creo
COLOR SERVERS

Technical Manual

English

Color Controller C-80
Powered by Creo Color Server Technology
for Pro C900

Version 1.0

734-00932A-EN

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Maschinenlarminformations-Verordnung 3. GPSGV:

Der hochste Schalldruckpegel betragt 70 dB(A) oder weniger gemass EN ISO7779

Noise emission is measured when the machine is connected with the adapted scanner.

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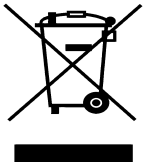

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CE Marking Traceability Information (For EU Countries Only)

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FCC Rules

This equipment has been tested and found to comply with the limits for a Class A digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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Industry Canada Class A Notice

This Class A digital apparatus complies with Canadian ICES-003.

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Internal 734-00932A-EN

Revised December 2009

Contents

Safety Information (Multi-Language)

Safety Precautions

The following safety information includes instructions about avoiding personal injury, before and while servicing the Color Controller C-80.

General Safety

Follow these rules to ensure general safety:

- Lift up the Color Controller C-80 using the handle and not using the front panel. Lifting it up using the front panel may result in major injury.
- Before opening the Color Controller C-80 covers, ensure that the unit has been switched off.
  Pressing the ON/OFF power button will leave some circuits energized. For complete disconnection from the supply, the main power cable must also be disconnected from the power source.

Battery Replacement

- Only qualified service personnel should replace the battery.
- Handle and dispose of the used batteries according to Lithium battery manufacturer's instructions.

Static Electricity

When handling static-sensitive electrical devices (such as: electronic boards, disk drives, or memory modules):

- Use a field service grounding kit (chain, mat, and wrist strap).
- After removing the component from the system or from its protective wrapper, place it on a grounded anti-static mat and not on a carpet, or on any other unshielded surface.
- After removing a board from a station, store it in an anti-static bag.

Sicherheitsmaßnahmen

Die folgenden Abschnitte enthalten Sicherheitsinformationen zur Vermeidung von persönlichen Verletzungen vor und während der Wartung des Color Controller C-80.

Allgemeine Sicherheit

Befolgen Sie diese Regeln, um allgemeine Sicherheit zu gewährleisten:

- Heben Sie den Color Controller C-80 nur am Griff hoch und berühren Sie nicht die Frontblende. Wenn Sie ihn an der Vorderblende hochheben, kann dies zu schweren Verletzungen führen.
- Bevor Sie die Schutzabdeckung des Color Controller C-80öffnen, stellen Sie sicher, dass die Einheit ausgeschaltet wurde.
  Wenn Sie das Gerät nur mit der ON/OFF-Schalttaste ausschalten, bleiben einige Stromkreise aktiviert. Um eine vollständige Trennung von der Stromversorgung zu erreichen, muss der Hauptlastschalter von der Stromquelle getrennt sein.

Batterieaustausch

- Die Batterie sollte nur von qualifiziertem Kundendienstpersonal ausgetauscht werden.
- Handhaben und entsorgen Sie die verbrauchten Batterien entsprechend den Anweisungen des Lithiumbatterie-Herstellers.

Reibungselektrizität

Beim Umgang mit statik-empfindlichen elektrischen Geräten (wie z.B.: elektronische Karten, Plattenlaufwerke oder Speichermodule):

- Benutzen Sie einen Erdungsmontagesatz für den Außendienst (Kette, Matte und Manschetten).
- Nach dem Entfernen des Teils aus dem System oder aus seiner Schutzhülle stellen Sie es auf eine geerdete anti-statische Matte und nicht auf einen Teppich oder auf andere ungeschützte Oberflächen.
- Nachdem Sie die Steckkarte aus einer Station entfernt haben, bewahren Sie sie in einer anti-statischen Tüte auf.

Medidas Preventivas de Seguridad

Las secciones a continuación contienen información de seguridad para evitar lesiones, antes y durante la prestación de servicio de mantenimiento y reparaciones del Color Controller C-80.

Seguridad General

Siga las siguientes reglas para garantizar la seguridad general:

- Levante el Color Controller C-80 utilizando el mango y no el panel frontal. Al levantarlo utilizando el panel frontal se pueden ocasionar serias lesiones.
- Antes de abrir las cubiertas del Color Controller C-80, asegúrese de que la unidad ha sido apagada.
  Si se apaga utilizando el botón ON/OFF solamente, algunos circuitos permanecen activados. Para una desconexión completa del suministro de energía, el cable de alimentación principal se debe desconectar de la fuente de alimentación.

Sustitución de la batería

- Sólo un ingeniero de mantenimiento y reparaciones debe reemplazar la batería.
- Manipule y deshágase de las baterías usadas de acuerdo a las instrucciones del fabricante de la batería de litio.

Electricidad estática

Cuando se manejan dispositivos eléctricos sensibles a electricidad estática (como por ejemplo: placas electrónicas, unidades de disco, o módulos de memoria):

- Use un kit de puesta a tierra para reparaciones y mantenimiento en terreno (cadena, felpudo y banda de muñeca).
- Después de sacar el componente del sistema o de su lugar de envoltura de protección, colóquelo en un felpudo antiestático puesto a tierra y no en una alfombra o cualquier otra superficie no protegida.
- Después de sacar una placa de una estación, almacénela en una bolsa antiestática.

Mesures de sécurité

Les sections suivantes contiennent des informations sur les mesures de sécurité à prendre pour éviter les blessures personnelles, avant et pendant l'entretien du Color Controller C-80.

Mesures générales de sécurité

Suivez ces règles pour garantir une sécurité générale :

- Soulevez le Color Controller C-80 par la poignée et non par le panneau frontal. L'utilisation du panneau frontal pour soulever le dispositif peut entraîner des blessures graves.
- Avant d'ouvrir les couvercles du Color Controller C-80 vérifiez que l'unité a été éteinte.
  Si vous ne mettez hors tension que l'interrupteur ON/OFF, certains circuits resteront sous tension. Pour une déconnexion totale de l'alimentation en courant, le câble d'alimentation principale doit aussi être déconnecté du bloc d'alimentation.

Remplacement de la batterie

- Le remplacement de la batterie est une opération réservée au personnel de service qualifié.
- Manipulez et jetez les batteries utilisées selon les instructions du fabriquant de batterie au Lithium.

Electricité statique

Lors de la manipulation des périphériques électriques sensibles à l'énergie statique (tels que : les cartes électroniques, les lecteurs de disque ou les barrettes de mémoire) :

- Utilisez une trousse de mise à terre (une chaîne, une carpette et un bracelet anti-statique).
- Après avoir enlevé le composant du système ou de son emballage de protection, placez-le sur une carpette anti-statique mise à la terre et non sur une carpette ou sur n'importe quelle autre surface non protégée.
- Après l'enlèvement d'une carte d'un poste, conservez-la dans un emballage anti-statique.

Precauzioni di Sicurezza

Le seguenti sezioni contengono informazioni di sicurezza riguardanti l'evitamento di lesioni personali, prima e durante l'uso del Color Controller C-80.

Sicurezza generale

Seguite queste istruzioni per assicurare la sicurezza generale:

- Alzate il Color Controller C-80 usando la maniglia e non usando il panello frontale. Alzandolo usando il panello frontale potrebbe causare una grave lesione.
- Prima di aprire la copertura del Color Controller C-80, assicuratevi che l'unità sia stata spenta.
  Spegnendo l'unità, solo il pulsante ON/OFF lasciera qualche circuito alimentato. Per arrivare a una sconnessione completa dalle fonti di alimentazione, il cavo di alimentazione principale deve essere staccato dal connettore di alimentazione.

Sostituzione della Batteria

- La batteria dovrebbe essere cambiata solo dal personale di assistenza qualificato.
- Disfatevi delle batterie usate a seconda delle istruzioni del fabbricante riguardanti batterie Lithium.

Elettricità Statica

Quando gestite dispositivi di sensitività elettro-statica (come: schede elettroniche, dischi rigidi o moduli di memoria):

- Usate un campo di servizio di attrezzatura messa a terra (catena, stuoia, cinghia da polso).
- Dopo avere rimosso il componente dal sistema o dal cartoccio protettivo, mettetela su una stuoia anti-statica a terra e non su un tappeto o ogni altra superficie non protetta.
- Dopo avere rimosso una scheda dalla stazione, custoditela in una borsa anti-statica.

Veiligheidsmaatregelen

In de volgende secties worden veiligheidsmaatregelen behandeld om persoonlijk letselt voor en tijdens het bedienen van de Color Controller C-80 te voorkomen.

Algemene veiligheid

Volg onderstaande regels op om uw algemene veiligheid te verzekeren:

- Gebruik het handvat om de Color Controller C-80 op te tillen, en niet het voorpaneel. Wanneer u het voorpaneel gebruikt bij het optillen kan dit resulteren in ernstig letsel.
- Zorg ervoor dat de Color Controller C-80 is uitgeschakeld voordat u de **deksels** opent.
  Wanneer u alleen de ON/OFF schakelaar uitschakeld zullen bepaalde electriciteitscircuits geactiveerd blijven. Om de stroomtoevoer volledig af te sluiten moet de electriciteitskabel uit het stopkontact zijn.

De batterij vervangen

- De batterij mag alleen door bevoegd servicepersoneel worden vervangen.
- Volg de instructies van de fabrikant op voor het vervangen en het wegwerpen van gebruikte lithium batterijen.

Statische electriciteit

Wanneer u met electrisch statisch geladen onderdelen omgaat (zoals: electronische kaarten, harde schijven of geheugenmodi):

- Gebruik een onderhoudsaardingpakket (ketting, mat, en een polsbandje).
- Nadat u het onderdeel van het systeem verwijderd of uit zijn beschermend omhulsel neemt, plaatst u dit op een geaarde anti-statische mat en niet op een vloerkleed of enig andere onbeschermde oppervlakte.
- Nadat u een kaart van een station heeft verwijderd plaatst u deze in een anti-statisch zak.

Precauções de segurança

As seguintes sessões contêm informações de segurança com respeito a como evitar feridas corporais, antes e no decorrer do uso do Color Controller C-80.

Segurança geral

Siga as seguintes regras para assegurar uma segurança geral:

- Levante o Color Controller C-80 usando o cabo e não o painel frontal. Ao levantá-lo através do painel frontal pode causar sérios danos.
- Antes de abrir as tampas do Color Controller C-80, certifique-se de que a unidade foi desligada.
  Ao desligar somente com o botão ON/OFF fará com que alguns circuitos sejam ativados. Para uma desconexão completa da fonte de alimentação, o cabo de alimentação principal também deve ser desconectado da fonte de alimentação.

Troca de bateria

- A bateria deve ser substituída somente por uma equipe de serviço qualificada.
- Manipule e jogue fora as baterias usadas de acordo com as instruções do fabricante de baterias de Lítio.

Eletricidade estática

Ao lidar com dispositivos sensíveis à energia estática (como: placas eletrônicas, unidades de disco ou módulos de memória):

- Utilize um kit de aterramento de serviço (cadeia, esteira e faixa de pulso).
- Após a remoção do componente do sistema ou do seu invólucro de proteção, coloque-o em uma esteira anti-estática e não em um tapete ou qualquer outra superfície desprotegida.
- Após remover uma placa de uma estação, armazene-a em uma bolsa anti-estática.

1

Product Overview

1.1 Introduction

The Color Controller C-80, Powered by Creo Color Server Technology is an on-demand printing system that uses advanced printing technologies to drive the press and turn it into a fast, high-quality network printer. It is a digital color solution for printers that enables you to print from computers running the Microsoft® Windows®, Apple Mac OS, or UNIX® operating systems. It can output high-value products, such as flyers, brochures, pamphlets, catalogs, and Variable Data Printing (VDP) publications.

The Color Controller C-80 processes files in PDL (for example, PostScript®, PDF, and VDP) formats—converting them into a suitable ready-to-print format for direct, high-quality printing.

The Color Controller C-80 combines raster image processing (RIP) competencies, quality-enhancement tools, automation and control tools, and special hardware capabilities.

1.1.1 Color Controller C-80 Components

The Color Controller C-80 is a dedicated platform running in the Microsoft Windows XP Professional operating system. There are four main groups of components:

- Dedicated hardware
- Off-the-shelf hardware
- DVD-RW drive
- Software including:
  - Windows XP Professional for embedded solutions
  - Adobe® Acrobat® 9.0
  - Color Controller C-80 software version 1.0

1.1.2 Functionality and Features

The features and functions of the Color Controller C-80 include:

- Efficient variable information printing
- Enhanced job-editing capabilities
- Image-enhancement capabilities
- Color management tools
- Enhanced text and line-art quality
- Post-RIP imposition
- Job management
- On-screen preview and editing
- Print jobs at machine-rated speed
- RIP—Adobe Postscript Level 3 and Extreme certified technologies
- Ready-to-print job format for immediate reprint
- Extensibility—scalable, modular, and with multiple upgrade paths
- Gallop printing while you RIPing process

1.1.3 Supported Client Platforms

The system is capable of receiving and processing input from a variety of client platforms:

- Macintosh®
- Windows
- UNIX

1.1.4 Product Configuration

Figure 1 shows the modular system architecture of the control station.

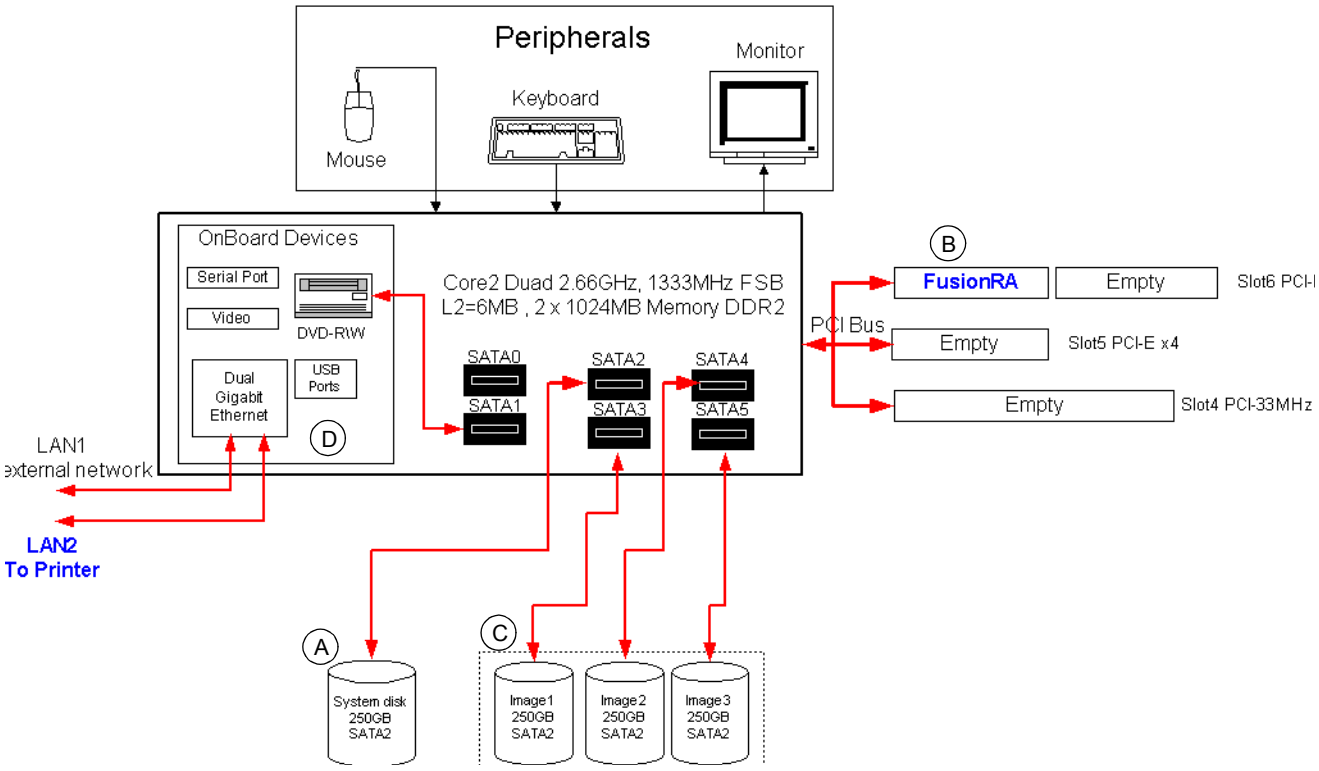


Figure 1: Color Controller C-80 configuration

Parts Description

A) System/user partitioned disk:

- 250GB hard disk
  - Windows XP Professional loaded (on **C:**)
  - Default Windows-based computer and Macintosh shared folder, including various utilities and PPD (on **D:**)
  - Default path for APR high-resolution files is **D:**
  - Spool area on hard disk containing the PostScript files
  - Other data used for Color Controller C-80 software(on **D:**)

B) FusionRA Board:

- Data decompression
- Page assembly
- FusionRA board supports color separations

C) Three image disks:

- 250 GB each
- After processing (RIPing), rasterized jobs are sent to (and stored on) the image disks as RTP jobs
- Jobs stored on the image disks are changed or deleted via the Color Controller C-80 software

D) Gigabit ethernet connection:

- Enables high-speed connection to the network

1.1.5 Disk Configuration

The following table outlines the Color Controller C-80 disk configuration.

Disk 0	**C:** Windows XP Professional Color Controller C-80 software	**D:** Spool files Shared files Output directory files Automatic Picture Replacement (APR) high-resolution files Backup folder
Disk 1	Image storage	
Disk 2	Image storage	
Disk 3	Image storage	

2

First Time Setup and Configuration

2.1 Connecting the Color Controller C-80

For more information, see the Easy Setup Steps chart supplied with your Color Controller C-80.

Connect the Color Controller C-80 to your printer as illustrated in Figure 2, below.

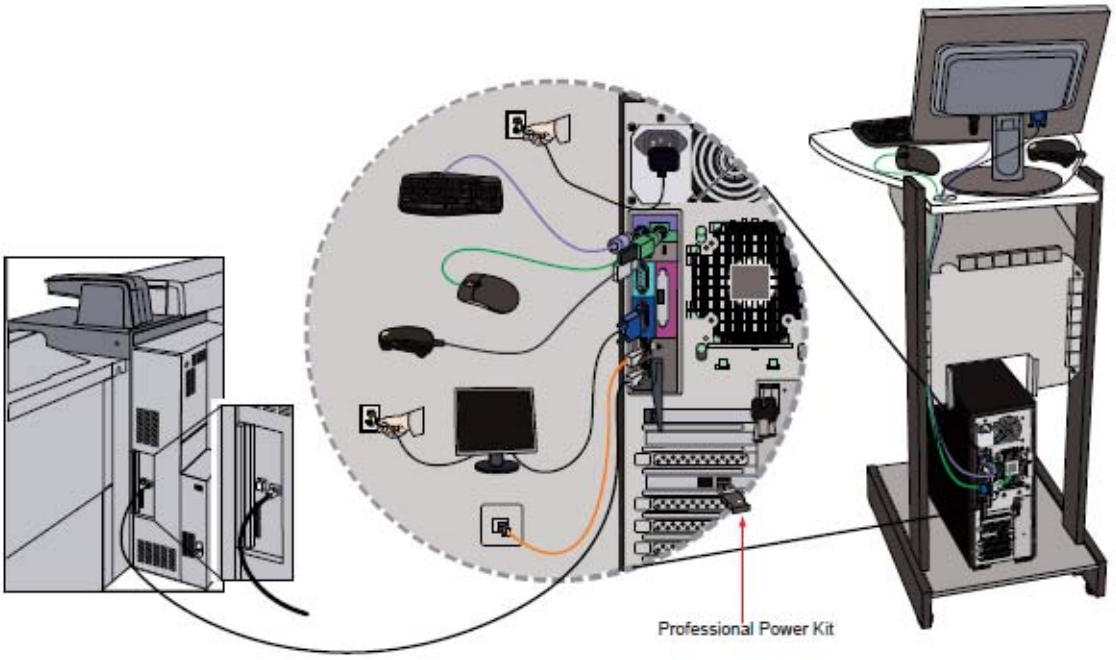


Figure 2: Connecting the Color Controller C-80

2.1.1 Connecting the Color Controller C-80 to the Printer

To enable communication between the printer and the Color Controller C-80, you need to enter the SP mode on the printer, and then select the correct SP5193-001 settings.

1. On the printer display panel, press **Clear Modes**.
2. Type 107, and press **C** (Clear) until the SP mode appears.
3. Touch **System Sp**.
4. Use the buttons on the touch screen to navigate to the SP5193-001 setting (External Controller Info. Settings).
5. Type **5**, and then press the **# (**Enter) key.
6. Touch **Exit** when the message to reboot the printer appears.

Note: During the process of connecting the Color Controller C-80 to the printer, you will need to turn the printer off and then turn it back on.

7. Turn off the printer using the main power switch that is located behind the front cover.

8. Shut down the Color Controller C-80.
9. Locate the printer interface cable (crossover Ethernet cable) that was shipped with the Color Controller C-80 and connect one end of the cable to the printer interface port on the Color Controller C-80, and then connect the other end of the cable to the correct Ethernet port on the printer.

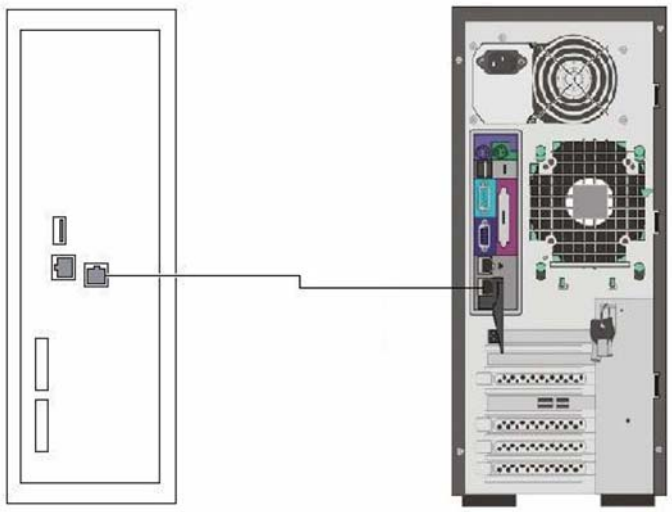


Figure 3: Printer and Color Controller C-80 connection

Note: To prevent the risk of crosstalk, make sure the printer interface cable does not touch the system's power cables. The Color Controller C-80 could shut down or image quality problems could result.

10. Open the Color Controller C-80 front panel and press the power control button.

    Wait approximately two minutes for the Color Controller C-80 to reach the idle state and for the workspace to appear.

11. Turn on the printer using the main power switch.

2.1.2 External LEDs and Controls

Figure 4 shows the external LEDs and controls of your Color Controller C-80.

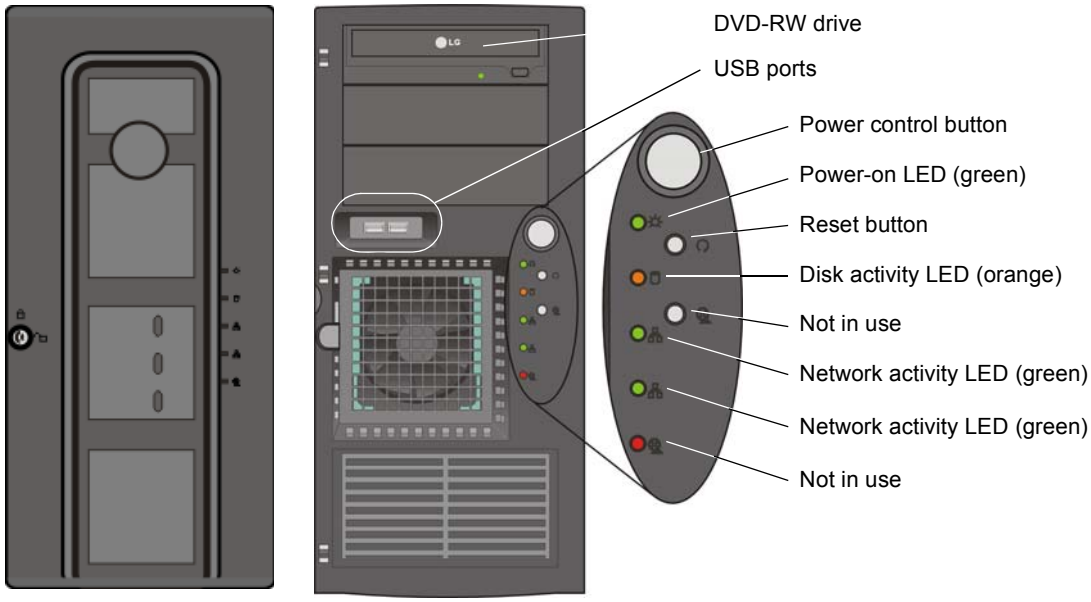


Figure 4: Front door controls and indicators

Power control button	Turns the Color Controller C-80 on or off
Power-on LED	Illuminates steady green when the Color Controller C-80 is turned on
Reset button	Restarts the Color Controller C-80
Disk activity (hard disk) LED	Blinks orange when a hard disk drive is in use
Network activity LED	Blinks green when the network is in use

2.1.3 Turning On the Color Controller C-80

Before connecting the Color Controller C-80 to an AC power source, review *Safety Information (Multi-Language)* on page v.

To turn on the Color Controller C-80:

1. Connect the monitor's AC power cable to the AC mains supply and turn on the monitor.
2. Connect the server's AC power cable to the AC mains supply.
3. Wait 20 seconds before pressing the power control button on the Color Controller C-80 (see Figure 4 on page 10). The ON/OFF LED on the front panel illuminates a steady green.

   After the system startup is complete, the Windows desktop appears.

4. If a power failure occurs while the server is turned on, the server will restart automatically when power is restored.

To turn off the Color Controller C-80:

Perform an orderly shutdown of the operating system before turning off the server.

1. Press the power control button to turn off the server.
2. Disconnect the AC power cable from the AC mains supply.

WARNING: Pressing off only the power control button will leave some circuits energized. For complete disconnection from the supply, the main AC power cable must also be disconnected from the AC mains power.

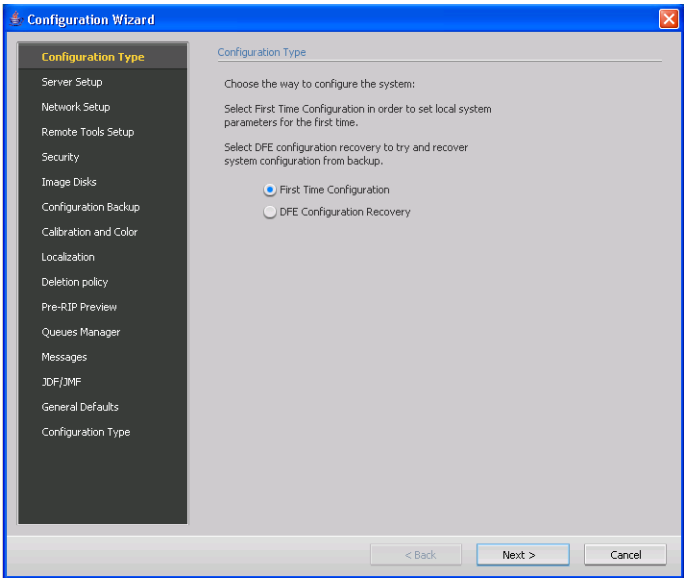
2.2 Configuration Wizard (First-time Software Setup)

After turning on the Color Controller C-80 for the first time the Configuration Wizard appears.

The first-time software setup is performed using the Configuration Wizard.

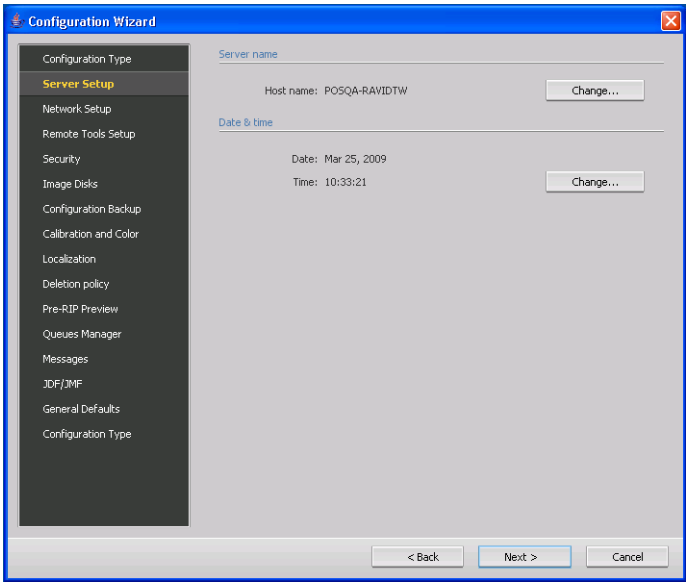
Note: During the configuration process, when prompted to restart your computer, click **No**. At the end of the Configuration Wizard, you will be prompted to restart your system.

2.2.1 Choosing the Configuration Type



➢ Verify that **First Time Configuration** is selected, and click **Next**.

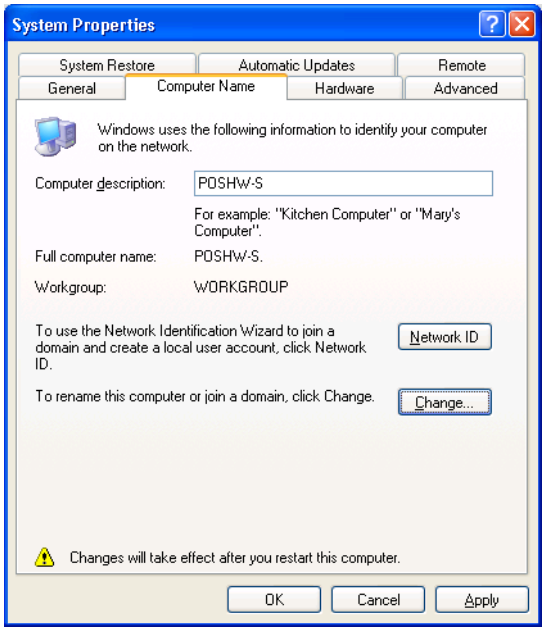
2.2.2 Configuring the Server Setup



Configuring the Host Name

The initial computer name (host name) of the Color Controller C-80 is created automatically during the factory installation. To change the computer name, check with your system administrator.

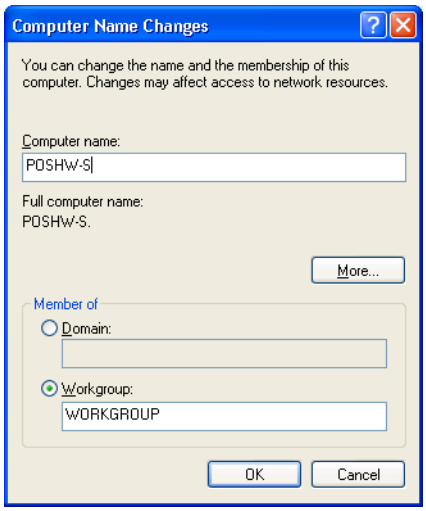
1. In the **Server name** area, verify that the correct host name appears. If the name is correct, proceed to *Setting the Date and Time* on page 13.
2. If you need to change the host name, click **Change**.



3. In the **Computer name** box, type the new name for the Color Controller C-80. If you want to change the workgroup or the domain in which your computer appears, type the new name in the corresponding box and click **OK**.

Attention: Do not modify the Workgroup or Domain in the following step unless instructed to. If you do change the workgroup or domain, verify that you have the correct user name and password for the workgroup or domain.

A message appears to inform you that changes will take effect only after restarting the Color Controller C-80.

