K2 Release Notes", then proceed with this procedure.
2. Restart the K2 system.
3. Log in to Windows.
4. When the AppCenter logon box appears, click **Cancel** and **Abort**.
5. Delete the channel suites file in the `C:\profile\ChannelSuites` directory. The file name begins with the K2 system's name. For example, if the name is `k2client1`, then the file name is `K2CLIENT1_localConnection.xml`.
6. Shutdown the K2 system.
7. From the rear panel, remove the blank plate that covers the empty codec module slot, as illustrated.



8. Install the upgrade codec module as illustrated.



NOTE: With a firm grip on the metal (EMI) bracket, ensure the board is level and parallel to the card guides to avoid damage to the components on the edge opposite the rear panel.

⚠ CAUTION: Improper handling can damage components on the board. Do not allow the board to come in contact with the chassis sheet metal during removal or installation. The components on the edge opposite the rear panel are the most susceptible to damage.

9. Start up the K2 system.
On restart, the K2 system rescans hardware and automatically discovers the new codec module.
10. If a message appears, follow the instructions in the message to either restart or shutdown/startup. This second startup process is necessary so that the K2 system can reconfigure appropriately.
11. After installing the replacement codec module, install the current version of K2 software and restart.

This is a re-install of current software, not an upgrade. You must install the same version of software that is currently on the K2 system now, regardless of whether you did or did not upgrade software earlier in this procedure. You install software now to ensure that the board is flashed with the proper version to be compatible with software currently on the K2 system. An over-install is all that is required. You do not need to first un-install the software.
12. Log in to Windows and AppCenter, and open Configuration Manager. The new channels are available for configuration.

Configure channels as follows:

- If you are installing a codec license field kit, do not configure your new channels yet. First install the codec license field kit, then configure your new channels.

Installing the two channel codec license

Tools and materials needed:

- The license sheet you received with the upgrade kit.

This section provides instructions for the following field kits:

Upgrade Nomenclature	Description
K2-XDP2-AVC-2CH-FK	K2 Summit 3G AVC-Intra 2 channel codec license. Includes AVC-Intra level 50 and 100 and decoding of H.264 L4.2. Two required for 4 channel model (K2-XDP2-04) Field kit.

Work through the tasks in this section sequentially.

Requesting a license

1. If you have not already done so, log on to the K2 Summit/Solo system.

NOTE: *You must log in as an Administrator with a local account, not a domain account.*

2. On the Windows desktop in the Grass Valley License Requests folder, open the appropriate license request shortcut.

The License Request Wizard displays.

3. Read the on-screen instructions, then click **Next**.

The Customer dialog box displays.

4. Enter the information requested on this page then click **Next**.

You must provide a valid email address to receive your license file.

The Sales Number dialog box displays.

5. Enter the Sales Order Number in the field then click **Next**.

Typically the Sales Order Number is found on the Software License sheet that you received from Grass Valley.

The Summary dialog box displays.

6. Review the License Request information and click **Finish**.

A License Request text file, *License_Request_<SalesNumber>.txt*, is generated and saved to the Windows Desktop.

NOTE: *If you are requesting licenses for more than one application, be sure to modify the name of the first License Request text file before saving it to your desktop. (In Notepad, use the Save As command.) Otherwise, the second License Request text file will overwrite it.*

7. If a K2 Summit/Solo system at a K2 software version lower than 9.0 and the write filter is currently enabled, be aware that files on the desktop are lost on restart. Therefore do one of the following:
 - Save the License Request text file(s) to a different location.
 - Keep the K2 system running (do not restart) until after you have requested the license(s).
8. Do one of the following:
 - Attach the License Request text file to an email.
 - Paste the text directly into an email message.

You might want to keep a copy of the message for your records.

9. Send the email as instructed by the License Request Wizard.

An email will be sent from Grass Valley to the return email address you specified; your SabreTooth software license will be provided as a text file.

10. Save this email in case you ever need to re-image this machine.

Next, when you receive the email from Grass Valley with your license, add the license to the K2 Summit/Solo system.

Adding a license

Your software license, *Licenses_<SalesNumber>.txt*, is provided as a text file. Use the License Manager to add this file to your system and enable the desired feature.

1. Double click on the License Manager icon on the Windows Desktop.

The SabreTooth License Manager opens.
2. Do one of the following:
 - Choose **File | Import License** and navigate to the file location to open the text file.
 - Drag and drop the text file onto the License Manager.

