creo
COLOR SERVERS

Technical Manual

English

Color Controller C-81, Powered by Creo Color Server Technology, for Pro C901/C901S

Version 1.1

731-02054A-EN Rev A

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This product complies with the following EU directives:2004/108/EC article 6(2) and 2006/95/EC directives. This declaration is valid for the area of the European Union.

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Acoustic Noise Emission

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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In the European Union, this symbol indicates that when the last user wishes to discard this product, it must be sent to appropriate facilities for recovery and recycling. Contact your local Ricoh representative for additional information on the collection and recovery programs available for this product.

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Batteries and accumulators must not be disposed of as unsorted municipal waste. Users of batteries and accumulators must use the available collection framework for the return, recycling, and treatment of batteries and accumulators.

Customer participation in the collection and recycling of batteries and accumulators is important to minimize any potential effects of batteries and accumulators on the environment and human health due to substances used in batteries and accumulators.

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Please consult www.kodak.com/go/REACH for information about the presence of substances included on the candidate list according to article 59(1) of Regulation (EC) No. 1907/2006 (REACH).

CE Marking Traceability Information (For EU Countries Only)

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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.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Perchlorate Material (For USA - California Only)

Special handling may apply. See http://www.dtsc.ca.gov/hazardouswaste/perchlorate.This product may include a real-time clock battery or coin cell battery that may contain perchlorate and may require special handling when recycled or disposed of in California. Refer to the product user documentation to determine if this product contains batteries, and if so, the battery type(s) that are used.

Industry Canada Class A Notice

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

Protection of Data

If you are concerned about information being extracted from the Color Controller C-81 Ethernet port without authorization, consider adding your own security to the Ethernet port.

www.creoservers.com

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1 Printing this guide

Change the paper size to print this document on any printer.

1. Open the PDF file in Adobe Acrobat.
2. From the **File** menu, select **Print Setup**.

   The Print dialog box appears.
3. In the Print Setup dialog box, under **Paper**, in the **Size** list, select the desired paper size, for example, A4 or letter.
4. From the **File** menu, select **Print**.
5. In the **Page Scaling** list, select **Fit To Printable Area** or **Shrink To Printable Area**.

   Note: The names in the Page Scaling list vary according to the version of the Adobe Acrobat software.
6. Click **OK**.

   This document is printed on either A4 or letter size paper.

2 Safety information (multilingual)

2 .1 Safety precautions

The following safety information includes instructions about avoiding personal injury, before and while servicing the Color Controller C-81.

2 .1 .1 General safety

This product is not categorized as a workstation according to §2 of "Regulation on Work on Screens" (EK1-ITB 2000:2010).

Follow these rules to ensure general safety:

- Lift up the Color Controller C-81 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-81 covers, ensure that the unit has been switched off. Switching off, only 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.

2 .1 .2 Battery replacement

Only qualified service personnel should replace the battery.

Handle used batteries and dispose of them according to the lithium battery manufacturer's instructions.

2 .1 .3 Static electricity

When handling static-sensitive electric devices (for example, electronic boards, disk drives, or memory modules), follow these guidelines:

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

2 .2 Sicherheitsmaßnahmen

Die folgenden Abschnitte enthalten Sicherheitsinformationen zur Vermeidung von persönlichen Verletzungen vor und während der Wartung des Color Controller C-81.

2 .2 .1 Allgemeine Sicherheit

Das Produkt ist nicht für den Einsatz an Bildschirmarbeitsplätzen im Sinne §2 der Bildschirmarbeitsplatzverordnung geeignet (EK1-ITB 2000:2010).

Befolgen Sie diese Regeln, um allgemeine Sicherheit zu gewährleisten:

- Heben Sie den Color Controller C-81 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-81 öffnen, 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.

2 .2 .2 Batterieaustausch

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

2 .2 .3 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.

2 .3 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-81.

2 .3 .1 Seguridad General

Siga las siguientes reglas para garantizar la seguridad general:

- Levante el Color Controller C-81 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-81, 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.

2 .3 .2 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.

2 .3 .3 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.

2 .4 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-81.

2 .4 .1 Mesures générales de sécurité

Suivez ces règles pour garantir une sécurité générale :

- Soulevez le Color Controller C-81 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-81 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.

2 .4 .2 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.

2 .4 .3 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.

2 .5 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-81.

2 .5 .1 Sicurezza generale

Seguite queste istruzioni per assicurare la sicurezza generale:

- Alzate il Color Controller C-81 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-81 , 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.

2 .5 .2 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.

2 .5 .3 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.

2 .6 Veiligheidsmaatregelen

In de volgende secties worden veiligheidsmaatregelen behandeld om persoonlijk letselt voor en tijdens het bedienen van de Color Controller C-81 te voorkomen.

2 .6 .1 Algemene veiligheid

Volg onderstaande regels op om uw algemene veiligheid te verzekeren:

- Gebruik het handvat om de Color Controller C-81 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-81 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.

2 .6 .2 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.

2 .6 .3 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.

2 .7 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-81.

2 .7 .1 Segurança geral

Siga as seguintes regras para assegurar uma segurança geral:

- Levante o Color Controller C-81 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-81, 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.

2 .7 .2 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.

2 .7 .3 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.

3 Product overview

3 .1 Introduction to the Color Controller C-81

The Color Controller C-81, powered by Creo color server technology is an on-demand server that uses advanced prepress technologies to drive the Pro C901/C901S.

The Color Controller C-81 enables you to print from computers running the Microsoft Windows operating system and Apple Mac OS operating system software. Using raster image processor (RIP) technology, the Color Controller C-81 converts image files in page-description language (PDL) formats—for example, Adobe PostScript, PDF, and variable data printing formats—to a suitable ready-to-print (RTP) format for direct highquality digital printing. The Color Controller C-81 also streamlines the printing process by allowing you to print with preset workflows.

In combination with the printer, the Color Controller C-81 enables you to efficiently print flyers, brochures, pamphlets, dummy catalogs, short-run trials, and print-on-demand publications. When installed as a network printer with the Color Controller C-81, the press prints at the full-rated speed.The Color Controller C-81 combines RIP functionalities, automation, control tools, and special hardware development capabilities with Windows-based architecture.

3 .2 Color Controller C-81 components

The Color Controller C-81 is a Creo dedicated platform running in a Microsoft Windows XP Professional system. There are four main groups of components:

- Dedicated Creo hardware, including the interface board
- Off-the-shelf hardware
- DVD-RW drive with DVD burning software
- Software including:
    - Color Controller C-81 software
    - Windows XP Professional for embedded solutions
    - Microsoft Internet Explorer 6

- Adobe Acrobat 9.0 and PDF 1.7
- Enfocus PitStop Edit

3 .3 Functionality and features

The features and functions of the Color Controller C-81 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

3 .4 Supported formats

The Color Controller C-81 supports the following file formats:

- PostScript (composite or pre-separated files) (levels 1, 2, and 3)
- Adobe PDF (versions 1.2 through 1.7)
- EPS
- Creo VPS (Variable Print Specification)
- PPML (Personalized Print Markup Language)
- PPML.zip
- PPML/VDX
- File formats from various prepress systems, for example, Kodak Brisque and TIFF/IT software
- CT, LW
- JPEG
- TIFF
- Pre-separated formats

3 .5 Supported client platforms

The system is capable of receiving and processing jobs from a variety of operating systems and monitoring the jobs all the way to the printout.

- Mac OS X
- Windows
- Unix

3 .6 Product configuration

The diagram below shows the modular system architecture of the Color Controller C-81.

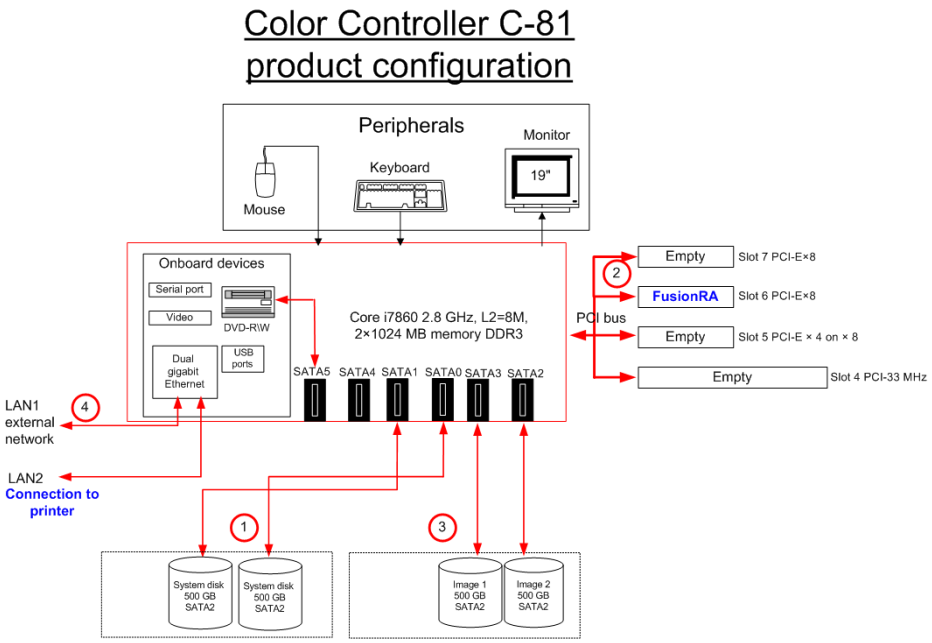


Figure 1: Color Controller C-81 configuration

The following list corresponds to the above diagram. Each number provides details about a specific part of the Color Controller C-81 architecture.

1. System/user partitioned disk:
   - 2 × 500 GB hard disk

- Windows XP Professional (on `C:\`)
- Apple Macintosh shared folder, including various utilities and PPD (on `D:\`)
- Default path for APR high-resolution files is `D:\Shared \High Res`
- Spool area on hard disk containing the PostScript files
- Other data used for Color Controller C-81 software(on `D:\`)

2. FusionRA board:
   - Data decompression
   - Page assembly
   - FusionRA board supports color separations
3. Two image disks:
   - 500 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-81 software
4. Gigabit ethernet connection:
   - Enables high-speed connection to the network

3 .7 Disk configuration

The following table outlines the Color Controller C-81 disk configuration.

Disk 0 / Disk 1	**C:** Windows XP Professional Color Controller C-81 software	**D:** Spool files Shared files Output directory files Automatic Picture Replacement (APR) high-resolution files Backup folder
Disk 2	Image storage	
Disk 3	Image storage	

4 Upgrading the Color Controller C-81 to version 1.1

This section describes how to the install version 1.1 software. Perform this upgrade when Color Controller C-81 1.0 is installed.

The upgrade procedure includes the following steps on the Color Controller C-81 :

1. Archive any important customer jobs to an external device.
2. Back up your system configuration from the **Configuration backup** in the Preferences window.
3. Update the firmware for a RAID system.
4. Configure the RAID volumes.
5. Run the complete installation from DVD 1.
6. Install version 1.1.
7. Restore your system configuration from the **Configuration backup** in the Preferences window.
8. Retrieve your jobs.

On the the client computer:

1. Uninstall the client software.
2. Reinstall the client software.

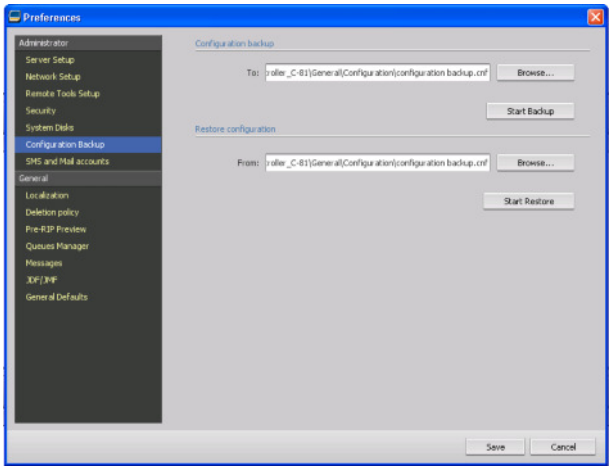
Note: If any anti-virus software is running on the Color Controller C-81, disable this software before installing version 1.1. Once you install version 1.1, the anti-virus software can be enabled.

4 .1 Backing up the Color Controller C-81 1.0 configuration and resources

The backup and restore configuration feature enables you to backup your Color Controller C-81 configuration so that you can restore it when necessary.

Make sure that you backup the system configuration to a network or an external drive.

1. From the **File** menu, select **Preferences**.
2. In the Preferences window, under **Administrator**, select **Configuration backup**.



3. In the **Configuration backup** area, click **Browse**.
   The Save dialog box appears.
4. Locate the desired folder for backup.
5. Enter a name for the file.
   For best results, use the current date as part of the file name.
6. Click **Save**.
7. In the **Configuration backup** area, click **Start Backup**.
   After a few moments, the Backup Completed message appears.
8. Click **OK**.
9. Click **Save** to close the Preferences window.
10. Copy the files to an external server. When you upgrade the installation will wipe out the backup files on the Color Controller C-81.

4 .2 Archiving jobs

Requirements: A folder for storing the archived jobs.

If you are archiving a VDP job, you will need to archive the cached elements separately (see the *Color Controller C-81 User Guide*).

1. In the **Storage** area, right-click the job(s) that you want to archive and select **Archive**.
2. Locate the desired folder, and then click **Archive**.
   A cabinet file (an archive file) that contains all the files related to the archived job(s) is created at the selected location.

4 .3 Updating firmware for a RAID system

The firmware on your Color Controller C-81 must be setup for RAID before you configure the RAID volumes.

1. If the Color Controller C-81 is on and the Color Controller C-81 workspace is open:
   a. Exit the workspace.
   b. Place DVD 1 into the DVD-RW drive.
   c. From the Windows **Start** menu, select **Shut Down** > **Restart** > **OK**.

   The Color Controller C-81 shuts down and restarts. The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

Proceed to step 3 on page 18

2. If your Color Controller C-81 is off:
   a. Press the Power On/Off button on the front panel.
   b. As soon as power is applied, place DVD 1, into the DVD-RW drive.

      The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite
all existing data)
2)    Preservation installation
(overwrite system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

3. To perform a firmware setup, press `4`.
4. Press `1` to begin the procedure.
5. Press `y` to confirm.

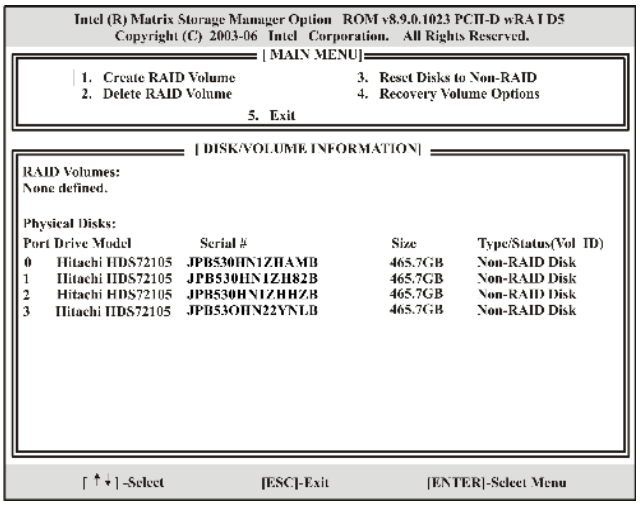
   Important: While the firmware setup is in progress, do not restart or turn off the computer.
6. After the firmware setup is completed, press any key to continue.
7. Press `Enter` to restart the computer.
8. While the computer restarts, press `<Ctrl+I>` to enter the Configuration Utility.
9. Continue with *Configuring new RAID volumes*.

4 .4 Configuring new RAID volumes

Perform the procedures described in this section if you are upgrading your non-RAID disks to RAID disks.

1. From the Windows **Start** menu, select **Shut Down** > **Restart** > **OK**.
2. While the Color Controller C-81 is restarting, press <CTRL+I> to enter the Configuration Utility.

   Important: If you do not press <CTRL+I>, the Color Controller C-81 starts normally and you will then have to repeat this procedure.



3. To create a RAID system volume, select **1. Create RAID Volume** and press Enter.
4. Press Enter to keep the default volume name.
5. Press Enter to keep the default **RAID Level** (RAID0(Stripe).
6. Press Enter to choose **Select Disks**.
   A window appears listing the available disks.
7. Using the **Up** and **Down** arrows, navigate to disk **0**, and then press the space bar to choose the disk.
8. Using the **Up** and **Down** arrows, navigate to disk **1**, and then press the space bar to choose the disk.
9. Press Enter to confirm your selection of disks for the volume.
10. Press Enter to choose the **Stripe Size** (128KB).
11. Press Enter to choose the **Capacity** (931.5 GB).
12. Press Enter to create the specified volume.
    A message appears warning you that all data on the selected disks will be lost.
13. Type y to continue.
    The volume is created and added to the list of RAID volumes.

14. To create the image volume, select **1. Create RAID Volume** and press `Enter`.
15. Press `Enter` to keep the default volume name.
16. Press `Enter` to keep the default **RAID Level** (RAID0(Stripe).
17. Press `Enter` to choose the **Stripe Size** (128KB).
18. Press `Enter` to choose the **Capacity** (931.5 GB).
19. Press `Enter` to create the specified volume.
    A message appears warning you that all data on the selected disks will be lost.
20. Type `y` to continue.
    The volume is created and added to the list of RAID volumes.
21. Make sure that DVD 1 is in the DVD-RW drive.
22. Using the arrow keys choose **5. Exit** and then press `Enter` to exit the configuration utility.
    A message appears asking you to confirm that you want to exit the Configuration Utility.
23. Press `y` to continue.
    The Creo Color Server startup menu appears.
24. Perform a complete installation as described in *Installing the operating system and software*.

See also:
Installing the operating system and software on page 58

4 .5 Installing Color Controller C-81 1.1 software

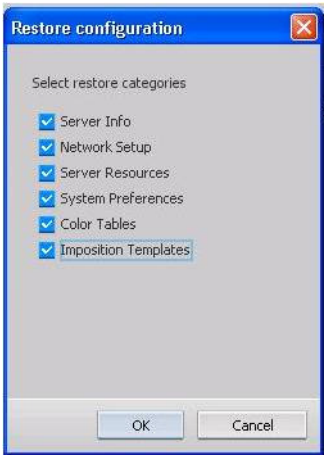
1. Insert the version 1.1 software DVD into the DVD device and browse to the Color Controller C-81 folder.
2. Double-click the `setup.exe` file.
3. In the License Agreement window, click **Yes**. Wait until the installation is completed.
4. Click **Finish** to restart the Color Controller C-81.
   The system is restarted and the Color Controller C-81 software automatically starts.
5. From the **Help** menu, select **About** to verify that Color Controller C-81 version 1.1 is installed.

Next:

- Restore the configuration that you backed up. When you restore the configuration, all the custom spot colors, virtual printers, new fonts, color profiles and so on, are saved again to the Color Controller C-81 version 1.1 software.
- You will need to remove and then reinstall the network printers on your client workstation after you have upgraded the software.

4 .6 Restoring Color Controller C-81 1.0 configuration and resources

1. Copy the backed up files from the external server to the Color Controller C-81.
2. From the **File** menu, select **Preferences**.
3. In the Preferences window, under **Administrator**, select **Configuration backup**.
4. In the **Restore configuration** area, click **Browse**.
   The Open dialog box appears.
5. Locate the directory path in which you copied the configuration.
6. Select the file you saved for backup, and then click **Open**.
7. Click **Start Restore**.



8. Select all the categories, and click **OK**.
9. After a few moments, the Restore complete message appears. Click **OK**.
10. Click **Save** to close the Preferences window.
11. From the **File** menu in the workspace, select **Exit**.
12. Restart the Color Controller C-81.

4 .7 Retrieving jobs

Requirements: If you are retrieving a VDP job, then you need to restore the cached elements first

When you retrieve a job, the archived job retains the original job name, and not the name assigned when archived. The files related to the job (for example, PDL) are also retrieved and the cabinet file is not deleted.

1. From the **File** menu, select **Retrieve from archive**.
2. Find the archived job under its archive name, and select the related cabinet file.
3. Click **Add**.
   The selected job appears in the lower list.
4. Click **Retrieve**.
   The selected job appears at the top of the list in the **Storage** area.
5. In the Job History window, verify that the file has been successfully retrieved.

4 .8 Uninstalling client software in Windows

1. Uninstall the Creo Color Server Job Ticket software:**Start** > **Program** > **Creo Color Server** > **Creo Color Server JT** > **Uninstall V1_0**
2. Uninstall the Remote Site Manager software:**Start** > **Program** > **Creo Color Server** > **Remote Site Manager** > **Uninstall V1_0**
3. Uninstall the Print Driver software:
   a. From your computer, navigate to the `\\<server name>\Utilities\PC Utilities\Driver Extension` folder on the Color Controller C-81.
   b. Double-click the `DEXUninstaller` file.

4 .9 Uninstalling client software in Mac OS

1. Uninstall the Creo Color Server Job Ticket software by removing the following folders:
   a. `/Applications/Creo_Color_Server_Tools`
   b. `/Library/Application Support/Creo_Color_Server_Tools`
2. Uninstall the Print Driver software.

   Note: Only perform the following steps after upgrading your system to version 1.1.

   a. Exit all open applications.
   b. From the **Go** menu, select **Connect to Server**.
   c. In the **Server Address** box, type your Color Controller C-81 host name or address, and click **Connect**.
   d. In the **Connect as** area, select **Guest**.
   e. Click **Connect**.
   f. Select **Utilities**, and then click **OK**.
   g. Select the `Mac Utilities` folder.
   h. Double-click the `CCSUninstall.dmg` file.
   i. Double-click the `CCSUninstall.app` file.
   j. Close all running applications on your Mac computer, and then click **OK**.
   k. Select the suitable Creo printer driver, and then click **OK**.
   l. If necessary, type your name and password, and then click **OK**.
   m. Click **OK**.
   The Print Driver software is removed. You can now upgrade the Print Driver software.

   Note: You will need to reinstall the network printers that you removed after you have upgraded the software.