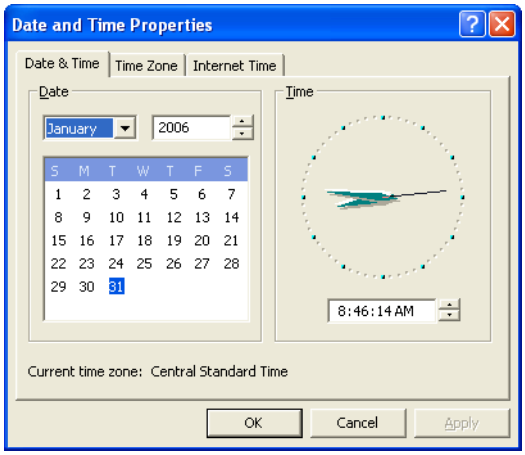


4. In the System Properties dialog box, click **OK.**

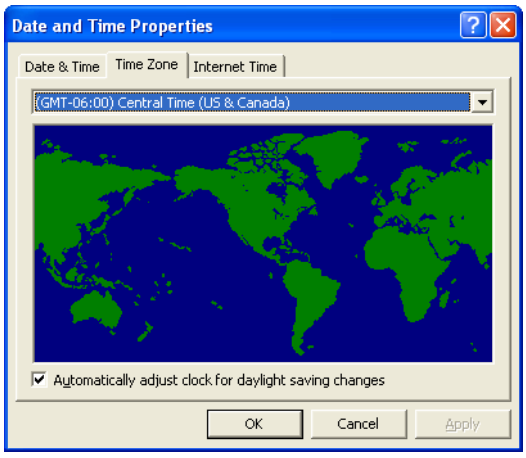
Note: When prompted to restart your Color Controller C-80, click **No**.

Setting the Date and Time

1. In the **Date & Time** tab, verify that the date and time are set correctly. If they are correct, proceed to *Configuring the Network Setup* on page 14.

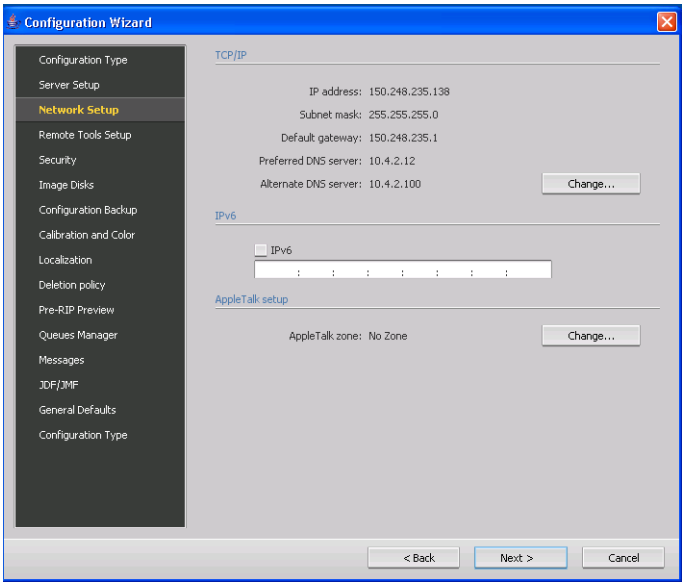


2. If you want to change the date and time, set the correct date and time, and then select the **Time Zone** tab.



3. Select the time zone in which you are located and click **OK.**

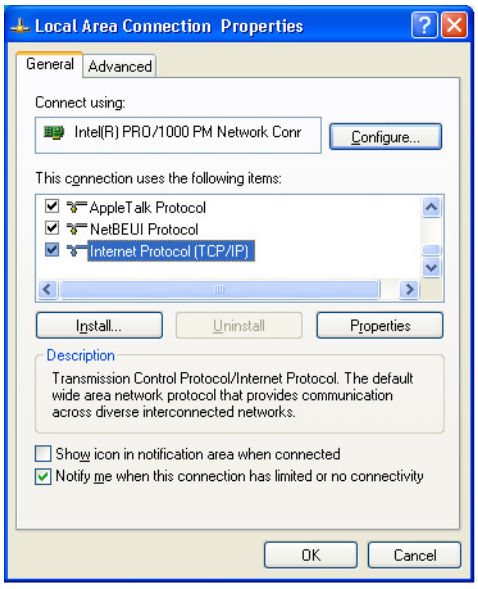
2.2.3 Configuring the Network Setup

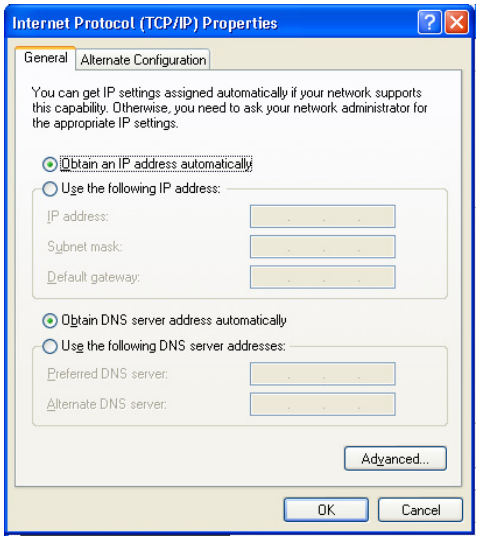


Configuring TCP/IP Addresses

1. In the **TCP/IP** area, verify that the IP address is correct. If it is correct, proceed to *Configuring the IPv6 Address* on page 15. If the IP address is not correct, click **Change**.

   The Local Area Connection Properties dialog box appears, followed by the Internet Protocol (TCP/IP) Properties dialog box.





2. In the Internet Protocol (TCP/IP) Properties dialog box, select **Use the following IP address**.
3. In their corresponding boxes, type the new **IP address**, **Subnet mask**, and **Default gateway** (if applicable).
4. Click **OK**.

   Note: When prompted to restart your Color Controller C-80, click **No**. You will be prompted at the end of the Configuration Wizard to restart the server.

5. In the Local Area Connection Properties dialog box, click **OK**.

Configuring the IPv6 Address

1. In the **IPv6 Address** area, verify that the address is correct.
2. If it is correct, proceed to *Configuring the AppleTalk Zone*.

3. If the settings are not correct, select the **IPv6** check box to enable IPv6 addressing.
   The following message appears:
   `You need to restart the application for the new settings to take effect.`
4. Click **OK**.
5. Type the new IPv6 address (get this information from the network administrator).

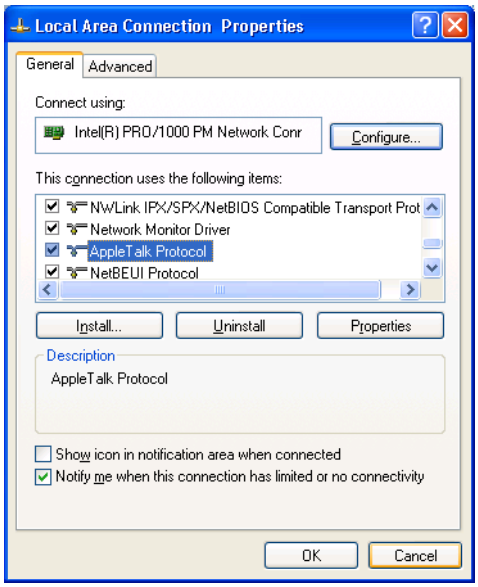
Configuring the AppleTalk Zone

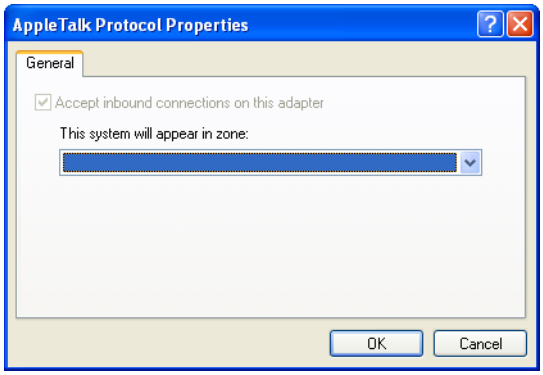
This option enables you to change the AppleTalk network zone in which your Color Controller C-80 appears.

Note: This option only applies to networks that contain Mac computers.

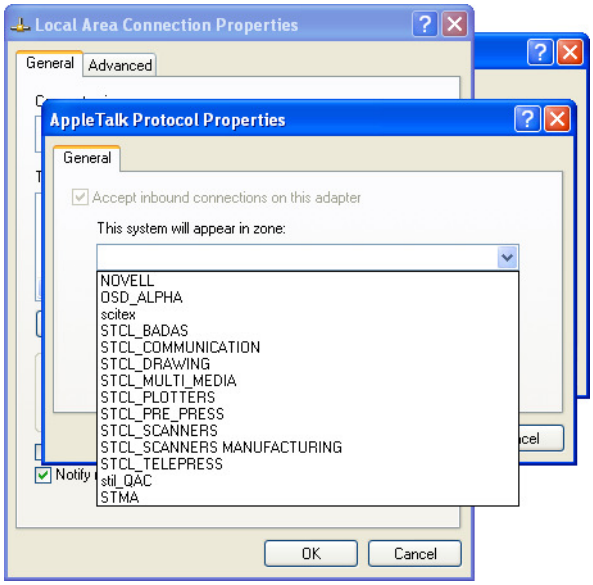
1. In the **Apple Talk setup** area, verify that the displayed AppleTalk zone is correct. If it is correct, Click **Next** and proceed to *Configuring the Remote Tools Setup* on page 17. If it is not correct, click **Change**.

   The Local Area Connection Properties dialog box appears, followed by the AppleTalk Protocol Properties dialog box.



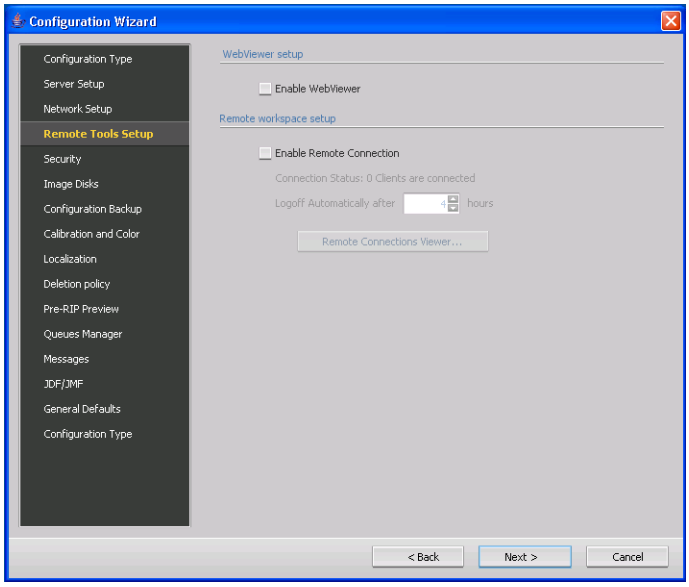


2. In the **This system will appear in zone** list, select the required zone, and click **OK**.



3. In the Local Area Connection Properties dialog box, click **OK**.

2.2.4 Configuring the Remote Tools Setup



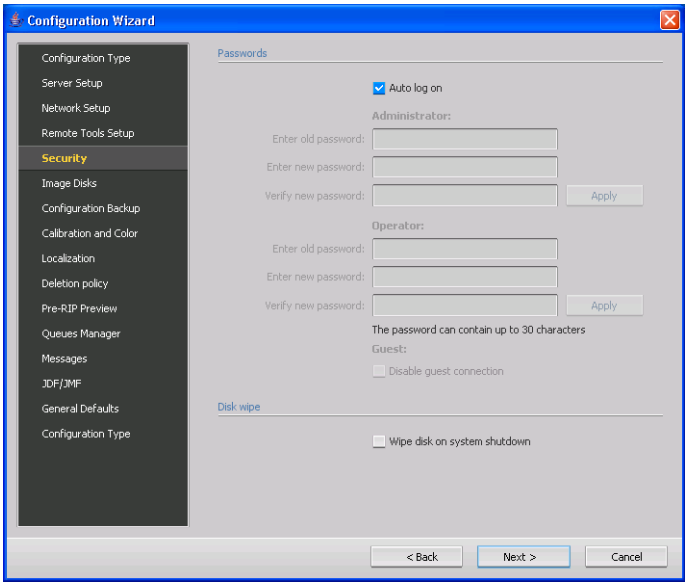
The WebViewer provides server information and enables you to view the status of jobs in the print queue, the process queue, and the **Storage** area.

The Remote Workspace opens an actual workspace for the selected server and enables you to import jobs, print jobs, and perform certain workflows. Several users can connect to the same server simultaneously from different remote workstations.

1. In the **WebViewer** area, verify that **Enable Webviewer** is selected.
2. In the **Remote Workspace Setup** area, verify that **Enable Remote Connection** is selected.

   Note: You can have up to 13 remote connections.
3. To change the **Logoff Automatically after** parameter, type the number of hours.
4. Click **Remote Connections Viewer**, to view the remote connections.

2.2.5 Configuring Security Settings



Using the Default Password Settings

Note: The factory default password for Administrator and Operator users is colorserver. It is used to log on to Windows and to connect to the Color Controller C-80 via the Microsoft Remote Desktop Connection utility.

➢ In the **Passwords** area, verify that **Auto log on** is selected.

To change the administrator password:

1. In the **Passwords** area, clear **Auto log on** check box.
2. In the **Passwords** area, under Administrator, in the **Enter old password** box, type the default password (colorserver).
3. In the **Enter new password** box, type a new password.
4. In the **Verify new password** box, retype the new password to confirm it, and click **Apply**.

To change the operator password:

1. In the **Passwords** area, clear **Auto log on** check box.
2. In the **Passwords** area, under Operator, in the **Enter old password** box, type the default password (colorserver).
3. In the **Enter new password** box, type a new password.
4. In the **Verify new password** box, retype the new password to confirm it, and click **Apply**.

To restrict guest access:

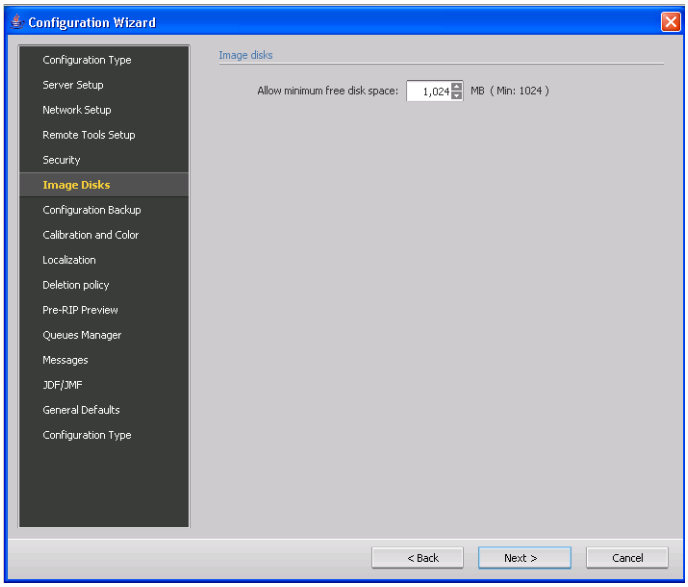
- In the **Passwords** area, under Guest, select the **Disable guest connection** check box.

Using Default Disk Wipe Setting

The Disk Wipe utility enables you to work in a more secure environment, by permanently removing data left by files that you have deleted. The utility eliminates the contents of your deleted files by scanning all of the empty sectors on both the system and image disks, and replacing them with zeros. Non-empty sectors are left untouched. The Disk Wipe utility starts automatically every time you quit the Color Controller C-80 software.

- In the **Disk Wipe** area, do one of the following:
  - To enable the Disk Wipe utility, select the **Wipe disk on system shutdown** check box.
  - To disable the Disk Wipe utility, clear the **Wipe disk on system shutdown** check box.

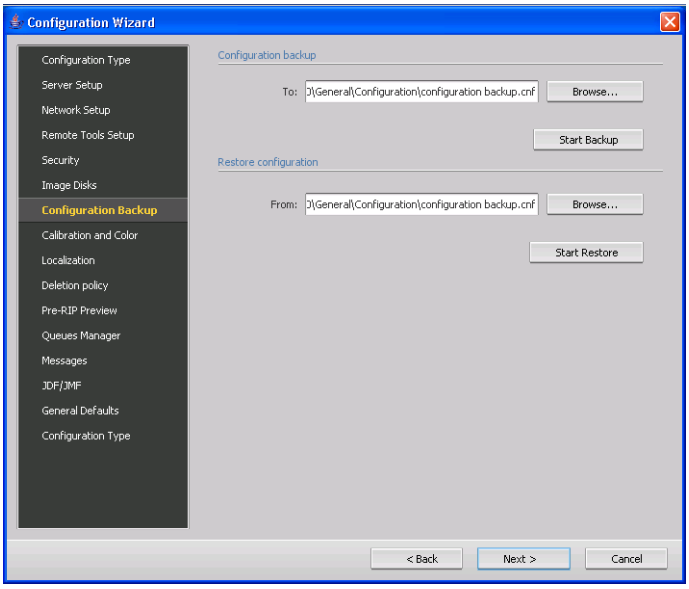
2.2.6 Configuring Image Disks



➢ Verify the minimum free disk space, and then perform one of the following options:

- ❒ If the disk space is correct, proceed to the next screen in the wizard.
- ❒ If you need to change the amount of free disk space, enter the correct minimum disk space that you require.

2.2.7 Configuring Backup and Restore Paths



You can back up your configuration to a local hard disk, network drive, CD or DVD media.

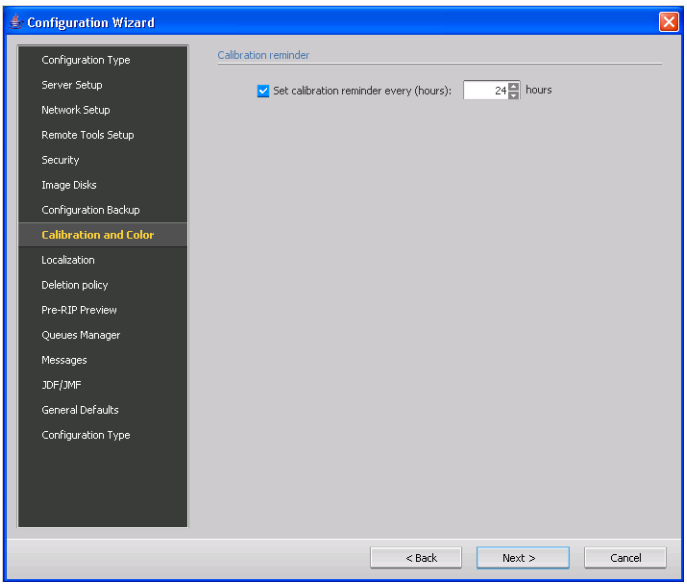
The following settings can be backed up and restored:

- Server information
- Network setup
- Server resources
- System preferences
- Color tables
- Imposition templates

➢ In the **Configuration backup** area, select **Browse** to change the default path.

Note: The last path is saved and displayed in the path box. If the backup is made to external media, the displayed path is the default: **C:\ColorControllerC-80\General\Configuration**.

2.2.8 Setting the Calibration Reminder



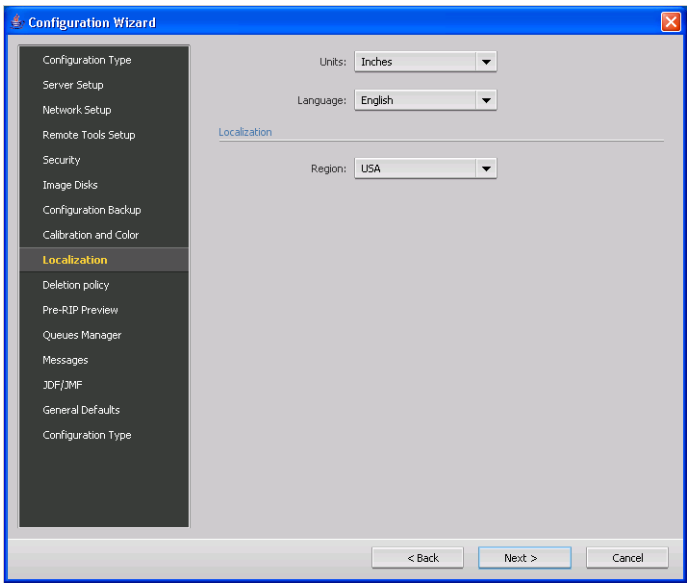
Set the calibration reminder to remind you when to perform a calibration.

➢ In the **Calibration reminder** area, select the **Set calibration reminder every (hours)** check box and select the number of hours from the list.

The calibration reminder indicator  appears in the workspace when it is time to calibrate.

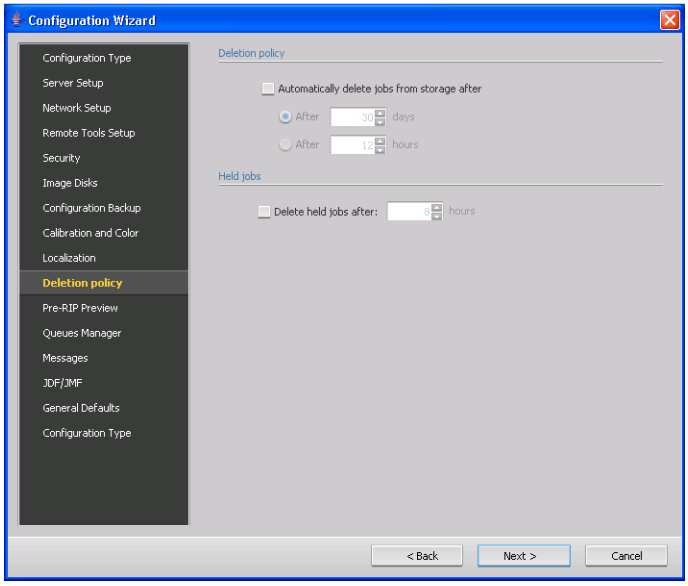
2.2.9 Setting the Localization Parameters

You configure the measurement unit, and language in the Localization window.



1. In the **Units** list, select the required default measurement unit.
2. In the **Language** list, select the required interface language.
3. In the **Region** list, select the region in which you are working.

2.2.10 Configuring the Deletion Policy



1. In the Deletion policy area, select the **Automatically delete jobs from storage** check box and then select one of the following:

   - **After 30 days**
   - **After 12 hours**

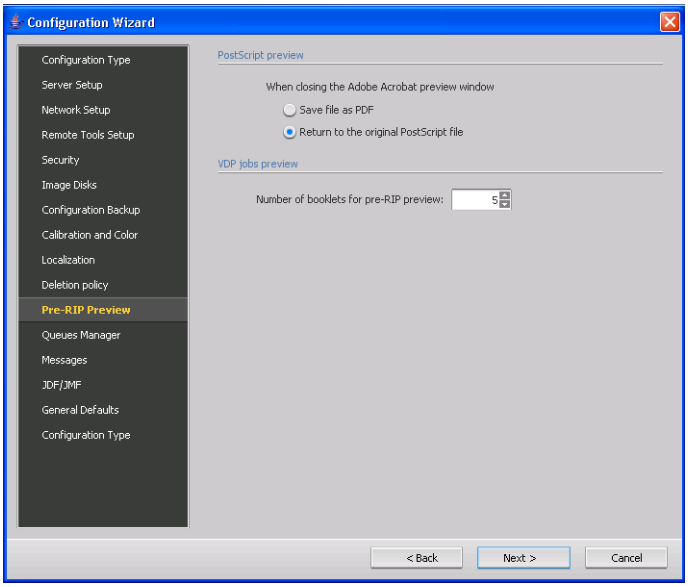
   Then, enter the desired number of days or hours.

   Note: Change the number of days or hours depending on your site requirements.

2. In the **Held jobs** area, select the **Delete held jobs after** check box, and enter the desired number of hours.

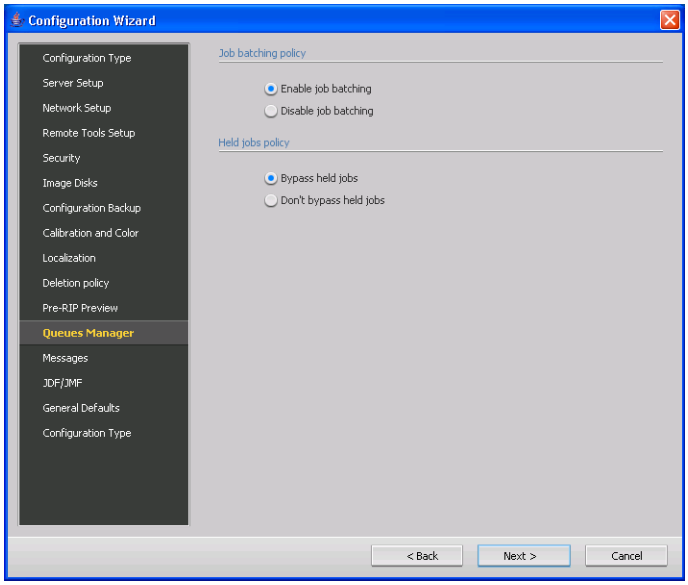
   Note: A held job is one that is bypassed in the Print Queue.

2.2.11 Configuring the Pre-RIP Preview



1. In the **PostScript preview** area, specify the desired action when you close the Adobe Acrobat preview window:
   - ❒ **Save file as PDF**
   - ❒ **Return to the original PostScript file**
2. In the **VDP jobs preview** area, select the desired number of booklets that you want to preview before the job is processed.

2.2.12 Configuring the Queues Manager



Job Batching Policy

➢ In the **Job batching policy** area, do one of the following:

- Select **Enable job batching** to print jobs that have similar attributes one after the other without having the printer pausing in between jobs.
- Select **Disable job batching** to discontinue printing jobs that have similar attributes and enable the printer to pause in between printing jobs.

Held Jobs Policy

➢ In the **Held jobs policy** area, do one of the following:

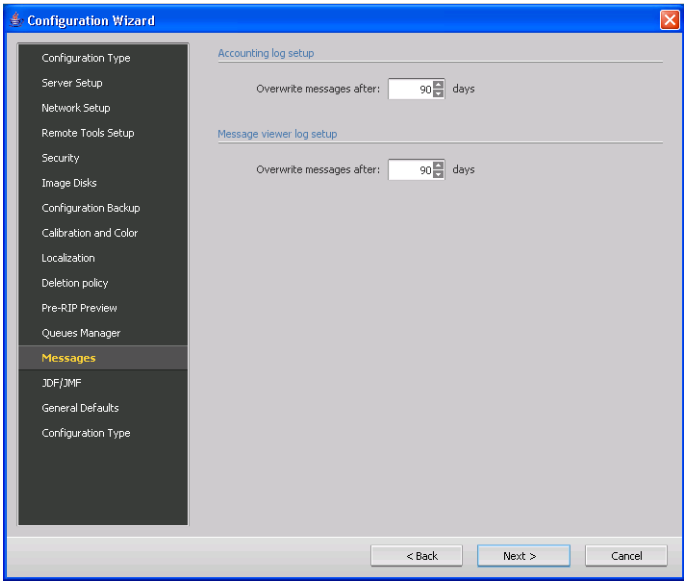
- **Select Bypass held jobs** - to bypass held jobs in the Print Queue.

  Note: This option moves the next job to the top of the Print Queue and saves valuable production time.

- Select **Don't bypass held jobs** - to stop printing from the Print Queue when a job is assigned a held status.

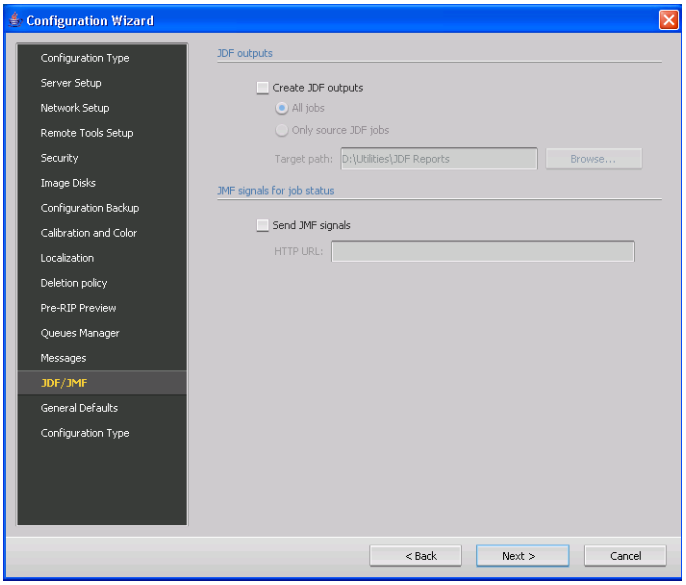
  Note: This option preserves the original order of the files in the queue.

2.2.13 Configuring Messages



1. In the **Accounting log setup** area, enter the number of days after which you can overwrite messages, if different than 90 days.
2. In the **Message viewer log setup** area, enter the number of days after which you can overwrite messages, if different than 90 days.

2.2.14 Configuring JDF Output and JMF Signals

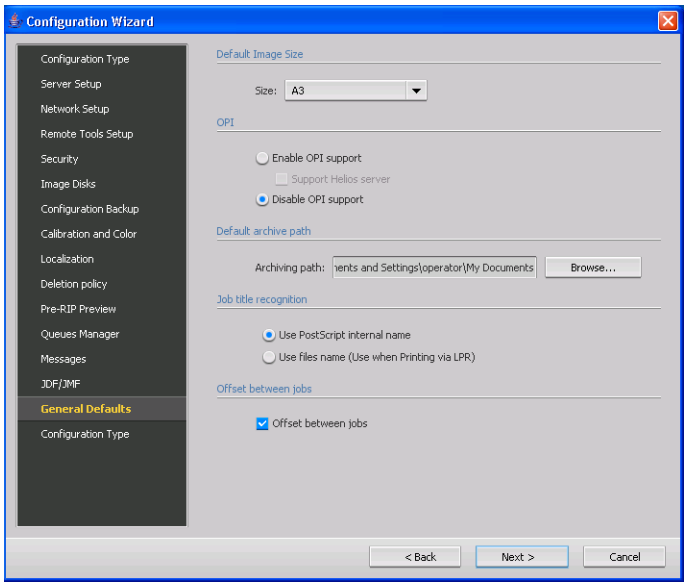


The Color Controller C-80 receives the JDF job ticket via hot folders, returns JDF output with job accounting information, and submits JMF (Job Messaging Format) signals with the job's status.

If the JDF job has a target path specified in the job, JDF output is always created. For JDF jobs that do not have a specified target path, the JDF output is only created if this option is selected in the Configuration Wizard.

1. In the **JDF outputs** area, select the **Create JDF outputs** check box, and select one of the following options:
   - Select **All jobs** to create JDF reports for all jobs.
   - Select **Only source JDF jobs** to create JDF reports from only source JDF jobs.
2. In the **Target path** box, type the target path or click **Browse** to locate the directory for the JDF output.
3. In the **JMF signals for job status** area, select the **Send JMF signals** check box to receive JMF signals about the job's status.
4. In the **HTTP URL** box, type HTTP URL . This enables you to submit JMF signals with the job status each time that the job status of a job in the system changes.

2.2.15 Configuring General Defaults



Default Image Size

When a PDL file does not contain page size information, the RIP uses a predefined default size. This default size is defined according to the unit of measurement that you have selected during the first-time configuration.

➢ In the **Default Image Size** area, select the desired size.

OPI Support

OPI Support automatically creates a low-resolution image of all supported file formats for placement in any layout application. It replaces layout images on-the-fly with optimized high-resolution images during output.

Setting Default archive path

➢ If you want to set a default path in which to archive jobs, click **Browse** and locate the folder.

Job Title Recognition

➢ In the J**ob title recognition** area, select one of the following options:

- ❒ **Use PostScript Internal name** : This option uses the internal file name as written inside the PostScript file by the print driver. Use this option when spooling from Mac OS X.
- ❒ **Use files name (Use when printing via LPR)**: Uses the job's given file name. Selecting this option ensures that the job appears in the Color Controller C-80 with the name last given by the user.

Cached global VDP elements

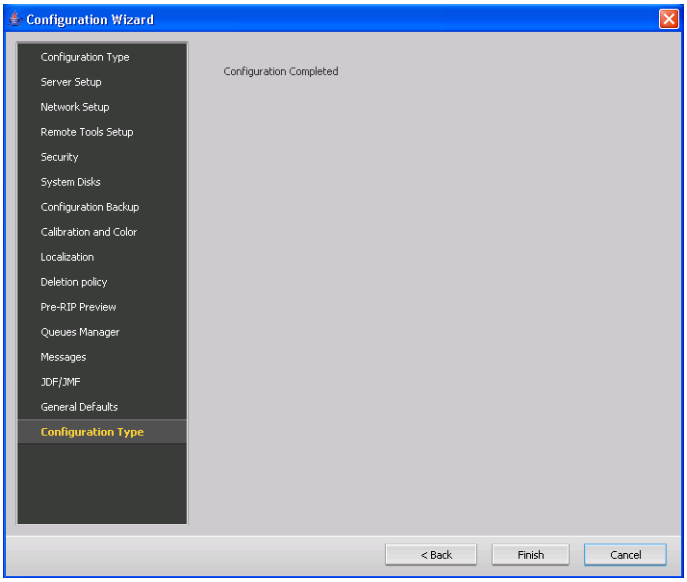
➢ Select the **Always cache global VDP elements** check box to cache and store VDP elements for reuse.