You will now see the permanent license in SabreTooth, as well as any other licenses, permanent or temporary, that have been installed on this machine.

You should archive the permanent license to a backup system.

Installing a MPEG/Multi-Cam codec option upgrade

Prerequisites:

- K2 software version 8.1 or higher is required

Tools and materials needed:

- Codec option card
- #1 Phillips screwdriver

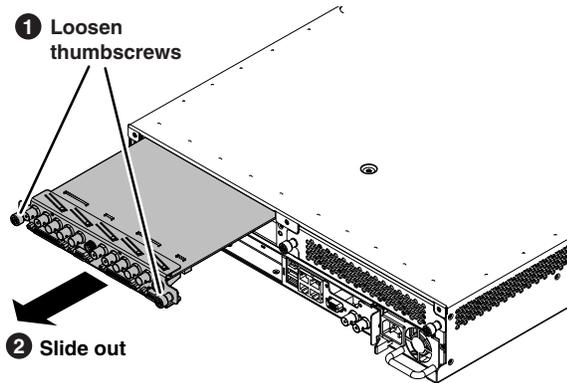
This section provides instructions for the following field kits:

Upgrade Nomenclature	Description
K2-XDP2-MPG2-MC-FK	K2 Summit 3G MPEG2 Multicam encoding field. Adds the ability to record up to 4 video streams per codec module using MPEG2 compression when used in ChannelFlex mode. Includes hardware and additional MPEG encoding license and K2_APPCENTER_ELITE. Two K2-XDP2-MPG-FK kits are required for the K2-XDP2-04 and enables up to 8 video streams to be recorded.

⚠ CAUTION: *This system contains board-level components that must be protected from static discharge and physical shock. Wear a wrist strap grounded to the system chassis when handling system components.*

1. If you intend to upgrade K2 software along with this Field Kit upgrade, upgrade K2 software first, then continue with this procedure.
2. Shutdown the K2 Summit system.

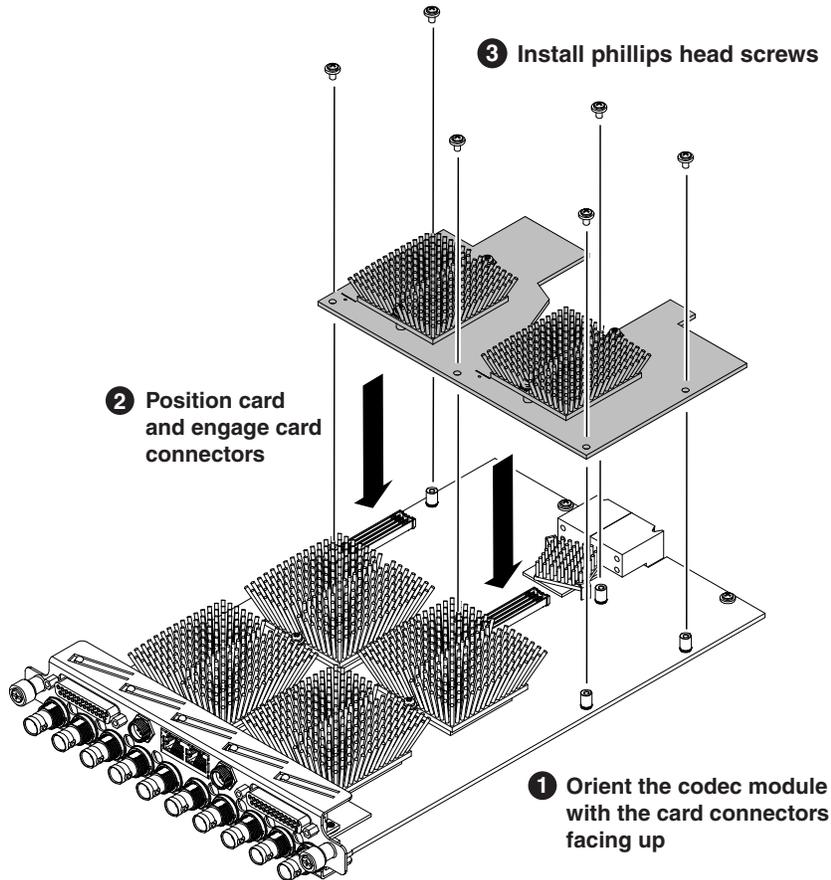
3. Access the rear panel and remove as illustrated.