5 First time setup and configuration

5 .1 Space requirements for installing the Color Controller C-81

Make sure that at your site there is enough space near the press for the Color Controller C-81 installation. You need a minimum of 8 inches (20cm) at the back and sides of the Color Controller C-81 as shown below.

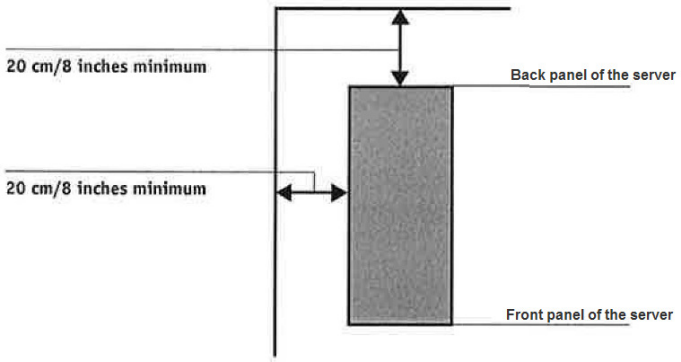


Figure 2: Space requirements for the Color Controller C-81

5 .2 Connecting and turning on the Color Controller C-81

For more information, see the Easy Setup Steps chart supplied with your Color Controller C-81 .

Connect the Color Controller C-81 to your printer as illustrated below.

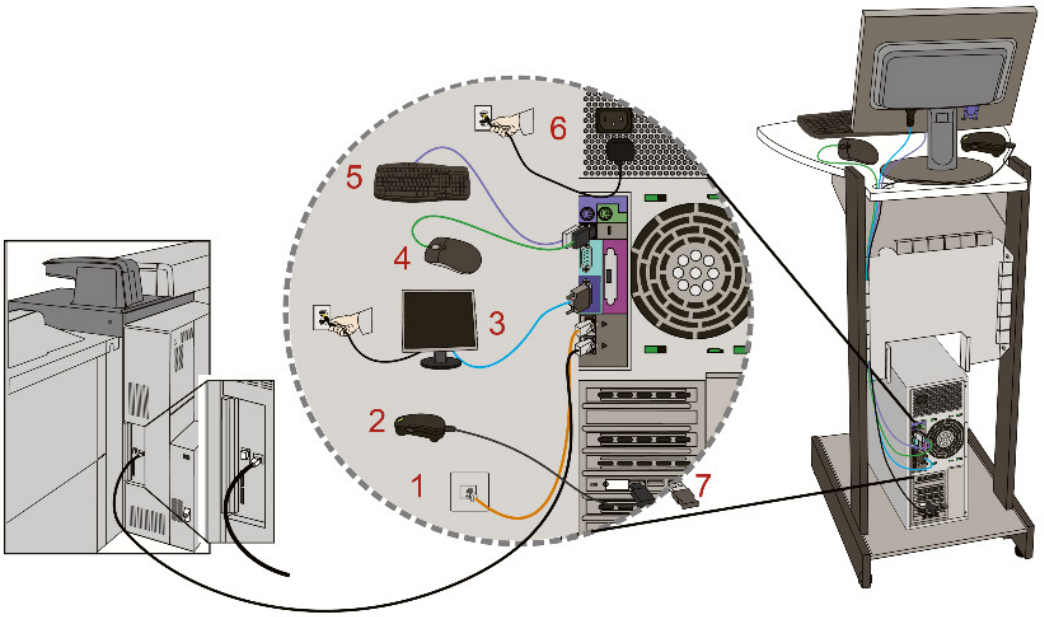


Figure 3: Connecting the Color Controller C-81

5 .2 .1 Connecting the Color Controller C-81 to the printer

To enable communication between the printer and the Color Controller C-81.

1. Enter the SP mode on the printer, and then select the SP5193-001 settings (External controller info. settings).
2. Type **5**, and then press the **#** (Enter) key.
3. Touch **Exit** when the message to reboot the printer appears.

   Note: During the process of connecting the Color Controller C-81 to the printer, you will need to turn the printer off and then turn it back on.
4. Turn off the printer using the main power switch that is located behind the front cover.
5. Shut down the Color Controller C-81.

6. Locate the printer interface cable (crossover Ethernet cable) that was shipped with the Color Controller C-81 and connect one end of the cable to the printer interface port on the Color Controller C-81, and then connect the other end of the cable to the correct Ethernet port on the printer.

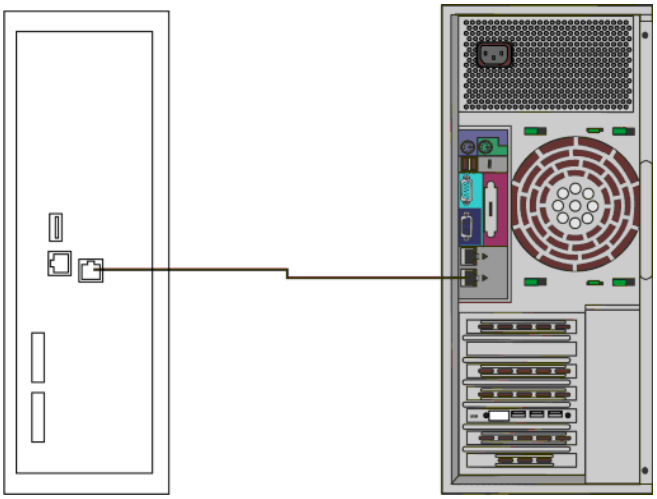


Figure 4: Printer and Color Controller C-81 connection

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-81 could shut down or image quality problems could result.

7. Open the Color Controller C-81 front panel and press the power control button.
   Wait approximately two minutes for the Color Controller C-81 to reach the idle state and for the workspace to appear.
8. Turn on the printer using the main power switch.

5 .2 .2 External LEDs and controls

This section identifies the external LEDs and controls of your Color Controller C-81 .

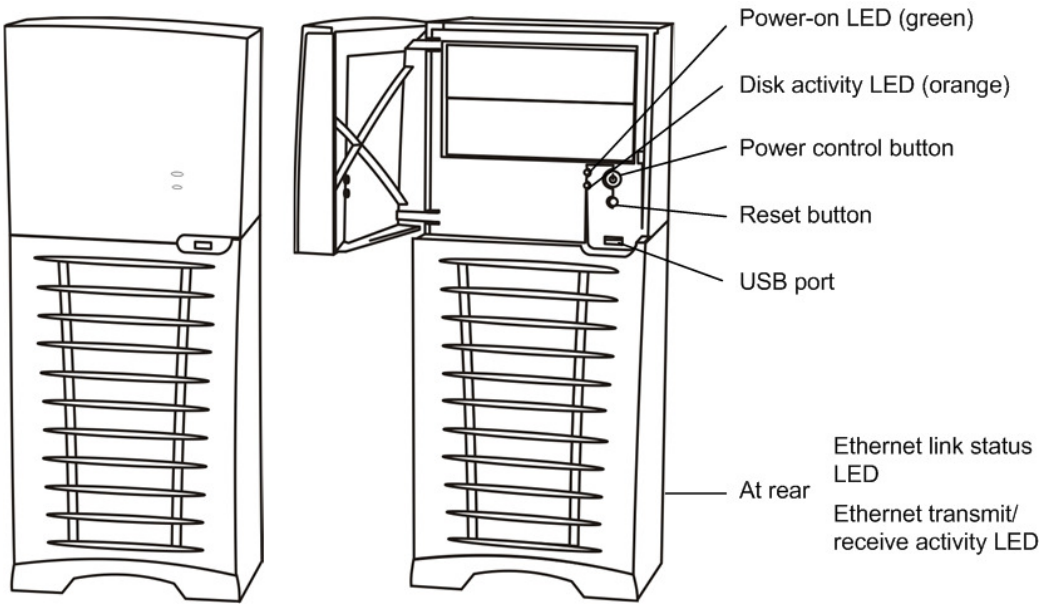


Figure 5: Front door controls and indicators

The following list describes functions of the external indicator lights and controls:

Power-on LED

Illuminates steady green when the Color Controller C-81 is turned on

Disk activity LED

Flashes orange when a hard disk drive is in use

Power control button

Turns the Color Controller C-81 on or off

Reset button

Restarts the Color Controller C-81

USB port

Connects any USB device to the Color Controller C-81

Ethernet link status LED

Indicates an active connection on the ethernet port when the LED is illuminated. This LED is on the ethernet connector at the back of the server

Ethernet transmit/receive activity LED

Indicates activity between the server and the network when the LED is illuminated. This LED is on the ethernet connector at the back of the server

See also:

Turning on the Color Controller C-81 on page 29

5 .2 .3 Turning on the Color Controller C-81

Before connecting the Color Controller C-81 to an AC power source, review the safety precautions.

See also:

Safety precautions on page 3

Turning on the Color Controller C-81

1. Connect the monitor's AC power cable to an AC power source, and turn on the monitor.
2. Connect the Color Controller C-81's AC power cable to the AC power source
3. Wait 20 seconds, and then press the power control button on the Color Controller C-81. The ON/OFF LED on the front panel illuminates a steady green.

   After the system startup is complete, the desktop appears.
4. If a power failure occurs while the Color Controller C-81 is turned on, it will restart automatically when the power is restored.

Turning off the Color Controller C-81

Perform an orderly shutdown of the operating system before turning off the Color Controller C-81.

1. Exit the Color Controller C-81 software.
2. On the Color Controller C-81 desktop, click **Start** > **Shut Down**.
3. In the Shut Down Windows dialog box, click **OK**.
4. Disconnect the AC power cable from the AC power source.

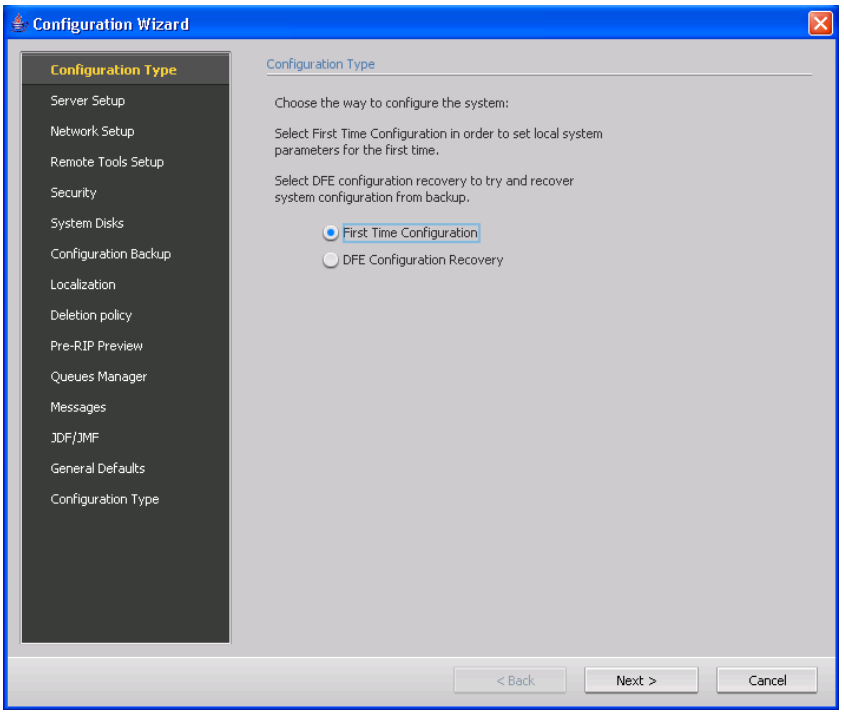
5 .3 Configuration Wizard (first-time software setup)

After turning on the Color Controller C-81 for the first time, the Configuration Wizard appears.

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

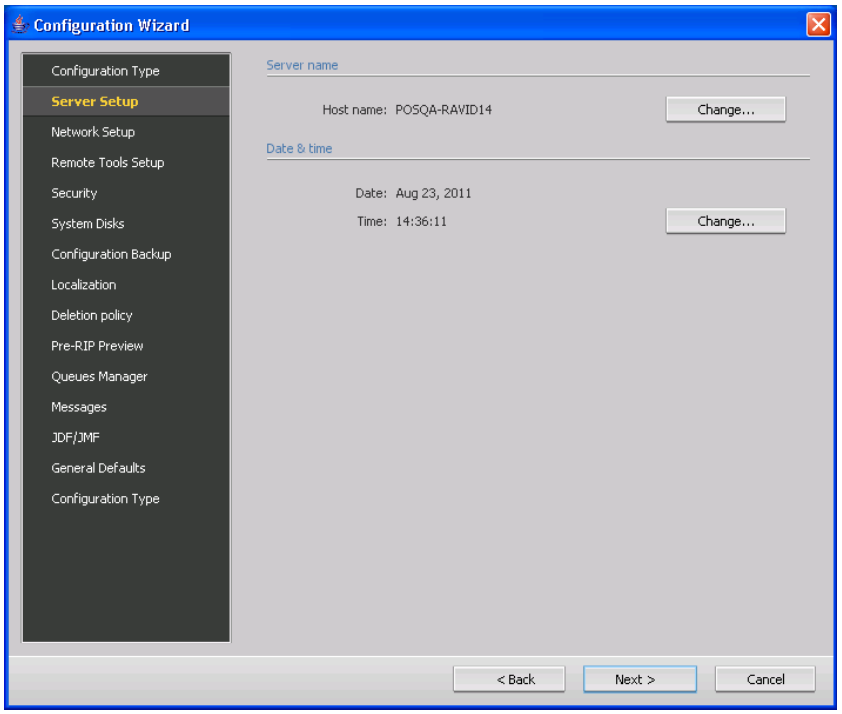
Note: During the configuration process, when prompted to restart your computer, click **No**. At the end of the Configuration Wizard, you will be prompted to restart your system.

5 .3 .1 Choosing the configuration type



- Verify that **First Time Configuration** is selected.

5 .3 .2 Configuring the server setup

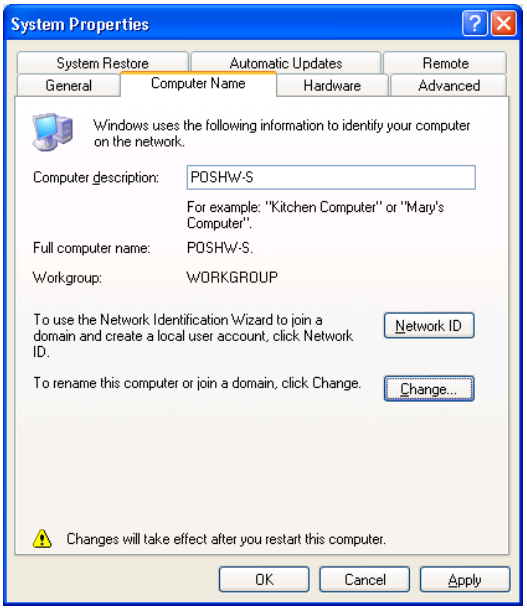


Configuring the host name

The initial computer name (host name) and workgroup name of the Color Controller C-81 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*.
2. If you need to change the host name, click **Change**.

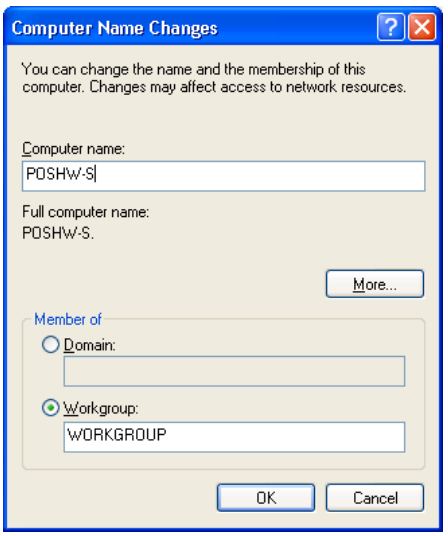
   The System Properties window appears.



Important: 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.

3. On the **Computer Name** tab, click **Change**.

   The Computer Name Changes dialog box appears.



4. In the **Computer name** field, type the new name for the Color Controller C-81 . 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**.

   A message appears to inform you that changes will take effect only after restarting the Color Controller C-81.

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

   Note: When prompted to restart your Color Controller C-81 , click **No**.

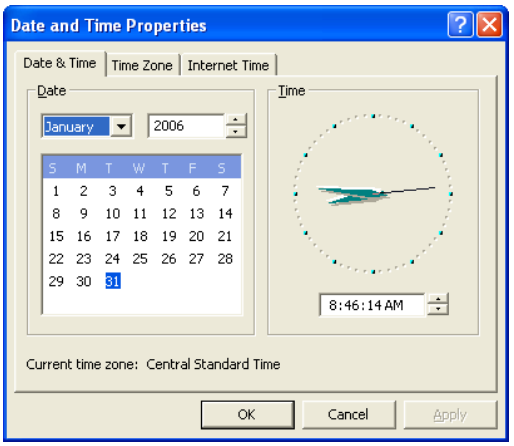
See also:

Setting the date and time on page 33

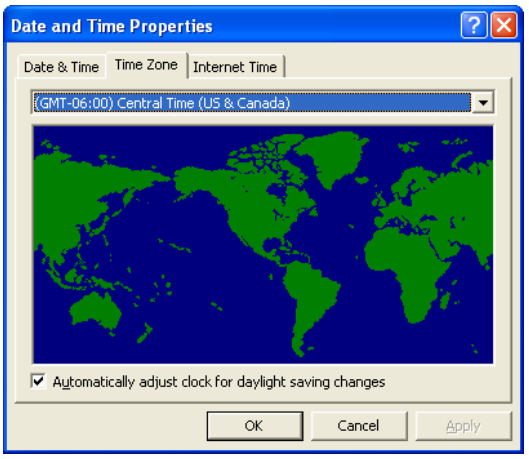
Setting the date and time

1. In the **Date & Time** area, verify that the date and time are set correctly. If they are correct, click **Next** and proceed to *Configuring the network setup.*
2. If the settings are not correct, click **Change**.

   The Date and Time Properties dialog box appears.



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

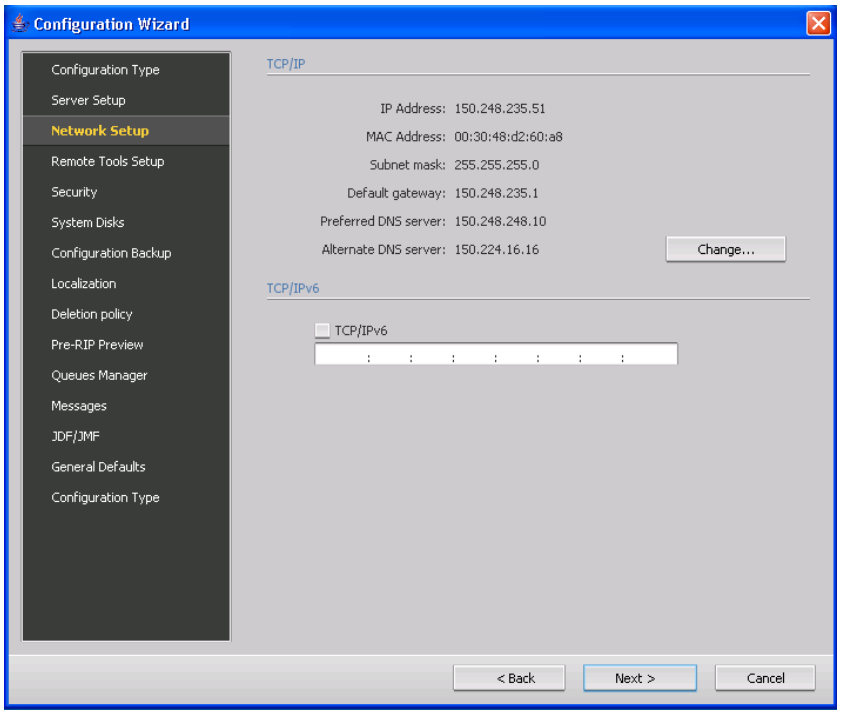


4. Select the time zone in which you are located and click **OK**.

See also:

Configuring the network setup on page 33

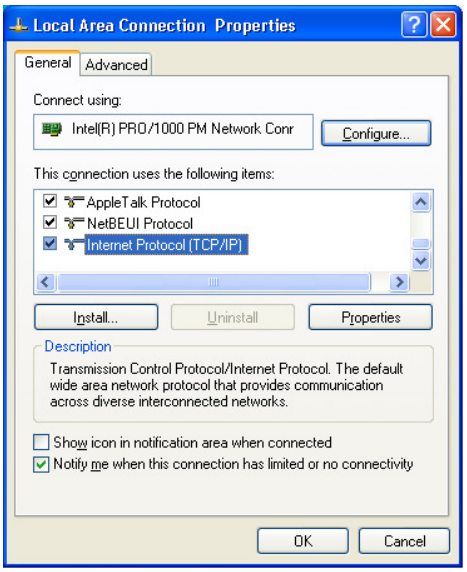
5 .3 .3 Configuring the network setup



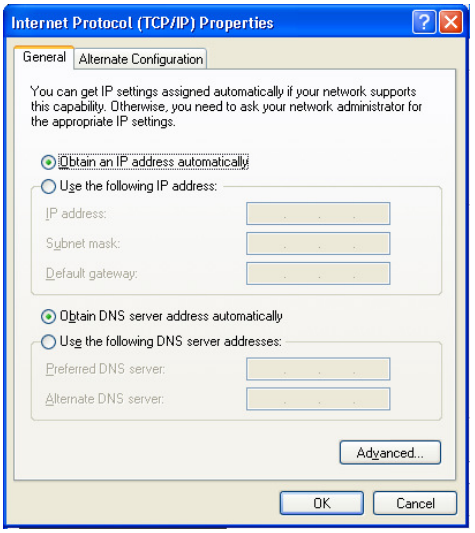
Configuring TCP/IP addresses

1. In the **TCP/IP** area, verify that the IP address is correct. If the IP address is not correct, click **Change**.

   The Local Area Connection Properties dialog box appears.



2. In the **This connection uses the following items** list, select **Internet Protocol (TCP/IP)** and then click **Properties**.
The Internet Protocol (TCP/IP) Properties dialog box appears.