Offset between jobs

This option changes the paper output position after the last page of the job is printed.

2.2.16 Completing the Configuration

After the installation is complete, the following window appears.



1. Click **Finish**.

   The configuration settings are automatically backed up.

   After a few moments, the Color Controller C-80 workspace appears on your screen.

2. Exit the Color Controller C-80 software. If you made any changes to the configuration, these changes will only take effect if the Color Controller C-80 is shut down and then restarted.
3. Quit any other software that may be running and, from the Windows **Start** menu, select **Shut Down > Restart > OK**.

   Note: Make sure to turn off your printer before you restart the Color Controller C-80. After the Color Controller C-80 restarts and the Color Controller C-80 workspace appears, you can turn on the printer.

   After restarting, the Color Controller C-80 software splash screen appears.
4. The Color Controller C-80 software is automatically loaded and launched.

   A backup of the operating system should be performed after the system configuration is completed, see *Backing Up the System Partition* on page 42.

2.3 Configuring McAfee VirusScan

For best results, install McAfee VirusScan® software on your Color Controller C-80. After you have installed McAfee VirusScan software, perform the following configuration procedures.

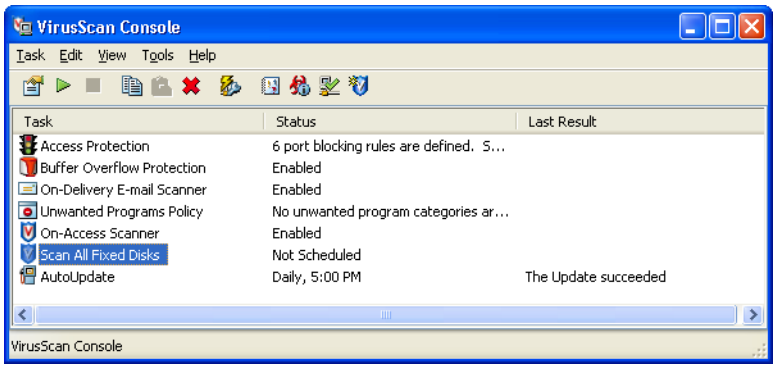
Important: Running VirusScan software could slow down process time and affect the overall performance of the server.

Once a year, the site manager must obtain the latest version of the antivirus software and installation procedure. The site manager must also regularly download the latest antivirus definitions from the relevant Internet site.

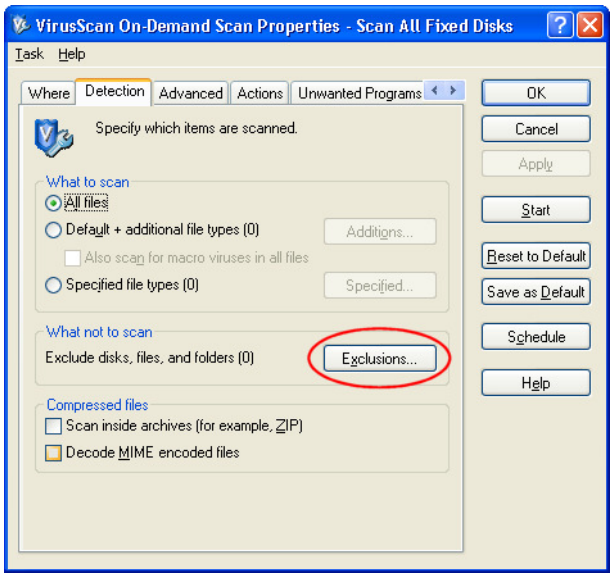
Note: The following VirusScan software configuration procedure is subject to change without notice, and the relevant documentation may not be updated.

2.3.1 Configuring the Scan All Fixed Disks Settings

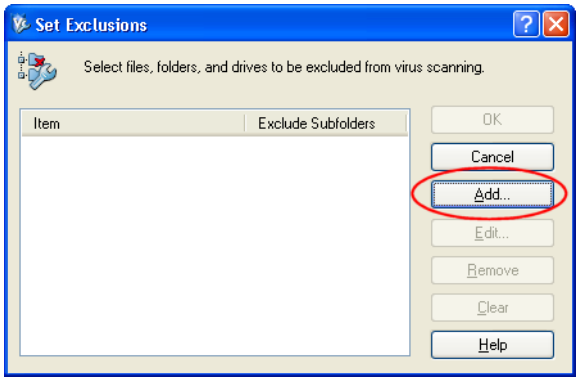
1. From the taskbar, right-click the **VShield** icon and select **VirusScan Console**.



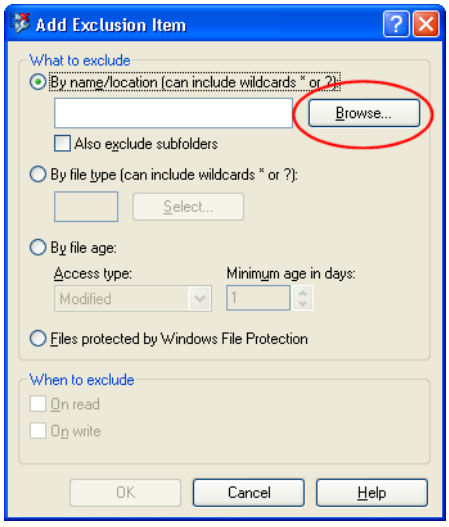
2. In the **Task** column, right-click **Scan All Fixed Disks** and select **Properties**.
3. Click the **Detection** tab.



4. In the **What not to scan** area, click **Exclusions**.

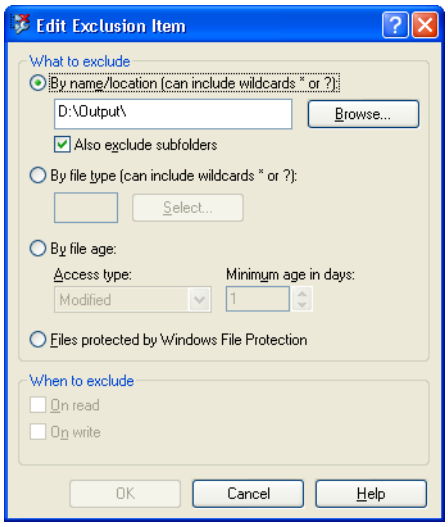


5. Click **Add**.



6. Click **Browse**.
7. In the Browse for Folder dialog box, locate the **D:\Output** folder, and click **OK**.

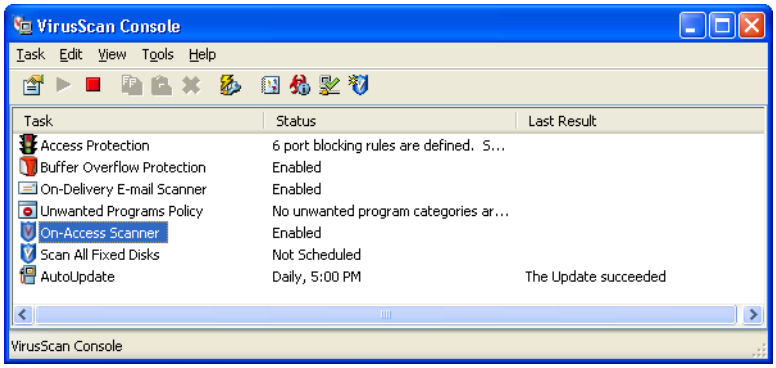
   The **D:\Output** path appears.



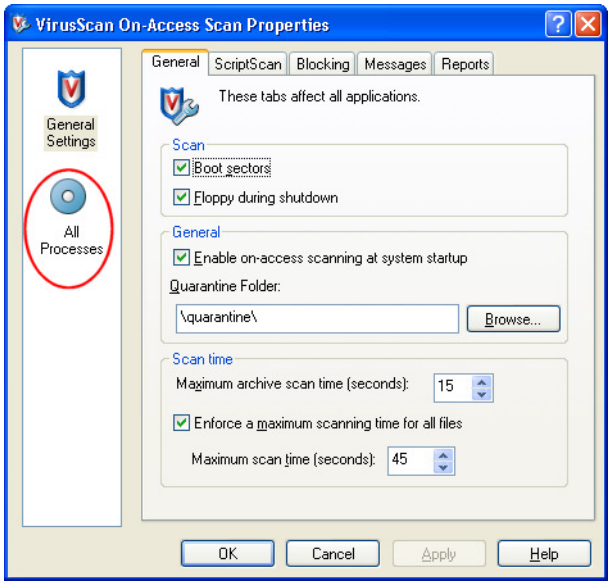
8. Select the **Also exclude subfolders** check box and click **OK**.
9. In the Set Exclusions dialog box, click **OK**, and then click **OK** again.

2.3.2 Configuring the On-Access Scan Settings

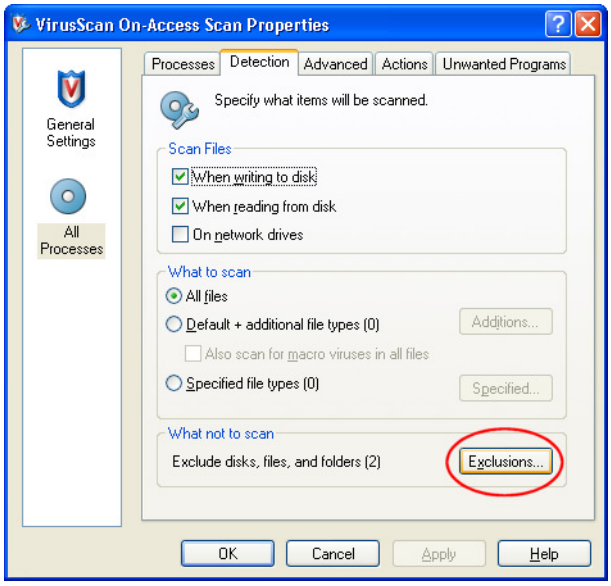
1. Return to the VirusScan Console window.



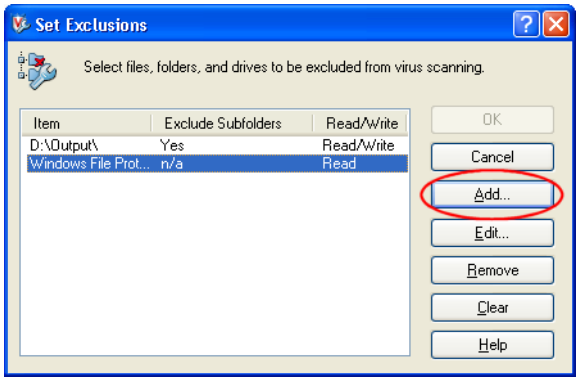
2. In the **Task** area, right-click **On-Access Scanner** and select **Properties**.



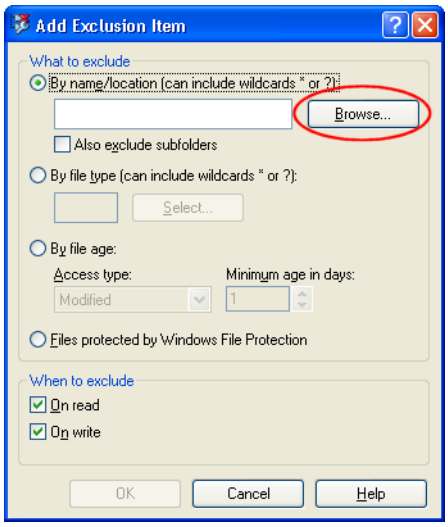
3. On the left of the window, click the **All Processes** icon.
4. Select the **Detection** tab.



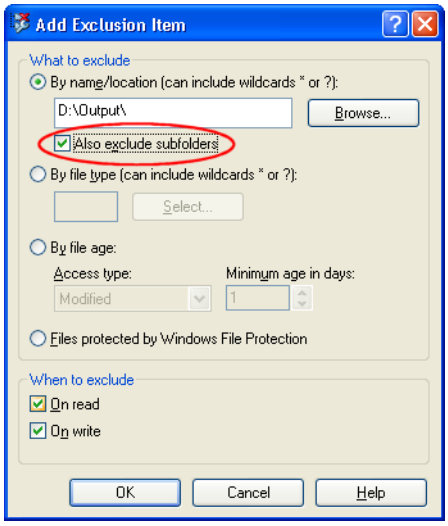
5. In the **What not to scan** area, click **Exclusions**.



6. In the Set Exclusions dialog box, click **Add**.



7. Click **Browse**.
8. In the Browse for Folder dialog box, locate the **D:\Output** folder and click **OK**.



9. Select the **Also exclude subfolders** check box and click **OK**.
10. In the Set Exclusions dialog box, click **OK**.

11. In the VirusScan On-Access Scan Properties window, click **OK**.

2.4 Performing a Test Print and Color Image Check

To import a file and perform a test print:

1. From the **File** menu, select **Import**.
2. Locate one of the following files:
   - **Golfer_Letter.pdf** in the **D:\Sample_Files\USA\General folder**
   - **Golfer_A4.pdf** in the **D:\Sample_Files\Europe\General folder**
3. Double-click the file to add it to the list for importing.
4. Select the **ProcessPrint** virtual printer.
5. Click **Import**.

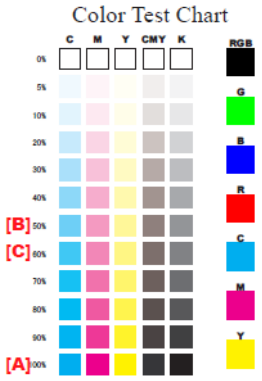
   The file is processed, printed, and sent to the **Storage** area.

   Note: If the job does not print or is waiting in the **Print Queue**, make sure that the default virtual printer parameters are set to the current finishing device. (**Job Parameters > Finishing**).

To import a file and perform a color image check:

1. From the **File** menu, select **Import**.
2. Locate one of the following files:
   - **Letter_Color Test Chart.pdf** in the **D:Sample_Files\Color Files\Color Test Chart**
   - **A4_Color TEST Chart.pdf** in the **D:Sample_Files\Color Files\Color Test Chart**
3. Double-click the file to add it to the list for importing.
4. Select the **ProcessPrint** virtual printer.
5. Click **Import**.

   The file is processed, printed, and sent to the **Storage** area.



6. Check that each 100% pattern (A) has a solid color and that there are no imperfections (not blotched or scratched).

7. Check that the density difference between the 60% patterns (B) and 50% patterns (C) is clearly visible.
8. If a problem appears on the test print, perform the following steps:
    - For solid color problems: On the printer control panel, enter the SP mode, and then execute the process control with SP3-820-002.
    - For density difference problems: Perform color calibration on the Color Controller C-80.

Note: If the job does not print or is waiting in the Print Queue, make sure that the default virtual printer parameters are set to the current finishing device. (**Job Parameters > Finishing**).

3

Reinstalling the Color Controller C-80 Software

3.1 When To Reinstall

This chapter describes the installation procedures for the Color Controller C-80. It describes how to reinstall the operating system, and how to reinstall the Color Controller C-80 software.

If you are upgrading an existing site or reinstalling, it is essential to capture and save all critical information before starting the installation procedure. This information could be lost if it is not saved to an external device or network in the event of a system crash.

The installation is mostly unattended. User interaction is needed only for entering the computer hostname, for restarting the computer when requested, for activating Windows XP operating system, and for inserting DVD 1 and DVD 2.

There are three methods for reinstalling the system:

- **Complete Installation,deleting old jobs**: This procedure requires two discs, DVD 1 and DVD 2. It installs a clean system with the Color Controller C-80 software and formats disk **C** and disk **D**. Complete Overwrite overwrites the operating system.

  Perform this installation under the following conditions:

  - ❒ When installing a new operating system
  - ❒ When physically replacing the system disk
  - ❒ When upgrading the system disk

- **Preservation Installation (System Partition Overwrite)**: This procedure requires two discs, DVD 1 and DVD 2. It installs the Color Controller C-80 software and formats only the system partition. In other words, disk **C** is reformatted and reloaded, and the information on disk **D** is preserved and not deleted.

  Perform this installation under the following conditions:

  - ❒ When the Windows XP operating system is corrupt and needs to be reinstalled
  - ❒ After an unrecoverable system crash
  - ❒ When you are upgrading the operating system

- **System Backup/Restore Tool:** This procedure only requires DVD 1. It is the fastest method in which to reinstall the system drive. Use this procedure if you have the latest software version and software updates installed, and you want to keep an image file that can be restored later on.

  - ❒ Back up and restore only partition **C** —Norton Ghost software copies the files on partition **C** to an image file on partition **D**, and restores partition **C** from the image file on partition **D**.
  - ❒ Back up and restore partitions **C** and **D**—Norton Ghost software copies the files on partitions **C** and **D** to a DVD, and restores partitions **C** and **D** from the backup

  Perform this installation under the following conditions:

  - ❒ After an unrecoverable system crash
  - ❒ When the Windows XP operating system is corrupt and needs to be reinstalled

3.2 Installing the Operating System and Software

The following table summarizes the procedures you need to perform before and after you reinstall, and tells you where to find the information for this section. Before you start, review the table to familiarize yourself with the procedures. You can also use the table as a check list to verify that you have completed all the required procedures.

Table 1: Tasks to perform for reinstallation

Step	Section in this book
1. Archive any important customer jobs to an external device	See *Color Controller C-80, Powered by Creo Color Server Technology, for Pro C900 User Guide (*731-01699A-EN)
2. Reinstall the operating system (Windows XP) and Color Controller C-80 software (Complete Installation or Preservation Installation)	page 39
3. Perform first time configuration wizard	page 16
4. Install and configure virus protection software (highly recommeded)	page 29
5. Perform test print	page 34
6. Restore customer jobs	See *Color Controller C-80, Powered by Creo Color Server Technology, for Pro C900 User Guide* (731-01699A-EN)
7. Back up the Color Controller C-80 system partition (highly recommended)	page 42

Note: Check if VIPP or other Creo supported software is loaded on the Color Controller C-80. Such software must be reloaded after the Complete Overwrite installation is completed.

Before reinstalling, ensure that:

- All external devices are disconnected from the Color Controller C-80
- The software pack (DVD 1, DVD 2) is available
- The following information is available for the Color Controller C-80:
  - ❒ Computer name
  - ❒ TCP/IP information
  - ❒ Gateway, WINS address, and DNS information (if DHCP is not active on site)
  - ❒ AppleTalk zone information
  - ❒ IPX information

Important: Always disconnect the network cable before installing software.

1. If the Color Controller C-80 is on and the Color Controller C-80 workspace is open:
   a. Exit the workspace.
   b. Place DVD 1 (Fast Install) into the DVD-RW drive.
   c. From the Windows **Start** menu, select **Shut Down > Restart > OK**. Wait until the **Color Server Startup** menu appears and then proceed to step 2.

   If your Color Controller C-80 is off:
   a. Press the Power On/Off button on the front panel.
   b. As soon as power is applied, place DVD 1 (Fast Install), into the DVD-RW drive.
   c. Wait until the **Color Server Startup** menu appears.
2. When the **Color Server Startup** menu appears, the following options are available:
   - Complete Installation, deleting old jobs
   - Preservation Installation (System Partition Overwrite)
   - System Backup Tool
   - Exit
3. On the keyboard, press the number of the option you want to perform:
   - Press 1 to perform a complete installation
   - Press 2 to perform preservation installation

   The confirmation message `Are you sure?` appears.
4. Press **y** (Yes) to confirm your selection.

   Note: To return to the **ColorServer Startup** menu, click N (No).
5. The system starts copying the files. This process takes about ten minutes, and then the following message appears:

   ```
   Please remove any media from the DVD-RW drive and press
   Ctrl+Alt+Del to reboot the computer.
   ```
6. Remove DVD 1 from the DVD-RW drive, and press CTRL+ALT+DELETE to restart.
7. In the Computer Name and Administrator Password screen, type the name for the Color Controller C-80—for example, `C80_WinXP`.

   Important:
   In the **Administrator Name and Password** area, use the default settings.

   If required, you can change the administrator name and password, but only at the end of the installation process. See *Configuring Security Settings* on page 18.
8. Click **Next**.

   The installation process continues.
9. At the end of the installation the system restarts.

10. Insert DVD 2 into the DVD-RW drive.

    The Color Controller C-80 software splash screen appears.

11. Click **Start**.

    The Acrobat software setup begins.

    After the Acrobat software setup is complete, the Color Controller C-80 installation starts.

12. When the License Agreement window opens, click **Yes** to continue the Color Controller C-80 installation.

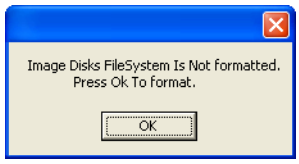
13. When the installation is complete:

    a. Click **Finish** to restart the computer.

    Note: If the `Wrong Disk Configuration` message appears after you restart the computer, the disks need to be striped. See *Disk Striping* on page 77.

    b. Remove DVD 2 from the DVD-RW drive.

    When the application starts the following message appears.



    c. Click **OK**.

    d. Proceed to *Configuration Wizard (First-time Software Setup)* on page 11.

3.3 Backing Up the System Partition

Back up the Color Controller C-80 system partition so that you always have a working copy of your software to be able to restore your system, if necessary. It is best practice to back up the system partition each time you update the Color Controller C-80 software, update the system cofiguration, perform a complete installation, or update the operating system.

Note: Jobs located in the queues and the Storage area are not backed up.

Attention: Before performing the backup and restore procedures, make sure that your computer's configuration is the one that you want to use when restoring the system.

Tip: It is recommended that you delete unnecessary files, such as temporary files, and all jobs in the workspace before performing the backup procedure.

Note: If you are already logged onto your system and the Color Controller C-80 workspace is open, exit the workspace, insert DVD 1 into the DVD-RW drive, and proceed to step 3

1. Turn on your Color Controller C-80.
2. Place DVD 1 (Windows XP Fast Install) into the DVD-RW drive.
3. Restart the Color Controller C-80.
4. Wait until the **Color Server Startup Menu** appears.
   The following options are available:

   1. Complete Installation, deleting old jobs
   2. Preservation Installation (System Partition Overwrite)
   3. System Backup/Restore Tool
   4. Exit

5. Press **3** to use the System Backup Tool.
6. Type Y to confirm your selection.

   The **System Backup/Restore Tool** menu appears.

System Backup / Restore Tool
Caution!!!
It is strongly recommended that you back up/restore both the C and D partitions at the same time to prevent possible synchronization problems between these partitions.
1. Back up system partition C to partition D
2. Restore system partition C from partition D
3. Back up partitions C and D to a DVD media
4. Restore partitions C and D from the DVD media
5. Exit and return to Main menu
Select an operation [1,2,3,4,5]?

Tip: If you want to copy the files to an external device, copy only the files located on **D:\Backup** that begin with **SYSPART**.

7. To back up system partition C, press **1**. This option backs up the files on partition C to an image file on partition D.

   The Norton Ghost window appears.

   e. If a Norton License Agreement window appears, click **OK** to continue.

      Norton Ghost copies the files on partition C to an image file on partition D. The process takes about 8 minutes to complete.

   f. When a message appears instructing you to remove the DVD from the DVD-RW drive and restart the computer, remove the DVD and press `Ctrl+Alt+Delete` to restart the Color Controller C-80.

8. To back up the entire system (partitions C and D), press **3**. This option backs up partitions C and D. You may need more than one DVD for the backup.

   a. Press Y to continue.

      The following message appears:

```
Back up partitions C and D to a DVD media
------------------------------------------------------------
Note that the backup procedure of the system partition
may require up to 3 DVD + R or DVD + RW Disks depending on the
amount of data stored on the partition.

Number the DVD disks in the order they are created to facilitate easy
restoration.

Continue?[Y,N]?
```

   b. To continue, press Y.

      The following message appears:

```
Back up partitions C and D to a DVD media
------------------------------------------------------------
Place a DVD media in
The DVD drive.
Wait until the LED on the
DVD drive turns off.

Press any key to continue . . .
```

   c. Follow the instructions in the message.

      Norton Ghost copies the files on partitions C and D to the DVD.

      Note: If an error occurs during the backup process, a message appears asking you to contact customer support. Press any key to continue and the Color Controller C-80 restarts automatically.

d. When a confirmation message appears notifying you that the backup process was successfully completed, remove the DVD from the DVD-RW drive and press any key to continue.

   The Color Controller C-80 restarts automatically.

3.4 Restoring the System Partition

Important: Always disconnect the network cable before installing software.

The Color Controller C-80 enables you to restore partition **C** or the entire system (partitions **C** and **D**). Restore the software on your Color Controller C-80 after an unrecoverable disk crash, or when the system exhibits unpredictable behavior—for example, error messages suddenly appear or occasional the user interface freezes. The process takes 20 - 30 minutes, depending on the size of the partition.

Performing the restore procedure requires a previous backup.

1. Exit the Color Controller C-80 work space.
2. Insert DVD 1 (Windows XP operating system) into the DVD-RW drive.
3. From the Windows **Start** menu, select **Shut Down > Restart > OK**.

   After the system restarts, the Color Controller C-80 Startup Menu appears. The following options are available:

   1. Complete Overwrite Installation, deleting old jobs
   2. Preservation Installation (System Partition Overwrite)
   3. System Backup/Restore Tool
   4. Exit

4. Press 3 to use the **System Backup/Restore Tool**.
5. Press Y to confirm your selection.

System Backup / Restore Tool
Caution!!!
It is strongly recommended that you back up/restore both the C and D partitions at the same time to prevent possible synchronization problems between these partitions.
1. Back up system partition C to partition D
2. Restore system partition C from partition D
3. Back up partitions C and D to a DVD media
4. Restore partitions C and D from the DVD media
5. Exit and return to Main menu
Select an operation [1,2,3,4,5]?

6. To restore only partition **C**, press 2. This option restores partition **C** from the image file on partition **D**.

   Note: Before restoring the color server system partition, you may need to return the ghost file or files that you moved to an external device to **D:\Backup**.

The following message appears.

The restore process is irreversible and overwrites **all information on the system partition.** **Continue and restore system partition ??** **Yes / No**

WARNING: The restore procedure erases all data on your system partition **C**.

- If you click **No**, the following message appears:

  ```
  Please remove any DVD media from the drive and press
  ctrl+alt+delete to reboot the computer.
  ```

- If you click **Yes**, the Norton Ghost window appears and the image file on partition **D** is restored to partition **C**.

  When the process is complete, the following message appears:

  ```
  Please remove any DVD media from the drive and press
  CTRL+ALT+DELETE to reboot the computer.
  ```

  - Remove the DVD from the DVD-RW drive and press CTRL+ALT+DELETE to restart.

7. To restore partitions **C** and **D**, press 4. This option restores partitions **C** and **D** from a backup media.

   a. Press **Y** to continue.

   ```
            warning !!!

   This process will erase
   all data on your system disk.


   YN Are you sure
   ```

   b. Press Y to continue.

   ```
   Restore partitions C and D from the DVD media
   ---------------------------------------------
   Place backup DVD disk 1
   in the DVD drive.

   If multiple DVDs were created during
   the backup process, be sure to insert
   the disks in the order they were created.

   Wait until the LED on the
   DVD drive turns off.
   ```

   c. Follow the instructions in the message.

   d. Press any key on your keyboard to continue.

   Norton Ghost software copies the files on the DVD to partitions **C** and **D**.

   Note: If an error occurs during the restore process, a message appears asking you to contact customer support. Press any key to continue. The computer restarts automatically.

e. When a confirmation message appears notifying you that the restore process was successfully completed, remove the DVD from the DVD-RW drive and press any key to continue.

The computer restarts automatically. Proceed to *Formatting the Image Disk*.

4 Diagnostics and Troubleshooting

4.1 Platform Diagnostics and Configuring the Server

This section provides basic troubleshooting information to help you resolve some issues that might possibly occur with the Color Controller C-80.

To maintain the good health of the server, it is important that the server continuously remains correctly configured. An incorrectly configured server will deliver poor performance, and the diagnostic results will be adversely effected.

4.1.1 Configuring Tools Overview

The following configuration programs are also provided to assist you in configuring the server, and to provide diagnostic information:

- BIOS Setup Utility
- Gigabit Ethernet Controller
- LAN speed verification

Phoenix cME FirstBIOS Pro

This program controls the basic input/output system (BIOS) code in your server. Use BIOS setup utility to:

- View configuration information.
- View and change assignments for devices and I/O ports.
- Set the date and time.
- Set the startup characteristics of the server and the order of startup devices.
- Set and change settings for advanced hardware features.
- View and clear error logs.
- Resolve configuration conflicts.

Gigabit Ethernet Controller

The Ethernet controller is integrated on the system board.

- It provides a interface for connecting to a 10-Mbps, 100-Mbps, or 1000-Mbps network and provides full duplex (FDX) capability, which enables simultaneous transmission and reception of data on the network.
- If the Ethernet port in the server supports auto-negotiation, the controller detects the data-transfer rate of the network (10BASE-T, 100BASE-TX, or 1000BASE-T) and automatically operates at that rate, in full-duplex or half-duplex mode, as appropriate.
- The Ethernet controller supports optional modes, such as teaming, priority packets, load balancing, fault tolerance, and virtual LANs, which provide better performance, security, and throughput. These modes apply to the integrated Ethernet controller and to controllers on supported Ethernet adapters.

Troubleshooting the Ethernet Controller

This section provides troubleshooting information for problems that might occur with the 10/100/1000-Mbps Ethernet controller.

To resolve network connection problems:

If the Ethernet controller cannot connect to the network, perform the following:

- Check the BIOS configuration relating to the LAN.
- Verify that the cable from the LAN connector on the server is connected to the LAN.
- Check that the network cable is attached at all connections. If the cable is attached but the problem persists, try a different cable.
- Check the LAN activity light on the rear of the Color Controller C-80. The LAN activity light illuminates when the Ethernet controller sends or receives data over the Ethernet network. If the LAN activity light is off, ensure that the hub and network are operating and that the correct device drivers are loaded.

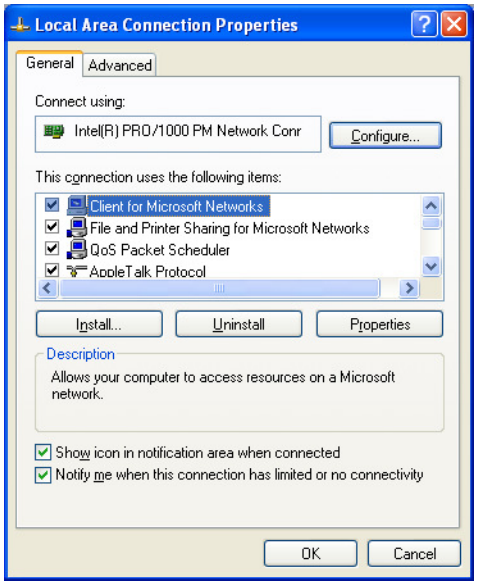
Verifying the LAN Speed

Use the following procedure to make sure that your system is operating at the maximum speed of the network.

1. Right-click **My Network Places**, and select **Properties**.

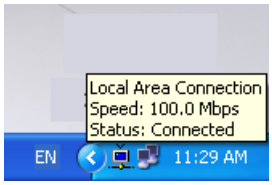
   The Network Connection window appears.

2. Right-click **Local Area Connection**, and select **Properties**.



3. Select the **Show icon in taskbar when connected** check box and click **OK**.

4. Roll the cursor over the network icon in the taskbar to display the speed, as shown in the following example:



4.1.2 Using the Configuring Tools

Using the Phoenix cME FirstBIOS Pro Setup Utility

This section provides instructions for starting the Phoenix cME FirstBIOS Pro Setup Utility and descriptions of the menu choices available for configuring the BIOS.

Important: It is recommended that you do not alter any BIOS settings unless they do not follow the recommendations in this section. Faulty BIOS settings could cause the system to fail or to operate incorrectly.