NOTE: With a firm grip on the metal (EMI) bracket, ensure the board is level and parallel to the card guides to avoid damage to the components on the edge opposite the rear panel.

⚠ CAUTION: Improper handling can damage components on the board. Do not allow the board to come in contact with the chassis sheet metal during removal or installation. The components on the edge opposite the rear panel are the most susceptible to damage.

4. Install codec option card as shown.



5. Install the codec module into the K2 Summit system.
6. Start up the K2 Summit system.
On restart, the K2 Summit system rescans hardware and automatically discovers the codec option card.
7. If a message appears, follow the instructions in the message to either restart or shutdown/startup. This second startup process is necessary so that the K2 Summit system can reconfigure appropriately.
8. After installing the card, start up and log on to the K2 Summit system with administrator privileges, then load software onto the codec board as follows:
 - a) Stop all Grass Valley services except for **Grass Valley Host File Service**.
 - b) From the Windows command prompt, navigate to the following directory:
`C:\profile`
 - c) Type the following and press **Enter**.
`srtploder -U`

This ensures that the board is flashed with the proper version to be compatible with K2 software.

Next, license the K2 Summit system for K2 AppCenter Elite, if it is not already licensed. The license enables the ChannelFlex functionality supported by the codec option card.

NOTE: Once a channel is operational, if you then remove the codec option card from the codec module you must also delete C:/profile/config/config.xml. Failure to do so causes errors in Configuration Manager.

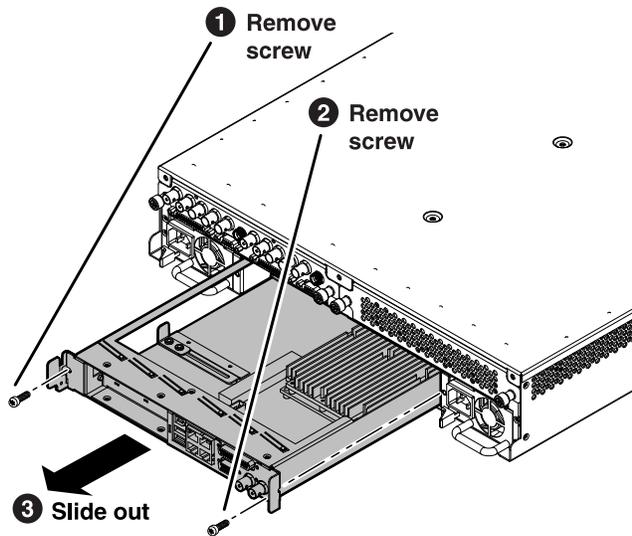
K2 Summit System Procedures

K2 Summit system procedures

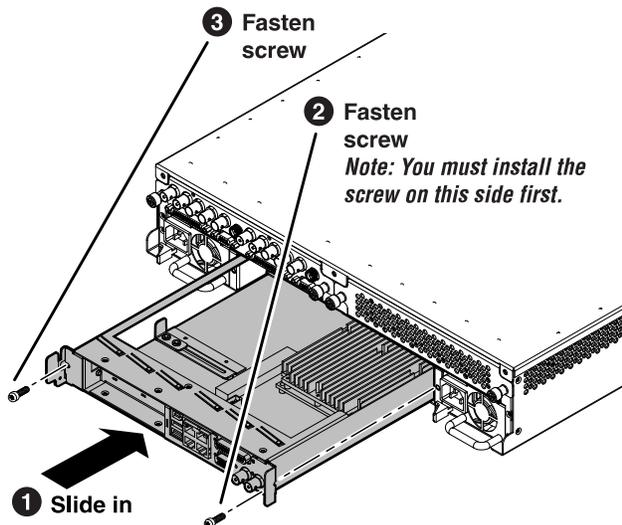
Refer to the following procedures as directed by the instructions for the Field Kit you are installing.