3. Select **Use the following IP address**.
4. In their corresponding boxes, type the new **IP address**, **Subnet mask**,and **Default gateway** (if applicable).
5. Click **OK**.

   Note: When prompted to restart your Color Controller C-81 , click **No**. You will be prompted at the end of the Configuration Wizard to restart the server.
6. In the Local Area Connection Properties dialog box, click **OK**.

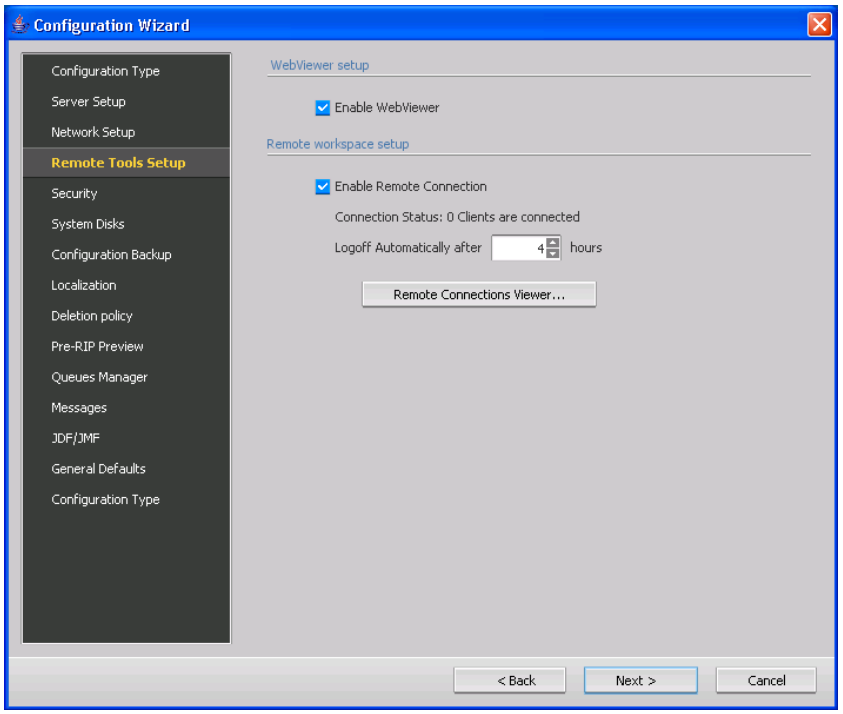
See also:

Configuring the IPv6 address on page 36

Configuring the IPv6 address

1. In the **IPv6 Address** area, verify the address is correct.
2. 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.`
3. Click **OK**.
4. Type the new IPv6 address (get this information from the network administrator).

5 .3 .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.

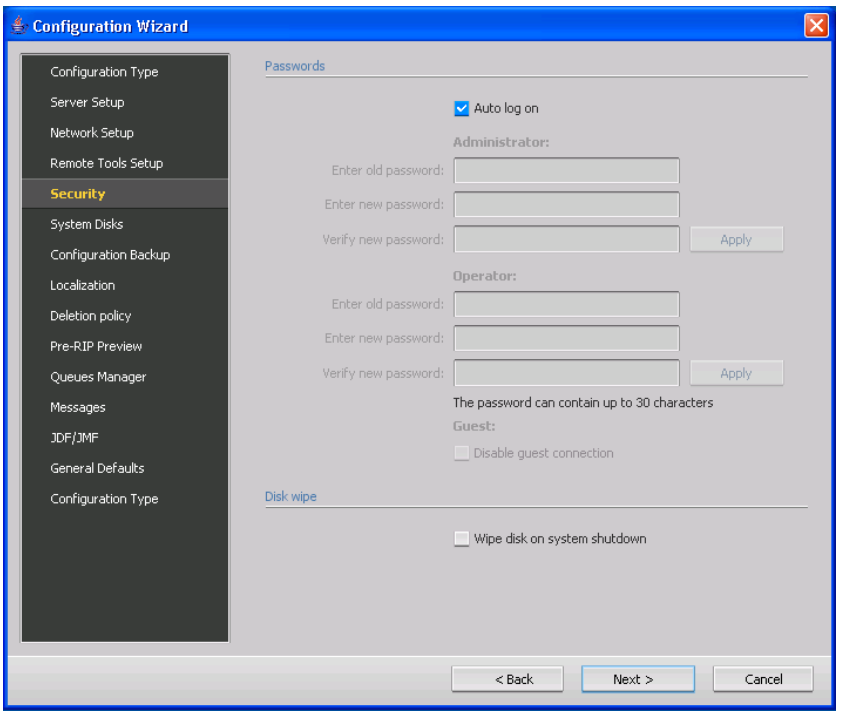
The Remote Workspace opens an actual workspace for the selected server and enables you to import jobs, print jobs, and

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, enter the number of hours.
4. Click **Remote Connections Viewer**, to view the remote connections.

5 .3 .5 Configuring security settings



Using the default password settings

The **Auto Log on** check box is selected by default so that you don't have to log on to the Color Controller C-81 each time. If you want each user to have to log on to the Color Controller C-81, you need to set the security settings. You can assign each user an access level and password. There are three access levels:

Operator (default)—enables the user to operate the Color Controller C-81 and configure the Preferences area in the Preferences window

Administrator—enables the user to access all features and settings on the Color Controller C-81

Guest—enables the user to import a job through an existing virtual printer and view the workspace

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-81 via the Microsoft Remote Desktop Connection utility.

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

Note: If you want each user to have to log on to the Color Controller C-81, clear the **Auto log on** check box.

Changing the administrator password

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

Changing the operator password

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

Restricting guest access

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

Using default disk wipe setting

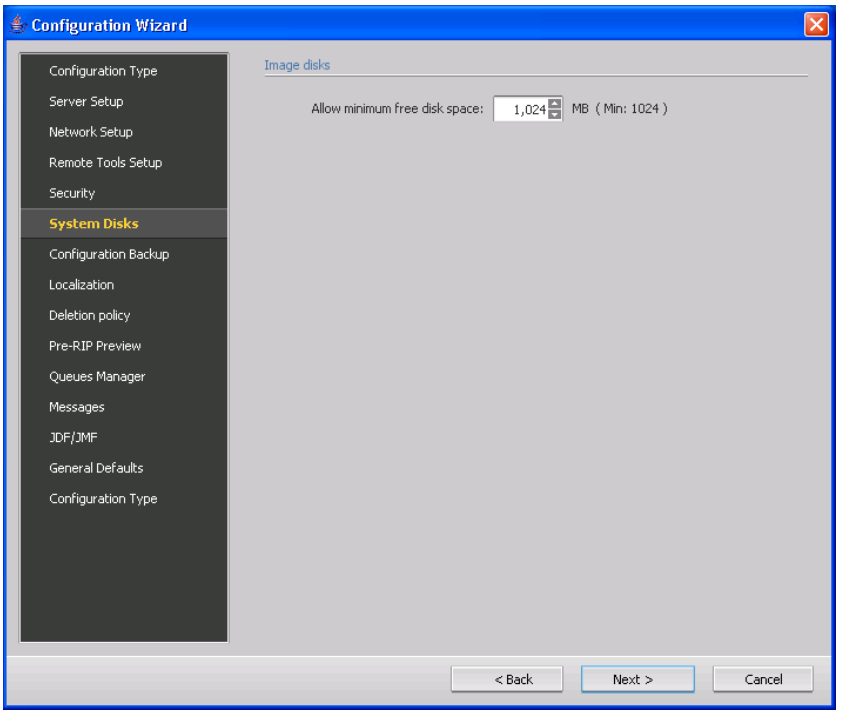
The Disk Wipe utility enables you to work in a more secure environment, by permanently removing data left by files that you have deleted. The utility eliminates the contents of your deleted files by scanning all of the empty sectors on both the system and image disks, and replacing them with zeros. Non-empty sectors

are left untouched. The Disk Wipe utility starts automatically every time you quit the Color Controller C-81 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.

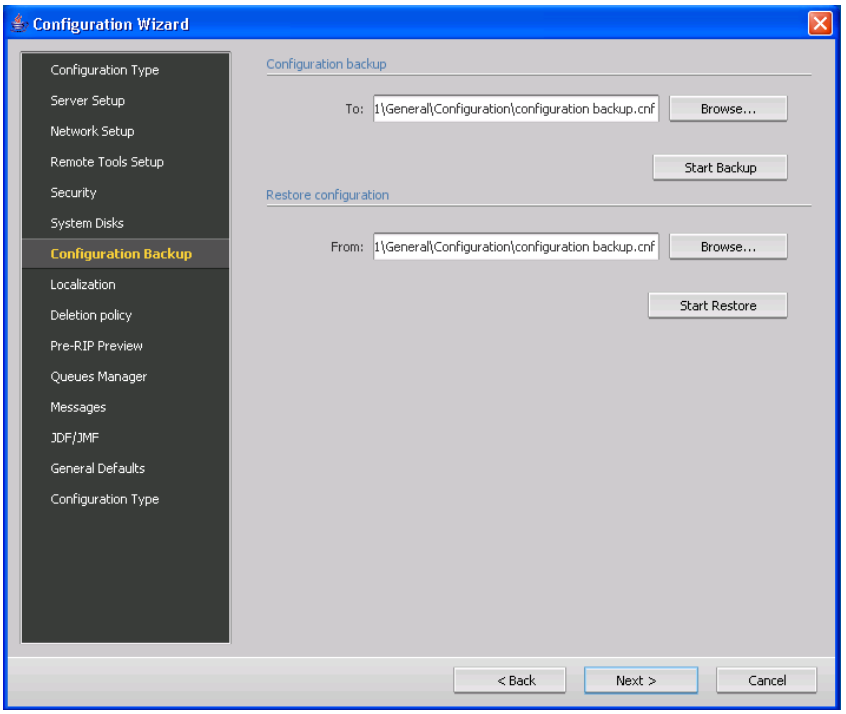
5 .3 .6 Configuring image disks



➢ 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.

5 .3 .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

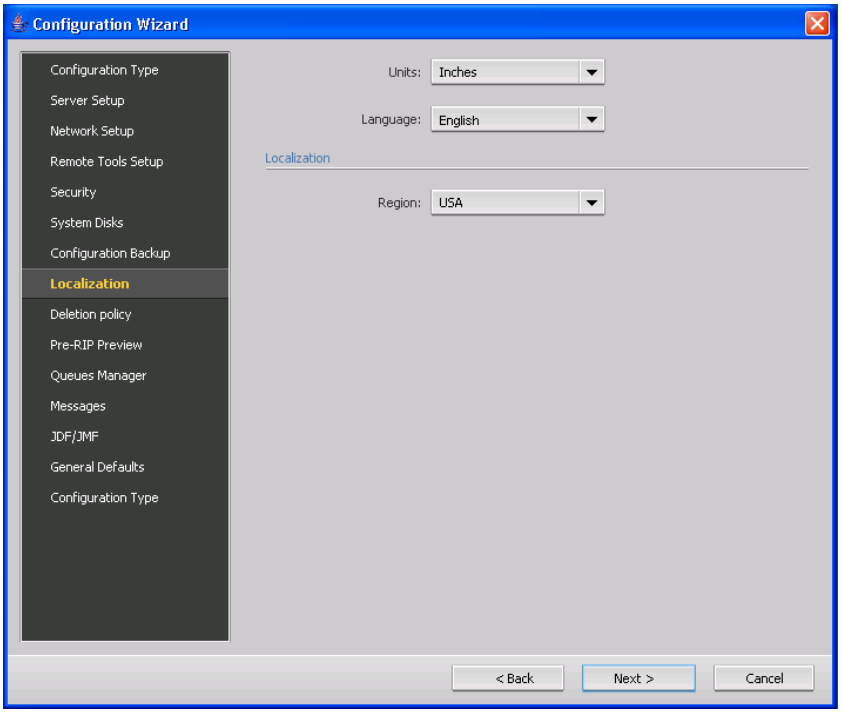
- Color tables
- Imposition templates

➢ 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:\Color Controller C-81\General\Configuration`.

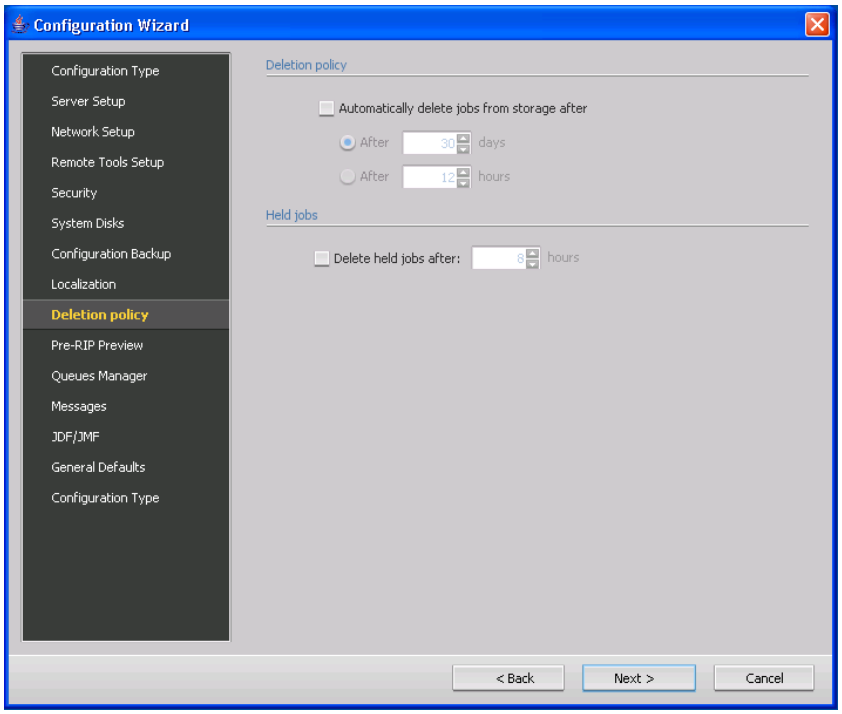
5 .3 .8 Setting the localization parameters

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



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

5 .3 .9 Configuring the deletion policy

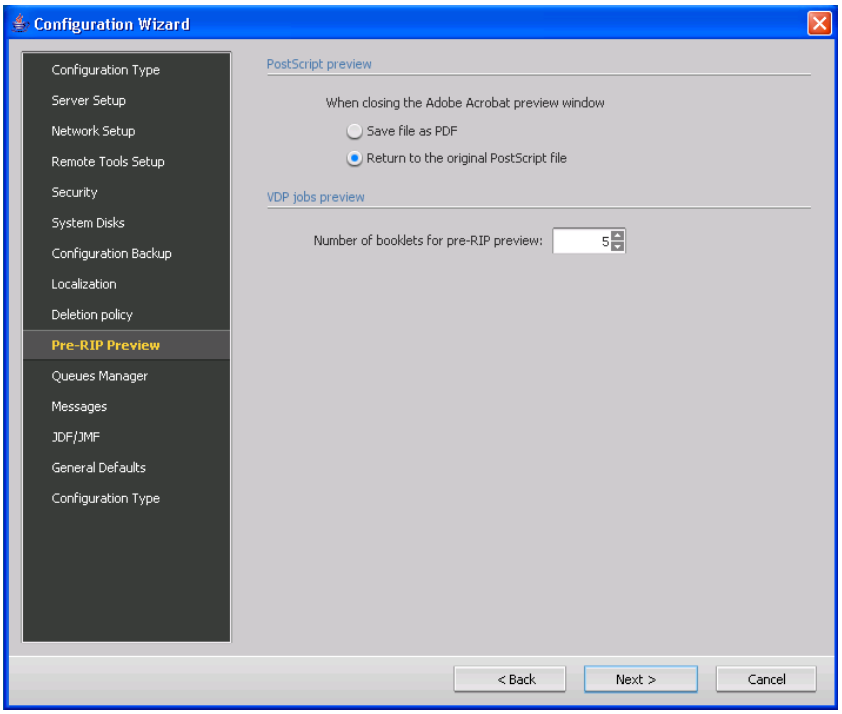


1. In the **Deletion policy** area, select the **Automatically delete jobs from storage** check box and then select one of the following:
   - **After 30 days**
   - **After 12 hours**
2. Enter the desired number of days or hours.

   Note: Change the number of days or hours depending on your site requirements.
3. In the **Held jobs** area, select the **Delete held jobs after** check box, and enter the desired number of hours.

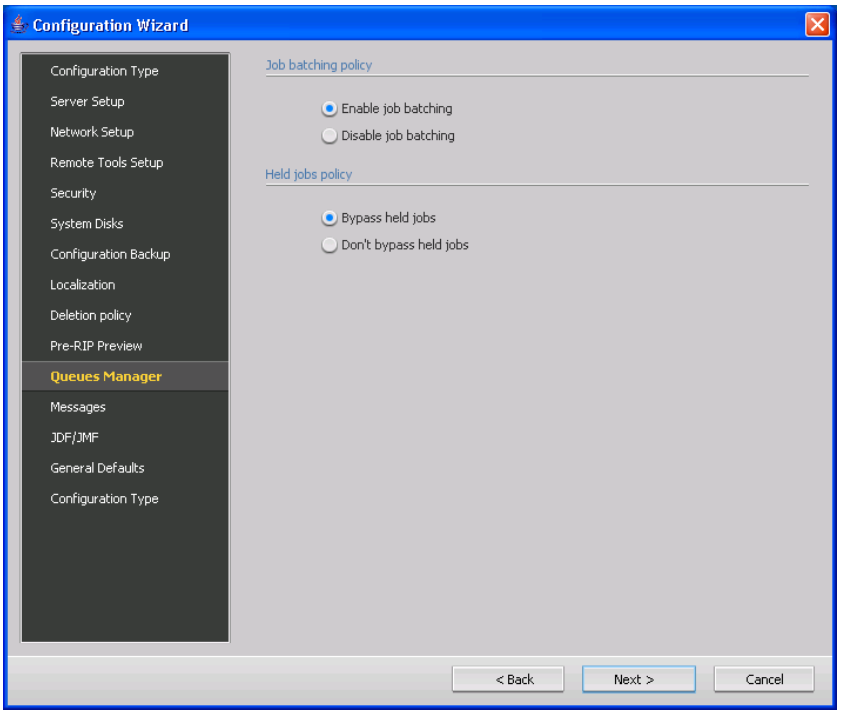
   Note: A held job is one that is bypassed in the Print Queue.

5 .3 .10 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.

5 .3 .11 Configuring the queues manager



You will need to install the dongle included in the Process Power Kit to activate this feature.

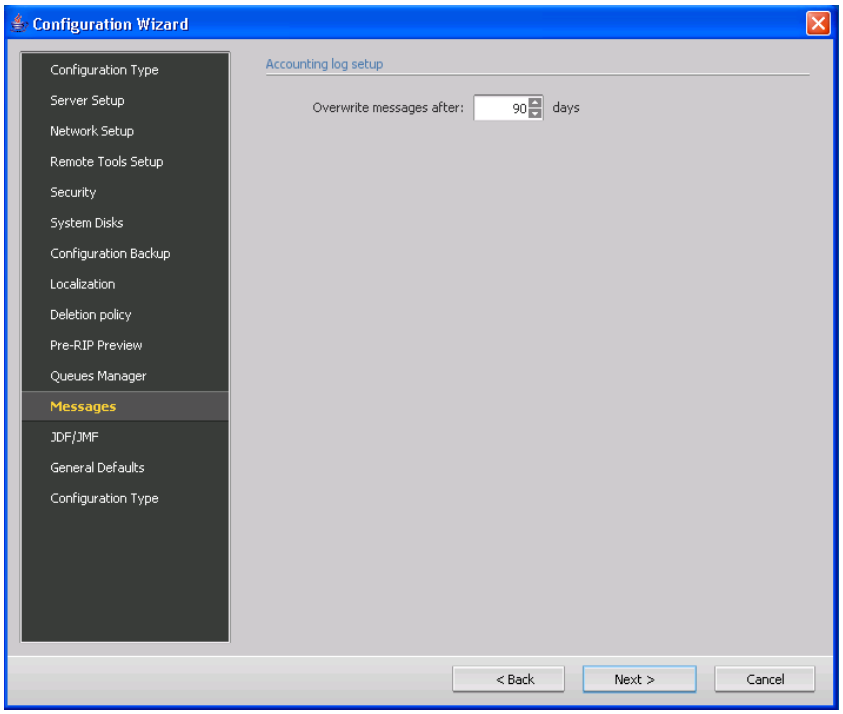
1. In the **Job batching policy** area, select one of the following:
   - Select **Enable job batching** to print jobs that have similar attributes one after the other without having the printer pausing in between jobs.
   - Select **Disable job batching** to discontinue printing jobs that have similar attributes and enable the printer to pause in between printing jobs.

2. In the **Held jobs policy** area, select 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.

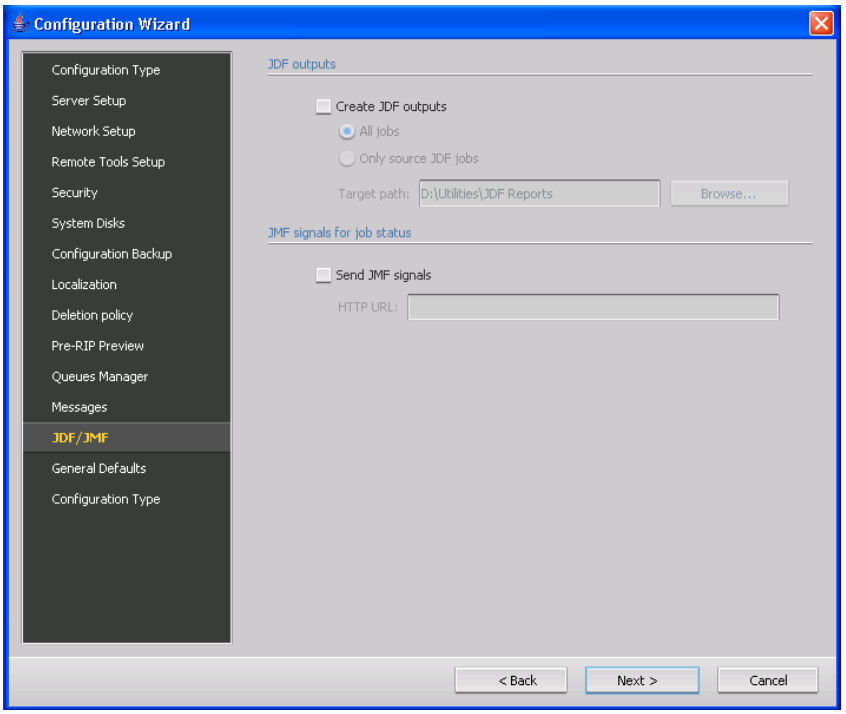
5 .3 .12 Configuring messages



By default, all jobs that were handled during the past 90 days are listed in a log in the Accounting Viewer. You can determine how long information remains before it is overwritten.