Starting the Phoenix cME FirstBIOS Pro Setup Utility

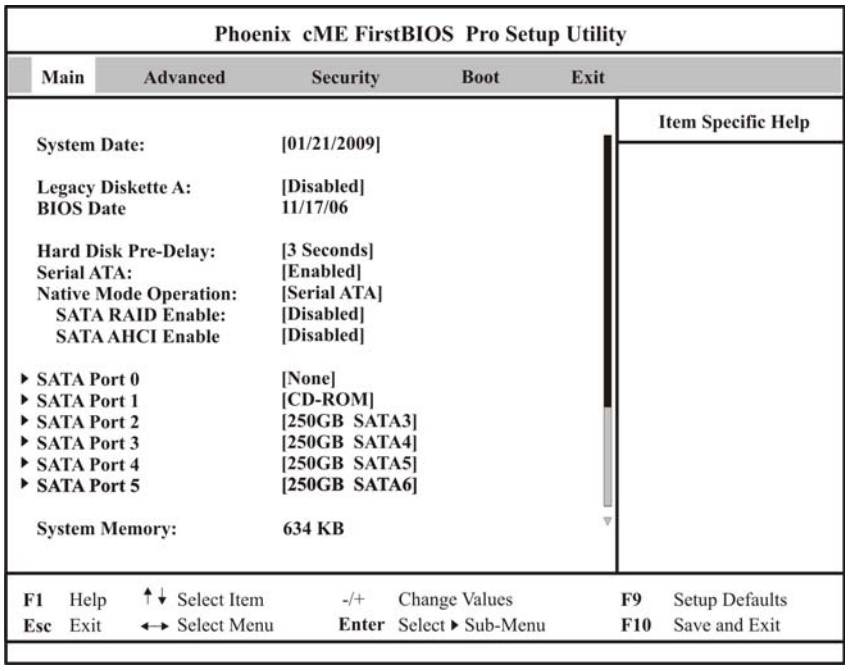
1. Quit the color server software.
2. Restart the Color Controller C-80 and immediately press DELETE.

   The Phoenix cME FirstBIOS Pro Setup Utility window appears.

Selecting From the Phoenix cME FirstBIOS Pro Setup Utility Main Menu

You can select settings that you want to change from the BIOS Setup Utility Main menu.

The Phoenix cME FirstBIOS Pro Setup Utility Main menu is similar to the following:



Note: The choices on some menus might differ slightly from the ones that are described in this manual. The menu choices depend on the BIOS version in the server.

Figure 5:

Descriptions of the choices that are available from the main menu are as follows:

- **System Time:** Sets the system date and time. The system time is in a 24-hour format (hour:minute:second).
- **System Date:** Sets the system date. The system date is in the format (month/day/year).
- **Hard Disk Pre-Delay:** Adds a delay before the HDD is accessed by the BIOS for the first time.
- **Serial ATA:** Allows the user to enable or disable the function of Serial ATA.

Selecting From the Phoenix cME FirstBIOS Pro Setup Utility Advanced Menu

Boot Features—Select this submenu to change the following settings:

- **Quick Boot Mode:**
  If enabled, this feature will speed up the POST (power-on self test) routine after the computer is turned on. If disabled, the POST routine will run at normal speed.
- **Quiet Boot:**
  Select this option to enable or disable the diagnostic screen during startup.

- **Advanced Processor Options:**
  Select this submenu to change the following settings.
  - **CPU Speed**:
    This display indicates the speed of the processor.
  - **Machine Checking**:
    If enabled, this feature allows the CPU to detect and report hardware (machine) errors.
  - **Compatible FPU Code**:
    This feature is for debugging only.
  - **Adjacent Cache Line Prefetch**:
    If enabled, the CPU fetches both cache lines for 128 bytes.
  - **Set Max Ext CPUID = 3**
  - **Echo TPR**:
    This feature is for debugging only.
  - **C1 Enhanced Mode**:
    If enabled, this feature lowers the CPU voltage and frequency to prevent overheating.
  - **Intel Virtualization Technology**:
    If enabled, this feature utilizes enhanced virtualization capabilities to allow one platform to run multiple operating systems and applications in independent partitions, creating multiple virtual systems in one physical computer.
    Disabled is the default setting. If you change this setting, you must restart your computer for the change to take effect.
  - **No Execute Mode Memory Protection**:
    If enabled, this feature allows the processor to classify areas in the memory where an application code can execute and where it cannot.
  - **Enhanced Intel Speed Step**:
    This setting allows you to determine the processor power management mode.

- **I/O Device Configuration:**
  Select this submenu to change the following settings:
  - **KBC Clock Input**: This setting allows you to set the keyboard clock rate.
  - **Serial Port A**: This setting allows you to assign control of serial port A.
  - **Serial Port B**: This setting allows you to assign control of serial port B.

- **Floppy Disk Controller**: This setting allows you to assign control of the floppy disk controller.

- **Hardware Monitor**:
  Select this submenu to change the following settings:
  - **CPU Temperature Threshold**: This option allows you to set a CPU temperature threshold that will activate the alarm system when the CPU temperature reaches the predefined temperature threshold.
  - **Fan Speed Control Modes**: This option allows you to decide how the system controls the speed of the on-board fans.
  - **Voltage Monitoring**
  - **System Event Log**
  - **Real Time Sensor Data**

Selecting From the Phoenix cME FirstBIOS Pro Setup Utility Boot Menu

- **Boot Priority Order and Exclusions From Boot Order**
  For details on how to change the order and specifications of the boot order, see the Item Specific Help area.

Selecting From the Phoenix cME FirstBIOS Pro Setup Utility Exit Menu

- **Exit Saving Changes**: This option allows you to save any changes that you made and to exit the BIOS setup utility Setup Utility.
- **Exit Discarding Changes**: This option allows you to exit the BIOS setup utility Setup Utility without saving any changes that you may have made.
- **Load Setup Defaults**: This option allows you to load the default settings for all items in the BIOS setup. This is the safest setting to use.
- **Discard Changes**: This option allows you to discard (cancel) any changes that you made. You will remain in the BIOS setup utility Setup Utility.
- **Save Changes**: This option allows you to save any changes that you made. You will remain in the BIOS setup utility Setup Utility.

Configuring the Computer BIOS

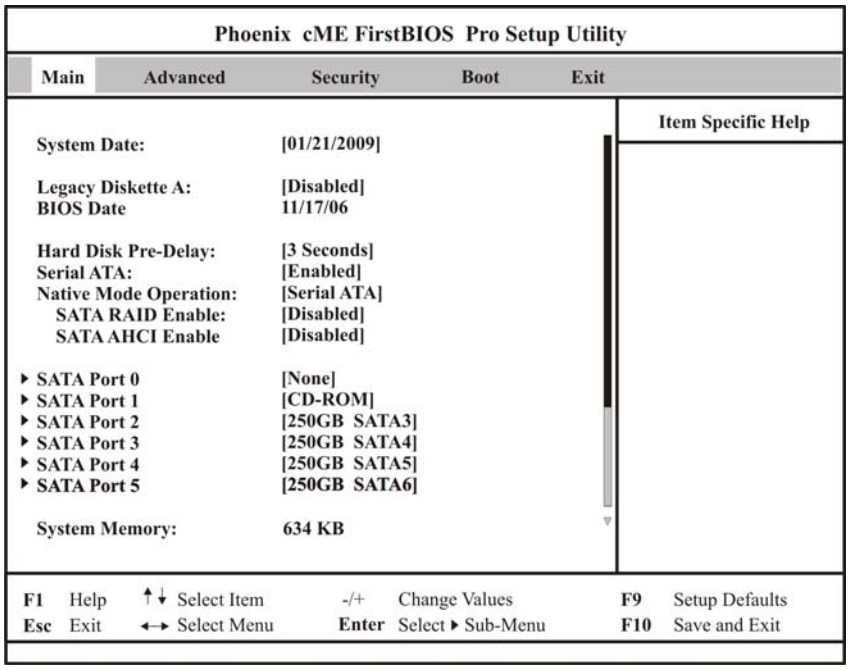
1. Start the Phoenix cME FirstBIOS Pro Setup Utility. See *Starting the Phoenix cME FirstBIOS Pro Setup Utility* on page 50

   The Phoenix cME FirstBIOS Pro Setup Utility window appears.

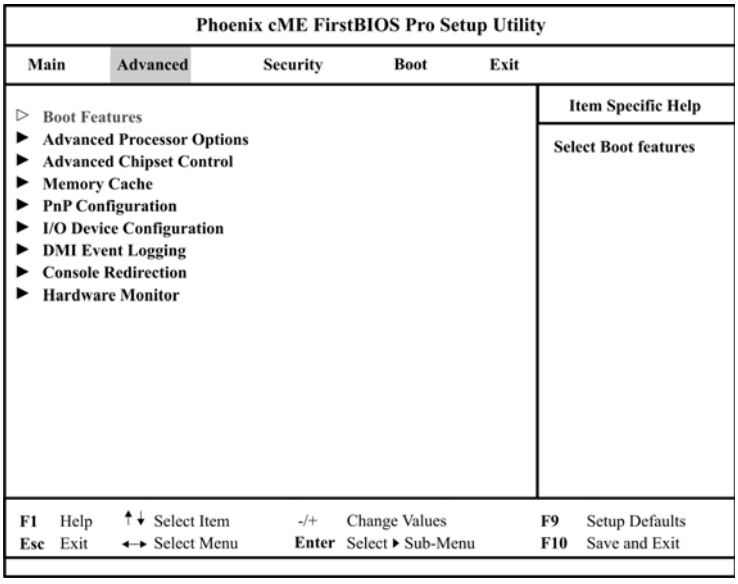
   Tip: To modify any of the following values, use the arrow keys to move to the required values, and the +, -, and numbered keys to change the values.

2. If required, change the **System Date** and verify that the rest of the settings are the same as the settings in the following window.

   a. Press ENTER to save any changes.

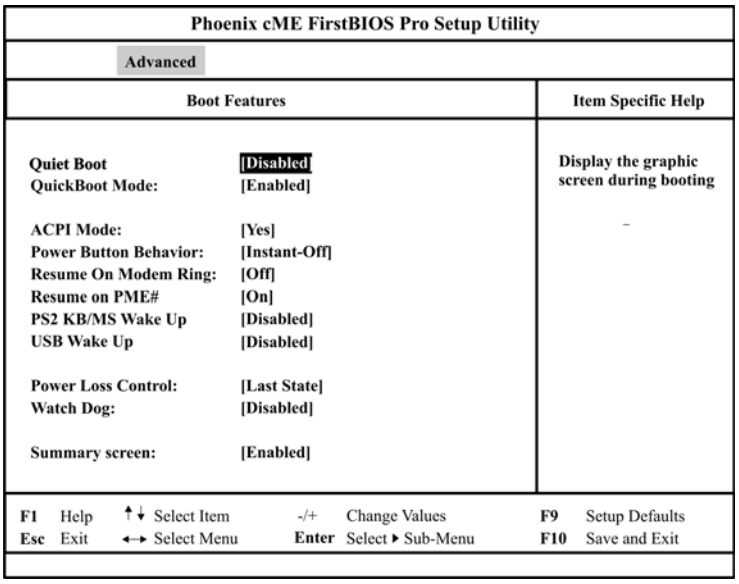


3. Using the arrow keys, select the **Advanced** menu.

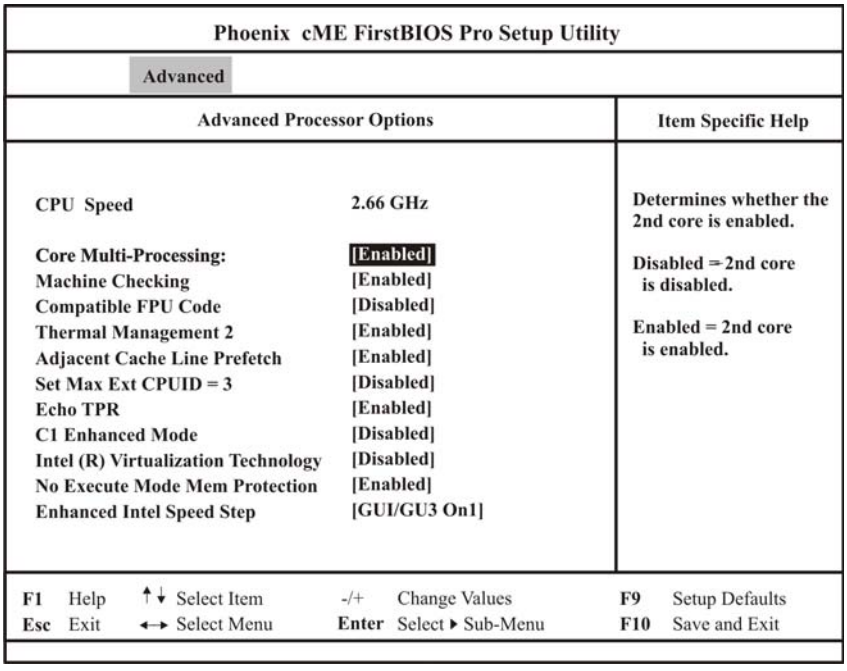


4. Using the keyboard arrow keys, select **Boot Features** and press ENTER.

5. Verify that the settings are the same as the settings in the following window.

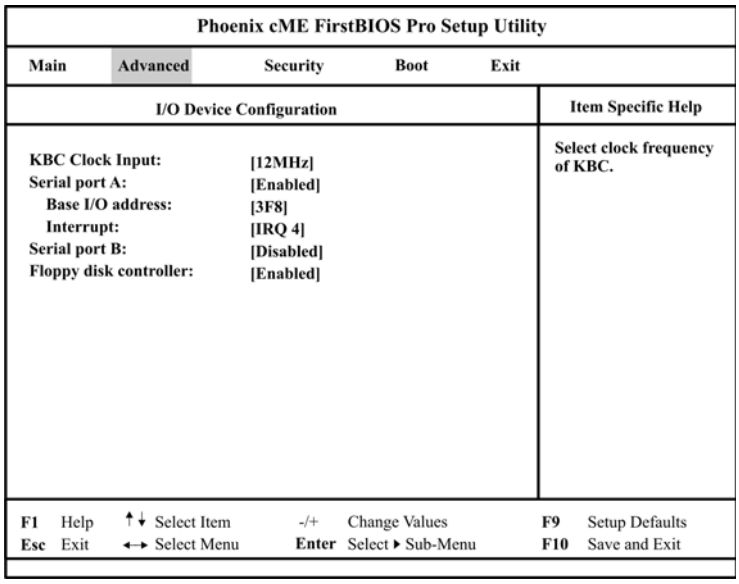


6. Press ESC to return to the **Advanced** menu.
7. Using the arrow keys, select **Advanced Processor Options** and press ENTER.
8. Verify that the settings are the same as the settings in the following window:

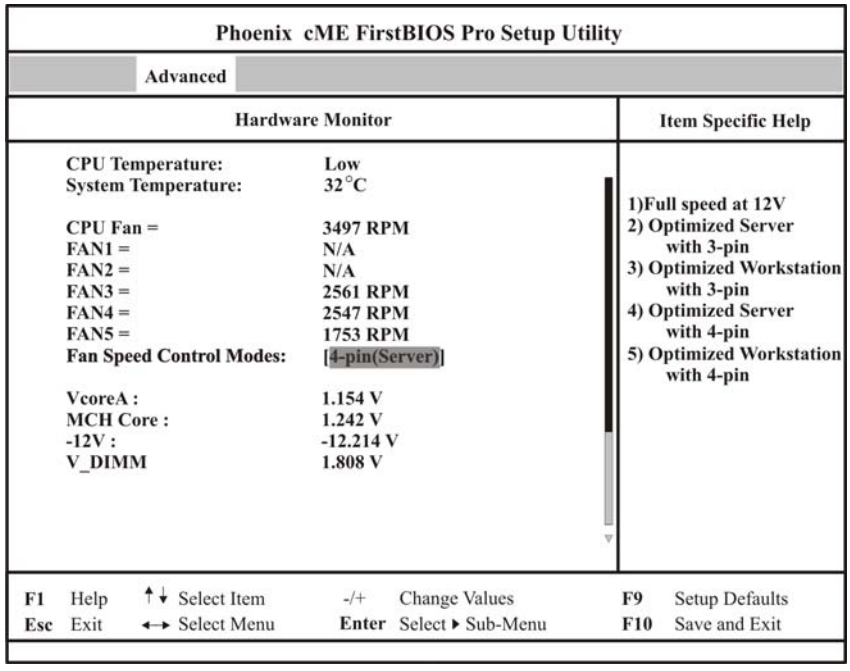


9. Press ESC to return to the **Advanced** menu.
10. Using the arrow keys, select **I/O Device Configuration** and press ENTER.

11. Verify that the settings are the same as the settings in the following window.

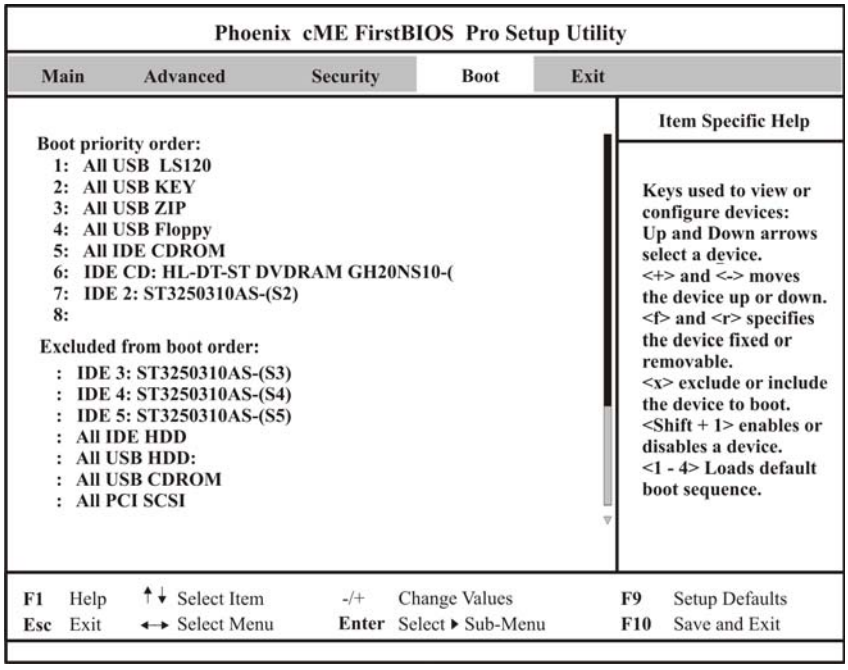


12. Press ESC to return to the **Advanced** menu.
13. Using the arrow keys, select **Hardware Monitor** and press ENTER.
14. Verify that the settings are the same as the settings shown in the window in following window**.**



15. Press ESC twice to return to the BIOS setup utility Setup Utility main window.

16. Select the **Boot** menu and verify that the settings are the same as shown in the following window:



17. If the boot order is not the same as shown in step 16, or if one or more of the devices that should appear in the **Boot priority order** list appears in the **Excluded from boot order** list, do the following:

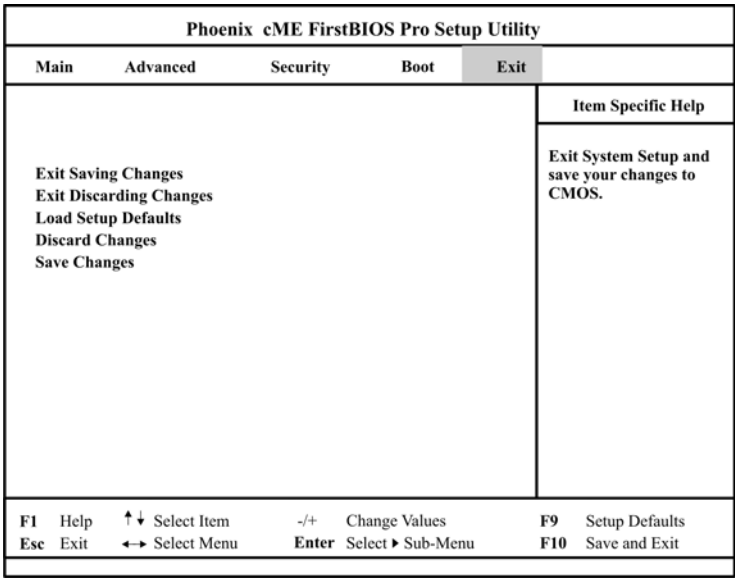
    a. Using the arrow keys, select the device that you want to appear in the Boot priority order list.

    b. On your keyboard, press the x key to add the selected device to the bottom of the Boot priority order list.

    c. Move the selected device to its correct position in the **Boot priority order** list.

    - Press x repeatedly until the device reaches the correct order in the list.

18. Select the **Exit** menu.



19. Using the arrow keys, select **Exit Saving Changes** and press ENTER.
20. To view the BIOS setup utility Setup Utility summary window in detail, when the system starts or restarts and the window appears, immediately press PAUSE BREAK on your keyboard.
21. Press any key to continue.

    You have completed Configuring the Computer BIOS.

Configuring the Gigabit Ethernet Controller

You do not need to set any jumpers or configure the controller. The device driver that enables the operating system to address the controller is automatically installed from DVD #1 (Fast Install SLP).

4.2 General Diagnostic Tools

The following tools are available to help you identify and resolve hardware-related issues:

- PC health monitoring
- POST (Power-On Self-Test) beep codes, error messages, and error logs—POST generates beep codes and messages to indicate successful test completion or the detection of a problem.

For more information, see *POST (Power On Self Test)* on page 59.

4.2.1 PC Health Monitoring

This section describes the PC health monitoring features of the system board. The system board has an onboard system hardware monitor chip that supports PC health monitoring.

An onboard voltage monitor will scan these voltages continuously. Once a voltage becomes unstable, a warning is raised or an error message is sent to the screen. Users can adjust the voltage thresholds to define the sensitivity of the voltage monitor. To adjust the sensitivity, open the BIOS utility and select **Advanced > Hardware Monitor**.

Fan Status Monitor with Firmware/Software On/Off Control

The PC health monitor can check the RPM status of the cooling fans. The onboard 3-pin CPU and chassis fans are controlled by the power management functions. The thermal fan is controlled by the overheat detection logic.

Environmental Temperature Control

The system board has a CPU thermal trip feature. A thermal control sensor monitors the CPU temperature in real time and will send a signal to shut down the system whenever the CPU temperature exceeds a certain threshold. This works to protect the CPU from being damaged by overheating.

Hardware BIOS Virus Protection

The system BIOS is protected by hardware so that no virus can infect the BIOS area. This feature can prevent viruses from infecting the BIOS area and destroying valuable data.

Auto-Switching Voltage Regulator for the CPU Core

The 3-phase-switching voltage regulator for the CPU core can support up to 60 A current and auto-sense voltage IDs ranging from 1.1 V to 1.85 V. This will allow the regulator to run cooler and make the system more stable.

4.2.2 POST (Power On Self Test)

When you turn on the Color Controller C-80, it performs a series of tests to check the operation of its components and some of its installed options.

If POST finishes without detecting any problems, a single beep sounds, and the first screen of the operating system or software program appears.

If POST detects a problem, more than one beep sounds and an error message may appear on the screen.

Note: A single problem might cause several error messages.

POST Beep Codes

Beep codes are sounded in a series of beeps.

- One short beep indicates the successful completion of POST.
- One long beep and two short beeps indicate that there is a video configuration error.
- A continuous beep indicates that no memory is detected.
- Other beep codes are detailed in the following table.

Code	Beep	POST Routine Description	Recovery Action
16h	1-2-2-3	BIOS ROM checksum	• Try saving the BIOS. • Replace the system board.
20h	1-3-1-1	Test DRAM refresh	• Try replacing the memory. • Replace the system board.
22h	1-3-1-3	Test 8742 keyboard controller	Replace the keyboard.
2Ch	1-3-4-1	RAM failure on address line	Replace the memory.
2Eh	1-3-4-3	RAM failure on data bits of low byte of memory bus	Replace the memory.
46h	2-1-2-3	Check ROM copyright notice	Replace the system board.
58h	2-2-3-1	Test for unexpected interrupts	• Remove and reseat the PCI adapters, one at a time, check if faulty, and replace the faulty adapter. • Reload a different BIOS. • Replace the system board.
98h	1-2	Search for option ROMs. One long, two short beeps on checksum failure	• Try reloading the BIOS. • Replace the system board.
B4h	1	One short beep before boot	The system is functioning correctly.

4.3 Color Controller C-80 Hardware Diagnostics Software

The Color Controller C-80 diagnostics software is used for testing both proprietary Creo hardware (FusionRA) and standard off-the-shelf hardware.

There is JOIND (Java Over the Internet Diagnostics)—an Color Controller C-80 client/server diagnostic controller—that runs locally or over a TCP/IP connection. JOIND runs under a Windows platform (NT/98/2000/XP) and enables local diagnostic testing of Color Controller C-80 products with user level support.

If you encounter any problems during installation or during normal operation of the Color Controller C-80, run the Color Controller C-80 diagnostics software to determine the cause.

The diagnostic software is located on the Color Controller C-80. The software receives and executes test requests and returns appropriate status responses.

A hierarchical diagnostics tree shows the FRUs (field replacement units) that can be tested by JOIND (Color Controller C-80 diagnostics software). You can select an individual component from the tree for testing, run batch tests of selected components, or run a general test of all units by selecting the **DFE** option.

Results appear as PASS/FAIL.

4.3.1 Activating the Diagnostics Software

Notes:
Only run the Diagnostics utility after you exit the Color Controller C-80 software.

Wait for the Color Controller C-80 software taskbar icon to disappear before continuing.

Quitting the Color Controller C-80 Software

1. In the Color Controller C-80 workspace, click the **File** menu and select **Exit**.
2. Right-click the Color Controller C-80 software icon in the Windows Quick Launch toolbar and select **ShutDown Color Server**.

Starting the Diagnostics Software

1. From the Windows **Start** menu, select **Color Controller C-80 > Color Controller C-80 Tools > Diagnostics**.
2. The diagnostics program initializes and the DFE User Diagnostics window appears on the screen. See *The Diagnostics Window* on page 62.

4.3.2 The Diagnostics Window

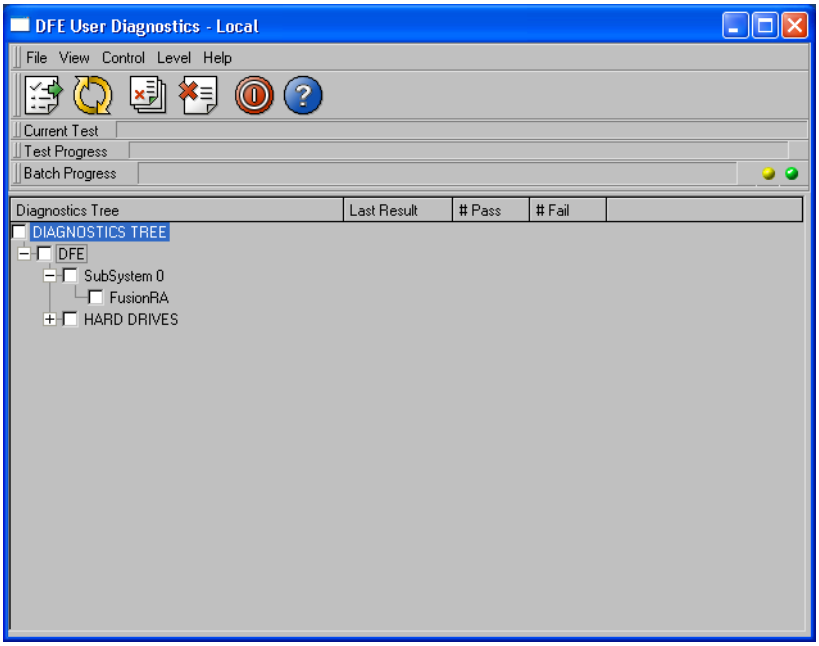


Figure 6: The DFE User Diagnostics window

The DFE User Diagnostics window is divided into four sections:

- The top section contains the Main Menu bar with five different menu options: **File, View, Control, Level,** and **Help**.
- The next section under the Main Menu bar contains shortcut buttons for performing the main **JOIND** operations.
- The third section is a monitoring area in which the progress of the tests appears.
- The fourth section is the Diagnostics tree (on the left) which displays boards and components to be tested. On the right, it displays results as Pass or Fail. The last result test performed on a specific component or batch of components also appears.

4.3.3 Main Menu Options

File Menu

Load Quick Batch	A **Quick Batch** is a pre-defined set of tests, performed on all available components. The results of these tests provide an overall view of the hardware performance of the control station or process print station. The Quick Batch option enables a quick (approximately 10 minutes) general indication of the malfunction and enables proceeding with a local comprehensive test. This set of tests should be used as an initial test. If this test does not indicate a malfunction, the full comprehensive test should be run.
Import Log File	Imports the JOIND current log file in which the Pass/ Fail data is stored from the control station or process print station to the client.
Exit	To exit the application.

View Menu

Test Log File	Stores information sent by JOIND. For each executed test, JOIND uses this file to record the date and time of execution, the loop number, the name of the test and the test result. If the **Rerun** mechanism is ON, results for all reruns are recorded. It is recorded in an HTML file and appears in a browser.
Software Configuration	Displays the software version information of JOIND (client and server). It is recorded in an HTML file and appears in a browser.
Hardware Configuration	Displays hardware information that is recorded in an HTML file and is displayed in a browser.

Control Menu

Run	Initiates a test session, after the items for testing in this session are marked in the check boxes. When **Loop Off** is selected, the test session terminates after each test has been executed. When **Loop On** is selected, the loop sequence is toggled on and the test session repeats until the loop termination condition is reached.
Run Until Fail	Initiates a test session, after the items for testing in this session are marked in the check boxes. When **Loop Off** is selected, the test session terminates after each test has been executed or until the first failure is detected by any test, whichever comes first. When **Loop On** is selected, the test session repeats until the loop termination condition is reached or once a failure is detected, whichever comes first.

Level Menu

User	The default setting for the diagnostic testing and operations on the diagnostic tree that provides indications regarding faulty field replacement units (FRUs).

Help Menu

Online Help	Loads the HTML page that has access to all the topics below.
JOIND Components and GUI	Introduction to the Color Controller C-80 Remote Support concept and describes the JOIND components and GUI.
Activating the JOIND	Describes the access modes Remote Support and how to run them.
The JOIND Main Window	Describes the JOIND main window, menus and options.
The JOIND Menu Options	Description of the menu and sub-menus.
DFE	Not applicable.
About JOIND	Displays the JOIND version number and date.

Shortcut Buttons

The shortcut buttons are found beneath the main menu bar and are available for performing the main operations when running diagnostics tests.

	Initiates the **Run** command to perform a diagnostic test running in loop or executing batch of tests.
	Terminates a test running in loop or executing batch of tests. This button appears only after the **Run** button was selected.
	Appears after the **Stop** button is selected or until the current test is completed.
	Activates the **Errors** command and accesses the **Error Buffer** for all tests run or a Quick Batch. The contents of this buffer are recorded in an HTML file which appears through the HTML browser.
	Enables quick access to the **Error Buffer** of a selected test. The contents of this buffer are recorded in an HTML file which appears through the HTML browser.
	Executes the **Loop Until Abort** command, which toggles the test sequence to **Loop On**. **Loop Off** is the default setting when executing diagnostic tests.
	Toggles the test sequence to **Loop Off**.
	Quits the diagnostics software. Remember to stop any tests that are running before exiting.
	Selects specific menu options or tree nodes when help is required.

Monitoring

The monitoring area is beneath the shortcut buttons. It displays three levels of monitoring progress:

Current Test	Shows the progress of the specific test be performed.
Test Progress	Shows the progress of component tests of a batch run.
Batch Progress	Shows the progress of the entire batch being run.

4.3.4 Board Diagnostics

This section describes the diagnostics for the Color Controller C-80 boards.

The board included in this category is FusionRA.

Use the JOIND diagnostic utility to test the Color Controller C-80 boards. If a board fails a test, first verify that it is properly connected (turn off the Color Controller C-80 and check the board connections including cables and pins; sometimes boards may become loose in the PCI slot).

Important: Replace a board or a system component that continues to fail its diagnostics test.