Carrier module removal

1. When removing the carrier module, access it from the rear panel. Remove as illustrated.

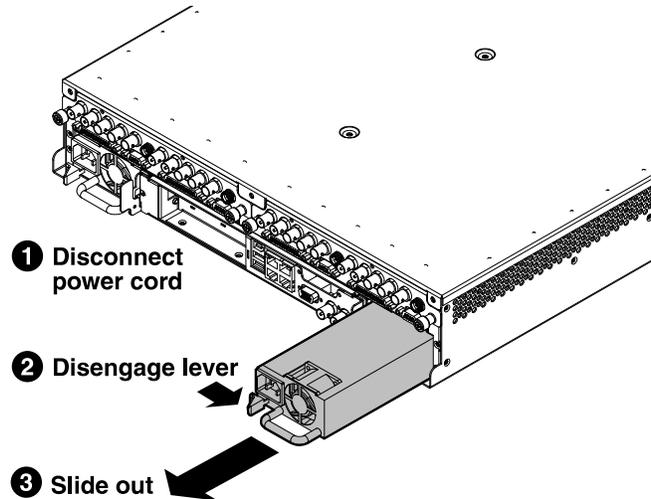


2. When replacing the carrier module, the screw attachment sequence is critical, as illustrated.



Power supply module removal

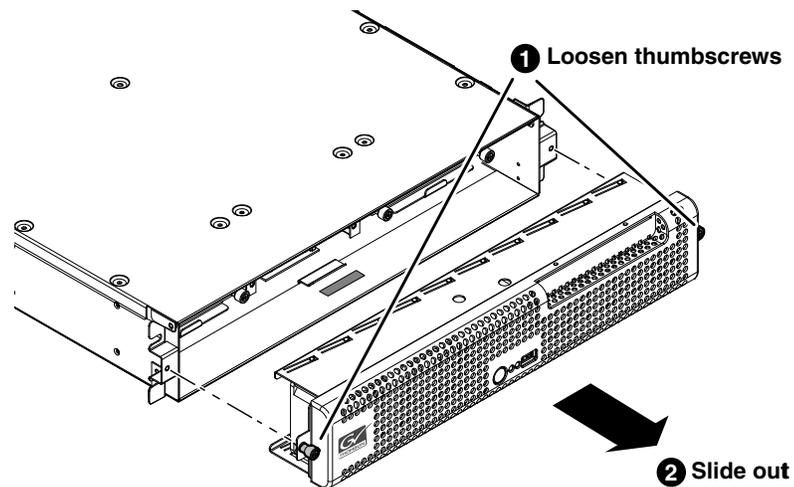
Access the power supply module from the rear panel. Remove as illustrated.



Front bezel assembly removal K2 Summit

You can remove the bezel assembly while the K2 Summit system is operating. If you do so, make sure you replace it within three minutes to ensure that the correct operating temperature is maintained.

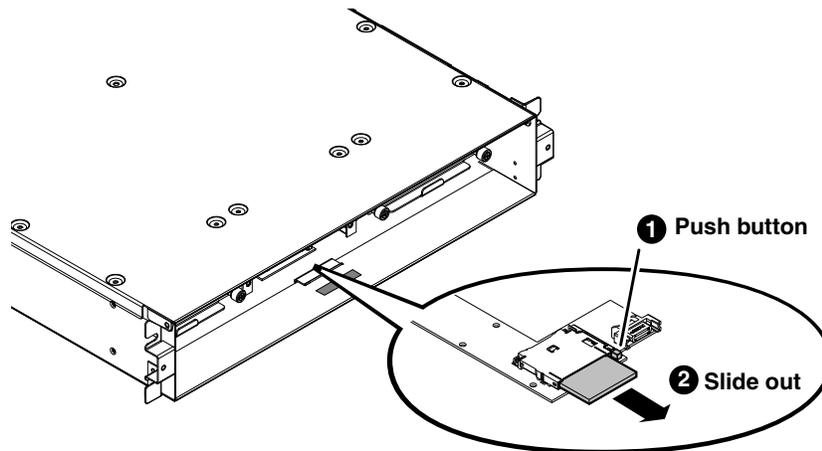
To remove the front bezel assembly, proceed as illustrated.



CompactFlash boot media removal K2 Summit

Before doing this task, remove the front bezel assembly.