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

5 .3 .13 Configuring JDF output and JMF signals

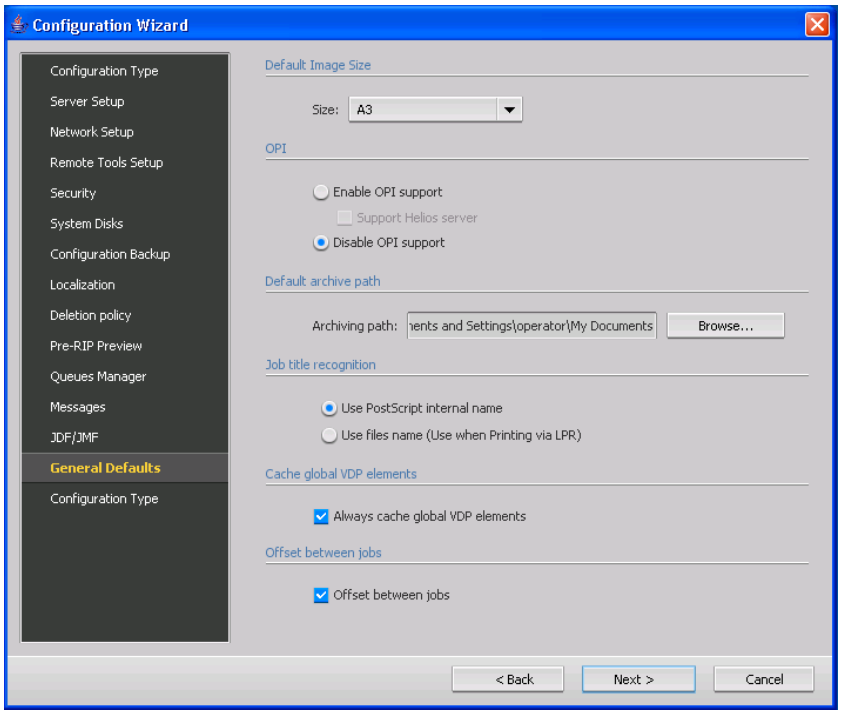


The Color Controller C-81 receives the JDF job ticket via hot folders, returns JDF output with job accounting information, and submits JMF (Job Messaging Format) signals with the job's status.

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.

5 .3 .14 Configuring general defaults



1. In the **Default Image Size** area, select the desired 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.

2. In the **OPI** area, select the following options if you want to automatically create a low-resolution image of Do not use to make a claim that isn't substantiated by data. supported file formats for placement in any layout application:

   a. Select the **Enable OPI support** check box.
   b. Select the **Support Helios Server** check box if you receive files that were created by the Helios OPI Server.

   OPI Support automatically creates a low-resolution image of Do not use to make a claim that isn't substantiated by data. supported file formats for placement in any layout application. It replaces layout images on-the-fly with optimized high-resolution images during output.

   By default, the OPI support option is not active.

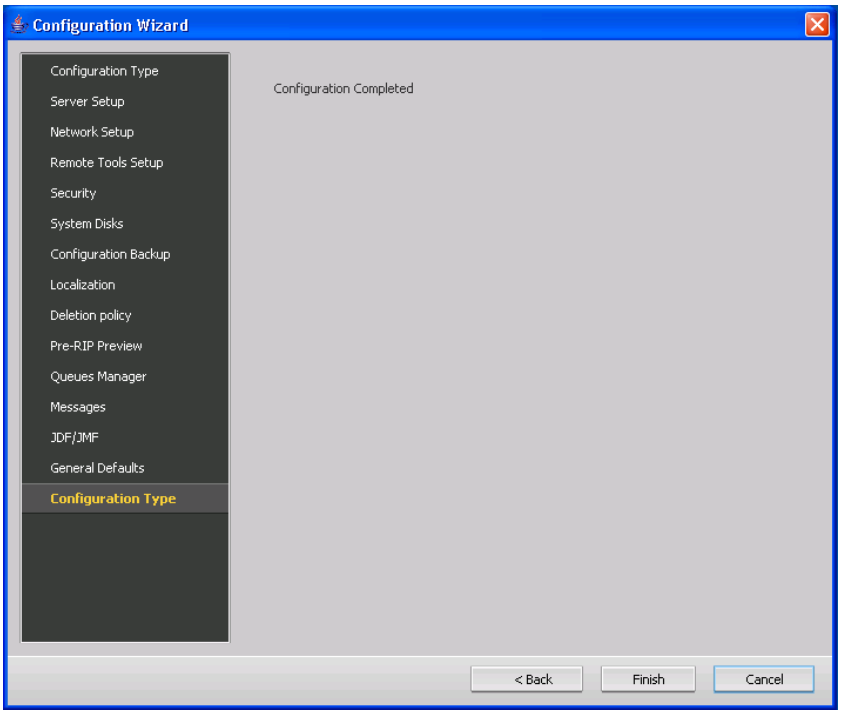
3. In the **Default archive path** area, choose this option if you want to set a default path in which to archive jobs:

   a. Click **Browse** and locate the folder in which you want to archive jobs.

4. In the **Job title recognition** area, select one of the following options:
   - **Use PostScript Internal name (Use when spooling from Mac OS X)**: Uses the internal file name as written inside the PostScript file by the print driver (default)
   - **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-81 with the name last given by the user.
5. In the **Cache global VDP elements** area, select the **Always cache global VDP elements** check box to cache and store VDP elements for reuse.
6. Select the **Offset between jobs** check box to offset between jobs.

5 .3 .15 Completing the configuration

After the installation is complete, the Configuration Completed window appears.



1. Click **Finish**.

   The configuration settings are automatically backed up.

After a few moments, the Color Controller C-81 workspace appears on your screen.

2. Exit the Color Controller C-81 software. If you made any changes to the configuration, these changes will only take effect if the Color Controller C-81 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**. After restarting, the Color Controller C-81 software splash screen appears.

   Note: Make sure to turn off the printer before you restart the Color Controller C-81. After the Color Controller C-81 restarts and the workspace appears, you can turn on printer.
4. The Color Controller C-81 software is automatically loaded and launched.

   A backup of the operating system should be performed after the system configuration is completed.

See also:

Backing up system partition C on page 62

5 .4 Configuring McAfee VirusScan

Anti-virus software is not included on your Color Controller C-81 . It is recommended that you install McAfee VirusScan software on your Color Controller C-81 . After installing VirusScan software, perform the following configuration procedures.

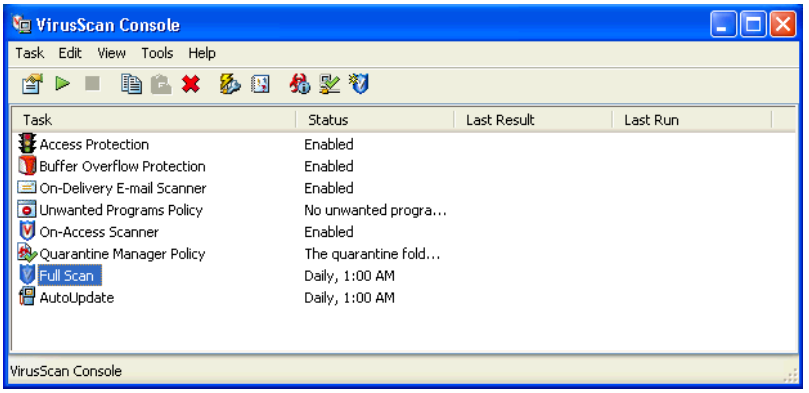
Important: Running VirusScan software could slow down process time and affect the overall performance of the server.

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.

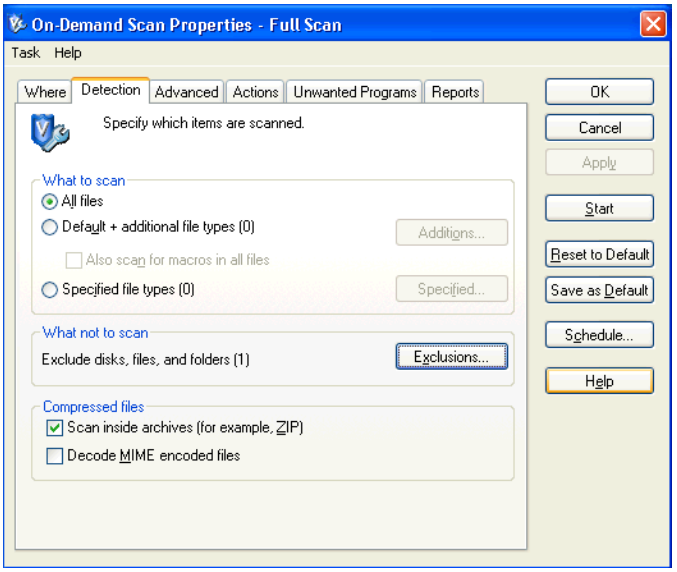
Note: The following VirusScan software configuration procedure is subject to change without notice, and the relevant documentation may not be updated.

5 .4 .1 Configuring the Full Scan settings

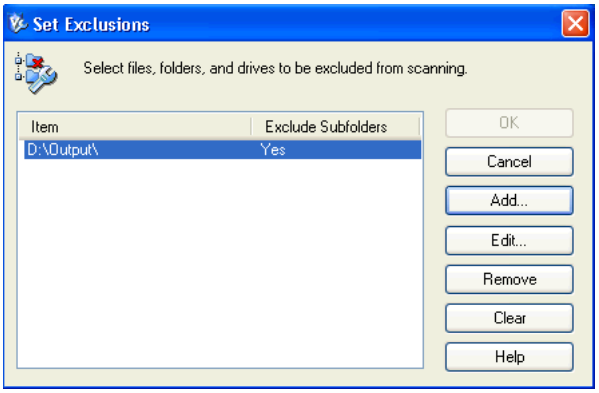
1. From the taskbar, right-click the **VShield** icon and select **VirusScan Console**.



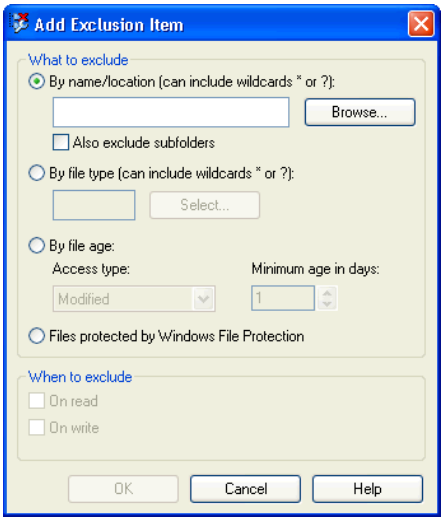
2. In the **Task** column, right-click **Full Scan** and select **Properties**.
3. Click the **Detection** tab.



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

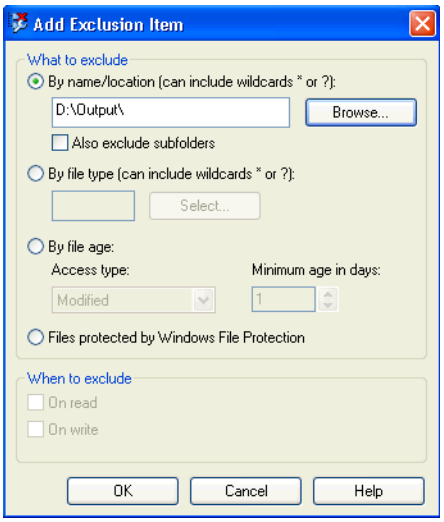


5. Click **Add**.



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

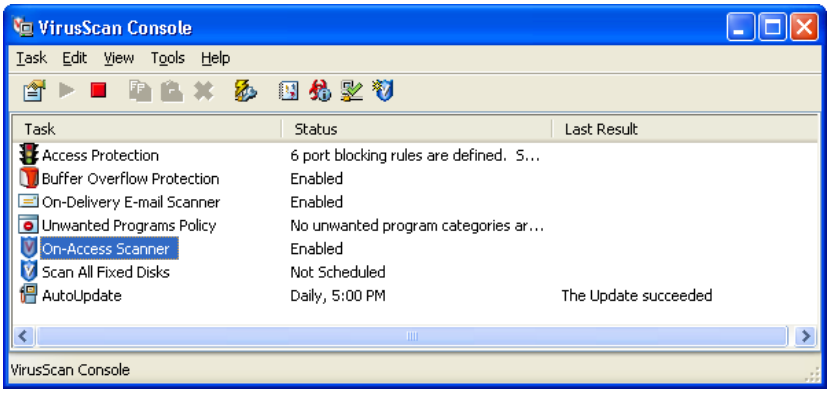
   The `D:\Output` path appears.



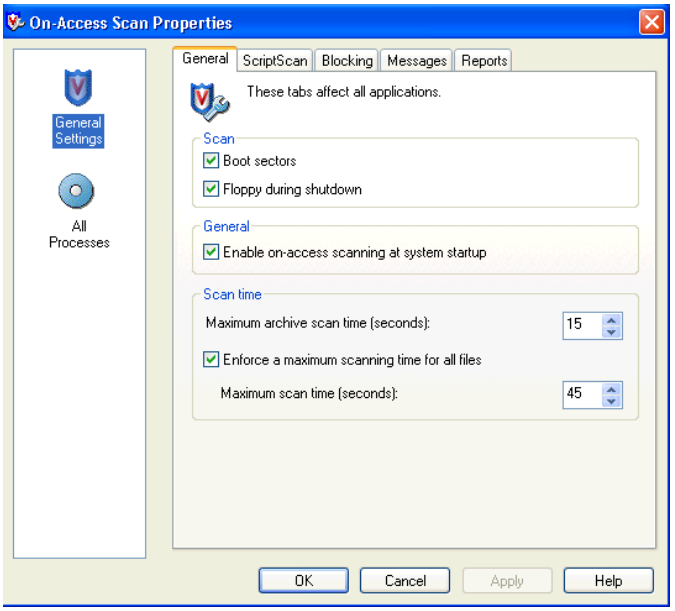
8. Select the **Also exclude subfolders** check box, and click **OK**.
9. In the Set Exclusions dialog box, click **OK**, and then click **OK** again.

5 .4 .2 Configuring the On-Access Scan settings

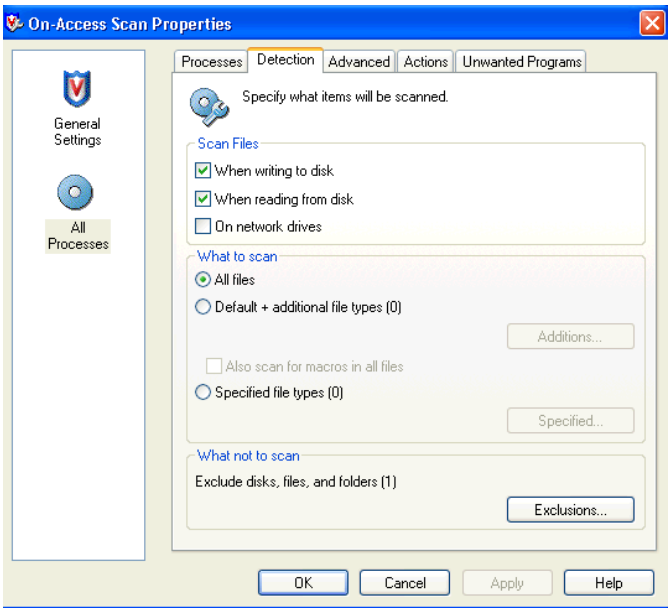
1. Return to the VirusScan Console window.



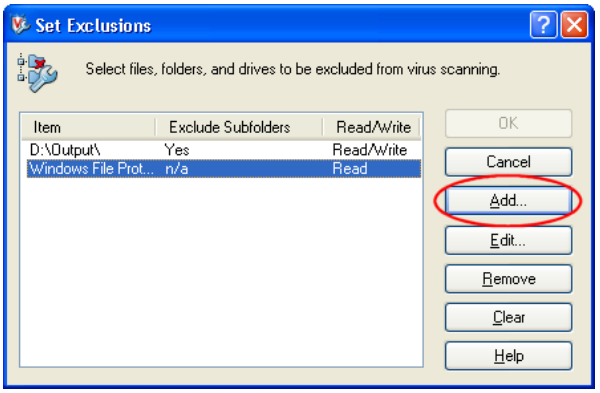
2. Double-click the **On-Access Scanner** icon.



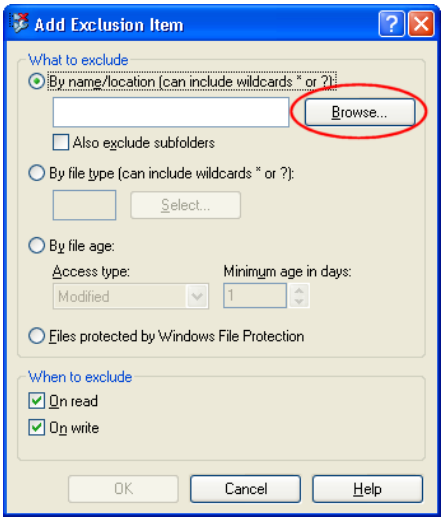
3. In the left pane, click the **All Processes** icon.
4. Select the **Detection** tab.



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

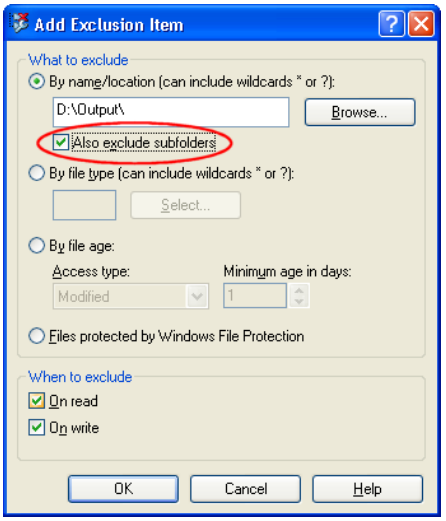


6. In the Set Exclusions dialog box, click **Add**.



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

   The `D:\Output` path appears.



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**.
12. To activate the antivirus software, restart the Color Controller C-81.

5 .5 Performing a test print and color image check

5 .5 .1 Importing a file and performing 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\Print Samples\Samples Europe (A3-A4)`
   - `Golfer_A4.pdf` in the

     `D:\Sample_Files\Print Samples\Samples US (DLT-LTR)`
3. Double-click the file to add it to the list for importing.
4. Select the **Print** 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**).

5 .5 .2 Importing a file and performing 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 **Print** virtual printer.
5. Click **Import**.

   The file is processed, printed, and sent to the **Storage** area. All color patches should be visible. Each color's patch set should show uniform gradation from patch to patch as the color lightens from 100% to 0%.
6. Check that each 100% patch has a solid color and that there are no imperfections (not blotched or scratched).
7. Check that the density difference between the 60% patch and 50% patch 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-81.

   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**).

6 Reinstalling the Color Controller C-81 software

6 .1 When to reinstall software

This chapter describes the installation procedures for the Color Controller C-81. It describes how to reinstall the operating system, and how to reinstall the Color Controller C-81 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, and for inserting DVD 1 and DVD 2.

There are three methods for reinstalling the system:

- **Complete installation (overwrite all existing data)**—This procedure requires two discs, DVD 1 and DVD 2. It installs a clean system with the Color Controller C-81 software and recreates **C** and **D** partitions. The Complete installation overwrites the operating system.

  Perform this installation under the following conditions:

  - When installing a new operating system
  - When physically replacing a system disk
  - When upgrading from non-RAID to RAID
  - After an unrecoverable system crash

- **Preservation installation (overwrite system partition only)**—This procedure requires two discs, DVD 1 and DVD 2. It installs the Color Controller C-81 software and formats only the operating system partition. In other words, partition **C** is recreated, and the information on partition **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 and restore**—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.

Note: A non-RAID configuration cannot be restored on a RAID configuration. 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.

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

6 .2 Installing the operating system and software

The following steps summarize the procedures you must perform before and after you reinstall. Before you start, review the steps to familiarize yourself with the procedures. You can also use the steps as a check list to verify that you have completed all the required procedures.

1. Archive any important customer jobs to an external device.
2. Back up the system configuration from the **Configuration backup** in the Preferences window .
3. Reinstall the operating system (Windows XP) and Color Controller C-81 software (Complete installation or Preservation installation).
4. Use the configuration wizard. If backup is available, use the **DFE Configuration Recovery**. If no backup is available, use the **First Time Configuration**.
5. Install and configure virus protection software (highly recommended).
6. Perform a test print.
7. Restore customer jobs.
8. Restore your system configuration from the **Configuration backup** in the Preferences window .
9. Back up the Color Controller C-81 system partition (System backup and restore).

Note: Check if any Creo supported software is loaded on the Color Controller C-81. 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-81
- The following is available:
  - Software pack (DVD 1, DVD 2)

    Note: DVD 1, which includes the operating system, does not require entering a license number or activation.

  - Computer name
  - TCP/IP information
  - Gateway, WINS address, and DNS information (if DHCP is not active on site)

1. If the Color Controller C-81 is on and the workspace is open:
   a. Exit the workspace.
   b. Place DVD 1 into the DVD-RW drive.
   c. From the Windows **Start** menu, select **Shut Down** > **Restart** > **OK**.