Note: Exit the Color Controller C-80 software prior to running the diagnostics program.

FusionRA Board

Testing Input/Output Memory Modules

Tests the input and output memories on the FusionRA board.

Testing the FusionRA Board

Tests the internal electrical mechanism of the FusionRA board.

4.3.5 Performing a Diagnostic Test

Important: Prior to activating the diagnostics software, verify that the drivers were loaded successfully (with no error messages during driver loading).

1. Access the JOIND software. See *Activating the Diagnostics Software* on page 61.
2. Select the components for testing from the diagnostics tree, or select **DFE** to test the entire tree, or select **Load Quick Batch** from the **File** Menu. See *File Menu* on page 63.
3. Click the **Loop** button to run the tests in loop mode.
4. Click the **Run** button to activate the diagnostics testing.
5. The system performs the tests and the results appear in the area of the diagnostics tree: Pass or Fail.
6. If there are components that fail, click the **Errors** button to view all failed components or click the **Quick Error** button to view a specific selected test. Diagnostics Test Results

This section lists the possible results of the diagnostics test and the recovery actions.

Symptom	Recovery Action
FusionRA board fails the test.	1. Verify that the FusionRA board is correctly seated. 2. Verify that the memory tests passed. If one or both memory tests failed, replace the failed memory module and run the FusionRA test again. 3. If the FusionRA test fails again, replace the FusionRA board.
The Input Memory fails the test.	1. Verify that the FusionRA board is correctly seated. 2. If the input memory fails again, replace the FusionRA board.
The Output Memory fails the test.	1. Verify that the FusionRA board is correctly seated. 2. If the output memory fails again, replace the FusionRA board.

4.4 Troubleshooting

The first group of troubleshooting procedures relate to the three main situations:

- The Color Controller C-80 does not turn on.
- The Color Controller C-80 turns on, but the operating system does not initialize.
- The Color Controller C-80 turns on, the operating system initializes but fails to execute commands.

The next set of troubleshooting procedures relate to:

- Memory, expansion enclosure, monitor, and common problems
- Ethernet printer cable faults
- Temperature and general power checkouts
- Handling error messages
- Collecting data log files
- Formatting image disks
- Disk striping

4.4.1 Color Controller C-80 Does Not Turn On

Symptom	Recovery Action
Color Controller C-80 does not turn on.	Verify that: • The power cables are properly connected to the Color Controller C-80 • The electrical outlet functions properly • The power-on LED is illuminated • There are no short circuits between the system board and the chassis • The memory DIMMs are correctly seated Then: 1. Turn the power on and off to test the system. 2. The battery on your system board may be old. Verify that it still supplies ~3 volts DC; if not, replace the battery. 3. If you just installed an option, remove it and restart the Color Controller C-80. If it turns on, you might have installed more options than the power supply supports. 4. Review *General Power Checkout* on page 73. 5. If the problem remains, escalate the service call.

4.4.2 Color Controller C-80 Turns On, No Operating System

In this situation it is not possible to run the JOIND diagnostics software.

Symptom	Recovery Action
The operating system does not initialize.	Verify the following: • The SATA2 cables and the power cables are properly connected. • The system disk is not damaged physically. • The boot order is correct. To verify the boot order: 1. Restart the server. 2. Press DELETE to enter the computer BIOS. 3. Use the arrow keys to select the **Boot** menu. 4. Verify the boot order is the same as shown in step 16 on page 57. 5. Reload the operating system; see page 39. 6. Replace the system disk.

4.4.3 Color Controller C-80 Does Not Execute Commands

In this situation it is possible to run the JOIND diagnostics software.

Symptom	Recovery Action
The FusionRA board does not appear when running diagnostics.	1. Verify that the FusionRA board is correctly seated. 2. Replace the input memory located on the FusionRA board. 3. Replace the FusionRA board.
A disk is not functioning properly.	1. Check that the disk is correctly installed. 2. Verify that each SATA2 cable is connected to the correct disk and system board connector. 3. Verify that the voltage cable to each disk is securely connected.
Several tests fail as a result of a particular failure.	When there is a memory failure replace the Fusion RA board and run tests on the board again.

4.4.4 Memory Problems

Symptom	Recovery Action
The amount of memory displayed is less than the amount of memory installed.	Verify that: 1. The memory modules are seated properly. 2. You installed the correct type of memory (ECC DDR2 memory, part number Creo 102-00105). 3. If you changed the memory modules, they are installed on the system board in DIMMs 1A and 2A. Do not use any other DIMM banks. See *Installing a DIMM* on page 102. 4. Check for faulty DIMM modules or slots by swapping a single module between two slots and noting the result. 5. Check that the 115/230 V power-supply switch is correctly set. 6. If the memory tests fail, replace the failing DIMM.

4.4.5 Monitor Problems

Symptom	Recovery Action
The Color Controller C-80 monitor is blank.	Verify that: 1. The power cord is plugged into the Color Controller C-80 and a working electrical outlet. 2. The monitor cables are connected properly, including the AC adapter. 3. The monitor is turned on and the brightness and contrast controls are adjusted correctly. 4. Connect the monitor to a portable workstation to check its working status. If the problem persists, replace the monitor with a confirmed working monitor. If this monitor works, replace the original monitor. 5. If the power is on and there is still no video, remove all the add-on adapters and cables, and use the speaker to determine if any beep codes exist. See *POST Beep Codes* on page 60. 6. If the problem persists and the screen remains blank, contact your support person.

4.4.6 Common Problems

Symptom	Recovery Action
During installing the operating system, you see a blue screen.	1. Restart the computer. 2. If you just installed an option, remove it and restart the Color Controller C-80.
An image disk is not identified.	Check the following: • The disk cables. • That the disk is mounted correctly in the disk bay. If the problem persists, replace the disk.
The system disk cannot be identified.	1. Check that the power cable and the SATA2 are properly connected to the disk. 2. See the procedure to identify the operating system in *Color Controller C-80 Turns On, No Operating System* on page 69.
The DVD-RW drive is not identified.	1. Restart the server and press DEL to enter the BIOS setup utility Setup Utility. See *Using the Phoenix cME FirstBIOS Pro Setup Utility* on page 50. a. In the **Main** menu, verify the following settings: • Serial ATA is **[Enabled]** • Native Mode Operation is **[Serial ATA]** • SATA RAID Enable **[Disabled]** • SATA AHCI Enable **[Disabled]** 2. If the problem persists, check that the SATA cable and the power cable are firmly situated in the Color Controller C-80. 3. If the above mentioned items are working, replace the DVD-RW drive.
The system's setup configuration is lost.	The battery on your system board may be old. Verify that it still supplies approximately 3 volts DC; if not replace the battery. If this does not help, escalate the service call.

4.4.7 Color Controller C-80 to Ethernet Printer Cable Faults

The Color Controller C-80 is connected to your printer with one ethernet printer cable that carries the following data and configuration details between server and printer:

- Information on your printer's power condition
- CMYK data

Symptom	Recovery Action	Further Action (if printing fails)
General	1. Shut down your printer and the Color Controller C-80. 2. Check that the Ethernet printer cable is securely connected to the Color Controller C-80 port. 3. Start the server. 4. Wait until the Color Controller C-80 splash screen disappears. 5. Start your printer.	➢ If printing fails, refer to the next symptom.
Before you print, the printer animation shows green indicating that the printer is ready. After sending the job, the printer appears to be warming up but does not print.	1. Check if the Print Queue is in **Enable** mode. 2. Check if there is no alert message that indicates that a different paper size or type is required. 3. Check that there is no error message on your printer's user interface. 4. Shut down your printer. 5. Replace the Ethernet printer cable. 6. Start your printer. 7. Send a print job.	➢ If printing fails with no communication error, replace the Ethernet printer cable.

Symptom	Recovery Action	Further Action (if printing fails)
No communication after following the correct startup procedure.	1. Restart both your printer and the Color Controller C-80 according to the startup procedure. 2. Send a print job.	➢ If printing fails with no communication error, replace the Ethernet printer cable.
Job printed with one color overlay, or printed output results appear with scratches (white lines) in one of the CMYK color combinations.	1. Shut down both the Color Controller C-80 and your printer. 2. Check that the Ethernet printer cable is connected to the Color Controller C-80 port. 3. Start the server and wait until the Color Controller C-80 splash screen disappears. 4. Start your printer. 5. Send a print job.	If printing fails with color overlay: 1. Replace the Ethernet printer cable. 2. If the procedure does not solve the problem, it could be a FusionRA board problem.

4.4.8 General Power Checkout

Power problems can be difficult to troubleshoot. For instance, a short circuit can exist anywhere on any of the power distribution buses. Usually a short circuit causes the power subsystem to shut down because of an over-current condition.

A general procedure for troubleshooting power problems is as follows:

1. Turn off the system and disconnect the AC power cord(s).
2. Check for loose cables in the power subsystem. Also check for short circuits. For example, if there is a loose screw causing a short circuit on a circuit board.
3. Remove adapters and disconnect the cables and power connectors to all internal and external devices until the system is at the minimum configuration required for operation.
4. Reconnect the AC cord and turn on the system. If the system starts successfully, replace adapters and devices one at a time until the problem is isolated. If the system does not turn on from the minimal configuration, replace FRUs of minimal configuration one at a time until the problem is isolated.

4.4.9 Temperature Checkout

Accurate cooling of the system is important for proper operation and system reliability.

Confirm the following:

- Each of the drive bays has either a drive or a filler panel installed.
- The cover is in place during normal operation.
- There is at least 50 mm (2 inches) of ventilated space at the sides of the Color Controller C-80 and 127 mm (5 inches) of space around the front and rear of the server.
- The cover is removed for no longer than 30 minutes while the server is operating.
- The fans are operating correctly and the air flow is good.
- A failed fan is replaced within 48 hours.

4.4.10 Error Messages

There are four types of error messages:

- System
- Hardware
- Software
- Connection

Each error message indicates a problem and sometimes also a recovery action. If the problem is not resolved after performing the recovery action, perform a diagnostics test and replace the problematic part.

The following tables contain examples of different error messages.

System Error Messages

Message	Recovery Action
`System error. Reboot the system.`	1. Restart the system from the **Start** menu. 2. If the error message reappears, run the diagnostics test.
`System error. Reinstall the Color Controller C-80 application.`	Reinstall the Color Controller C-80 software, and restart the system.

Hardware Error Messages

Message	Recovery Action
FusionRA load failure. Reboot the system.	1. Check that the FusionRA board is seated correctly and restart the system. 2. Run the diagnostics test. 3. If the error message still appears, replace the board.

Software Error Messages

Message	Recovery Action
Failed to spool the file during job submission	Check the image disk space and free disk space, if required.
Failed to locate the thumbnail for element <name of element> in the job <job name>	Repeat the RIP process.
Wrong striping configuration— reboot the computer and configure the striping	Re-create striping. See *Disk Striping* on page 77.

Connection Error Messages

Message	Recovery Action
Ethernet connection failure	1. Check the cable connections. 2. Restart the client workstation computer and the Color Controller C-80. 3. Check the communication parameters in the client workstation computer and the Color Controller C-80.

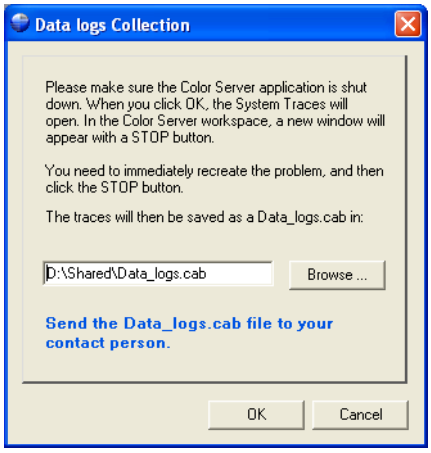
4.4.11 Collecting Data Log Files

The data logs collection feature enables you to collect log files from both the Color Controller C-80 software and system board.

When troubleshooting a problem in the system, you may be requested to recreate the problem with the data log collection tool enabled and send the trace results to your service representative.

Collecting the Data Logs

1. Shut down the Color Controller C-80 software.
2. From the Windows **Start** menu, select **Color Controller C-80 > Color Controller C-80 Tools > Data Logs Collection.**



Saving the Data Logs

1. If you accept the default cab file location, click **OK** and proceed to step 3.
2. If you want to save the cab file to another location, click **Browse**, select the new location, click **Save**, and then **OK**.
3. Restart the Color Controller C-80 software.

4. Recreate the problem you have encountered and then click the **STOP** button.

   The Color Controller C-80 software closes automatically and the log files are saved as a **Data_logs.cab** file in **D:\ Shared**, or in the location previously specified in step 2.

Sending the Data Logs

➢ Send the **Data_logs.cab** file to your your service representative.

4.4.12 Disk Striping

Perform disk striping if the `Wrong Disk Configuration` message appears. This message may appear in the following instances:

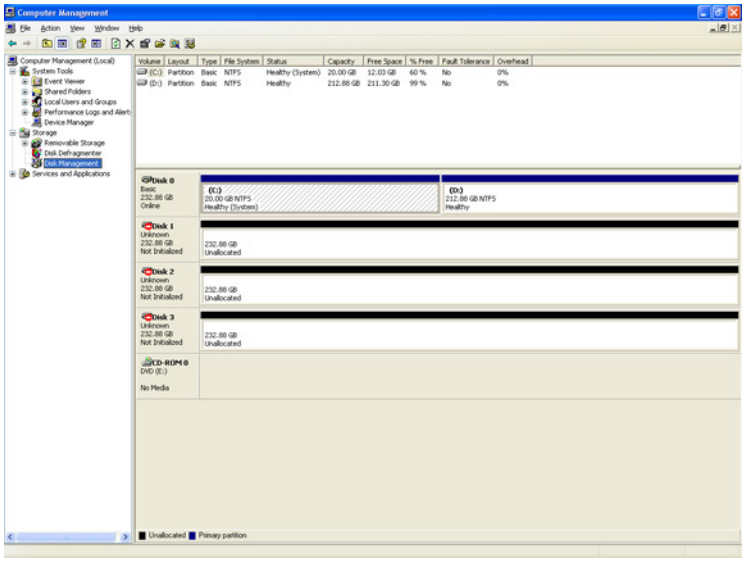
- The operating system does not identify a disk because a cable, such as a SATA2 or power cable, is faulty or not connected properly. See *Troubleshooting* on page 67.
- The operating system and the Color Controller C-80 software have been installed from scratch, and the operating system only recognizes foreign disks. See *Striping Foreign Disks* on page 78.
- An image disk either has been replaced with a new disk, and the operating system identifies it as an unknown disk. See *Striping Unknown Disks* on page 80.
- A faulty image disk has been replaced with a new disk, and the new disk is intermittenly unavailable. See *Removing a Missing Disk* on page 82.

Note: If the `Image Disks File System is not Formatted` message appears, proceed to step 2 of the *Confirming the Disk Striping* procedure on page 85.

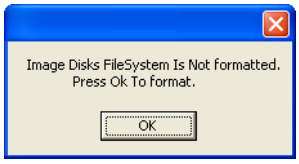
To establish the correct disk striping procedure:

1. If the following message appears, click **OK.**

The Computer Management window appears.



2. Perform one of the following tasks:
   - Stripe the foreign disks— See *Striping Foreign Disks* on page 78.
   - Stripe the unknown disks—See *Striping Unknown Disks* on page 80.
   - Remove the missing disk—See *Removing a Missing Disk* on page 82.
3. After completing disk striping, the following message appears:

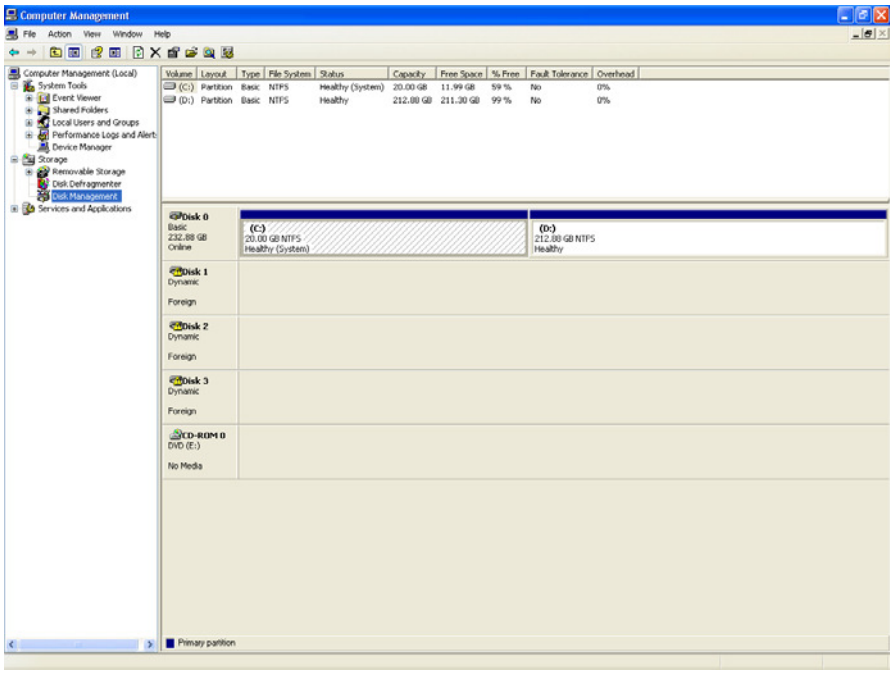


4. Click **OK**.

Striping Foreign Disks

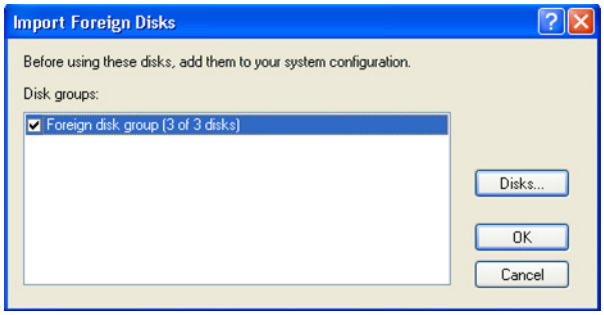
Perform the following procedure to remind the operating system that a striped volume resides within the operating system.

1. In the Computer Management window, verify that the disks you need to stripe (Disk 1, Disk 2, or Disk 3) are labeled **Dynamic**.

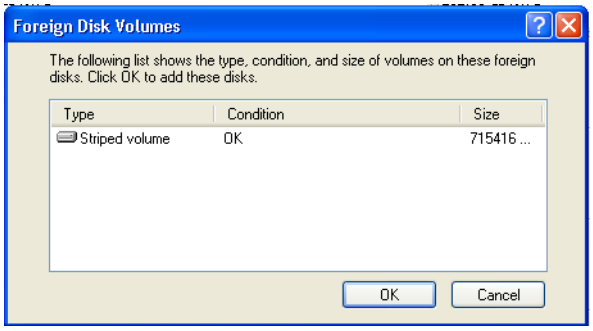


2. Right-click in the area where the disk is designated **Dynamic**, and select **Import Foreign Disks**.

Note: Foreign disks are any hard disks that were recognized as dynamic disks from a previous installation.

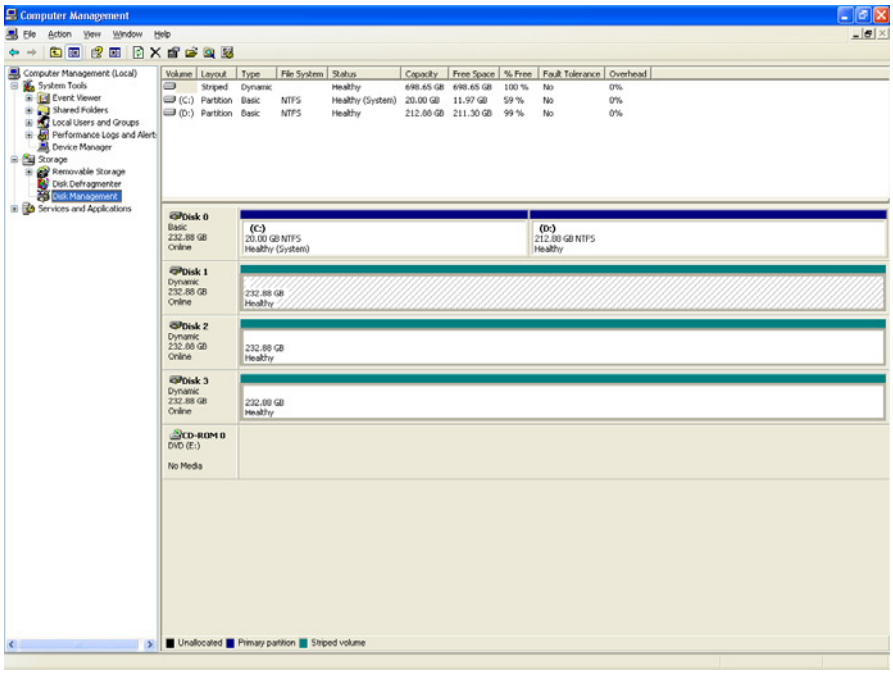


3. Verify that the **Foreign disk group (3 of 3 disks selected)** check box is selected and click **OK**.



4. Click **OK.**

   The Dynamic disks are striped, as shown in the following window.



5. Close the Computer Management window.
6. When the `Image Disks File System is not Formatted` message appears, click **OK**.

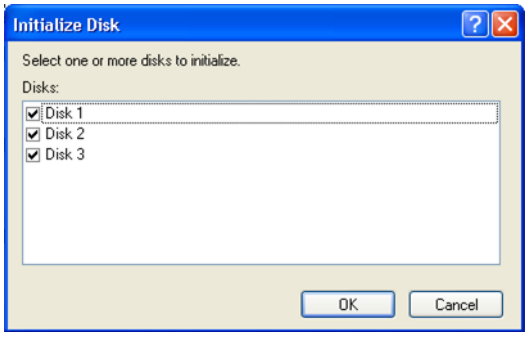
Striping Unknown Disks

The following procedures describe how to initialize unknown disks to basic disks, and to convert basic disks to dynamic disks.

Perform the following procedures if you have replaced an image disk.

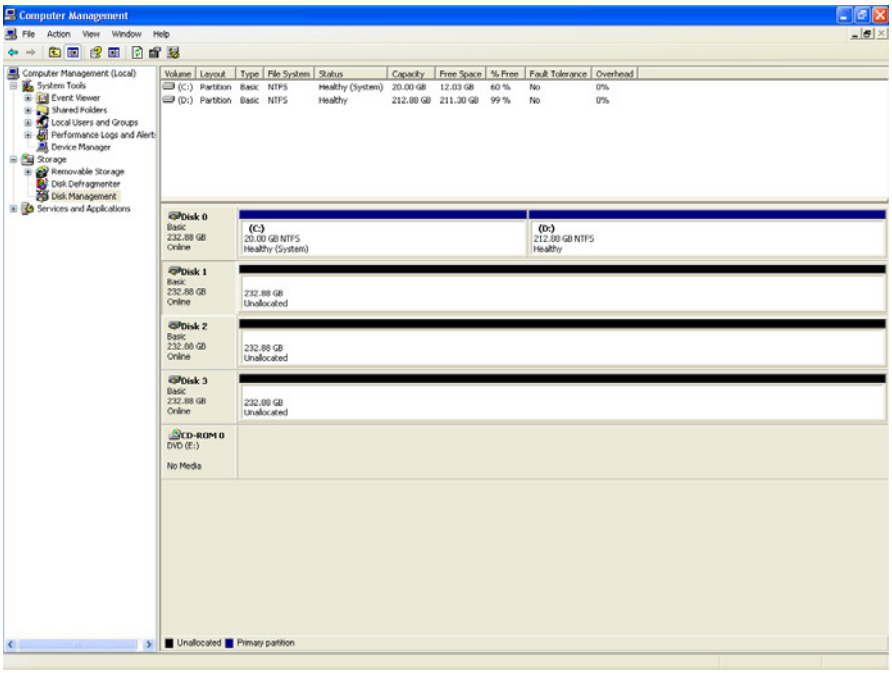
To initialize the disks:

1. In the Computer Management window, right-click the disk you want to initialize, and select **Initialize Disk**.



2. Verify that the image disk check boxes are selected, and click **OK**.

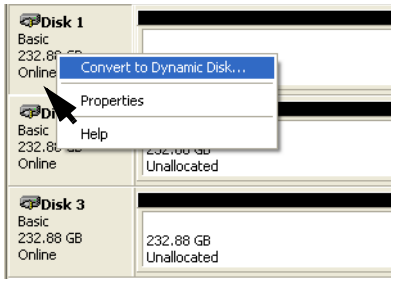
3. Verify that the Computer Management window appears similar to the following window.



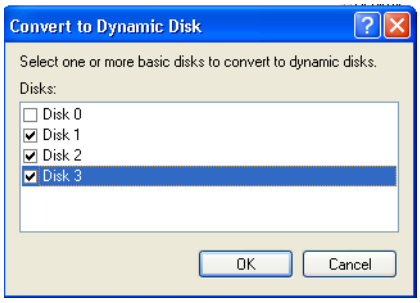
4. Proceed to *Converting the Disks to Dynamic Disks*.

Converting the Disks to Dynamic Disks

1. In the Computer Management window, right-click in the disk area that you want to convert and select **Convert to Dynamic Disk**.

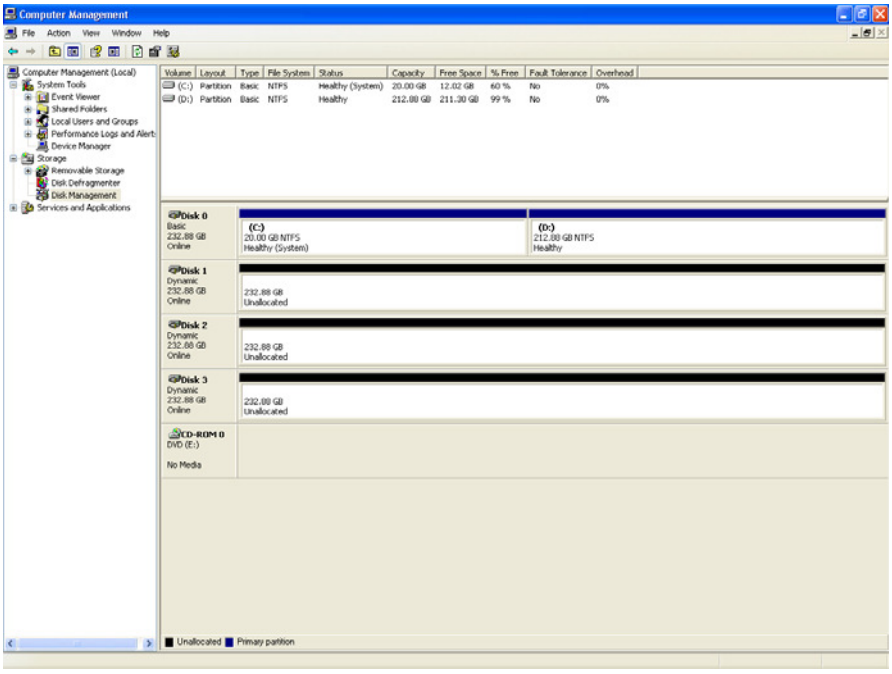


2. Select the disks to convert to dynamic disks, and click **OK**.



Attention: Do not select the disk that is the system disk. Selecting the system disk will cause all information to be lost.

3. Verify that the Computer Management window appears similar to the following window.

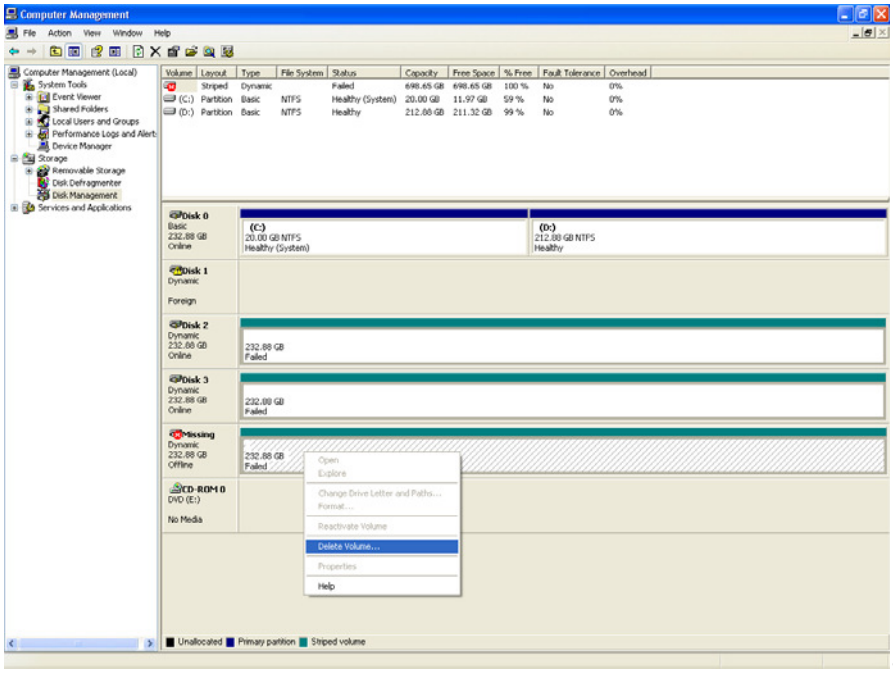


4. Proceed to *Creating a Striped Volume*.

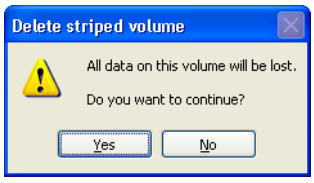
Removing a Missing Disk

Perform the following procedure when you have replaced a faulty disk and the new disk is intermittenly unavailable.

1. Right-click the white area opposite the missing disk and select **Delete Volume**.

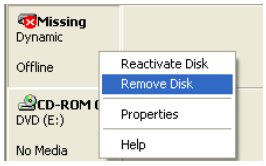


2. Click **Yes**.



The missing disk volume is deleted.

3. Right-click the **Missing Dynamic** area, and select **Remove Disk**.



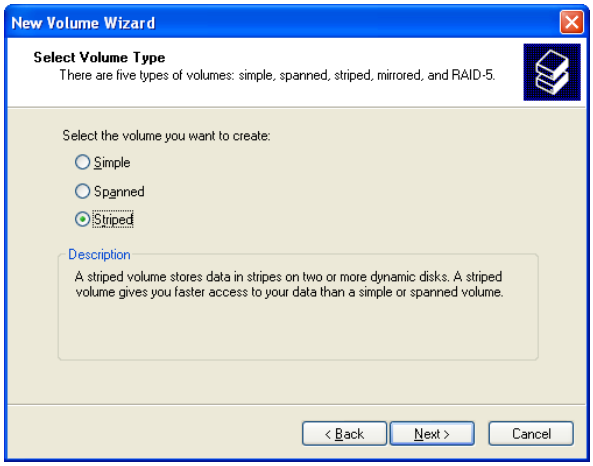
The missing disk is deleted.

4. Proceed to *Creating a Striped Volume*.

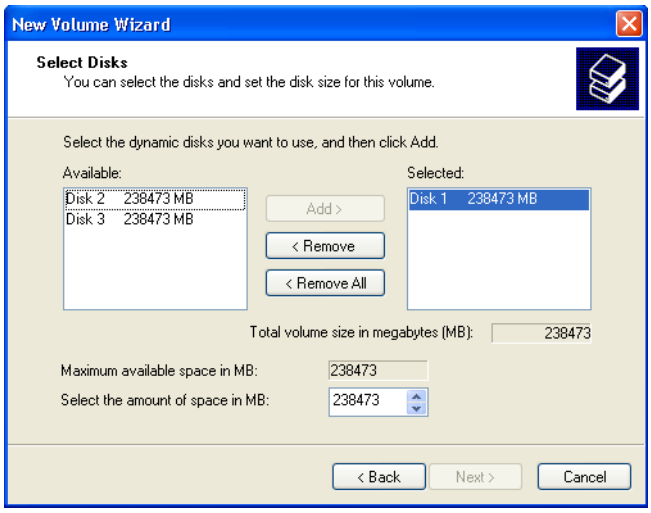
Creating a Striped Volume

After you have replaced a disk, or low-level formatted one or more disks, you need to create a striped volume.