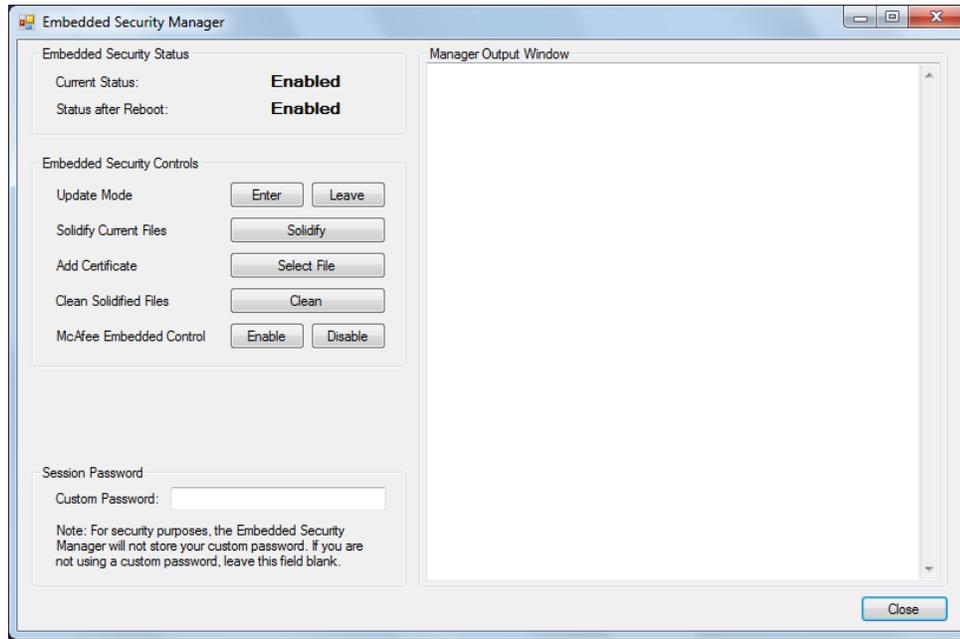
To remove the boot media, proceed as illustrated.



You must use the CompactFlash boot media provided by Grass Valley. Do not use CompactFlash media procured elsewhere.

Manage Embedded Security Update mode

1. From the Windows desktop, click **Start | All Programs | Grass Valley | Embedded Security Manager**. Embedded Security Manager opens.



Interpret Current Status as follows:

- **Enabled:** Embedded Security is enabled but is not in Update mode.
 - **Update:** Embedded Security is enabled and is in Update mode, ready for software installation.
2. Manage the Update mode as follows:
 - If Embedded Security is not in Update mode, click **Enter** to put it in Update mode.
 - If Embedded Security is already in Update mode, click **Leave** to take it out of Update mode.

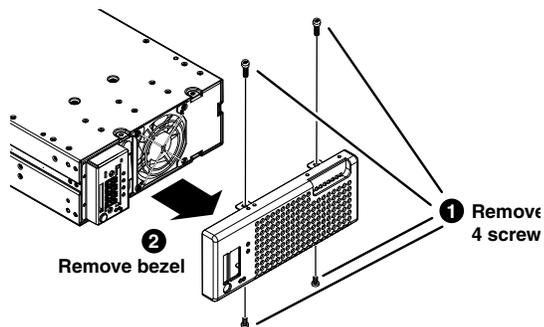
A restart is not required after you change the Update mode.

K2 Solo Media Server procedures

Refer to the following procedures as directed by the instructions for the Field Kit you are installing.

Front bezel removal K2 Solo

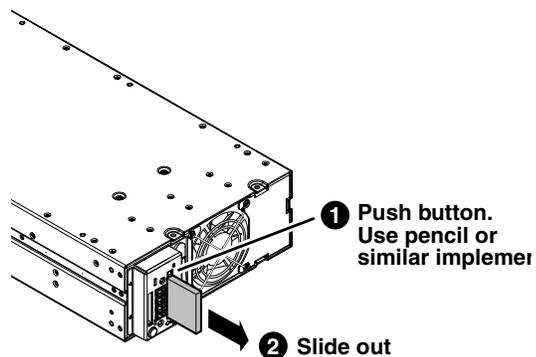
To remove the front bezel, proceed as illustrated.



⚠ CAUTION: Do not remove bezel while power is on. If powered, the fan can turn on with moving blades exposed.

CompactFlash boot media removal K2 Solo

To remove the boot media, first remove the front bezel, then proceed as illustrated.



You must use the CompactFlash boot media provided by Grass Valley. Do not use CompactFlash media procured elsewhere.

Trademarks and Agreements

Trademarks

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JPEG acknowledgment

This software is based in part on the work of the Independent JPEG Group.