      The Color Controller C-81 restarts and then the **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

      Proceed to step 3 on page 18

2. If your Color Controller C-81 is off:
   a. Press the Power On/Off button on the front panel.
   b. As soon as power is applied, place DVD 1 into the DVD-RW drive.

      The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite
all existing data)
2)    Preservation installation
(overwrite system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

3. Press the number of the option that you want to perform:
   - To perform a complete installation, ,press `1`.
   - To perform a preservation installation, press `2`.
4. Press `y` (Yes) to confirm your selection.

   Note: Pressing `n` (No) returns you to the **Creo Color Server startup menu** menu.

   The system starts copying the files. The copying process takes about ten minutes.
5. When the process is complete, remove DVD 1 from the DVD-RW drive, and press `Enter` to restart
6. In the Computer Name and Administrator Password screen, type the name for the Color Controller C-81—for example, `C81_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.
7. Click **Next**.

   The system restarts and the Color Server Installation window appears.
8. When the License Agreement window opens, click **Yes** to continue the Color Controller C-81 installation.
9. When the installation is complete:
   a. Click **Finish** to restart the computer.
   b. Remove DVD 2 from the DVD-RW drive.

      When the application starts the following message appears.

c. Click **OK**.

Note: If the `Wrong Disk Configuration` message appears after you restart the computer, the disks need to be configured for RAID.

d. Continue with the *Configuration Wizard (First-time Software Setup)*.

See also:

Archiving jobs on page 16
Retrieving jobs on page 22
Configuration Wizard (first-time software setup) on page 29
Configuring security settings on page 37
Configuring McAfee VirusScan on page 49
Performing a test print and color image check on page 55
Backing up system partition C on page 62
Recreating a volume on page 133

6 .3 System partition backup and restore

Back up the Color Controller C-81 system partition so that you always have a working copy of your software to be able to restore your system, if necessary.

For best results, back up the system partition each time you update the Color Controller C-81 software, update the system cofiguration, perform a complete installation, or update the operating system.

There are two methods of system partition backups:

- Back up and restore system 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 system 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.

Notes:

- Jobs located in the queues and the **Storage** area are not backed up.
- 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.
- It is recommended that you delete unnecessary files, such as temporary files, and all jobs in the workspace before performing the backup procedure.

6 .3 .1 Backing up system partition C

If you are already logged onto your system and the Color Controller C-81 workspace is open, exit the workspace, insert DVD 1 into the DVD-RW drive, and proceed to step 3 on page 62.

1. Turn on your Color Controller C-81.
2. Place DVD 1 into the DVD-RW drive.
3. Restart the Color Controller C-81.

   The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

4. Press `3` to use the System backup and restore.

   The **System backup and restore** menu appears.

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

5. To back up system partition `C`, press `1`. This option backs up the files on partition `C` to an image file on partition `D`.
6. When the `Caution` message appears press `y` to proceed. The Norton Ghost window appears.

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

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

8. When the backup is complete, press Enter to return to the System backup and restore menu.

   Note: If an error message appears, press Enter to return to the System backup and restore menu to repeat the procedure.

6 .3 .2 Restoring system partition C

Important: For best results, always disconnect the network cable before installing software.

The Color Controller C-81 enables you to restore partition C or the entire system (partitions C and D). Restore the software on your Color Controller C-81 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-81 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**.

   The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

4. Press 3 to use the System backup and restore.

5. 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`.

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

6. Press `y` to continue.
   The Norton Ghost window appears and the image file on partition `D` is restored to partition `C`.
7. When the restore process is sucessfully completed, remove the DVD from the DVD-RW drive and press `Enter` to continue.
   The computer restarts automatically.

6 .3 .3 Backing up system partitions C and D

If you are already logged onto your system and the Color Controller C-81 workspace is open, exit the workspace, insert DVD 1 into the DVD-RW drive, and proceed to step 3 on page 62.

1. Turn on your Color Controller C-81.
2. Place DVD 1 into the DVD-RW drive.
3. Restart the Color Controller C-81.

   The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

4. Press `3` to use the system backup and restore.
5. To back up the entire system (partitions `C` and `D`), press `3`.
   This option backs up partitions `C` and `D` on to DVD media. You may need more than one DVD for the backup.
6. When the `Backup C and D partitions on DVD` message appears press `y`.

7. Place a DVD into the DVD-RW drive.
8. Press `Enter` to continue.
   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-81 restarts automatically.
9. When a confirmation message appears notifying you that the backup process was successfully completed, remove the DVD from the DVD-RW drive and press `Enter` to continue.

   The Color Controller C-81 restarts automatically.

6 .3 .4 Restoring system partitions C and D

Important: For best results, always disconnect the network cable before installing software.

The Color Controller C-81 enables you to restore partition `C` or the entire system (partitions `C` and `D`). Restore the software on your Color Controller C-81 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-81 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**.

   The **Creo Color Server startup menu** appears.

```
Creo Color Server startup menu
==============================

1)    Complete installation (overwrite all
existing data)
2)    Preservation installation (overwrite
system partition only)
3)    System backup and restore
4)    Firmware setup
5)    Exit

Select an option [1, 2, 3, 4 or 5]:
```

4. Press `3` to use the System backup and restore.

5. To restore partitions `C` and `D`, press `4`. This option restores partitions `C` and `D` from DVD media.

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

6. Press `y` to continue.
7. Place a DVD into the DVD-RW drive, and then press `Enter` to continue.
   Norton Ghost software copies the files on the DVD to partitions `C` and `D`.
8. When the restore process is successfully completed remove the DVD from the DVD-RW drive and press `Enter` to continue.
   The computer restarts automatically.

7 Diagnostics and troubleshooting

7 .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-81.

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 affected.

7 .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

BIOS

This program controls the basic input/output system (BIOS) code in your server. Use the 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-81. 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.

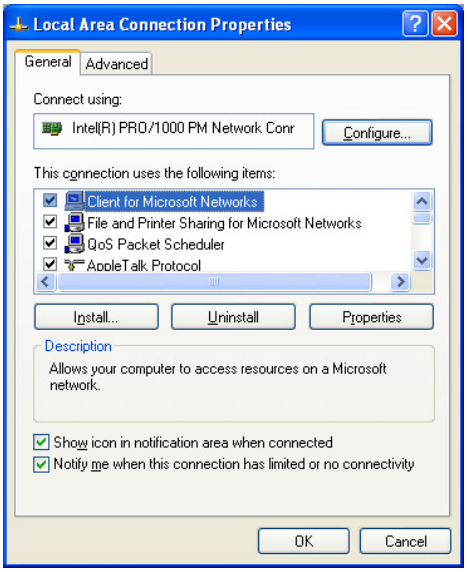
Verifying the LAN speed

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

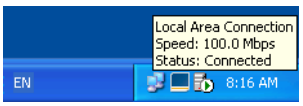
1. Right-click **My Network Places**, and select **Properties**.

   The Network Connection window appears.

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



3. Select the **Show icon in notification area 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:



7 .1 .2 Using the configuring tools

Using the BIOS setup utility

This section provides instructions for starting the BIOS Setup Utility. Do not alter any BIOS settings unless they are different from the recommendations in this section. Faulty BIOS settings could cause the system to fail or to operate incorrectly. If you encounter a problem with a hard disk, check the BIOS settings to ensure that the BIOS recognizes the hard disk.

Starting the BIOS setup utility

1. Quit the color server software.
2. Restart the Color Controller C-81 and immediately press Delete.

   The BIOS Setup Utility window appears.

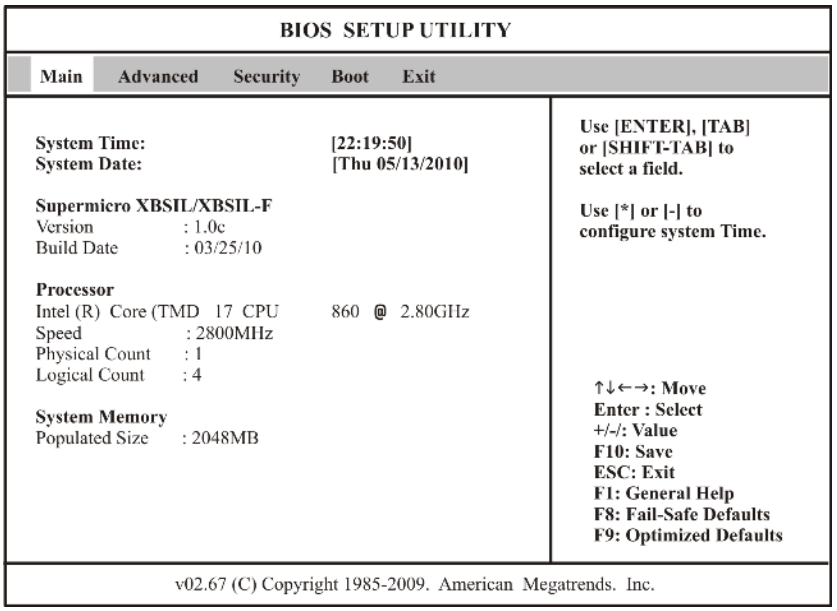


Figure 6: BIOS Setup Utility main window

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.

3. Verify that the BIOS settings on the Color Controller C-81 are as follows.

BIOS setup utility main menu

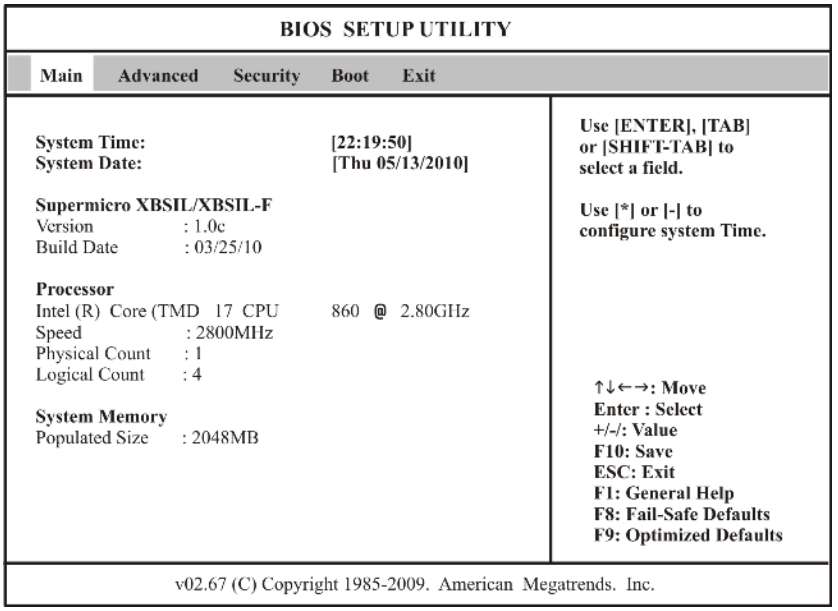


Figure 7: BIOS Setup Utility main menu

BIOS setup utility advanced settings

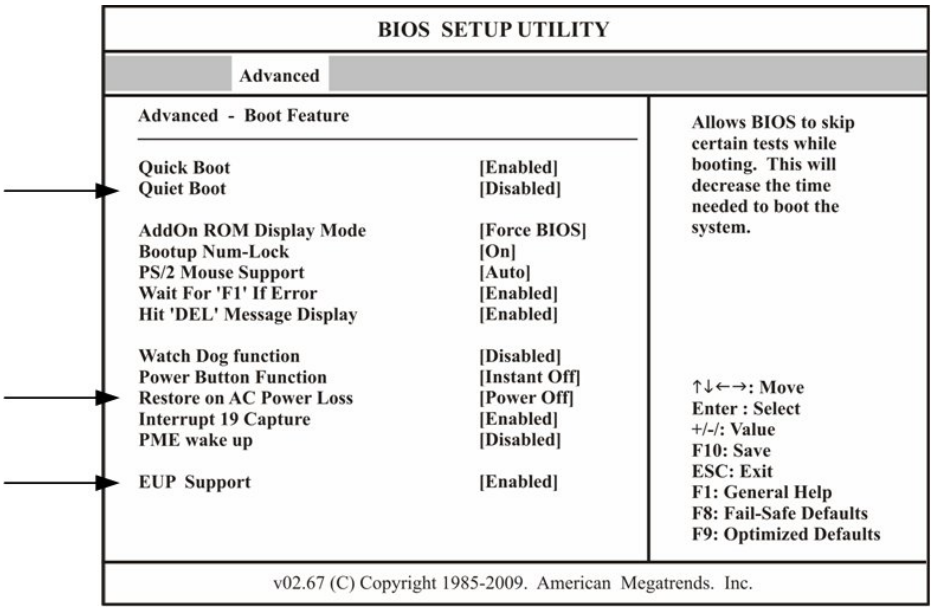


Figure 8: Boot Features menu

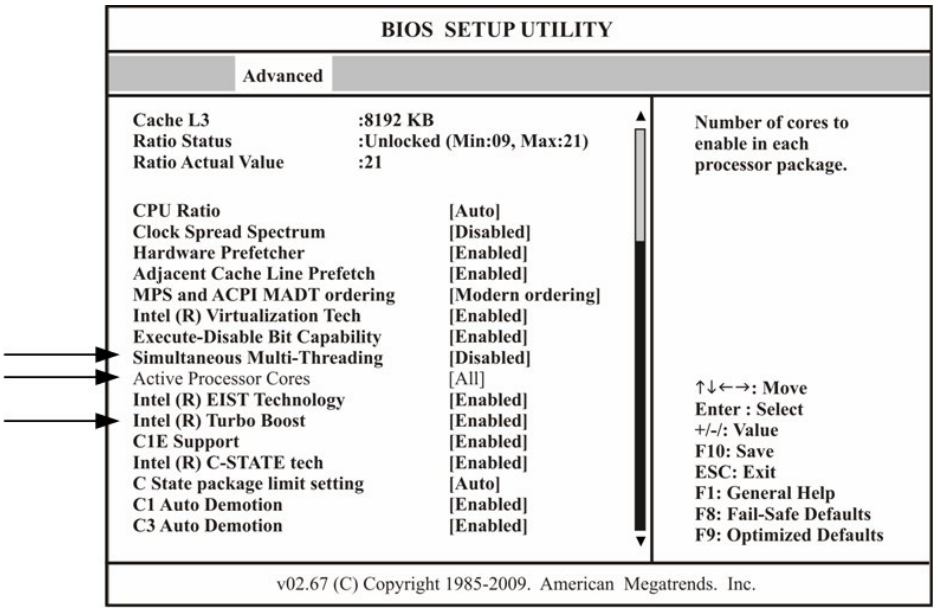


Figure 9: Processor and Clock Options menu

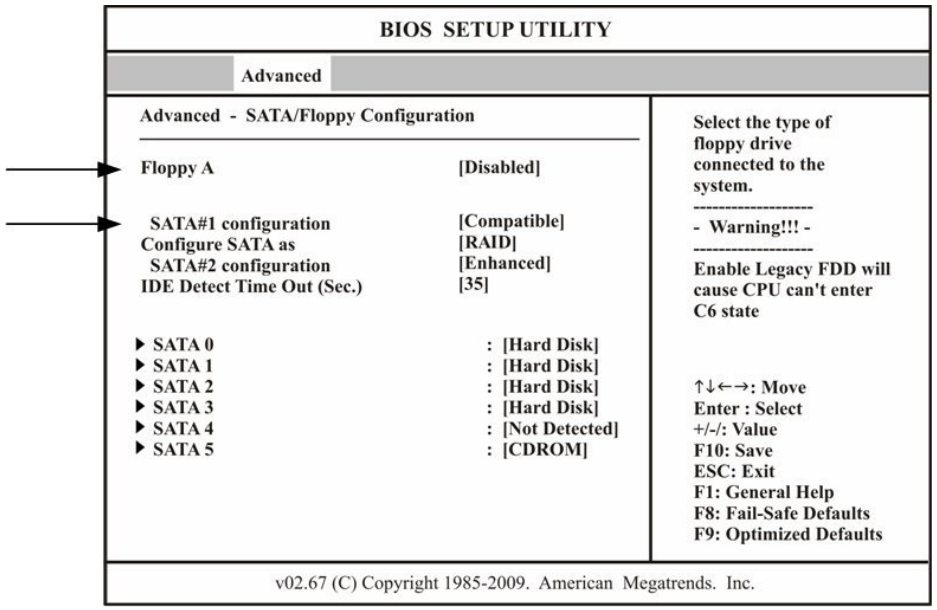


Figure 10: SATA/Floppy Configuration menu

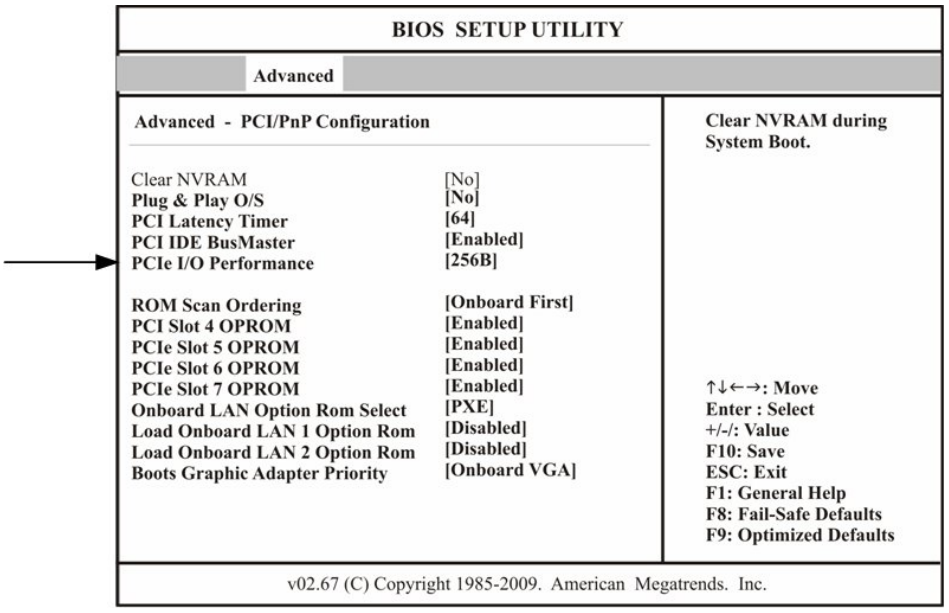


Figure 11: PCI/PnP Configuration menu

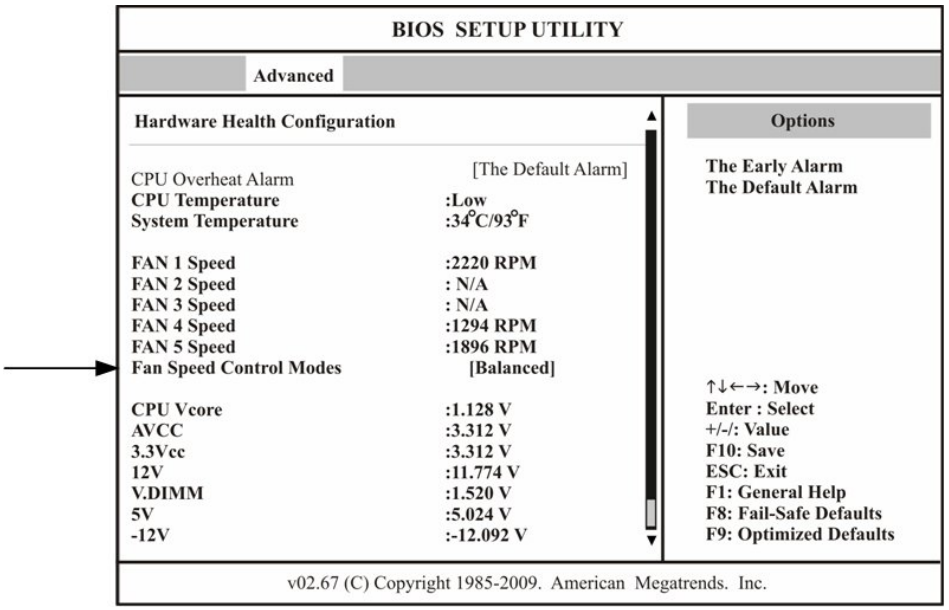


Figure 12: Hardware Health Configuration menu

BIOS setup utility boot menu

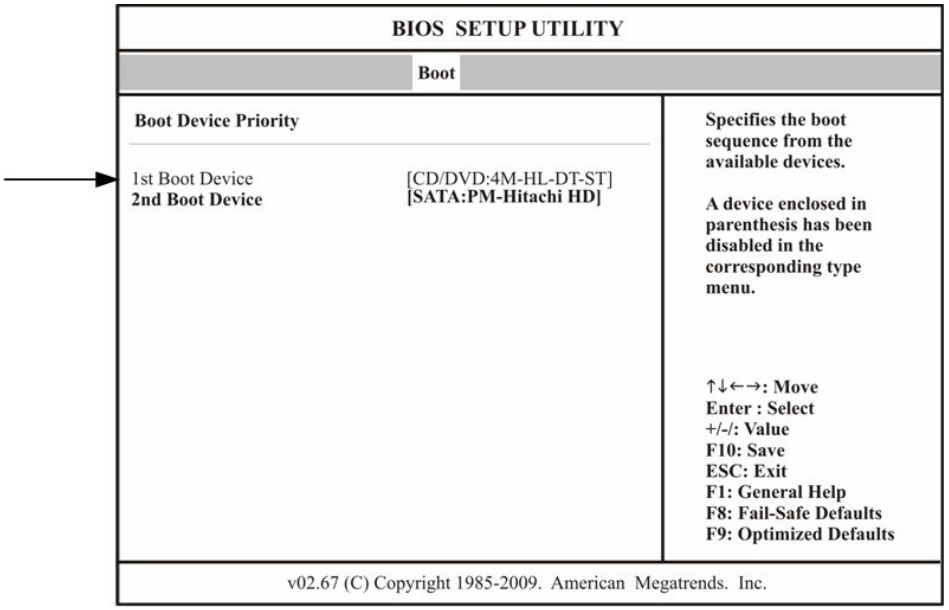


Figure 13: Boot Device Priority menu

BIOS setup utility exit menu

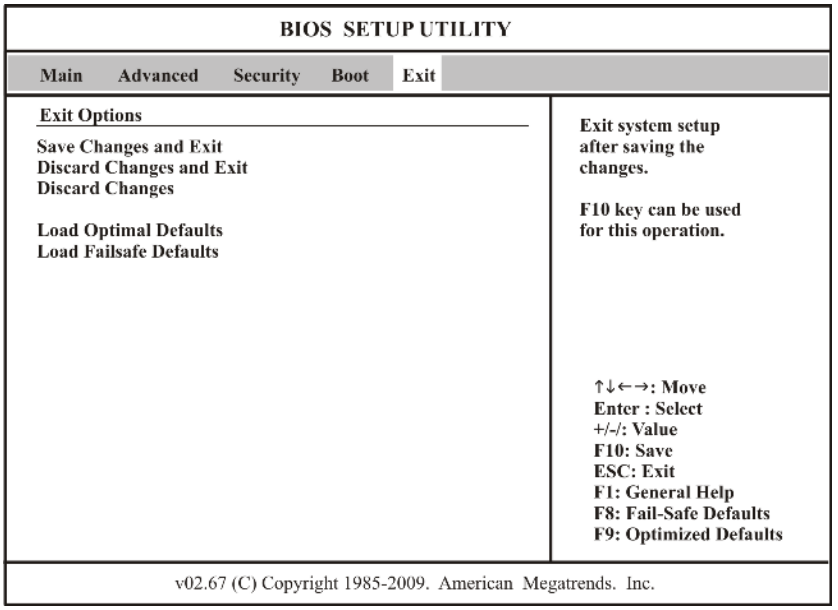


Figure 14: Exit Options menu

Configuring the order for hard disk drives

If you encounter a problem with the system or the BIOS, load the default BIOS settings and then configure the order of the hard disk drives .