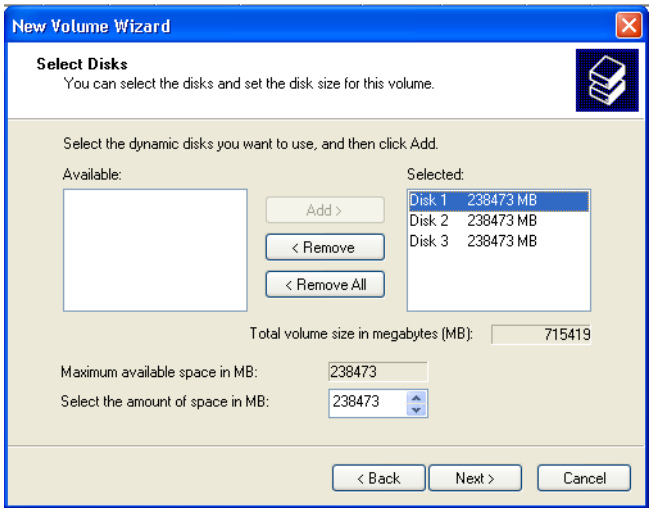
1. In the Computer Management window, right-click the white area to the right of the disk for which you need to create a volume, and select **New Volume**.
2. In the New Volume Wizard, click **Next**.



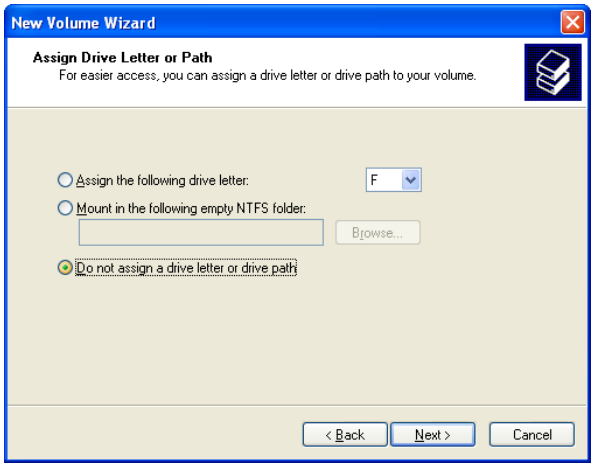
3. Select **Striped,** and click **Next**.



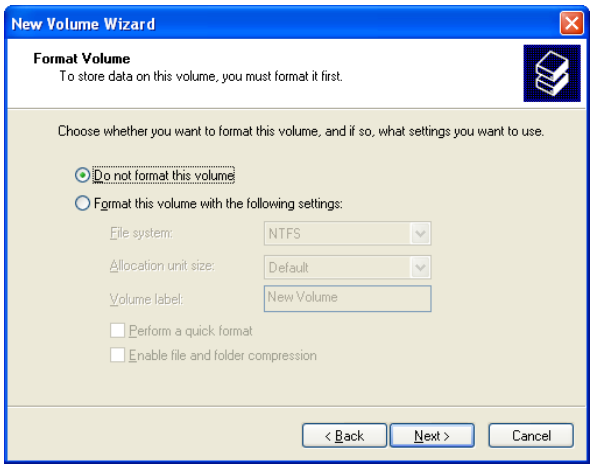
4. In the **Available** list, select each disk that you want to include in the new volume and click **Add**.



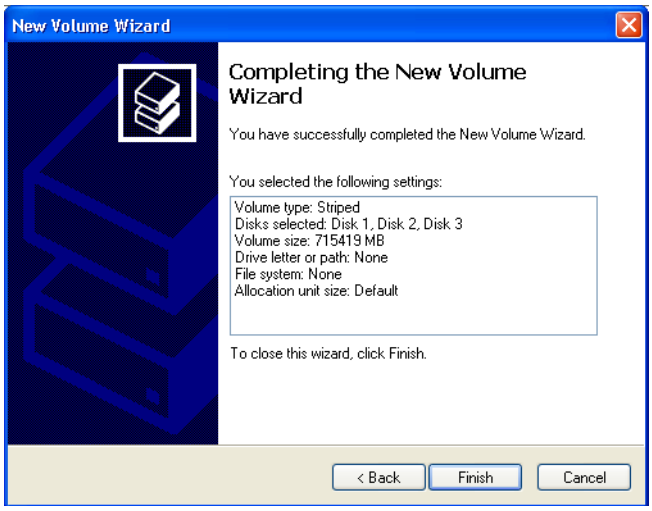
5. Click **Next**.



6. Select **Do not assign a drive letter or drive path**, and click **Next.**



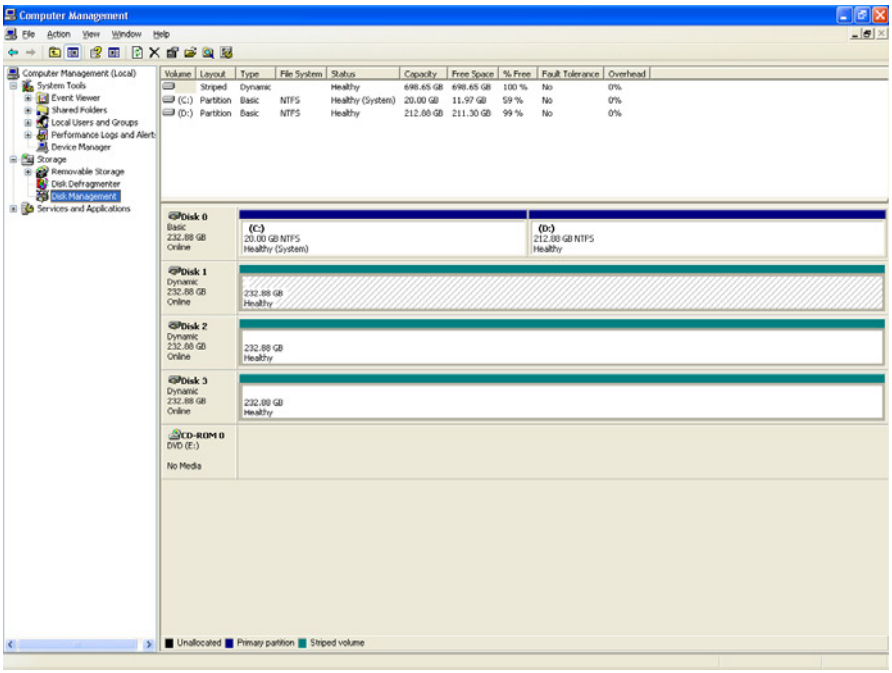
7. Select **Do not format this volume,** and click **Next**.



8. Click **Finish**.
9. Confirm that the disks are striped.

Confirming the Disk Striping

After you complete the New Volume Wizard, the Computer Management window appears.



1. Close the Computer Management window.

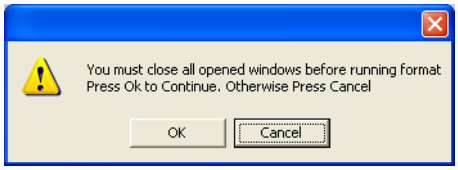
When the `Image Disks File System is not Formatted` message appears, click **OK**.

4.4.13 Formatting the Image Disk

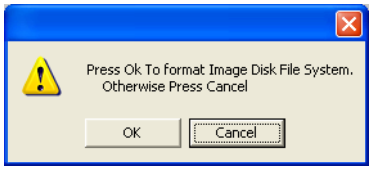
Perform the following procedure when suggested as a recovery action.

Important: Formatting erases all data stored in the Storage area. It is recommended to back up your data, if possible, to an external device or network.

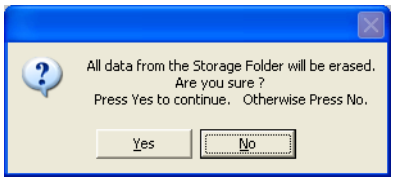
1. Close all software programs and wait for them to shut down completely.
2. From the Windows **Start** menu, select **Color Controller C-80 > Color Controller C-80 Tools > Format Image Disks**.



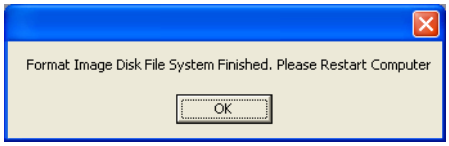
3. Close all open windows, if required, and click **OK**.



4. Click **OK**.



5. Click **Yes**.



6. Click **OK**.
7. To enable the changes to take effect, restart your computer.

5

Hardware and Maintenance Repairs

5.1 System Components

Use the following diagram to locate a specific part for replacement. In the *Spare Parts List* on page 91, each number in the Item number column corresponds to a spare part—not all the parts in the spare parts list are illustrated.

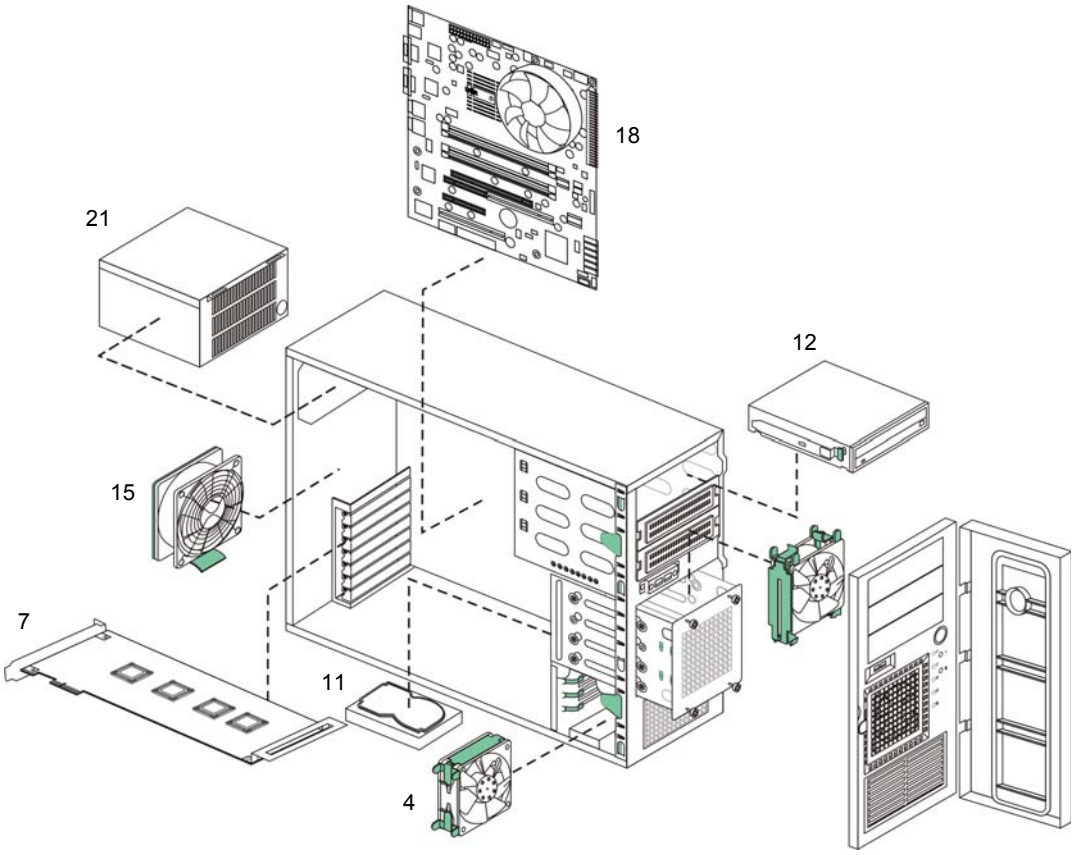


Figure 7: Spare parts diagram

5.2 Spare Parts List

Color Controller C-80 Spare Parts List (FRUs- Field Replaceable Units)

Item Number	Description	Creo Part Number	Type	Qty/ Unit
1.	Battery, 3V, Lithium, CR2032	210C03010		1
2.	PRW Cord,18AWG,BR/BL/ GR,3M SJT,USA/C13	216-00160		2
3.	Power Cord 10A,250V,C-13 CONN. [LF]	216-00161		2
4.	Power Cord 10A, 250V, C-13, CON. U.K. [LF]	216-00164		2
5.	Cable Ethernet Shielded,CAT5E,10M	216-00169		1
6.	Cord, Power, 10A/250V, AU & NZ, 2.5M, Black	216-00973		2
7.	Fan 12V Wiring Assy. (92 X 92)	220-01391A		2
8.	Bracket,Ricoh DFE,Net Cable Protector	252-21224A	Creo	1
9.	CAP, Ricoh DFE,Net Cable Protector	252-21226A	Creo	1
10.	FusionRA [LF] Board	503-00561B	Creo	1
11.	Universal Stand Type II	518-01588A	Creo	1
12.	CPU Kit Q9400,Quad Core2, 2.66GHZ,1333MHZ	518-03787A		1
13.	Kit, Color Controller C-80 front cover	518-04033A		Option
14.	Chassis Screws kit - Color Controller C-80	518-04035A		1
15.	Left cover kit	518-04036A		
16.	GM Eye-One Pro without UV Cut Filter [LF]	600-00051		1
17.	HD,250GB,7.2KRPM,SATA2	607-00253		4
18.	CMPTR, DVD R/W, SATA, Black	607-00254		1
19.	Monitor,LCD 19" Wide,Black	608-00070		1
20.	CMPTR, Keyboard and Mouse,Basic Pack,Black[LF]	609-00343		1
21.	Computer Rear Fan (120 X 120)	609-00393		1
22.	Computer CPU,INTEL P4 LGA775,Cool Fan	609-00401		1
23.	USB2.0 Cable,2-Port W/ Bracket,40CM,LF	609-00504		1
24.	CMPTR,MB,X7SBL-LN2	609-00532		1

Color Controller C-80 Spare Parts List (FRUs- Field Replaceable Units)

Item Number	Description	Creo Part Number	Type	Qty/ Unit
25.	Computer,Memory Module,1GB,DDR2,ECC,800MHZ	609-00533		2
26.	SATA Cable,Straight, Right Angle (UP)	609-00564		5
27.	P/S,ATX,350W,6 SATA Connectors	609-00568	Third party	1
28.	Color Controller C-80 Media Software Kit V1.0	634-00634A	Creo	1

5.3 Before You Begin

Before you begin to replace parts:

- Become familiar with the safety and handling guidelines specified in *Safety Information (Multi-Language)* on page v. These guidelines will ensure your safety while working with the Color Controller C-80 and its options.
- Ensure that you have an adequate number of properly grounded electrical outlets for the server, monitor, and any options that you intend to install.
- Back up all important data before you make changes to disk drives.
- Have a small flat-blade screwdriver available.

Warning: Before performing any hardware maintenance or repair, turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.

5.3.1 System Reliability Considerations

To help ensure proper cooling and system reliability, verify that:

- The side cover is in place during normal operations.
- There is space around the Color Controller C-80 to allow its cooling system to work properly. Leave about 127 mm (5 in.) of space around the front and rear of the server.
- Cables for optional adapters are routed according to the instructions provided with the adapters.
- A failed fan is replaced as soon as possible, to prevent possible damage to the boards.

5.3.2 Hardware Connections

Figure 8 shows the hardware connections for the Color Controller C-80.

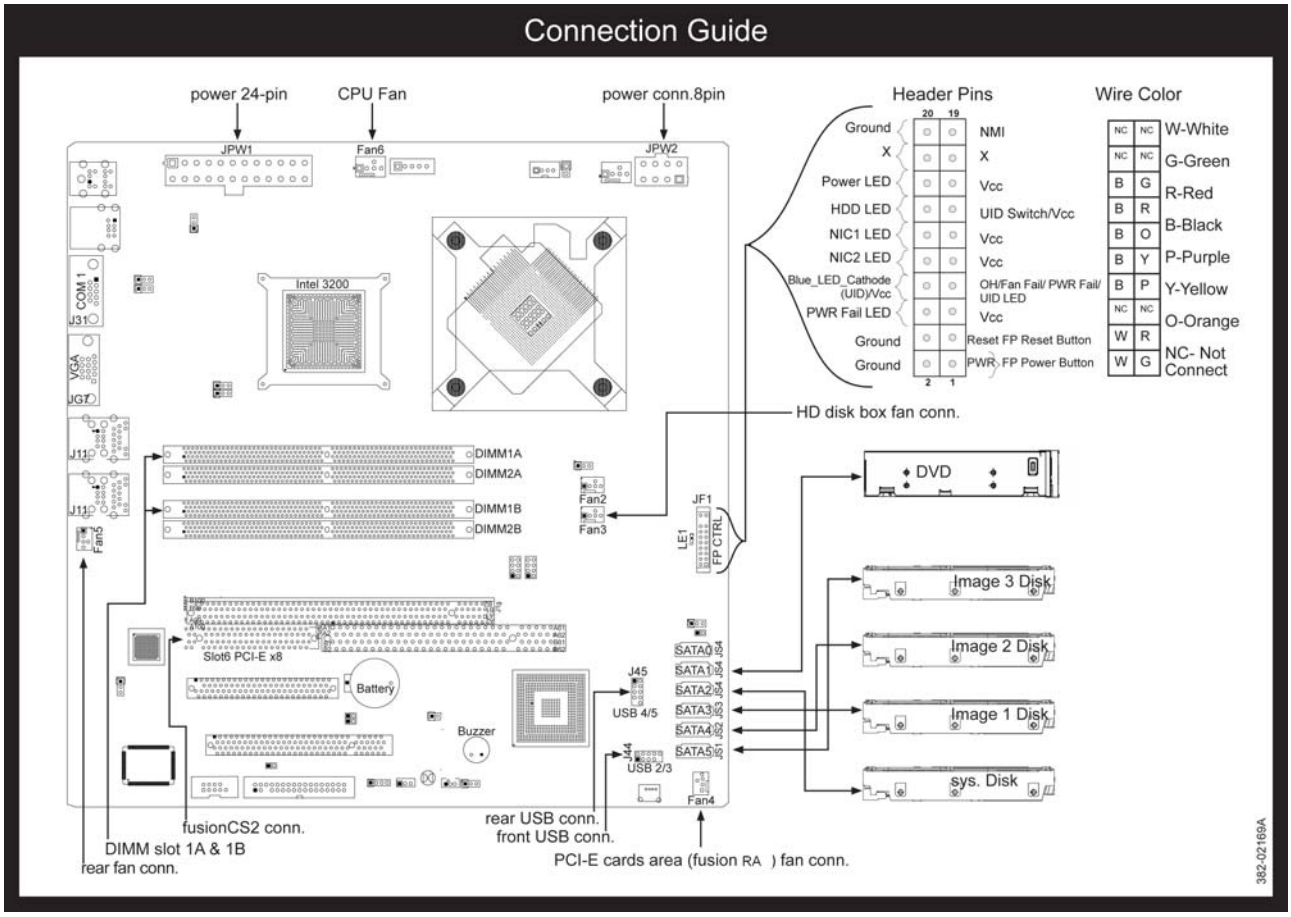


Figure 8: Hardware connections for the Color Controller C-80

5.4 Removing and Placing the Side Cover and Front Panel

This section describes the procedures used to remove and place the Color Controller C-80 cover and front panel.

5.4.1 Removing the Side Cover

1. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.
2. If necessary, unlock the side cover.
3. Loosen the two screws that secure the side cover to the rear of the server.
4. Release the side cover by sliding it toward the rear of the server.

5. Move the side cover outward and away from the server.

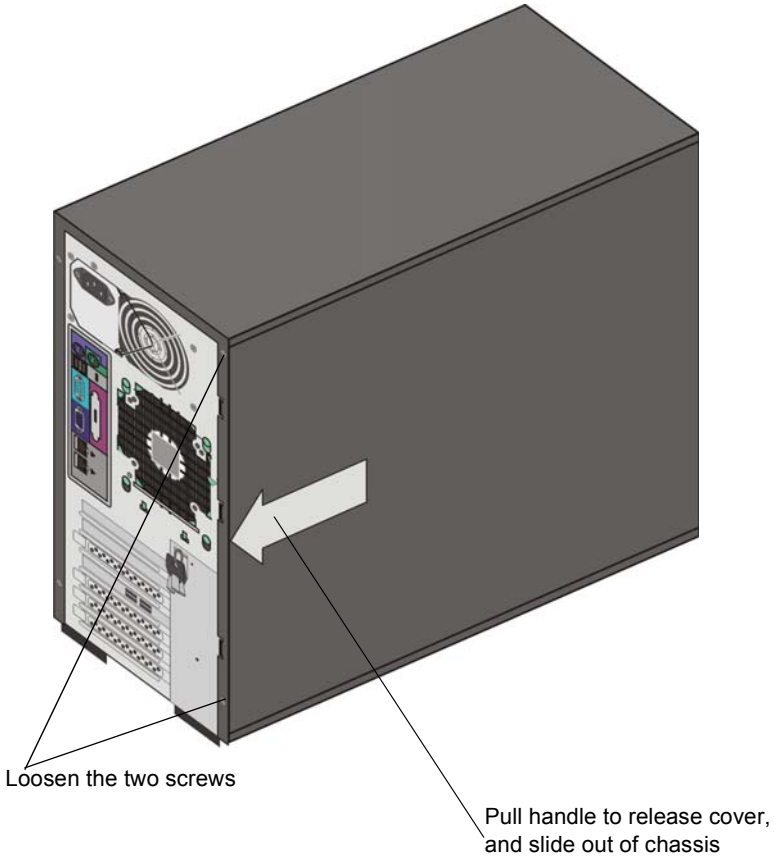


Figure 9: Removing the side cover

5.4.2 Placing the Side Cover

1. Verify that the server is off and that all external cables are disconnected.
2. Clear any cables that might impede returning the side cover.
3. With the server in the upright position, rest the bottom of the side cover on the bottom rail of the chassis.
4. Align the slots in the side cover with the matching tabs in the chassis. Insert the side cover into the slots.
5. Slide the side cover toward the front of the server.
6. Tighten the two screws that secure the side cover to the rear of the server.
7. Reconnect all external cables and power cords and turn on the server.

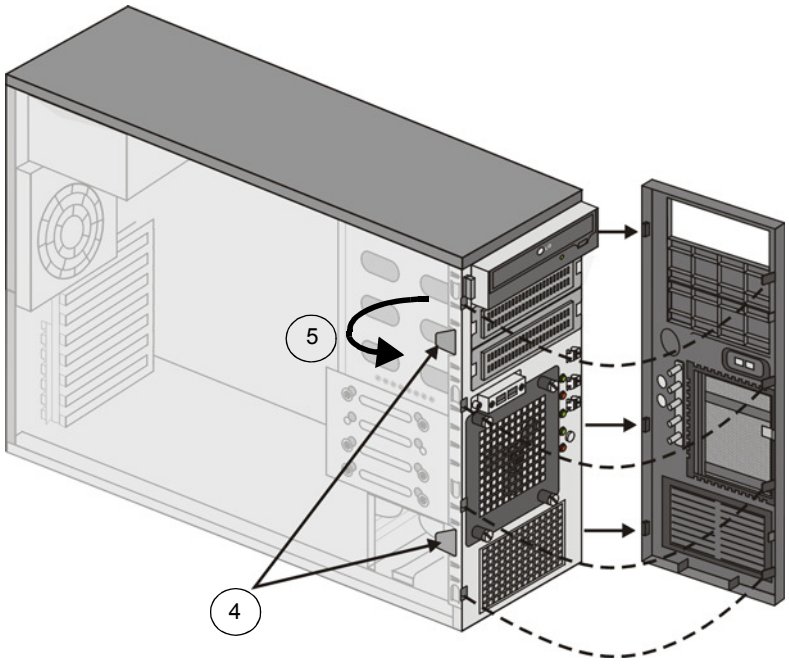
Caution: For proper cooling and airflow, replace the side cover before turning on the server. Operating the server for extended periods (more than 30 minutes) with the side cover removed might damage server components.

5.4.3 Removing the Front Panel

1. Review *System Reliability Considerations* on page 93.
2. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover (see *Removing the Side Cover* on page 94).

   Tip: It is easier to perform this procedure if you place the server on its side on a table, with the front panel of the tower computer case protruding over the table edge.

4. Inside the chassis, lift the two protruding tabs that secure the front panel to the front of the chassis and move the edge of the front panel slightly away from the chassis. See step 4 in Figure 10 and Figure 11 on page 97.
5. Using a flat screwdriver, gently pry the four concealed tabs along the edge of the front panel away from the chassis.



4 Inside the chassis, lift the two protruding tabs.

5 Pry the edge of the front panel away from the chassis and open outward.

Figure 10: Removing the front panel

6. When the front panel is free, pull it away from the front of the chassis, and then push it downward to release the concealed tabs along the bottom of the front panel from the chassis.

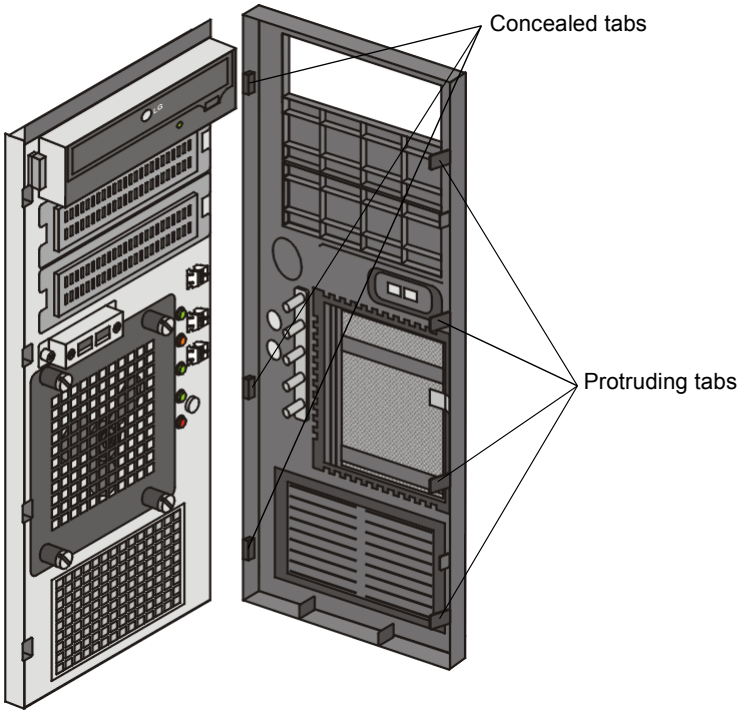


Figure 11: Front panel removed showing protruding and concealed tabs

7. Remove the front panel and store it in a safe place.

5.4.4 Returning the Front Panel

1. With the Color Controller C-80 on its side, insert the concealed tabs along the bottom edge of the front panel into the matching slots in the chassis.
2. Push the top of the front panel toward the server until the two protruding tabs, and the concealed tabs along the top edge of the front panel snap into place.

   Note: While pushing the front panel into place, be careful not to damage the USB port. See Figure 11 on page 97.

3. Return the side cover. See *Placing the Side Cover* on page 95.
4. Reconnect all external cables and power cords, and turn on the server.

5.5 Working with Boards (Adapters)

If the diagnostics check (see Chapter 4, *Diagnostics and Troubleshooting*) indicates that any unit components need replacing, follow the replacement procedures.

Figure 12 illustrates schematically the external connectivity of the peripherals and the internal connectivity of the main components of the Color Controller C-80.

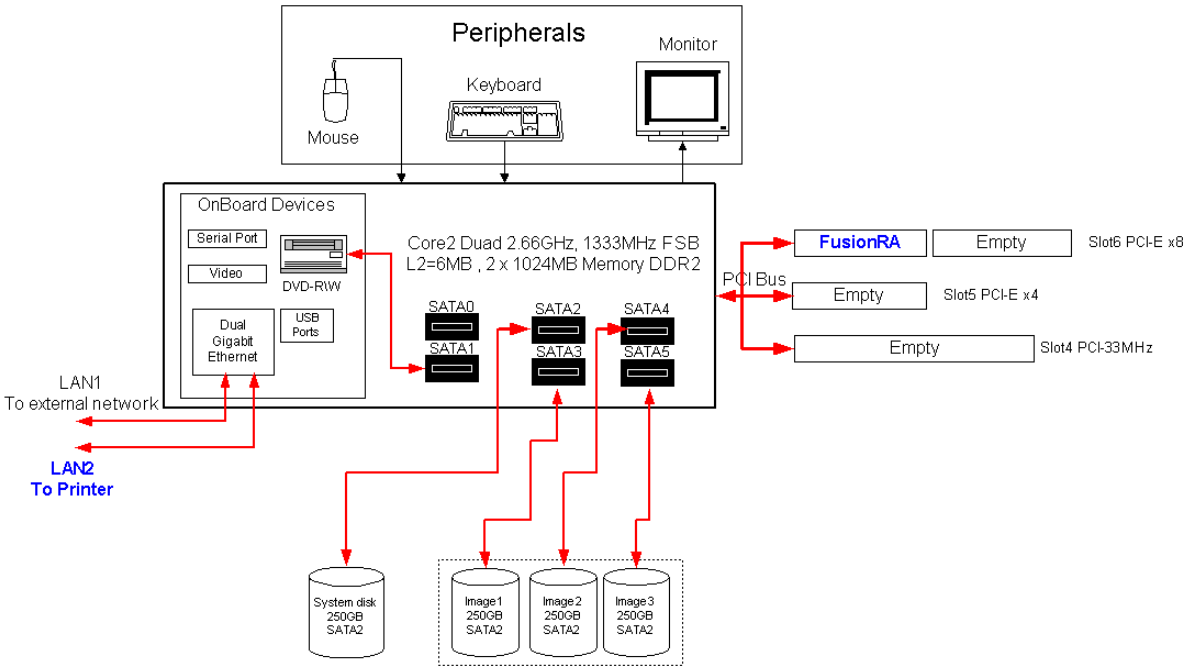


Figure 12: Peripherals and internal connectivity

5.5.1 Visual Inspection

Whenever you replace any component in the unit:

1. Check that all boards are retained properly in their slots.
2. Check that the cables are routed properly.
3. Check the existence of all the fans.
4. Check that all the disks are locked properly.

WARNING: When you handle static-sensitive devices, take precautions to avoid damage from static electricity. For details, see *Safety Information (Multi-Language)* on page v.

5.5.2 Replacing the FusionRA Board

The FusionRA board simultaneously decompresses and RIPs data for the duration of a job. Perform the following procedures to remove and install the FusionRA board.

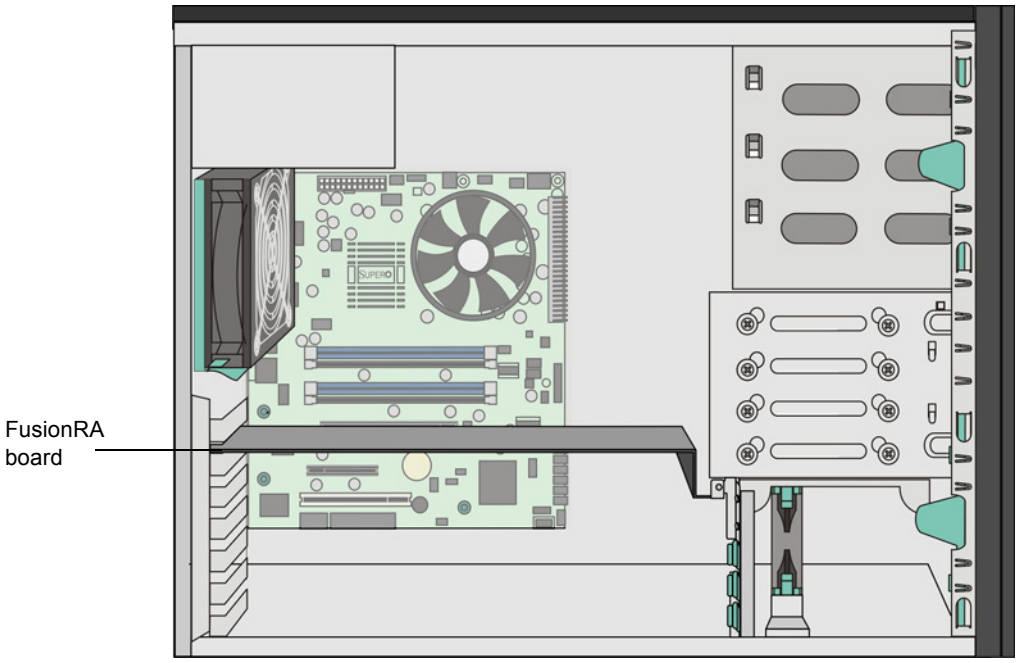
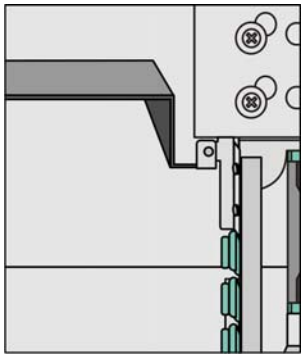


Figure 13: FusionRA Board layout

Removing the FusionRA Board

CAUTION: Before opening the unit, ensure that the power is turned off and that the unit is disconnected from the AC mains power.