1. Start the BIOS Setup Utility.

   The BIOS Setup Utility window appears.

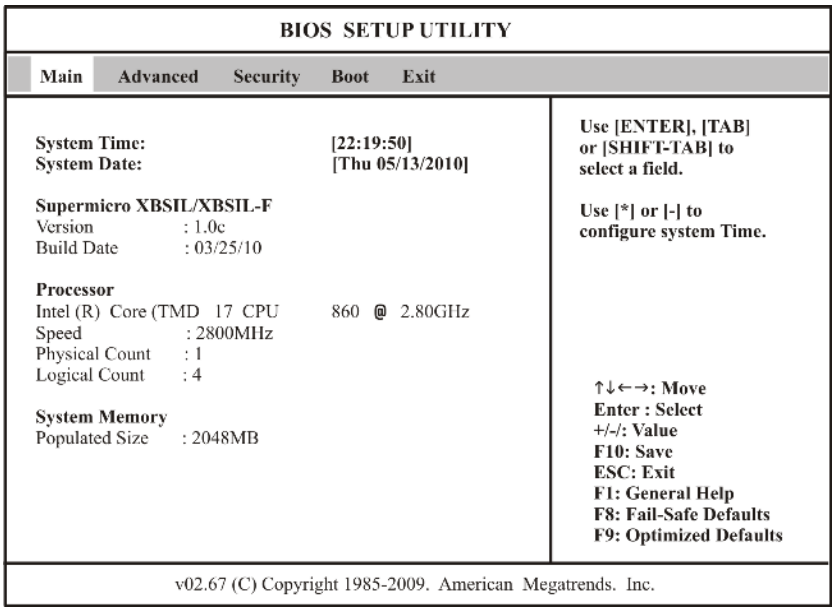


   Figure 15: BIOS Setup Utility main menu

2. If required, change the system date and time and press Enter to save any changes.

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

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

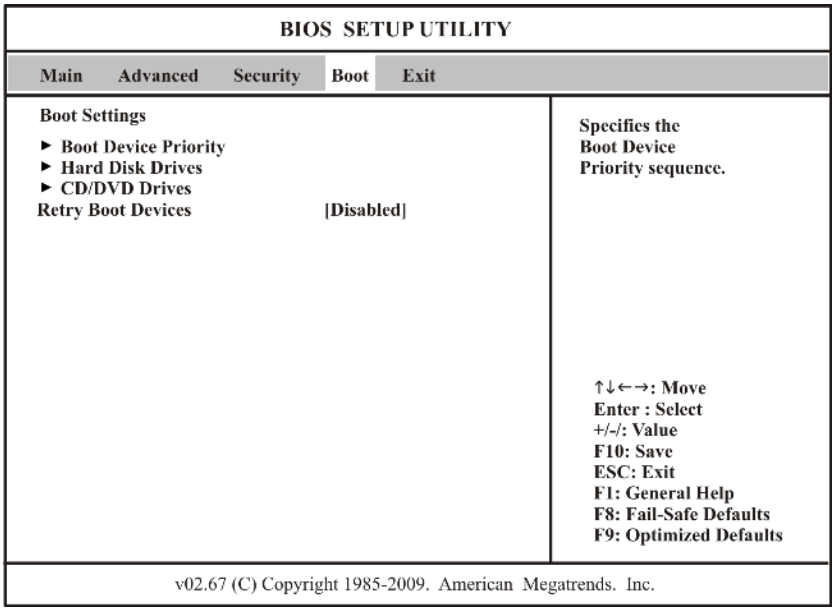


Figure 16: BIOS Setup Utility boot menu

4. Under **Boot Settings**, select **Hard Disk Drives**
5. Verify that the settings are the same as shown in the following window:

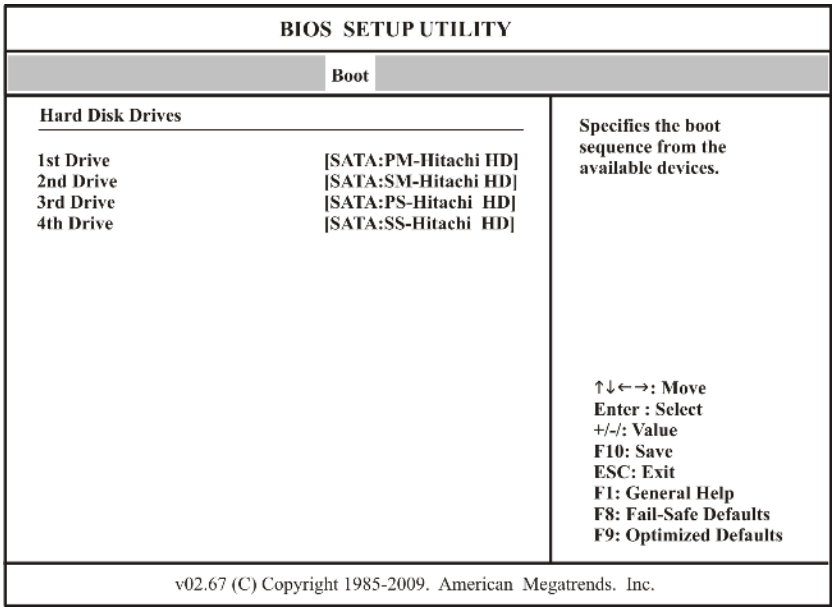


Figure 17: Hard Disk Drives menu

6. If the boot order is not the same as shown above, use the arrow keys to move the devices to the correct order
7. Select the **Exit** menu.
8. Using the arrow keys, select **Save Changes and Exit**.

9. Select **OK** to save the configuration and exit the setup.
10. Press any key to continue.

See also:
Starting the BIOS setup utility on page 70

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).

7 .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.

See also:
POST (Power On Self Test) on page 78

7 .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.

Recovery from AC power loss

BIOS provides a setting for you to determine how the system will respond when AC power is lost and then restored to the system. You can choose for the system to remain powered off (in which case you must press the power switch to turn it back on) or for it to automatically return to a power on state. The default setting is **Last State**.

Onboard voltage monitoring

The onboard voltage monitor will scan the following voltages continuously: CPU core, +3.3V, +5V, +/-12V, +3.3V Stdby, +5V Stdby, VBAT, HT, Memory, Chipset. Once a voltage becomes unstable, it will give a warning or send an error message to the screen. Users can

adjust the voltage thresholds to define the sensitivity of the voltage monitor by using SuperoDoctor III.

Fan status monitor with software

PC health monitoring can check the RPM status of the cooling fans via SuperoDoctor III.

CPU overheat LED and control

This feature is available when the user enables the CPU overheat warning feature in the BIOS. This allows the user to define an overheat temperature. When this temperature reaches this pre-defined overheat threshold, the CPU thermal trip feature will be activated and it will send a signal to the buzzer and, at the same time, the CPU speed will be decreased.

7 .2 .2 POST (Power On Self Test)

When you turn on the Color Controller C-81, it performs a series of tests to check the operation of its components and some of its installed options. This series of tests is called the power on self test or POST.

POST error beep codes are divided into two categories: recoverable and terminal.

This section lists beep codes for recoverable POST errors.

POST beep codes

Beep codes are sounded in a series of beeps.

- One continuous beep with the front panel Overheat LED on indicates that system is overheating
- One long beep and eight short beeps indicate that there is a video configuration error.
- A repetitive long beep indicates that no memory is detected.

7 .3 Color Controller C-81 hardware diagnostics software

The Color Controller C-81 diagnostics software is used for testing both proprietary Creo hardware (FusionRA) and standard off-the-shelf hardware.

There is JOIND (Sun Java Over the Internet Diagnostics)—an Color Controller C-81 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-81 products with user level support.

If you encounter any problems during installation or during normal operation of the Color Controller C-81, run the Color Controller C-81 diagnostics software to determine the cause.

The diagnostic software is located on the Color Controller C-81. 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-81 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.

7 .3 .1 Activating the diagnostics software

Note: Only run the Diagnostics utility after you exit the Color Controller C-81 software.Wait for the Color Controller C-81 software taskbar icon to disappear before continuing.

Quitting the Color Controller C-81 software

1. In the Color Controller C-81 workspace, click the **File** menu and select **Exit**.
2. When the message `Are you sure you want to exit the application?` appears, click **Yes.**
3. Right-click the Color Controller C-81 software icon in the Windows Quick Launch toolbar and select **ShutDown Color Server**.

Starting the diagnostics software

➢ From the Windows **Start** menu, select **Color Controller C-81** > **Color Controller C-81 Tools** > **Diagnostics**.

The diagnostics program initializes and the DFE User Diagnostics window appears on the screen.

See also:
The Diagnostics window on page 80

7 .3 .2 The Diagnostics window

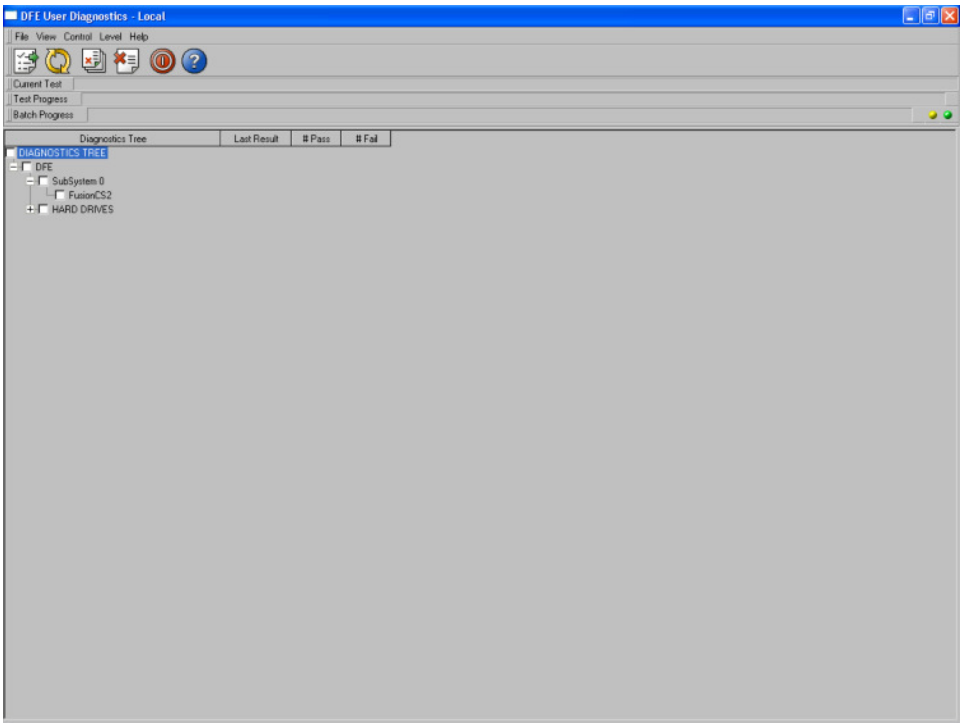


Figure 18: DFE User Diagnostics window

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.

7 .3 .3 Diagnostic software menu options

File menu

Load Quick Batch	Is a predefined representative set of components to be tested coupled with predefined tests to be run. Select **Load Quick Batch** to load this set of components to be tested. To execute the batch test, select **Load Quick Batch**. A confirmation message appears. Click **OK**, and then click the **Run** icon. This is not the default setting and should be used only when a quick testing set is needed, as its name implies.
Import Log File	Imports the current log file from the server to the client.
Exit	Exits the application. If the application has been remotely activated (Internet or modem), the server stays active and ready for a new connection.

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. The command opens the HTML browser for viewing this file.
Software Configuration	Displays the software version information of JOIND (client and server) and of the diagnostics DDLs in an HTML file and is displayed through the HTML browser.
Hardware Configuration	Displays hardware information that is recorded in an HTML file and is displayed through the HTML browser. Not applicable in this version.

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-81 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.
POS	Not applicable.
About JOIND	Displays the JOIND version number and date.

Toolbar buttons

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

	**Run**—initiates the command to perform a diagnostic test running in loop or executing batch of tests.
	**Stop**—terminates a test running in loop or executing batch of tests. This button appears only after the **Run** button was selected.
	**Wait**—appears after the **Stop** button is selected or until the current test is completed.
	**Loop Off**—terminates the test session after each test has been executed or until the first failure is detected. **Loop Off** is the default setting when executing diagnostic tests.

	**Loop On**—repeats the test session until the loop termination condition is reached.
	**Errors**—enables you to view all failed components through the HTML browser.
	**Quick Error**—enables you to view failed components for a specific test through the HTML browser.
	**Exit**—exits the diagnostics software. Remember to stop any tests that are running before exiting.
	**Help**—selects specific menu options or tree nodes when help is required.

Monitoring

The monitoring area is located below the toolbar 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.

7 .3 .4 Board diagnostics

This section describes the diagnostics for the Color Controller C-81 boards.

The board included in this category is the FusionRA board.

Use the JOIND diagnostic utility to test the Color Controller C-81 boards. If a board fails a test, first verify that it is properly connected (turn off the Color Controller C-81 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-81 software prior to running the diagnostics program.

FusionRA board

Testing input/output memory modules

Test the input and output memories on the FusionRA board.

Testing the FusionRA board

Test the internal electrical mechanism of the FusionRA board.

7 .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.
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.
3. Click the **Loop Off** button to run the tests in loop mode.
4. Click the **Run** button to activate the diagnostics testing. The system performs the tests and the results appear in the area of the diagnostics tree: **Pass** or **Fail.**
5. 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.

See also:
Activating the diagnostics software on page 79

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.	a. Verify that the FusionRA board is correctly seated. b. Verify that the memory tests listed below are passed. If one or both of these memory tests fails, replace the failed memory module and run the test again. c. If the FusionRA test fails again, replace the FusionRA board.
The Input Memory fails the test.	a. Verify that the FusionRA board is correctly seated. b. If the input memory fails again, replace the FusionRA board.
The Output Memory fails the test.	a. Verify that the FusionRA board is correctly seated. b. If the output memory fails again, replace the FusionRA board.
The FusionRA board (inclusive of all other related components) does not appear	a. Verify that the FusionRA board is correctly seated. b. Replace the FusionRA board.

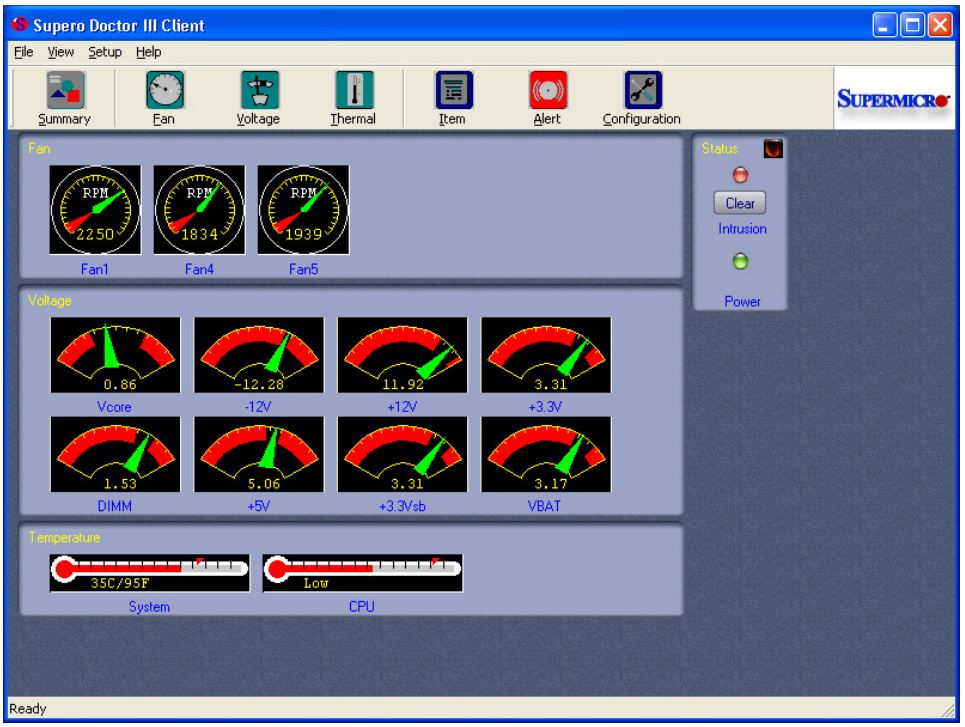
7 .4 Monitoring the system

The Color Controller C-81 includes Supero Doctor III server monitoring software that provides you with dynamic information about the health of your system. The health information page enables you to monitor the:

- System fans' rpm
- System voltage levels
- Temperatures of the processor and system chassis

To access the software:

➢ From the **Start** menu, select **Programs** > **SUPERMICRO** > **Supero Doctor III Client** > **Supero Doctor III Client**.



7 .5 Troubleshooting

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

- The Color Controller C-81 does not turn on.
- The Color Controller C-81 turns on, but the operating system does not initialize.
- The Color Controller C-81 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
- Remote client applications

7 .5 .1 Color Controller C-81 does not turn on

Symptom	Recovery Action
Color Controller C-81 does not turn on.	Verify that: • The power cables are properly connected to the Color Controller C-81. • 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 by gently pressing them down. Then: **a.** Turn the power on and off to test the system. **b.** The battery on your system board may be old. Verify that it still supplies ~3 volts DC; if not, replace the battery. **c.** If you just installed an option, remove it and restart the Color Controller C-81. If it turns on, you might have installed more options than the power supply supports. **d.** Review the general power checkout. **e.** If the problem remains, escalate the service call.

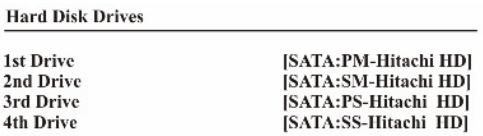
See also:

General power checkout on page 93

7 .5 .2 Color Controller C-81 turns on, operating system does not initialize

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

Replace the system disk.

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: **a.** Restart the server. **b.** Press `Delete` to enter the computer BIOS. **c.** Use the arrow keys to select the **Boot** menu. **d.** Under **Boot Settings**, select **Hard Disk Drives**. **e.** Verify the boot order is as follows:  **f.** Reload the operating system **g.** Replace the system disk.

7 .5 .3 Color Controller C-81 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.	**a.** Verify that the FusionRA board is correctly seated. **b.** Replace the input memory located on the FusionRA board. **c.** Replace the FusionRA board.
A disk is not functioning properly.	**a.** Check that the disk is correctly installed. **b.** Verify that each SATA2 cable is connected to the correct disk and system board connector. **c.** 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 FusionRA board and run tests on the board again.

See also:

System board internal cable connectors on page 114

7 .5 .4 Memory problems

Symptom	Recovery Action
The amount of memory displayed is less than the amount of memory installed.	Verify that: **a.** The memory modules are seated properly. **b.** You installed the correct type of ECC DDR3 memory. **c.** 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. **d.** Check for faulty DIMM modules or slots by swapping a single module between two slots and noting the result. **e.** Check that the 115/230 V power-supply switch is correctly set. **f.** If the memory tests fail, replace the failing DIMM or contact your service representative.

See also:

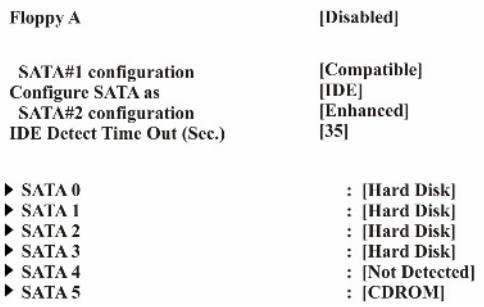
Installing a DIMM on page 113

7 .5 .5 Monitor problems

Symptom	Recovery Action
The Color Controller C-81 monitor is blank.	Verify that: **a.** The power cord is plugged into the Color Controller C-81 and a working electrical outlet. **b.** The monitor cables are connected properly, including the AC adapter. **c.** The monitor is turned on and the brightness and contrast controls are adjusted correctly. **d.** 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. **e.** 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. **f.** If the problem persists and the screen remains blank, contact your support person.

7 .5 .6 Common problems

Symptom	Recovery Action
During installing the operating system, you see a blue screen.	a. Restart the Color Controller C-81 b. If you just installed an option, remove it and restart the Color Controller C-81.
An image disk is not identified.	Check the following: • SATA2 cable and power cable. • The disk is mounted correctly in the disk bay. If the problem persists, replace the disk.
`Wrong disk configuration` message appears or files fail to RIP.	a. Open the Disk Management window. b. If the image disk volume is not displayed, the volume is corrupt and must be recreated. c. To create the image volume, choose **1. Create RAID Volume** and press `Enter`. d. Press `Enter` to choose the volume name. **Note:** It is recommended that you choose the default volume name. e. Press `Enter` to choose the default **RAID Level** (RAID0(Stripe). f. Press `Enter` to choose the **Strip Size** (128KB). g. Press `Enter` to choose the **Capacity** (931.5 GB). h. Press `Enter` to create the specified volume. A message appears warning you that all data on the selected disks will be lost. i. Type `y` to continue. The volume is created and added to the list of RAID volumes and the individual disks in the volume are indicated as being a member of that volume. j. Proceed to *Formatting image disks*.
The system disk cannot be identified.	Check that the power cable and the SATA2 cable are properly connected to the disk and the motherboard.

Symptom	Recovery Action
The DVD-RW drive is not identified.	• Restart the Color Controller C-81 and press `Del` to enter the BIOS Setup Utility. a. Use the arrow keys to select the **Advanced** menu. b. Under **Advanced Settings**, select **SATA/ Floppy configuration** and verify the following settings:  Floppy A [Disabled] SATA#1 configuration [Compatible] Configure SATA as [IDE] SATA#2 configuration [Enhanced] IDE Detect Time Out (Sec.) [35] SATA 0 : [Hard Disk] SATA 1 : [Hard Disk] SATA 2 : [Hard Disk] SATA 3 : [Hard Disk] SATA 4 : [Not Detected] SATA 5 : [CDROM] • If the problem persists, check that the SATA cable and the power cable are firmly situated in the Color Controller C-81. • 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.

See also:

Color Controller C-81 turns on, operating system does not initialize on page 87
Formatting image disks on page 96
Removing a hard disk drive on page 131
Installing a hard disk drive on page 132

7 .5 .7 Color Controller C-81 to data cable and ethernet printer cable faults

The Color Controller C-81 is connected to your printer with two open I/F cables and one crossover ethernet cable. These cables carry the following data and configuration details between the server and printer:

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

Symptom	Recovery Action	Further Action (if printing fails)
General	**a.** Shut down your printer and the Color Controller C-81. **b.** Check that the Ethernet printer cable is securely connected to the Color Controller C-81 port. **c.** Start the server. **d.** Wait until the Color Controller C-81 splash screen disappears. **e.** 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.	**a.** Check if the Print Queue is in **Enable** mode. **b.** Check if there is no alert message that indicates that a different paper size or type is required. **c.** Check that there is no error message on your printer's user interface. **d.** Shut down your printer. **e.** Replace the Ethernet printer cable. **f.** Start your printer. **g.** Send a print job.	
No communi-cation after following the correct startup procedure.	**a.** Restart both your printer and the Color Controller C-81 according to the startup procedure. **b.** Send a print job.	
Job printed with one color overlay, or printed output results appear with scratches (white lines) in one of the CMYK color combinations.	**a.** Shut down both the Color Controller C-81 and your printer. **b.** Check that the Ethernet printer cable is connected to the Color Controller C-81 port. **c.** Start the server and wait until the Color Controller C-81 splash screen disappears. **d.** Start your printer. **e.** Send a print job.	If printing fails with color overlay: • Replace the Ethernet printer cable. • If the procedure does not solve the problem, it could be a FusionRA board problem.

See also:

Connecting and turning on the Color Controller C-81 on page 25

7 .5 .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 Color Controller C-81 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 Color Controller C-81 is at the minimum configuration required for operation.
4. Reconnect the AC power cord and turn on the Color Controller C-81. If the Color Controller C-81 starts successfully, replace adapters and devices one at a time until the problem is isolated. If the Color Controller C-81 does not turn on from the minimum configuration, replace the FRUs of the minimum configuration one at a time until the problem is isolated.

7 .5 .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 200 mm (8 inches) of ventilated space at the sides of the Color Controller C-81 and 200 mm (8 inches) of space around the front and rear of the server.
- The cover is removed for no longer than 30 minutes while the Color Controller C-81 is operating.
- The fans are operating correctly and the air flow is good.
- A failed fan is replaced within 48 hours.

7 .5 .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.`	• Restart the Color Controller C-81 from the **Start** menu. • If the error message reappears, run the diagnostics test.
`.System error. Reinstall the Color Controller C-81 application`	Reinstall the Color Controller C-81 software, and restart the system.

Hardware error messages

Message	Recovery Action
`FusionRA load failure. Reboot the system.`	• Check that the FusionRA board is seated correctly and restart the Color Controller C-81 • Run the diagnostics test. • 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.

Message	Recovery Action
`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.

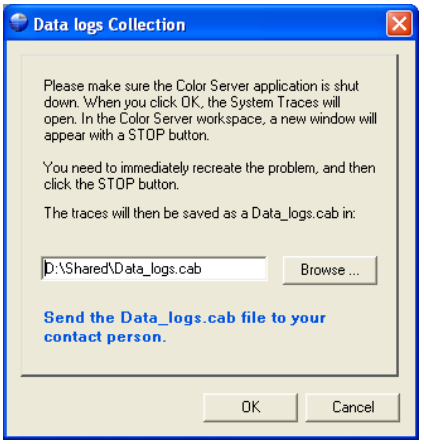
Connection error messages

Message	Recovery Action
`Ethernet connection failure`	• Check the cable connections. • Restart the client workstation computer and the Color Controller C-81 • Check the communication parameters in the client workstation computer and the Color Controller C-81.

7 .5 .11 Collecting data log files

Troubleshoot a problem in the system by collecting log files from the Color Controller C-81 software and sending the log files to a service representative.

1. Shut down the Color Controller C-81 software.
2. From the Windows **Start** menu, select **Color Controller C-81** > **Color Controller C-81 Tools** > **Data Logs Collection.**



3. The `.cab` file is automatically saved in a default location in drive **D**. If you want to save the `.cab` file to another location, click **Browse**, select the new location, click **Save**, and then **OK**.
4. Restart the Color Controller C-81 software.

5. Recreate the problem you encountered, and then click **STOP**.

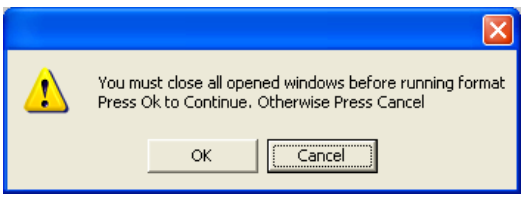
   The Color Controller C-81 software closes automatically and the log files are saved in the defined location.
6. Send the `Data_logs.cab` file to your service representative.

7 .5 .12 Formatting image disks

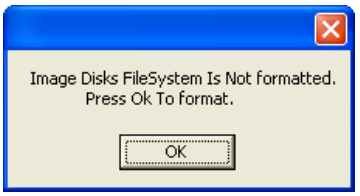
Perform the following procedure when suggested as a recovery action.

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 the Color Controller C-81 software, and wait until the server icon on the taskbar disappears.
2. From the Windows **Start** menu, select **Color Controller C-81** > **Color Controller C-81 Tools** > **Format Image Disks**.

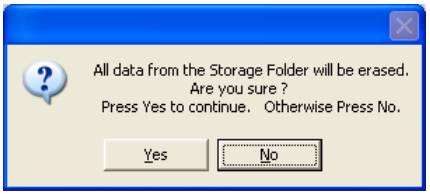


3. Close all open windows, if required, and click **OK**.

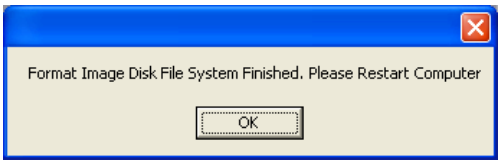


Note: When performing the formatting procedure, all disks are formatted including the Creo File System.

4. Click **OK**.



5. Click **Yes**.



6. Click **OK**.
7. To enable the changes to take effect, restart your Color Controller C-81.

7 .5 .13 Remote client applications

Problems with remote client applications should be reported to the manufacturer. When reporting such issues, you should include the released version details of the problematic remote client application. You can find details of the released version of the remote client application as follows:

Remote client application	Where to find the released version details
Print driver software (DEX)	• Windows: ◦ In the `Config.xml` file located in the following path: `%appdata%\Color_Server_Client_Tools\PrinterDriver\C81CREO\Configuration`, find the released version details in the `"ReleasedVersion"` group: `<GROUP NAME="ReleasedVersion"> <PARAM NAME="version" IT="STR">C-81 v1.1</PARAM> </GROUP>` • Mac ◦ Right-click `<InstallationDisk>\Library\Printers\Creo_Color_Server_Tools\JA\C81CREO.app` and select **Get Info**. You will find the released version details in the version field.

Remote client application	Where to find the released version details
Creo Color Server JT (JTC)	• Windows: ◦ In the `AppInfo.xml` file located in the following path: `%programfiles%\Color_Server_Client_Tools\Creo_Color_Server_JT\V1_0`, find the released version details in the `"ReleasedVersion"` group: `<GROUP NAME="ReleasedVersion"> <PARAM NAME="version" IT="STR">C-81 v1.1</PARAM> </GROUP>` • Mac ◦ Right-click `<InstallationDisk>\Applications\Creo_Color_Server_Tools\Creo_JT\V1\JTCreator.app` and select **Get Info**. You will find the released version details in the version field.
Remote Workspace (RWSP)	• Windows: ◦ In the `AdditionalInfo.xml` file located in the following path: `%allusersprofile%\Color_Server_Client_Tools\Remote_Workspace\Program_Files\C81CREO_V1_0`, find the released version details in the `"ReleasedVersion"` group: `<GROUP NAME="ReleasedVersion"> <PARAM NAME="version" IT="STR">C-81 v1.1</PARAM> </GROUP>`
Remote Site Manager (RSM)	• Windows: ◦ In the `AdditionalInfo.xml` file located in the following path: `%programfiles%\Color_Server_Client_Tools\Remote_Site_Manager\V1_0`, find the released version details in the `"ReleasedVersion"` group: `<GROUP NAME="ReleasedVersion"> <PARAM NAME="version" IT="STR">C-81 v1.1</PARAM> </GROUP>`

Remote client application	Where to find the released version details
Office Hot Folders (OHF)	• Windows: ◦ In the `AppInfo.xml` file located in the following path: `%programfiles%\Color_Server_Client_Tools\Office_HF\V1.00`, find the released version details in the "`ReleasedVersion`" group: `<GROUP NAME="ReleasedVersion"> <PARAM NAME="version" IT="STR">C-81 v1.1</PARAM> </GROUP>`

8 Hardware and maintenance repairs

8 .1 System components

The following diagram shows ths system components for the Color Controller C-81.

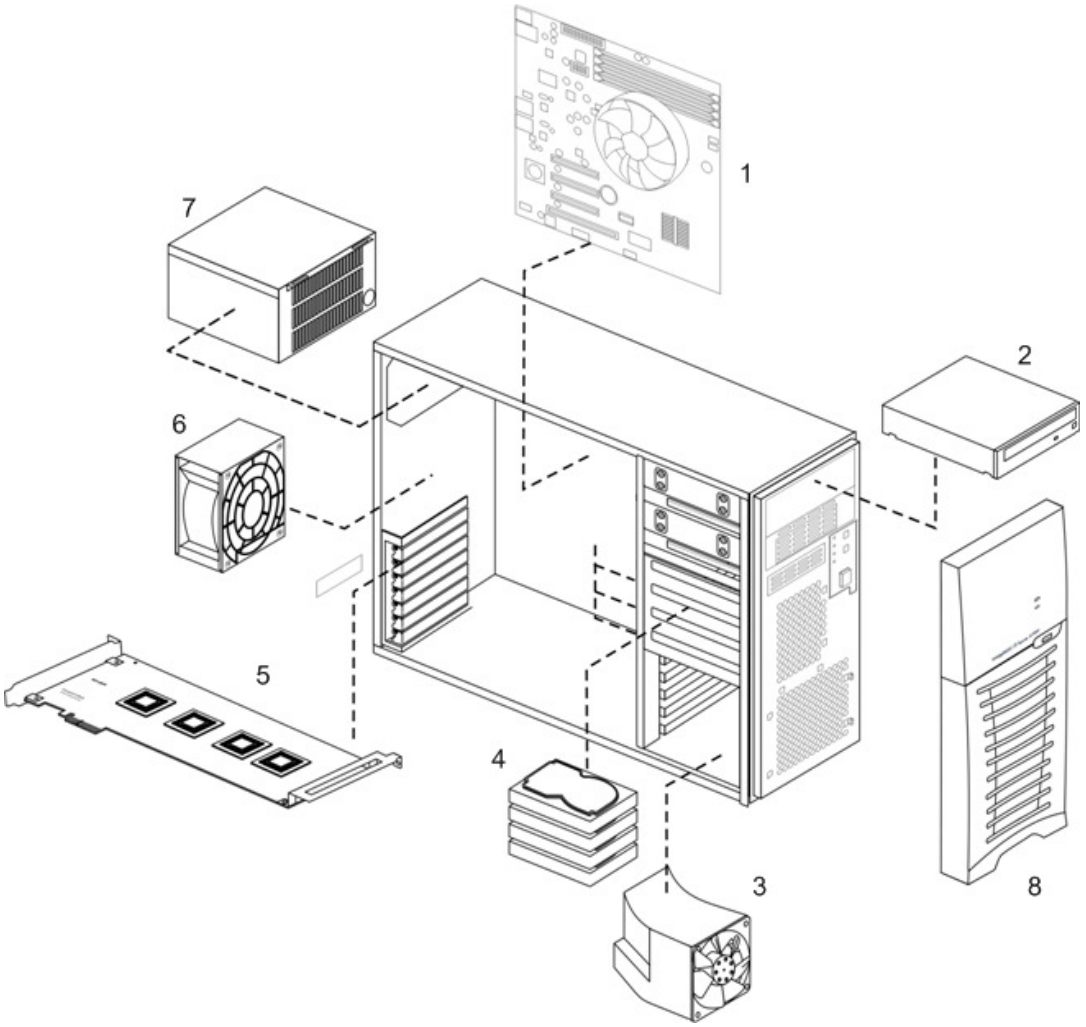


Figure 19: Color Controller C-81 system components

System component	Description
1	System board

System component	Description
2	DVD-RW drive
3	Front fan
4	Hard disk
5	FusionRA board
6	Rear fan
7	Power supply
8	Front panel

8 .2 Before you begin

Before you begin to replace parts:

- Familiarize yourself with the safety and handling guidelines specified at the beginning of this book. These guidelines will ensure your safety while working with the Color Controller C-81 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 both a cross-head and a small flat-blade screwdriver available.

WARNING: Before performing any hardware maintenance or repair, turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.

See also:

Safety precautions on page 3

8 .2 .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-81 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.

8 .2 .2 Hardware connections

The following diagram shows the hardware connections for the Color Controller C-81.

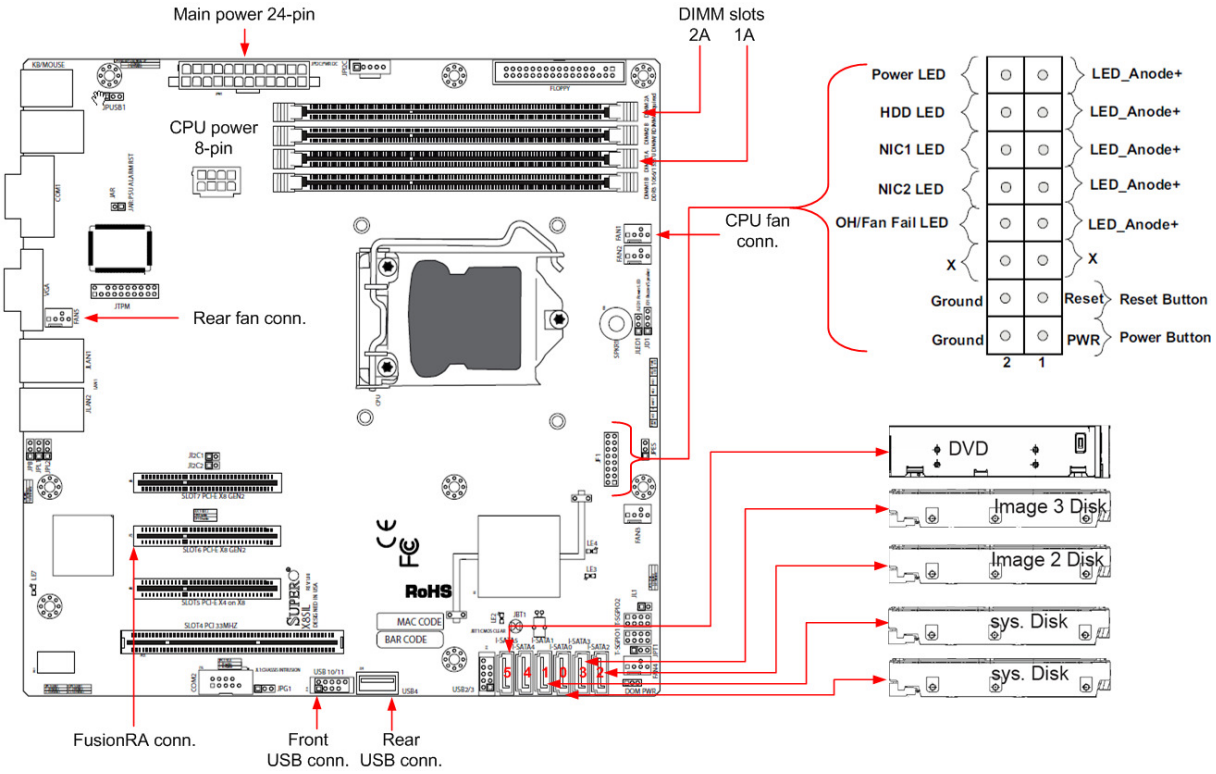


Figure 20: Hardware connections for Color Controller C-81

8 .3 Removing and replacing the side cover and front panel

This section describes the procedures used to remove and replace the Color Controller C-81 cover and front panel.

Tip: When installing options in the Color Controller C-81, you may find it easier to place the server on its side.

8 .3 .1 Removing the side cover

1. Turn off the Color Controller C-81 and all peripheral devices.
2. Disconnect all external cables and power cords.
3. If necessary, unlock the side cover.
4. Remove the two screws that secure the side cover to the rear of the server.
5. Using the side cover handle, release the side cover by sliding it toward the rear of the server.
6. Move the side cover outward and away from the server.

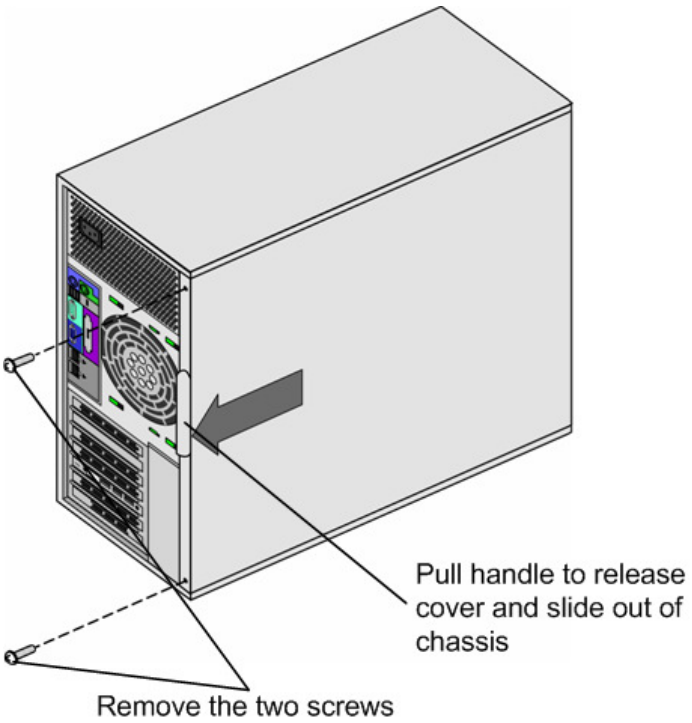


Figure 21: Removing the side cover

8 .3 .2 Returning 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, return 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.

8 .3 .3 Removing the front panel

1. Review the *System Reliability Considerations.*
2. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover.

   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 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.

5. Using a flat screwdriver, gently pry the four concealed tabs along the edge of the front panel away from the chassis.

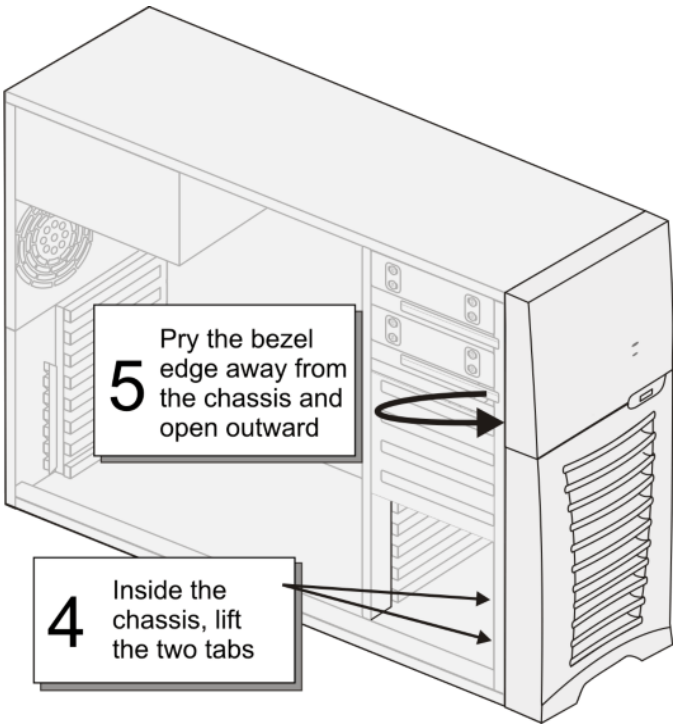


Figure 22: Removing the front panel

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.