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover. See *Removing and Placing the Side Cover and Front Panel* on page 94.
4. Using a cross-head screwdriver, remove the hexagonal screws that hold the board at the right and the left of the chassis.



5. Grip the front-left and right corners of the board between the thumb and forefingers of each hand and gently slide the board out.

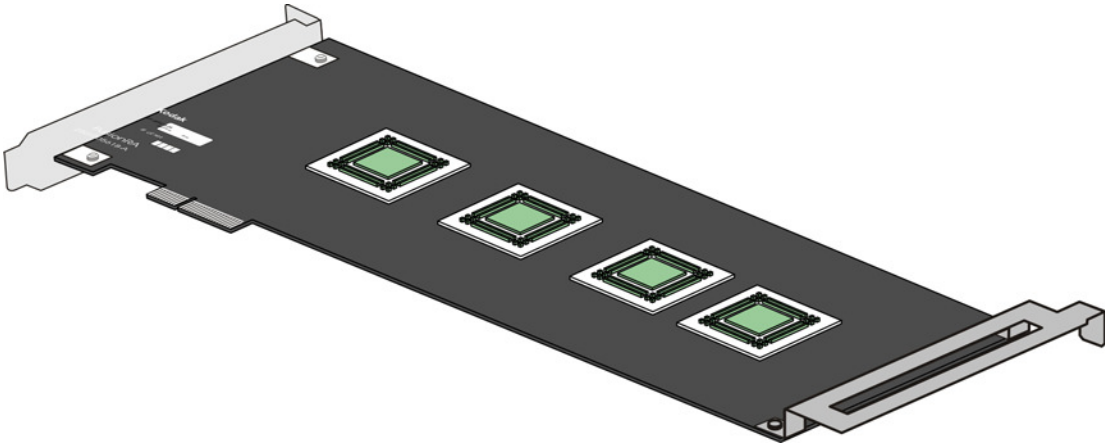


Figure 14: FusionRA board

Preparing the FusionRA Board

1. Touch the sides of the new board's antistatic packet to an unpainted area of the server chassis, and then remove the new board from the packet.

WARNING: Avoid touching the components and gold-plated connectors on the adapter.

2. Place the board, component-side up, on a flat, antistatic surface.

Installing the FusionRA Board

1. Carefully grasp the board by its top edge or upper corners, and align it with the expansion slot on the system board.
2. Press the board firmly into the expansion slot. Verify that the board fits securely in the expansion slot and is locked in position.

   Attention: When you replace a board in the server, ensure that it is completely and correctly seated in the system board expansion slot before applying power. Incorrect seating might cause damage to the system board or any other board.

3. If you have other options to remove or replace, do so now.
4. Insert the hexagonal screw that holds the board at the rear of the chassis and tighten it.
5. Insert the hexagonal screws that hold the board at the left and right of the chassis and tighten the screws.
6. Return the side cover. See *Placing the Side Cover* on page 95.
7. Reconnect all external cables and power cords, and turn on the server.

5.5.3 Replacing System Board Memory Modules

The Color Controller C-80 comes with Dual In-line Memory Modules (DIMMs) that are installed on the system board in DIMM bank #1A (blue) and DIMM bank #1B (blue).

Note: Removing or installing DIMMs may change the configuration information in the server. Therefore, after removing or installing a DIMM, save the new configuration information by using the BIOS setup utility program. When you restart the server, the system displays a message indicating that the memory configuration has changed.

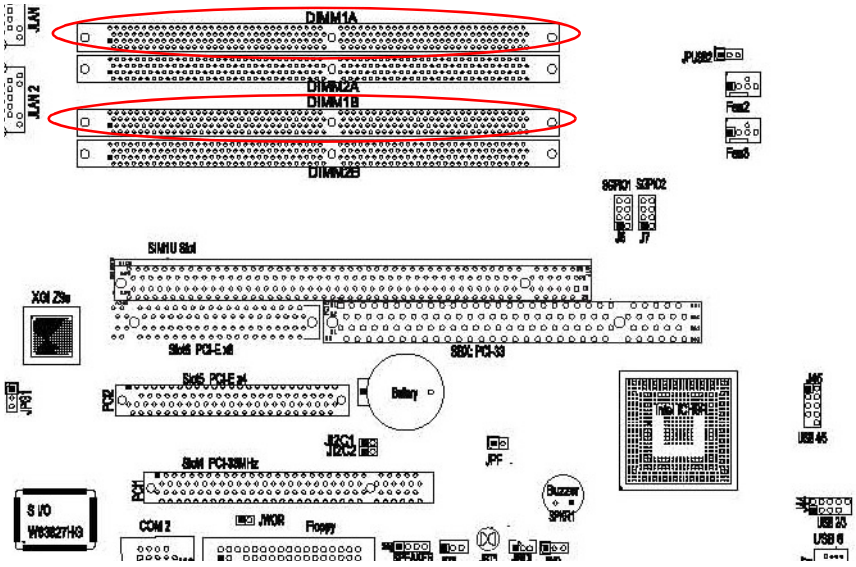


Figure 15: DIMM module locations

Preparing to Remove a DIMM

Attention: When you handle electrostatic discharge (ESD) sensitive devices, take precautions to avoid damage from static electricity.

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover. See *Removing the Side Cover* on page 94.
4. Verify which DIMM you want to remove. See Figure 16 on page 102.

Removing a DIMM

1. Press down on the two DIMM release tabs so that they rotate outward, releasing the memory from its seat.

   Attention: To avoid breaking the release tabs or damaging the DIMM connectors, handle the clips gently.

2. Gently pull the DIMM up and out of the server.

Installing a DIMM

1. Touch the antistatic package containing the new DIMM to any unpainted metal surface on the server, and then remove the DIMM from the package.
2. Verify that the DIMM release tabs are open.
3. Orient the memory so that the pins align correctly with the tab.
4. Insert the DIMM into the tab by pressing, one at a time, on the edges of the DIMM. Ensure that you press the DIMM vertically into the tab. See Figure 16.

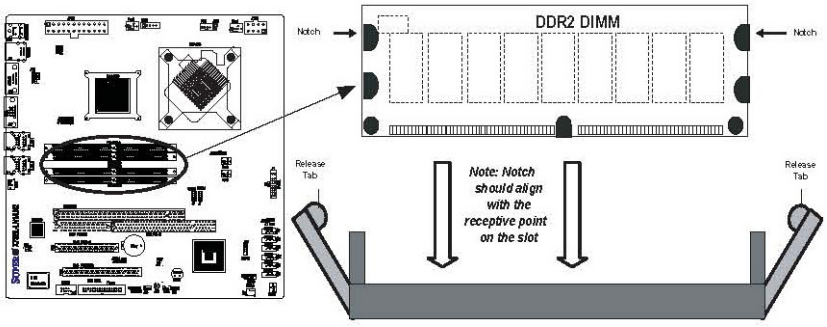


Figure 16: Installing a DIMM

5. Verify that the release tabs are in the closed position. If a gap exists between the DIMM and the release tabs, the DIMM has not been properly installed. In this case, open the release tabs, remove the DIMM, and then repeat steps 4 and 5.
6. If you have other options to remove or replace, do so now.
7. Return the side cover. See *Placing the Side Cover* on page 95.
8. Reconnect all external cables and power cords, and turn on the server.

5.6 Working With the System Board

This section shows illustrations of the components on the system board, and procedures for removing and installing the system board.

Note: It is recommended to perform all the procedures in this section with the server on its bottom on a table.

5.6.1 System Board Internal Cable Connectors

The following illustration identifies system board connectors for internal cables.

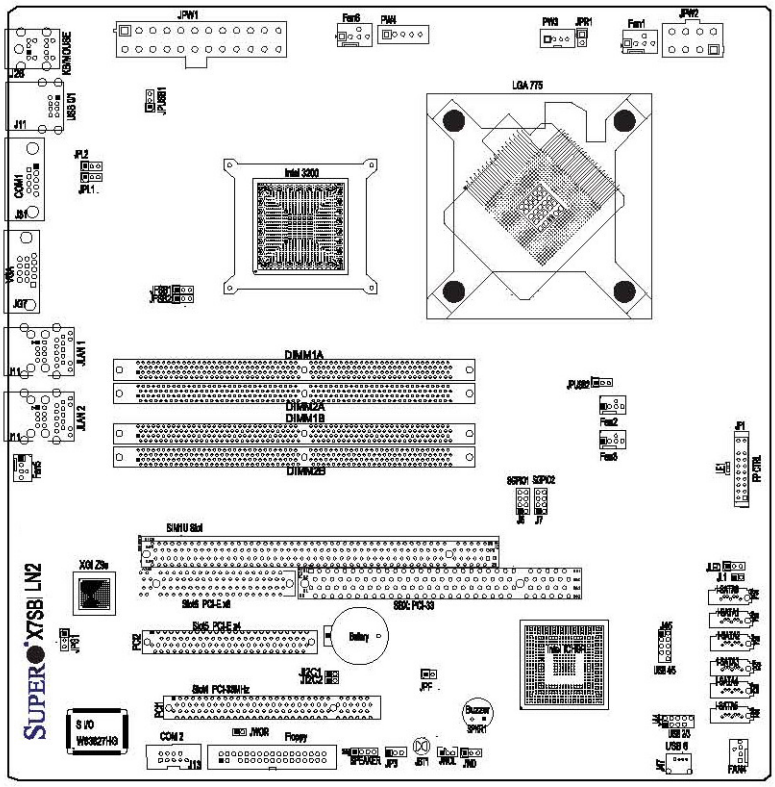


Figure 17: System board internal cable connectors

5.6.2 System Board External-Port Connectors

The following illustration identifies system board connectors for external devices.

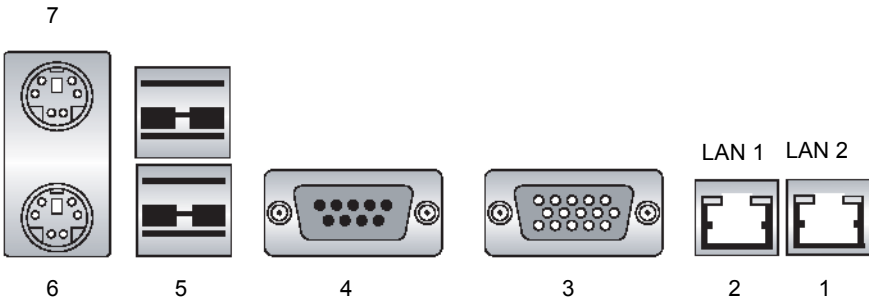


Figure 18: System board external port connectors

1 LAN2 (Printer)
2 LAN1 (client network)
3 VGA port (monitor)
4 COM1 port (DTP)
5 USB ports 1/2 (mouse)
6 Keyboard
7 Optional mouse port

5.6.3 Removing the System Board

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the side cover. See *Removing the Side Cover* on page 94.

   Note: It is recommended that you place the server on its side before continuing this service procedure.
4. Remove the FusionRA board. See *Replacing the FusionRA Board* on page 98.
5. Disconnect all the cables connected to the system board, power supply, fans, and hard disks.
6. Remove the CPU. See *Replacing the Central Processing Unit (CPU)* on page 109.
7. Remove the eight system board screws.
8. Release the system board from the RFI clips by sliding the system board away from the rear of the server.

Note: Radio Frequency Interference (RFI): A high frequency, cyclic series of spikes or noise injected onto an electrical line by means of radio wave energy or by a piece of equipment connected to the line. Exists when either the transmitter or receiver is carrier operated (has an antenna), causing undesired responses to or from other electronic equipment or systems.

9. Lift the system board up and out of the server.

10. Turn over the system board and remove the metal bracket from the board. Set aside the bracket to install on the new system board.

5.6.4 Installing a New System Board

Attention: When you handle electrostatic discharge (ESD) sensitive devices, take precautions to avoid damage from static electricity.

1. Review *Safety Information (Multi-Language)* on page v.
2. Verify that the Color Controller C-80 is turned off and that all power cords and external cables are disconnected.
3. Touch the antistatic package containing the new system board to any unpainted metal surface on the server, then remove the system board from the package and place it on the worktable.

   Note: The new system board includes a new black plastic CPU load plate, which you can discard.

4. Turn over the system board.
5. Attach the metal bracket to the system board.

   Note: The Color Controller C-80 is supplied with a reusable metal bracket attached to the underside of the system board. The metal bracket is part of the CPU cooling kit (Creo part number 518-03787A).

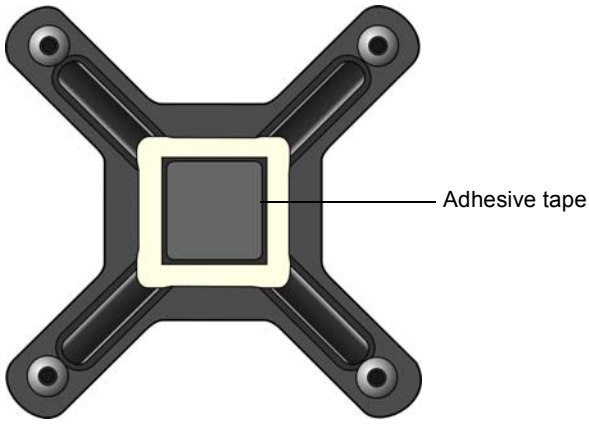


Figure 19: Metal bracket

a. Turn over the bracket so that it is face down and align it with the diagram on the system board.

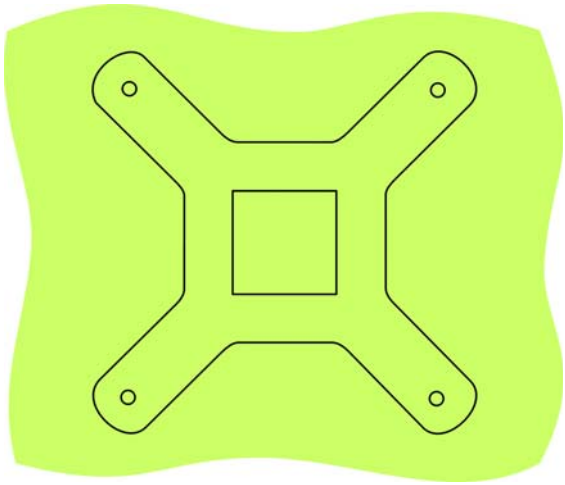


Figure 20: Diagram of metal bracket

b. When the bracket is properly aligned (the four ends should fit into place over the holes), gently press the bracket into place.

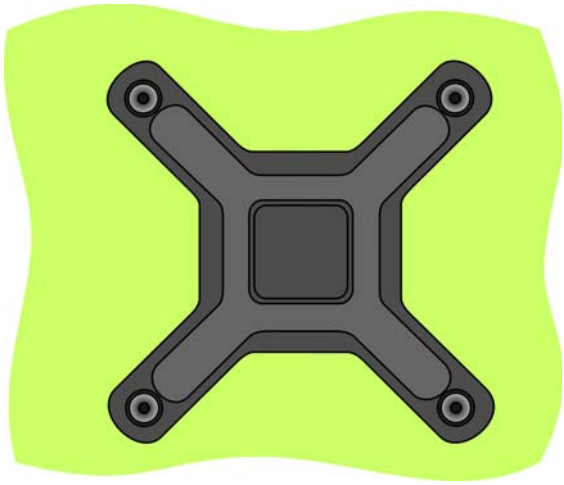


Figure 21: Metal bracket

Note: If you are reusing a metal bracket that was attached to a previous system board, the glue may have weakened and lost some of its adhesiveness. Therefore, make sure to support the bracket with one hand when installing the system board to its upright position,

6. While supporting the bracket with one hand, turn over the system board and place it on the worktable.
7. Return the CPU. See *Replacing the Central Processing Unit (CPU)* on page 109.
8. Connect the CPU fan cable to the CPU Fan 6 connector. See Figure 17 on page 103.
9. Insert the system board into the chassis, and carefully slip it under the five RFI clips.

Attention: Do not bend or damage the RFI clips. Make sure that the five RFI clips make firm contact with the external-port connectors. See Figure 23.

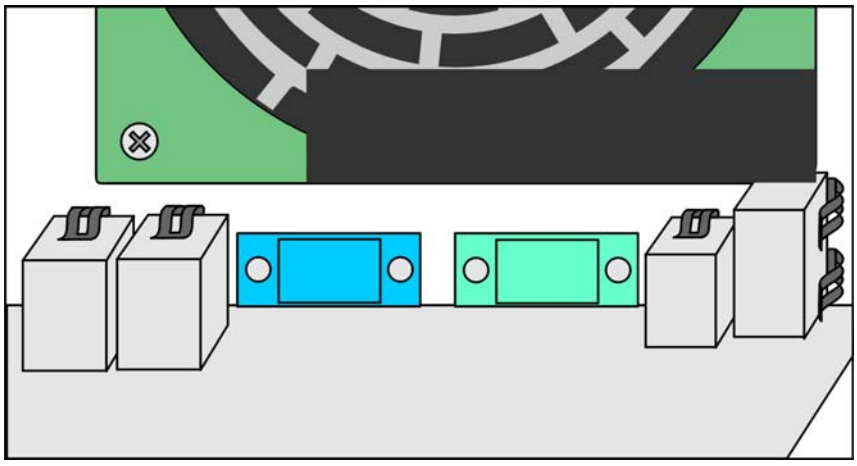


Figure 22: RFI-clip positions, internal view

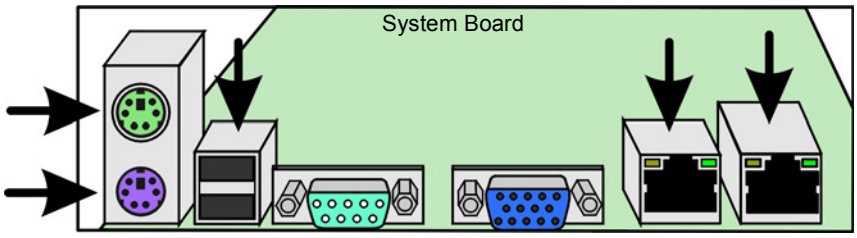


Figure 23: RFI-clip positions, external view

10. Align the system board with the matching hole in each standoff insulator in the chassis.
11. Insert the eight screws into the holes. Do not tighten the screws until all the screws are inserted.
12. Return the rear fan. See *Installing the Rear Fan* on page 124.
13. Return the memory modules. See *Installing a DIMM* on page 102.
14. Return the FusionRA board. See *Installing the FusionRA Board* on page 100.

15. Reconnect all the cables that you disconnected from the system board, power supply unit and hard disks.

    Note: To assist you in reconnecting the cables to the system board, see the following table and Figure 17 on page 103.

Table 2: System Board Cable Connections

Cable	System Board Connector
Power supply	JPW1, JPW2
USB	USB 3/4 (J46) USB 2/3 (J44)
Serial ATA	SATA 0 (empty) SATA 1 (DVD/RW) SATA 2 (system disk) SATA 3 (image disk 1) SATA 4 (image disk 2) SATA 5 (image disk 3)
Security	JL1
CPU fan	CPU fan 6
Rear fan	Fan 5
Front fan	Fan 4
Hard disk fan	Fan 3

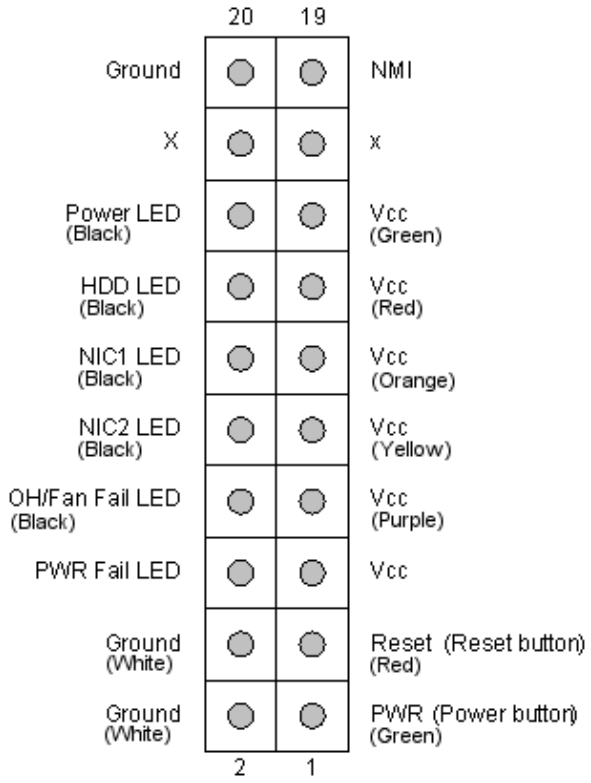


Figure 24: Front panel connectors

16. Return the side cover. See *Removing the Side Cover* on page 94.
17. Reconnect all external cables and power cords, and turn on the server.

5.6.5 Replacing the Central Processing Unit (CPU)

Note: The microprocessor speeds are automatically set for this server so you do not need to set any microprocessor frequency-selection jumpers or switches.

Preparing to Remove the CPU

Attention: When you handle static-sensitive devices, take precautions to avoid damage from static electricity.

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover. See *Removing the Side Cover* on page 94.
4. Remove the FusionRA board. See *Removing the FusionRA Board* on page 99.
5. Remove the rear fan.

   See *Removing the Rear Fan* on page 123.

Removing the CPU Fan and Heat Sink Assembly

1. Locate the CPU on the system board.

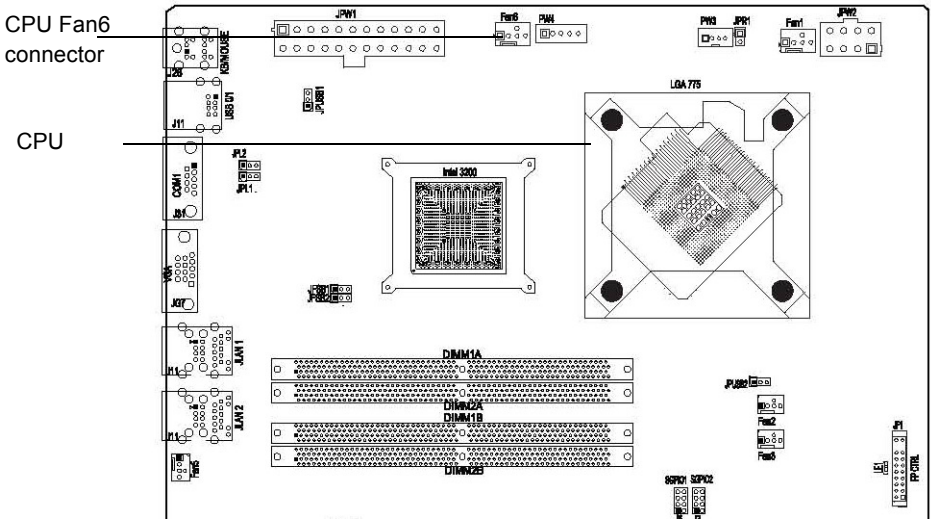
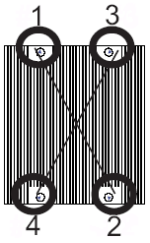


Figure 25: CPU system board location

1. Locate and disconnect the CPU fan cable from the CPU Fan6 connector.
2. Release the four spring screws that secure the CPU fan and heat sink assembly to the system board.

Important: Loosen the screws using the crisscross method. First loosen screws 1 and 2, and then screws 3 and 4. Once all four screws are loose, remove them diagonally, one after the other, in the order previously described, until all four spring screws have been removed.



3. Lift the CPU fan and heat sink assembly up and out of the server.

Removing the Microprocessor

1. Unlock the microprocessor socket.
   a. Using your thumb, press the socket lever to release the metal frame from its locking position.

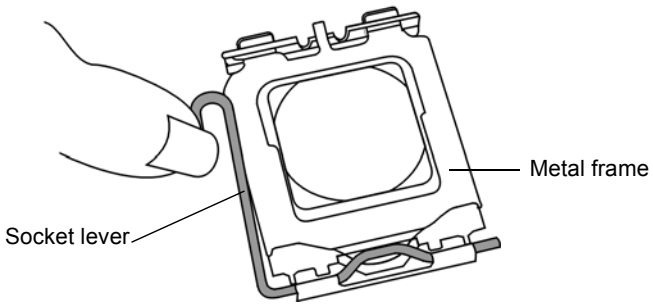


Figure 26: Unlocking the microprocessor socket

b. Gently lift the socket lever to open the metal frame.

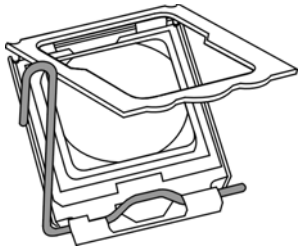


Figure 27: Opening the metal plate

2. Using your thumb and index finger, carefully grasp the microprocessor by its north and south center edges and lift it up and out of the server.

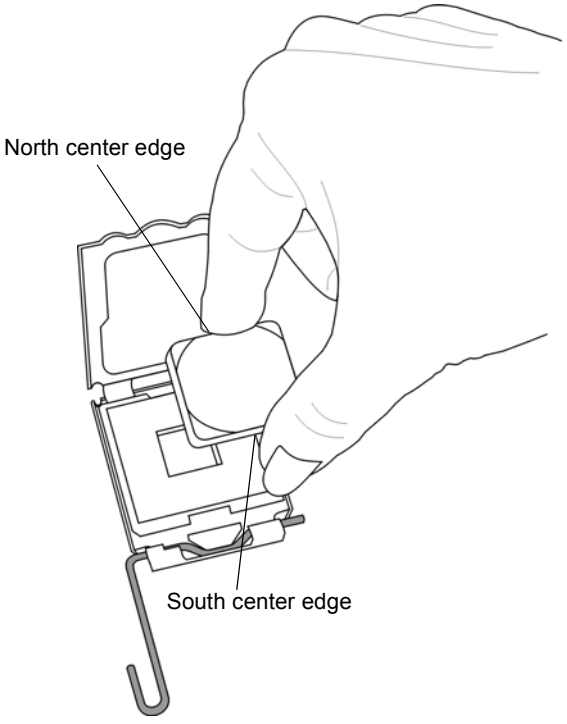


Figure 28: Removing the microprocessor

3. Store the microprocessor in an antistatic package for possible future use.

Installing the Microprocessor

1. Touch the antistatic package containing the new microprocessor to any unpainted metal surface on the server, and then remove the microprocessor from the package.
2. Unlock the microprocessor socket.
   a. Press the socket lever down to release the load plate from its locking position. The load plate covers the microprocessor socket.

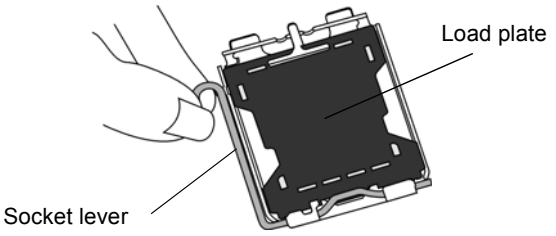


Figure 29: Microprocessor socket lever

   b. Gently lift the socket lever to open the load plate.

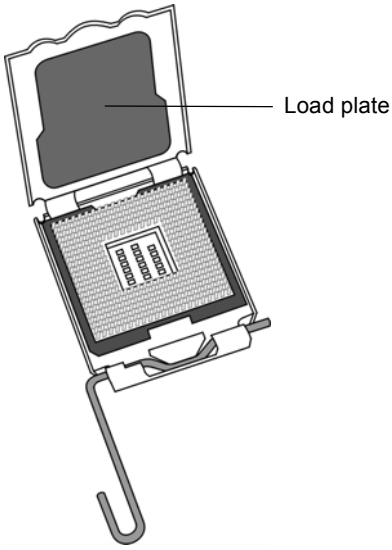


Figure 30: Opening the load plate

   c. Remove the load plate.
3. Locate Pin 1 on the microprocessor socket.

   Note: Pin 1 is the corner marked with a triangle.

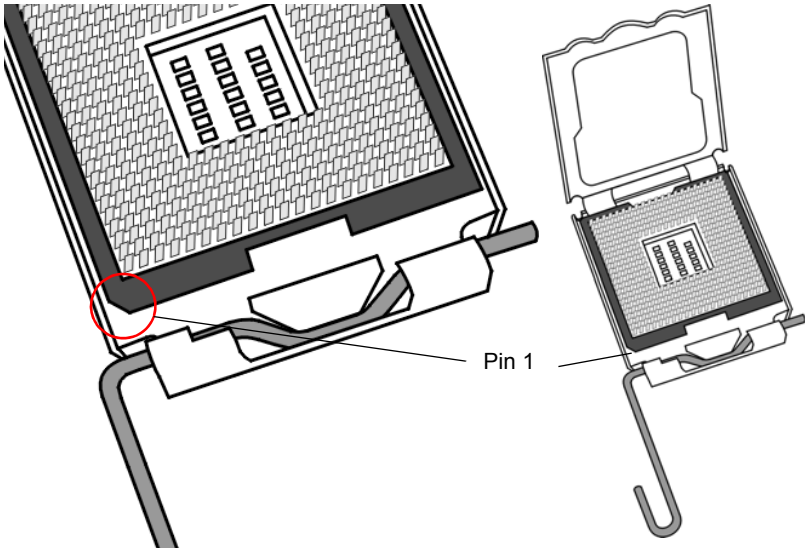


Figure 31: Locating pin 1 on the microprocessor socket

a. Make sure that Pin 1 of the microprocessor socket is located at the left bottom of the microprocessor housing.

4. Insert the microprocessor into the microprocessor socket.

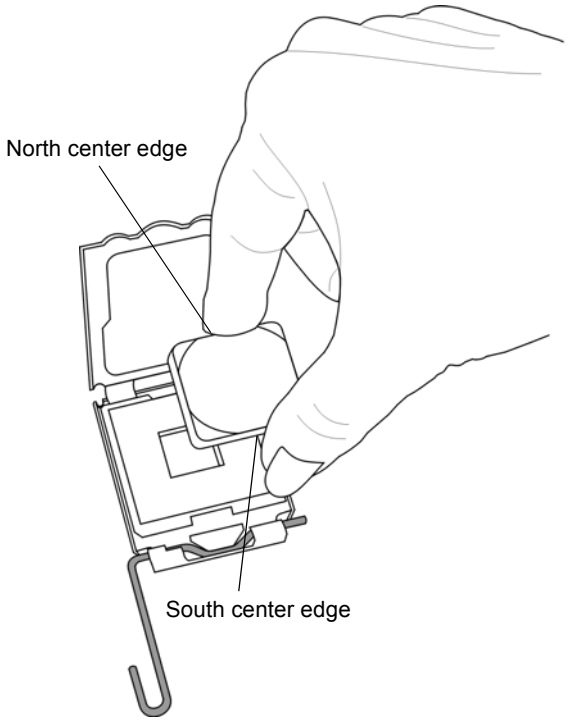


Figure 32: Aligning the microprocessor

a. Using your thumb and index finger, hold the microprocessor by its north and south center edges and align Pin 1 of the microprocessor with Pin 1 of the microprocessor socket.

b. When aligned, carefully lower the microprocessor straight down to the socket.

c. With the microprocessor inside the socket, check the four corners of the microprocessor to make sure that it is properly installed.

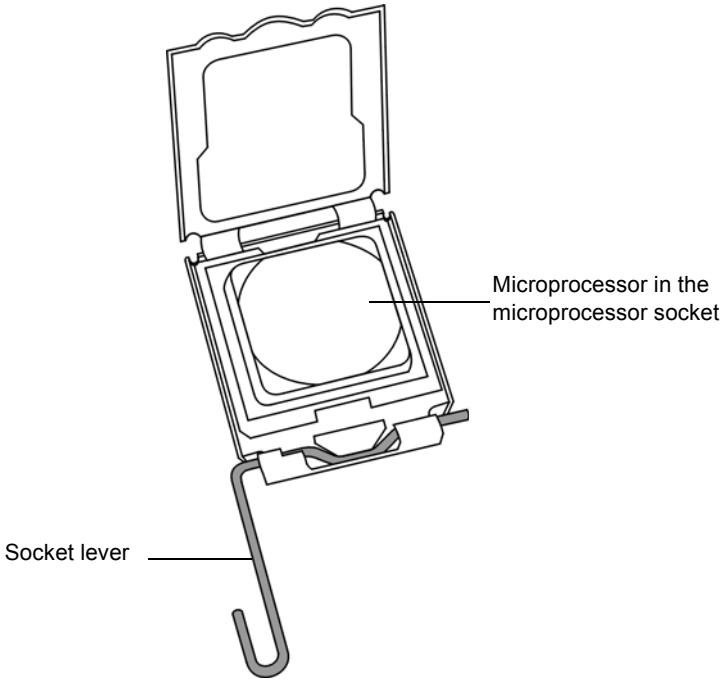


Figure 33: Checking that the microprocessor is properly installed

5. Using your thumb, gently push the socket lever down and lock it in the hook.

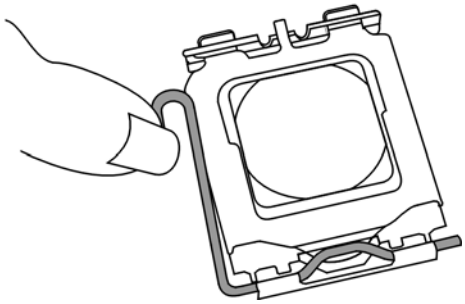


Figure 34: Locking the microprocessor

Installing the CPU Fan and Heat Sink Assembly

1. If applicable, remove the thin layer of protective film from the copper core of the heat sink.

WARNING: If the protective film is not removed from the heat sink, the microprocessor might overheat.

2. Position the CPU fan and heat sink assembly in such a way that the fan wires are close to the microprocessor fan, but do not obstruct other components.
3. Apply thermal grease to the top of the microprocessor.

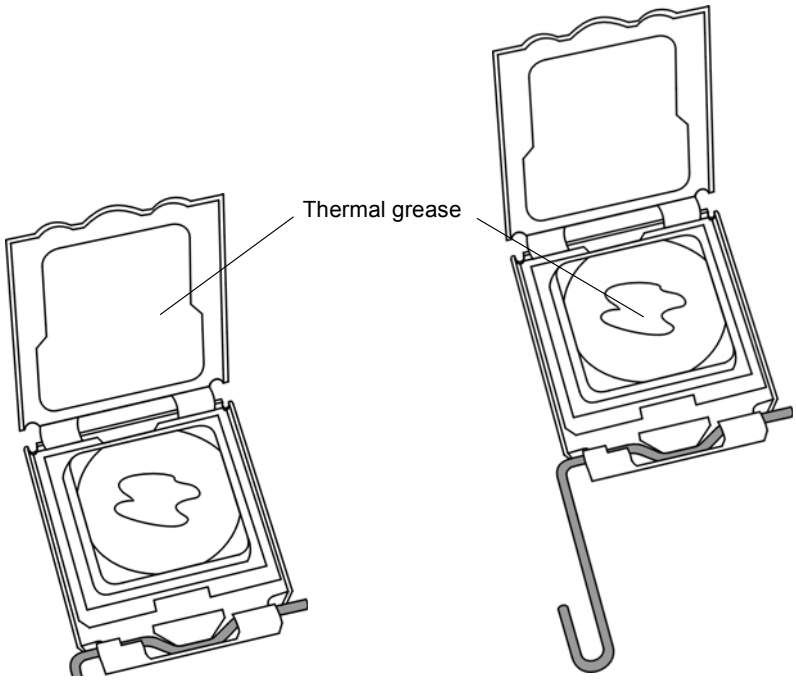


Figure 35: Applying thermal grease

4. Align the spring screws holes in the CPU fan and heat sink assembly with their corresponding holes on the system board. Insert the four spring screws and tighten.

   Important: Make sure to insert and secure the spring screws using the crisscross method. First insert screws 1 and 2, and lightly secure. Next insert screws 3 and 4, and lightly secure. Once all four screws are in place, tighten them diagonally, one after the other, in the order previously described, until all four screws are tightened.

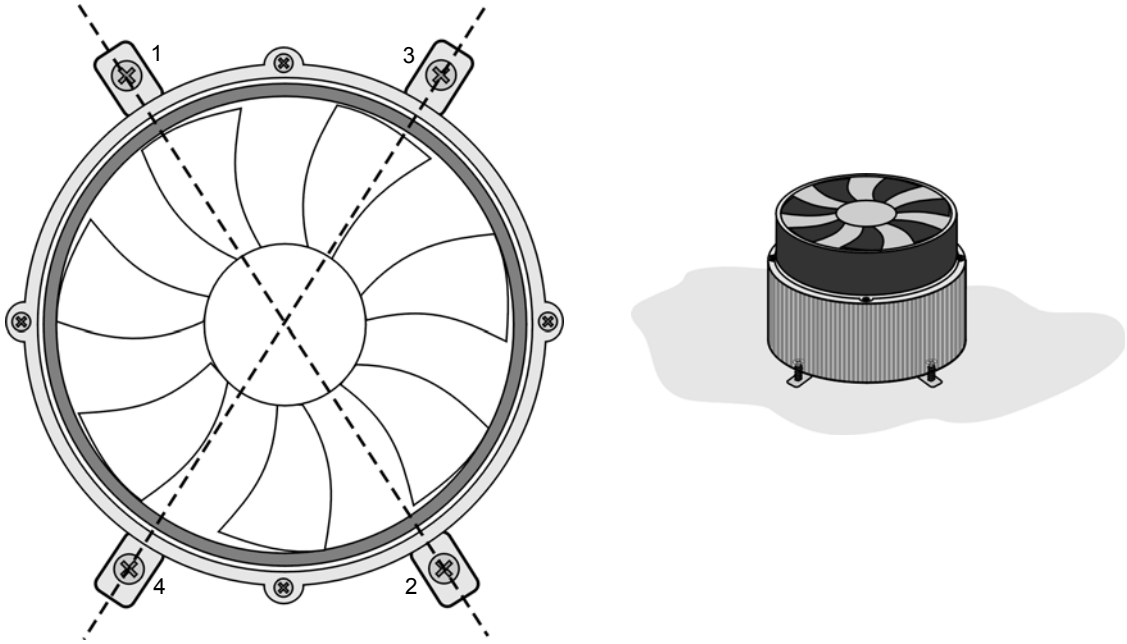


Figure 36: Securing the CPU fan and heat sink assembly

5. Connect the CPU fan cable to the CPU Fan 6 connector. See Figure 25 on page 110.
6. If you have other options to install or remove, do so now.
7. Return the FusionRA board. See *Installing the FusionRA Board* on page 100.
8. Return the rear fan. See *Installing the Rear Fan* on page 124.
9. Return the side cover. See *Placing the Side Cover* on page 95.
10. Reconnect all external cables and power cords, and turn on the server.

5.6.6 Replacing the Battery

If you need to replace the battery, use a lithium battery, model number CR2032. To avoid possible danger, read and comply with the following safety statement.

WARNING: There is a danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

The battery is located on the system board below slot 5. See Figure 13 on page 99.

Note: After you replace the battery, reconfigure the Color Controller C-80 and reset the system date and time.

Removing the Battery

1. Follow any special handling and installation instructions supplied with the replacement battery.

   See *System Reliability Considerations* on page 93.
2. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and power cords.

3. Remove the side cover. See *Removing the Side Cover* on page 94.
4. Remove the FusionRA board to gain access to the battery.
5. Remove the battery:
   a. Use one fingernail to press the top of the battery clip away from the battery. The battery pops up when released.
   b. Use your thumb and index finger to lift the battery from the socket.
   c. Ensure that the battery clip is touching the base of the battery socket by pressing gently on the clip.

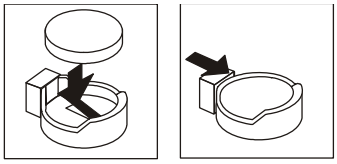


Figure 37: Removing the battery

Installing the Battery

1. Tilt the battery so that you can insert it into the socket on the side opposite the battery clip.
2. Press the battery down into the socket until it clicks into place. Ensure that the battery clip holds the battery securely.

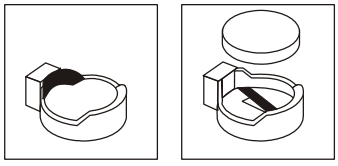


Figure 38: Inserting the new battery

3. Return any adapters that you removed.
4. Return the side cover. See *Placing the Side Cover* on page 95.
5. Reconnect all external cables and power cords, and turn on the server

CAUTION: Replacing the battery may cause the configuration to be modified. Verify that the computer BIOS is configured by performing the procedures in *Configuring the Computer BIOS* on page 53.

5.7 Replacing the DVD-RW Drive

Perform the following procedures to remove and install the DVD-RW drive.

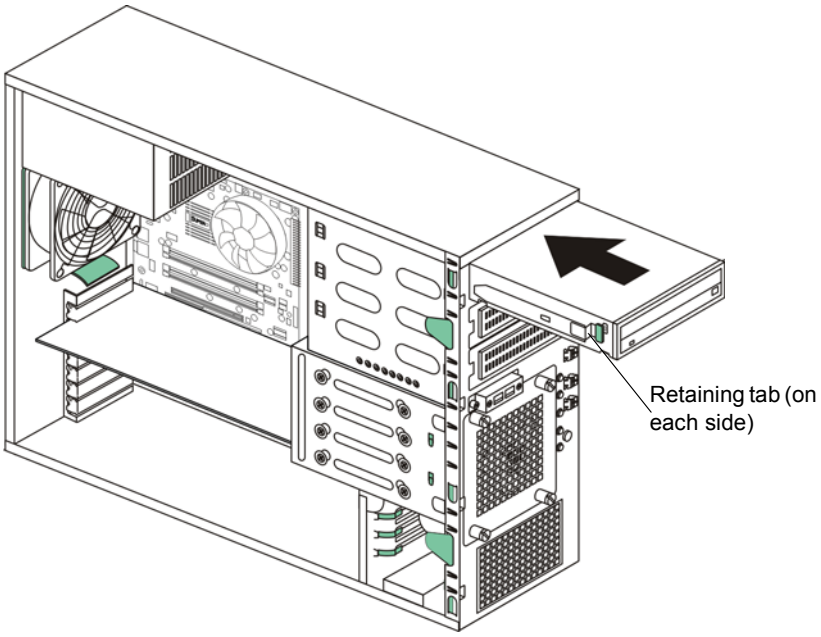


Figure 39: Bay1 DVD-RW drive

5.7.1 Removing the DVD-RW Drive

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the side cover. See *Removing and Placing the Side Cover and Front Panel* on page 94.
4. Disconnect the cables connected to the DVD-RW.
5. Press the retaining tabs that hold the DVD-RW drive, then gently slide the drive toward the front of the server and remove the drive.
6. Remove the tab strips from both sides of the DVD-RW drive using a cross-head screwdriver and retain them for future use.

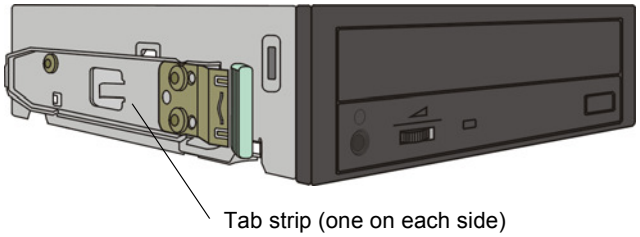


Figure 40: Tab strips on the DVD-RW drive

5.7.2 Installing the DVD-RW Drive

1. Install the tab strips to the new DVD-RW drive that you removed from the old DVD-RW drive. See Figure 40.
2. Slide the DVD-RW drive into the DVD-RW drive cage, making sure that the drive locks into place.
3. Reconnect the cables to the DVD-RW drive.
4. Return the side cover. See *Placing the Side Cover* on page 95.
5. Reconnect all external cables and power cords, and turn on the server.

5.8 Replacing a Hard Disk

The tasks that you must perform before and after you remove a hard disk and install a new one differ for the system disk and image disks. The tables in this section describe the procedure for each case, and tell you where to find the information.

Table 3: Tasks to replace system disk

Step	Section in this book
1. Back up the system configuration (Preferences window)	See *Color Controller C-80, Powered by Creo Color Server Technology, for Pro C900 User Guide (731-01699A-EN*
2. Replace the disk	*page 119*
3. Reinstall DVD 1 and DVD 2 on the Color Controller C-80	*page 39*
4. Restore the system configuration (Preferences window)	See *Color Controller C-80, Powered by Creo Color Server Technology, for Pro C900 User Guide (731-01699A-EN*

Table 4: Tasks to replace image disk

Step	Section in this book
1. Replace the disk	*page 119*
2. Perform disk striping	*page 77*
3. Format the image disk	page 86

Attention:
System disk: Before replacing or formatting the system disk, ensure that you have made a note of the computer name, TCP/IP information (for example DHCP = Yes), and OEM Windows XP Professional Product ID#. Back up folders or jobs in **C** and **D** partitions to an external device or network.

Image disks: Before replacing an image disk, ensure that you back up all jobs (such as: PostScript, High-Res, Variable Print Specification, and PDF jobs) to an external device or network.

5.8.1 Removing a Hard Disk

1. Turn off the Color Controller C-80 and all peripheral devices. Disconnect all external cables and AC power cords.
2. Remove the side cover. See *Removing the Side Cover* on page 94.

   Tip: You may find it easier to work if you lay the server on its side.
3. Disconnect the SATA2, data, fan, and power cables from all the hard disks.
4. Loosen the four screws that secure the drive cage to the server chassis.
5. Slide the drive cage out of the server.

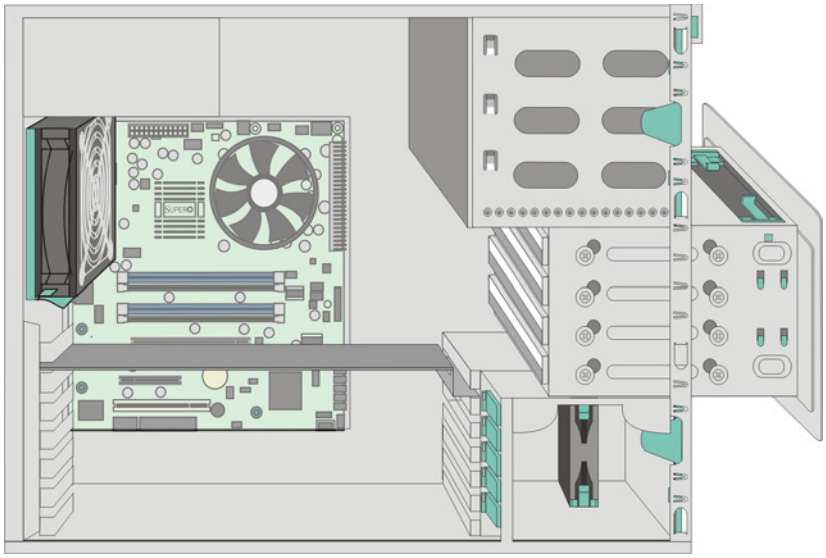


Figure 41: Removing a hard disk drive

6. Identify which hard disk you want to remove.
7. Loosen the two screws on either side of the disk drive and pull the disk drive out of the chassis.

5.8.2 Installing a Hard Disk

1. Slide the hard disk into the drive cage.
2. Insert the four screws that secure the hard disk to the drive cage, and tighten.
3. Insert the drive cage inside the chassis, and over the locating tabs in the front wall of the chassis.
4. Align the holes in the drive cage with the matching holes in the chassis.
5. Tighten the four drive-cage screws and tighten.

6. Connect the SATA2 cables into the back of each drive. Make sure that the other end of each cable is connected to the appropriate connector on the system board.

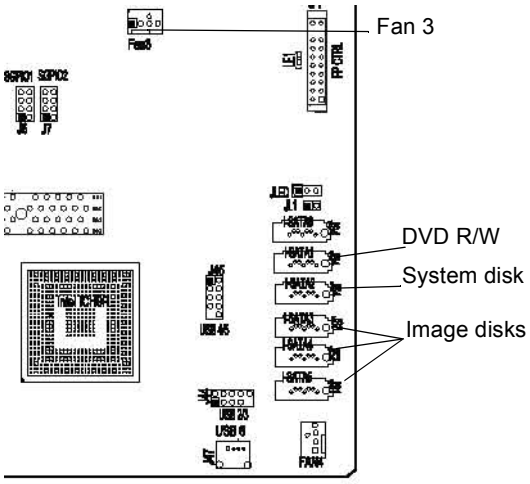


Figure 42: SATA2 connectors on the system board

7. Route each cable so that it does not block the air flow to the rear of the drives.
8. Connect a power cable to the back of each drive. The connectors are keyed and can be inserted only one way.

   Note: Do not route the cables over the microprocessor and memory.

9. Connect the hard disk fan to the system board (Fan 3).
10. If you have other options to remove or replace, do so now.
11. Return the side cover. See *Placing the Side Cover* on page 95.
12. Reconnect all external cables and power cords, and turn on the server.

5.9 Replacing the Power Supply

Perform the following procedures to replace the power supply.

Tip: It is easier to perform the following procedures if the server is on its side.

5.9.1 Removing the Power Supply

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and peripheral devices.
3. Disconnect all AC power cords and external cables.
4. Remove the side cover. See *Removing the Side Cover* on page 94.
5. Disconnect the power supply cables to the drives, and to the system board (JPW1, JPW2).
6. Remove the four screws that secure the power supply to the server from the rear of the server, using one hand to hold the power supply inside the server. See Figure 43 on page 122.

7. Gently move the power supply out of the server.

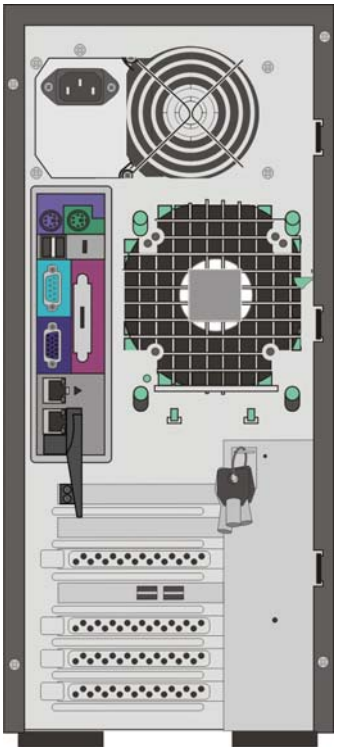


Figure 43: Removing the power supply unit

5.9.2 Installing the Power Supply

1. Orient the power supply and place it into the server.
2. Insert the power supply into the opening at the rear of the chassis.
3. Align the holes in the power supply with the holes in the chassis.
4. Insert the four power-supply screws, and tighten them.
5. Reconnect the internal cables from the power supply to the system board and drives.
6. Return the side cover. See *Placing the Side Cover* on page 95.
7. Reconnect all external cables and AC power cords, and turn on the server.

5.10 Replacing Fans

Perform the following procedures to remove and install the rear fan and PCI fan.

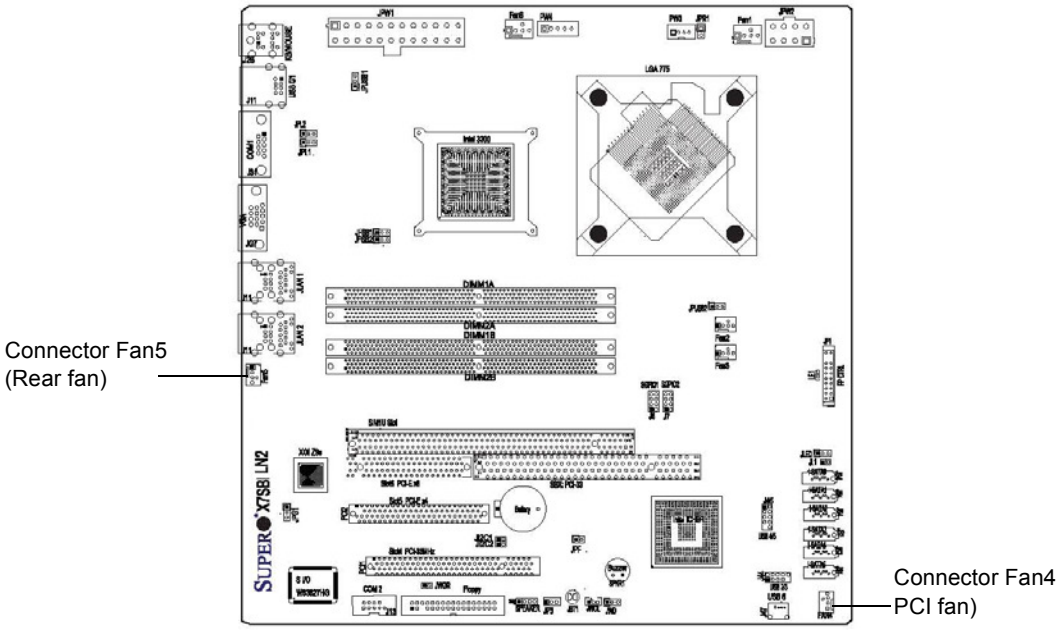


Figure 44: Rear and PCI fan connector locations

5.10.1 Removing the Rear Fan

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and peripheral devices. Disconnect all AC power cords and external cables.
3. Remove the side cover. See *Removing the Side Cover* on page 94.
4. Disconnect the fan cable from the system board connector (Fan 5).
5. Press the two locking tabs, protruding through the outside of the rear of the server, outward. See Figure 45 on page 124.
6. Lift the fan upward and out of the server.

7. Remove the four screws that secure the fan to the rear-fan bracket. See Figure 45 on page 124.

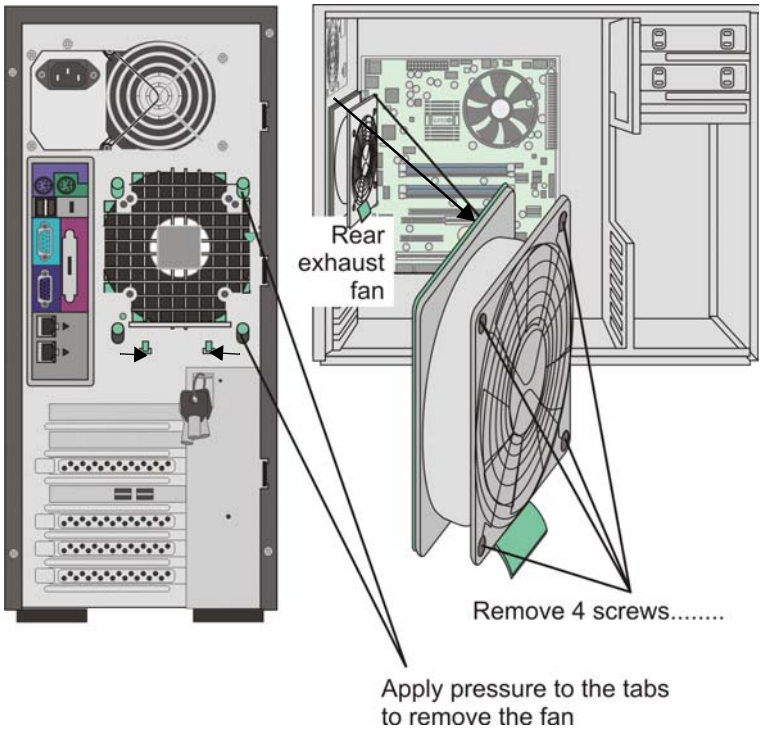


Figure 45: Rear fan

5.10.2 Installing the Rear Fan

1. Align the four holes in the new fan with the matching holes in the rear-fan bracket, then insert the four screws and tighten them.
2. Place the rear fan in position at the rear of the server.
3. Guide the two locking tabs through the top of the slots, while aligning the other four tabs with their respective slots.
4. Press the rear-fan bracket against the rear of the server, until all the tabs are in their slots, and then move the rear-fan bracket downward until it locks into position.
5. Reconnect the fan cable to the system board.
6. Return the side cover. See *Placing the Side Cover* on page 95.
7. Reconnect all external cables and power cords, and turn on the server.

5.10.3 Removing the PCI Fan

1. Review *Safety Information (Multi-Language)* on page v.
2. Turn off the Color Controller C-80 and peripheral devices. Disconnect all AC power cords and external cables.
3. Remove the side cover. See *Removing the Side Cover* on page 94.

4. Disconnect the fan cable from the system board connector (Fan 4).
5. Press the two locking tabs, protruding through the outside of the rear of the server, outward.
6. Lift the fan upward and out of the server.
7. Remove the fan bracket and retain for future use.

5.10.4 Installing the PCI Fan

1. Place the fan bracket on the new PCI fan.
2. Place the PCI fan in position in the front of the server.
3. Guide the two locking tabs through the top of the slots.
4. Press the fan bracket against the rear of the server, until all the tabs are in their slots, then move the fan bracket downward until it locks into position.
5. Reconnect the fan cable to the system board.
6. Return the side cover. See *Placing the Side Cover* on page 95.
7. Reconnect all external cables and AC power cords, and turn on the server.

A

Specifications and Standards

A.1 Environmental Requirements

This chapter lists the software installation steps, includes specifications for the Color Controller C-80 operating environment, and provides a list of the international safety standards to which the Color Controller C-80 conforms.

A.2 Installation Steps

- Software installation—time: approximately 30 minutes
- Full installation, operating and software—time: approximately 1.5 hours
- System loading—time: approximately 15 minutes

A.3 Specifications

A.3.1 Dimensions and Weight

Color Controller C-80	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	58.8 × 20 × 44	23.1 ×7.9 ×17.3	16.8 kg/37 lb.
Packed	63 × 78.5 × 46	24.8 × 30.9 × 18.1	33.1 kg/72.9 lb.

WARNING:

- The Color Controller C-80 is heavy, and must be lifted by two people.
- Each person must place both hands underneath the Color Controller C-80 from the sides.

Spectrophotometer (i1) [Optional]	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	10 × 4 × 5	4 ×1 × 2	0.8 kg/1.8 lb.
Packed	46 × 35 × 16	18 × 14 × 6	3.0 kg/6.6 lb.

Monitor 19"	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	44 x 19 x 38	17 x 7 x 15	4 kg/8.8 lb.
Packed	51 x 35 x 11	20 x 18 x 4	4 kg/8.8 lb.

Keyboard	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	44 ×17×3	17 × 7 × 2	1 kg/2.2 lb.
Packed	55 ×21 ×4	21 × 8 ×2	1 kg/2.2 lb.

Stand (Contents and Carton) [Optional]	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	77.2 × 66.8 ×102.4	30.4 × 26.3 × 40.3	28 kg/61.7 lb.
Stand (Contents and Carton) [Optional]	**L x W x H (cm)**	**L x W x H (in.)**	**Weight**
Packed+Pallet	114 × 82.6 ×38	44.9 ×32.5×15	45 kg/99.2 lb.

A.4 Operating Environment

A.4.1 Electrical (Color Server and Monitor)

Input Voltage Range	100-127/200-240 VAC
Input Frequency Range	60 / 50 Hz
Ampere Rating	2.25 / 1.25 A

A.4.2 Energy Consumption

- 220 VAC–1.25 AAC = > 275 W = 939 BTU/hour
- 110 VAC–2.25 AAC = > 247.5 W = 845 BTU/hour

A.4.3 Transportability

- There is no need for special tools for system transportation.
- The system is without wheels.

A.4.4 Temperature and Relative Humidity

Items complying with IEC 721-3-1, 2, 3		
Temperature	Operating	15° C to 40° C (59° F to 104° F)
	Storage	–25° C to 70° C (–77° F to 158° F)
Relative humidity	Operating	5% to 85%
	Storage	Max 95% @ 50° C (122° F)
Items complying with IEC 721-3-0,1, 2, 3		
Vibration	Shipping	Acceleration spectral density of $1m^2/s^3$ in frequency range of 10–200 Hz and acceleration spectral density of 0.3 m^2/sec^3 in frequency range of 200–2000 Hz.
Free fall	Shipping	0.25 m
Static load	Shipping	10 Kpa
Stacking	Shipping	3 boxes

A.5 Standards

A.5.1 Safety Approvals

United States and Canada	cCSAus marking for the US and Canada. Standards: UL 60950-1 2nd Edition, CAN/CSA - C22.2 No. 60950-1-07
European Union	EU Low Voltage Directive 2006/95/EC, standard EN60950-1:2006
CB Countries	CB Report & Certificate according to standards IEC 60950-1:2005 (2nd Edition) and EN 60950-1:2006 and National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations; CA, KR, US

The CB reports have supplements that together include the national differences for the following countries:

Australia	Portugal
Austria	Russian Federation
Denmark	Slovenia
Finland	Sweden

France	Switzerland
Germany	United Kingdom
Greece	
Italy	
Japan	
Korea	
Netherlands	
Norway	
Poland	

A.5.2 EMC Requirements

United States	FCC 47CFR part 15: 2008, subpart B class B
Canada	ICES-003: 2004 issue 4, class B
Japan	VCCI V-3/2008.04, class B
Australia and New Zealand	CISPR 22: 2006, class B
Europe	EMC Directive 89/336/EEC
European EMC standards	
Radiated Emissions	EN55022:2006+A1:2007 Class B
Harmonics	EN61000-3-2:2006
Flicker	EN61000-3-3:1995+ A1:2001 & A2: 2005
Immunity STD	EN55024:1998+A1:2001+A2:2003
Immunity to Electro Static Discharge	EN61000-4-2: 1995+A1(98)+A2(01)
Immunity to Radiated Electro Magnetic field	EN61000-4-3: 2002 +A1(02)
Immunity to Fast transients	EN61000-4-4: 2004
Immunity to Voltage Surges	EN61000-4-5: 1995+ A1(01)
Immunity to radio frequency Conducted Disturbances	EN61000-4-6: 1996 +A1(01)
Immunity to power frequency Magnetic Fields	EN61000-4-8: 1993 +A1(01)
Immunity to supply Voltage Dips, and Variations	EN61000-4-11: 2004

A.6 Reliability and Maintenance

Prediction of Mean Time Between Failure (MTBF) is based on Parts Stress method of B33216; parts stress method of Bellcore TR-NWT-332Issue6 (12/97). The prediction was performed with CARE software from BQR Israel.

Environment: GB Ambient temperature: 40° C (104° F).

MTBF Calculation Results	MTBF (hours)
CMPTR, MONITOR, LCD 19" WIDE, BLACK	58,080
CMPTR, KBD+MOUSE, BASIC PACK, BLACK[LF]	58,066
FUSIONRA [LF] BRD ASSY	4,591,368
FusionRA board assembly	94,080
CMPTR, HD, 250GB, 7.2KRPM, SATA2	2,742,980
CMPTR, DVD R/W SATA BLACK	161,290
CMPTR, CPU, INTEL P4 LGA775, COOL FAN	34,998
CMPTR, MB, X7SBL-LN2	154,641
CMPTR, MEM MODULE, 1GB, DDR2, ECC, 800MHZ	4,887,586
UP, Q9400, QUAD CORE2, 2.66GHZ, 6M, 1333MHZ	90,909
CMPTR, REAR FAN, 120X120X25, 98CFM, 12VDC	27,998
FAN, AXIAL, 12V DC, 92*92*25, 42 CFM+TACH	34,998
CMPTR CASE, 65-SLVR, NON HOTSWAP DSK + P/S	15,550
FAN 12V WIRING ASSY.[LF]	34,975

A.6.1 General Maintenance Information

General Maintenance Information	
Periodic call-on	None
Failure-recovery period	1.5 hours
Space required for service	2.0 x 1.8 meters (6.7 x 6 feet)
Service tools	• Screwdriver (flat and Phillips) • Antistatic kit • Side cutters • DVM
Typical Space Required for Installation	
Desktop position	1200 x 1200 mm (47.2 x 47.2 in.)
Stand position	800 x 800 mm (31.5 x 31.5 in.)

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