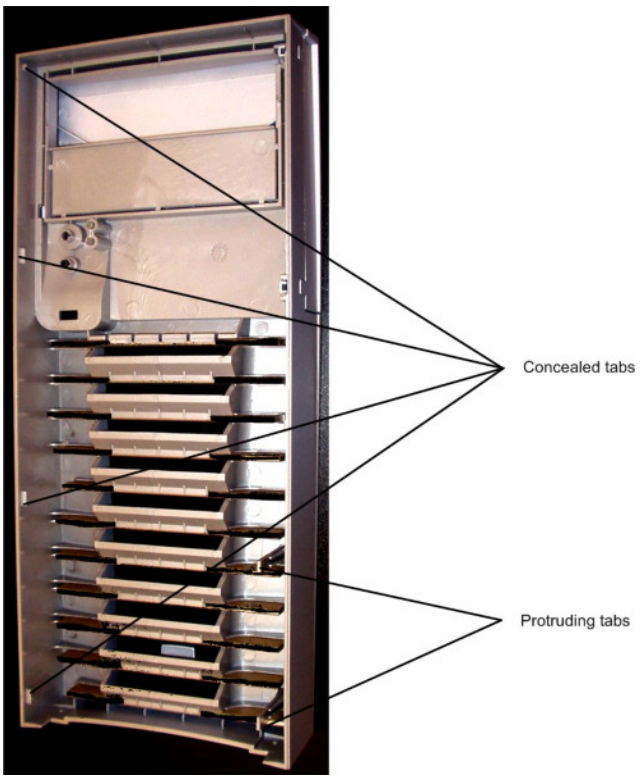


Figure 23: Front panel removed showing protruding and concealed tabs

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

See also:

System reliability considerations on page 102
Removing and replacing the side cover and front panel on page 103

8 .3 .4 Returning the front panel

1. With the Color Controller C-81 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.
3. Return the side cover.

4. Reconnect all external cables and power cords, and turn on the server.

See also:

Returning the side cover on page 104
Removing the front panel on page 105

8 .4 Working with boards (adapters)

If the diagnostics check indicates that any unit components need replacing, follow the replacement procedures.

The following diagram illustrates schematically the external connectivity of the peripherals and the internal connectivity of the main components of the Color Controller C-81

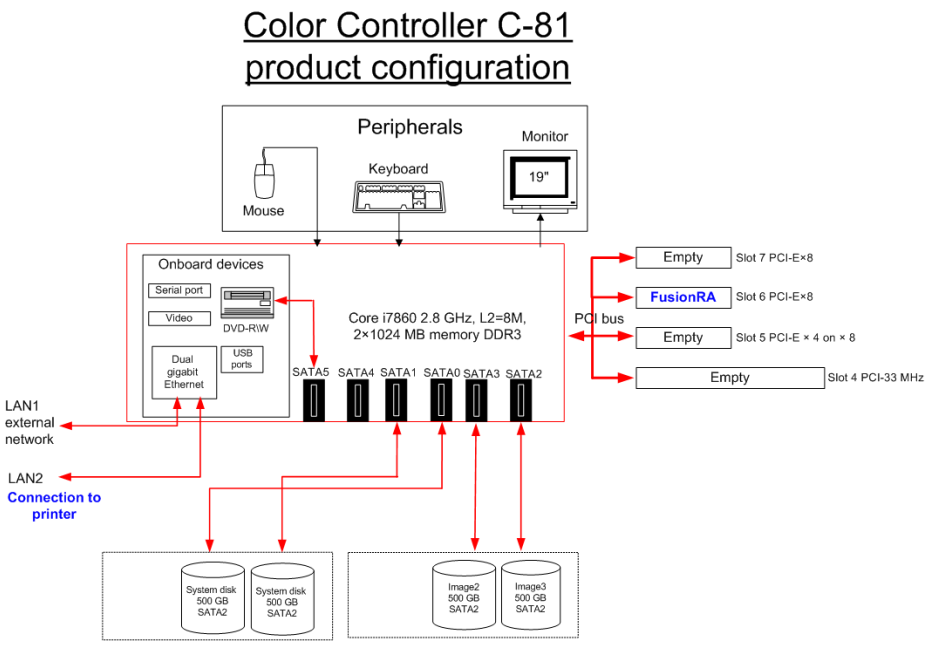


Figure 24: Peripherals and internal connectivity

See also:

Troubleshooting on page 85

8 .4 .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.

See also:

Safety precautions on page 3

8 .4 .2 Removing and installing 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.

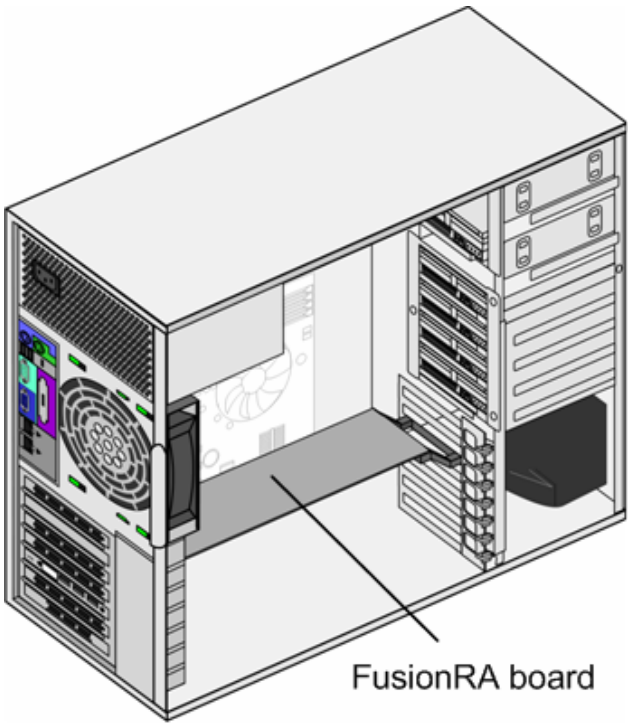


Figure 25: FusionRA board inside chassis

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 power socket.

1. Before you remove the FusionRA board, review the safety precautions.
2. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover.
4. Gently slide the right side of the board out from its slot and from the white clip.

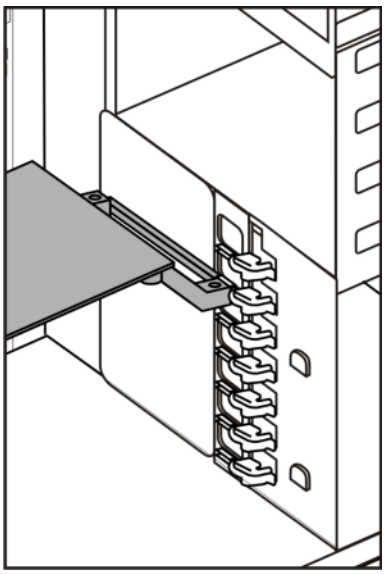


Figure 26: Right side of FusionRA board in slot

5. Using a cross-head screwdriver, remove the hexagonal screw that holds the board at the left of the server.

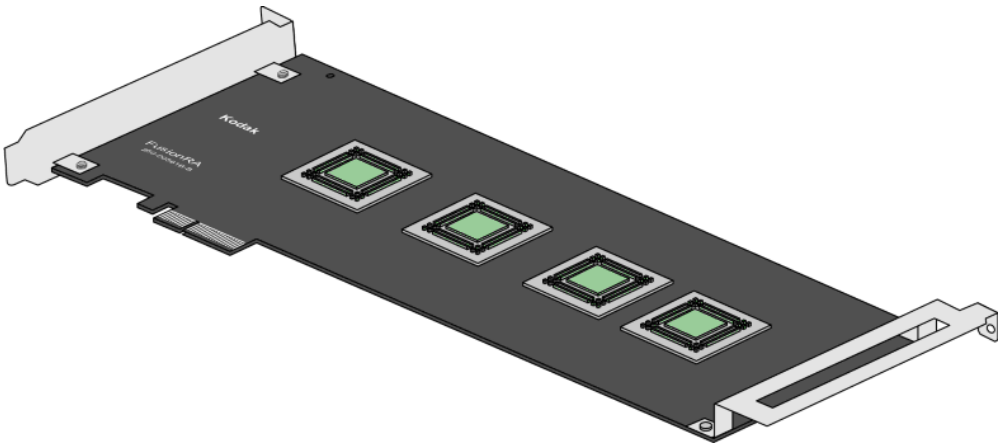


Figure 27: FusionRA board

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103

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 server and tighten it.
5. Return the side cover.

6. Reconnect all external cables and power cords, and turn on the server.

See also:

Returning the side cover on page 104

8 .4 .3 Removing and installing system board memory modules

The Color Controller C-81 comes with Dual In-line Memory Modules (DIMMs) that are installed on the system board in DIMM bank #1A (blue) and DIMM bank #2A (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.

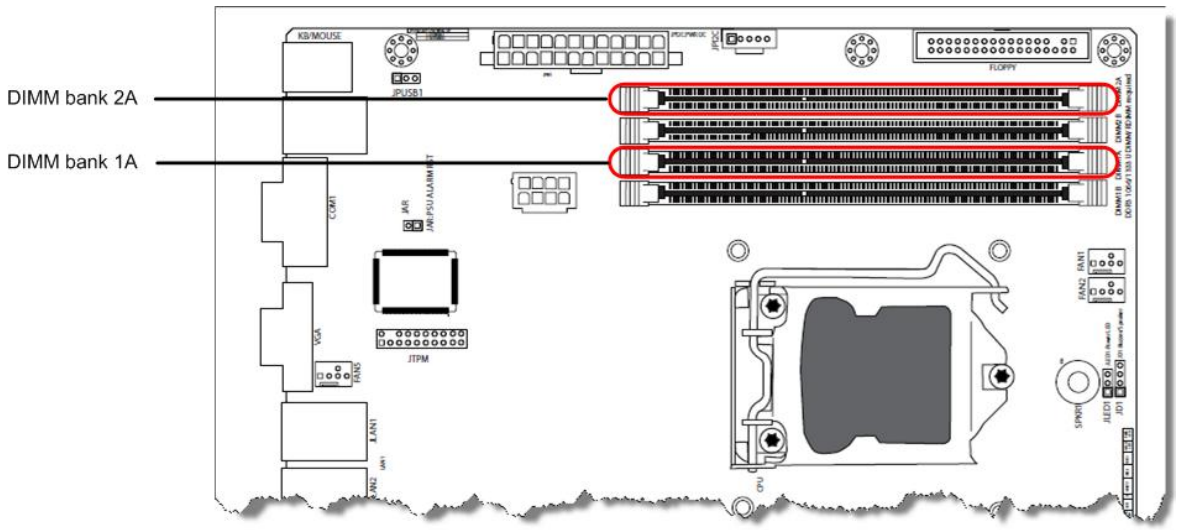


Figure 28: DIMM module locations

Preparing to remove a DIMM

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

1. Before you start to remove a DIMM, review the safety precautions.
2. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover.
4. Verify which DIMM you want to remove.

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103
Installing a DIMM on page 113

Removing a DIMM

1. Press down on the two DIMM release tabs so that they rotate outward, until the memory is released from its slot

Attention: Handle the clips gently to avoid breaking the retaining clips or damaging the DIMM connectors.

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 connector retaining clips are open.
3. Orient the memory so that the pins align correctly with the connector.

4. Insert the DIMM into the connector and, by pressing on the edges of the DIMM, one at a time, allow it to click into place in the slot . Ensure that you press the DIMM vertically into the slot

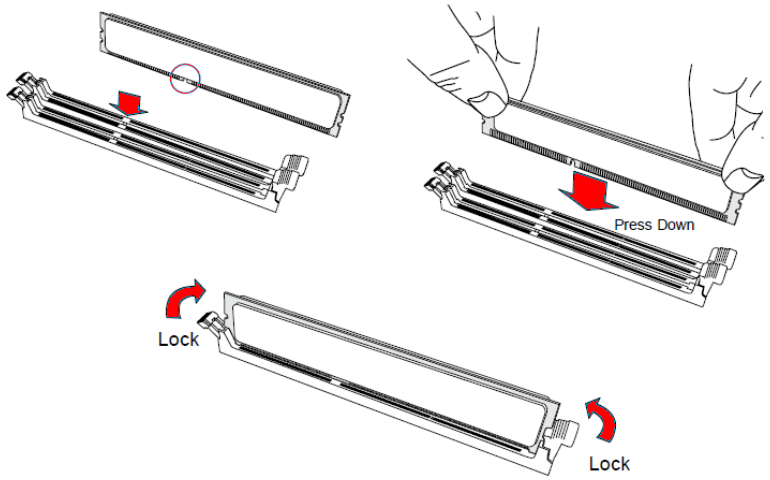


Figure 29: Installing a DIMM

5. Verify that the retaining clips are in the closed position. If a gap exists between the DIMM and the retaining clips, the DIMM has not been properly installed. In this case, open the retaining clips, remove the DIMM, and repeat the previous step.
6. If you have other options to remove or replace, do so now.
7. Return the side cover.
8. Reconnect all external cables and power cords, and turn on the server.

See also:

Returning the side cover on page 104

8 .5 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 side on a table.

8 .5 .1 System board internal cable connectors

The following illustration identifies system board connectors for internal cables.

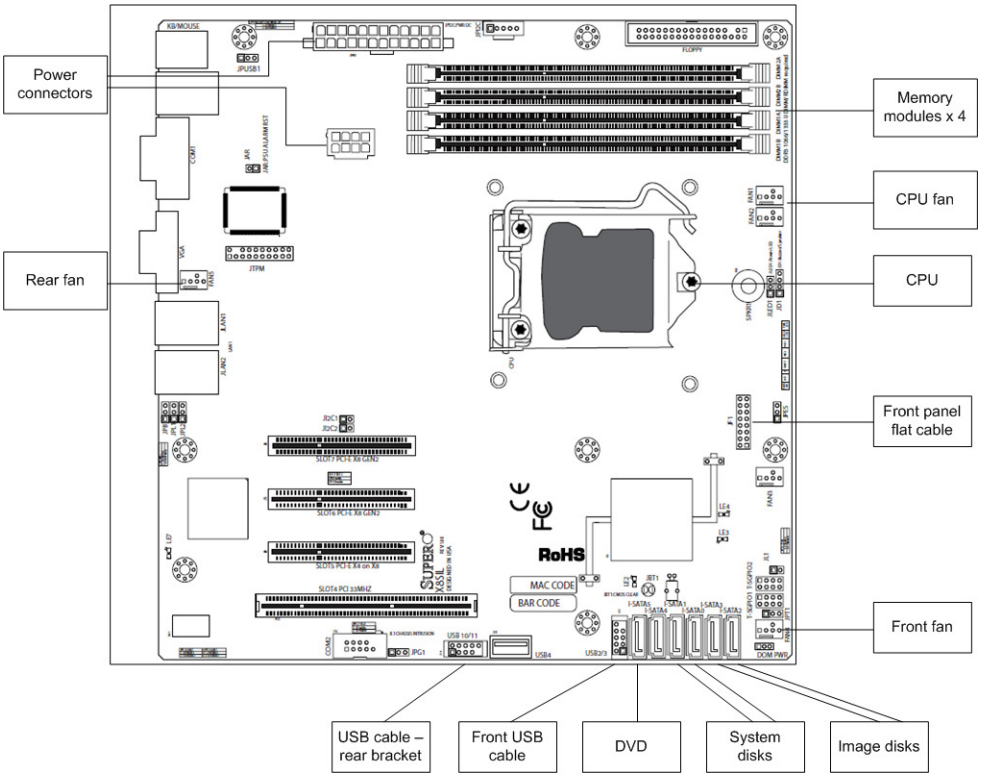


Figure 30: System board internal cable connectors

8 .5 .2 System board external-port connectors

The following illustration identifies system board connectors for external devices.

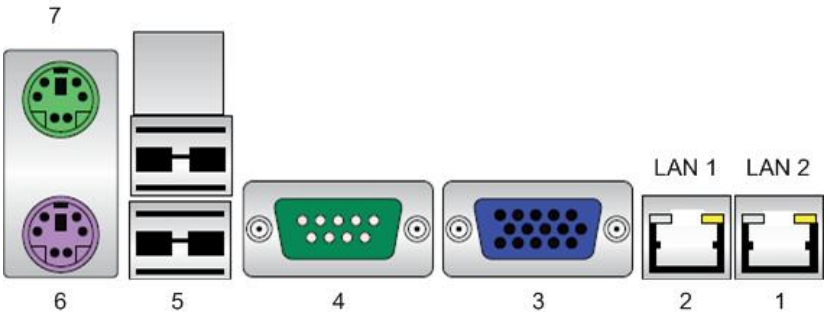


Figure 31: System board external port connectors

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

8 .5 .3 Removing the system board

1. Before you remove the system board, review the safety precautions.
2. Turn off the Color Controller C-81 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the side cover.

   Note: It is recommended that you place the server on its side before continuing this service procedure.
4. Remove the FusionRA board.
5. Disconnect all the cables connected to the system board, power supply, fans, USB cables, and hard disks.
6. Remove the CPU.
7. Remove the eight system board screws.
8. Lift the system board up and out of the server.
9. Turn over the system board and remove the metal bracket from the board. Set aside the bracket to install on the new system board.

See also:

Safety precautions on page 3
Removing the side cover on page 103
Removing and installing the FusionRA board on page 109
Removing and installing the central processing unit (CPU) on page 119

8 .5 .4 Installing a new system board

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

1. Before installing a new system board, review the safety precautions.
2. Verify that the Color Controller C-81 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.

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

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

   Note: The Color Controller C-81 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.
5. Perform the following actions to attach the metal bracket to the system board:
   a. Place the metal bracket face down on the work table and use a knife to cut the adhesive tape on all four corners.

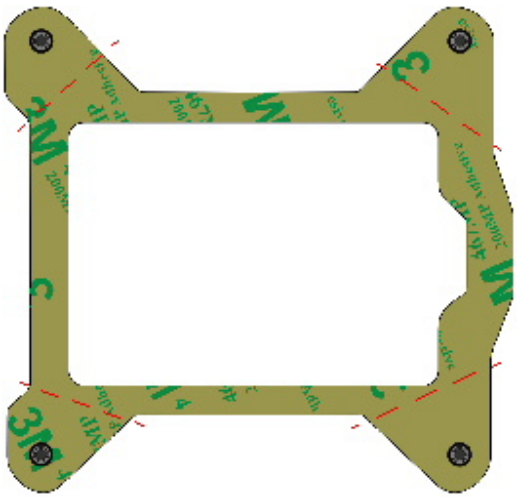


Figure 32: Cutting adhesive tape on metal bracket

   b. Remove the adhesive tape from the four corners.

c. Turn the metal bracket over and align it with the holes on the system board.
d. Gently press the bracket into place.

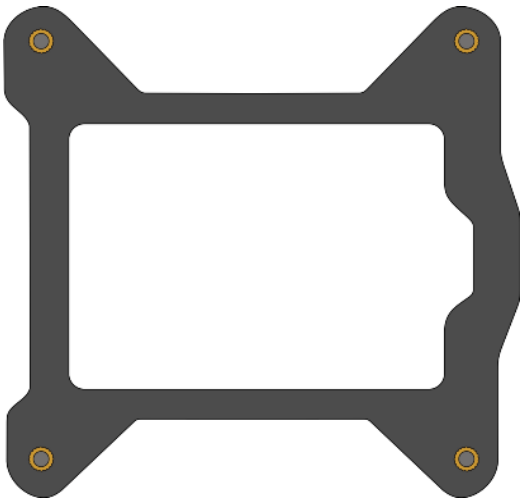


Figure 33: Metal bracket

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. Return the CPU.
7. Connect the CPU fan cable to the CPU Fan 1 connector.
8. Insert the system board into the chassis.
9. Align the system board with the matching hole in each standoff insulator in the chassis.
10. Insert the eight screws into the holes. Do not tighten the screws until all the screws are inserted.
11. Return the rear fan.
12. Return the memory modules.
13. Return the FusionRA board.
14. 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, refer to the following table.

Table 1: System board cable connections

Cable	System Board Connector
Power Supply	JPW1, JPW2
USB	USB 2/3 USB 10/11

Cable	System Board Connector
Serial ATA	SATA 0 (system disk) SATA 1 (image disk 1) SATA 2 (image disk 2) SATA 3 (image disk 3) SATA 4 (empty) SATA 5 (DVD/RW)
Security	JL1
CPU Fan	CPU Fan 1
Rear Fan	Fan 5
Front Fan	Fan 4

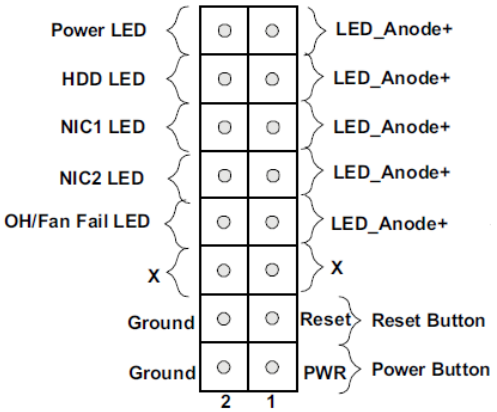


Figure 34: Front panel connectors

15. Return the side cover.
16. Reconnect all external cables and power cords, and turn on the server.

See also:

Safety precautions on page 3
Removing the side cover on page 103
Removing and replacing the side cover and front panel on page 103
Installing the FusionRA board on page 111
Installing a DIMM on page 113
System board internal cable connectors on page 114
Removing and installing the central processing unit (CPU) on page 119
Installing the rear fan on page 141

8 .5 .5 Removing and installing 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

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

1. Before you remove the CPU, review the safety precautions.
2. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover.
4. Remove the FusionRA board.
5. Remove the rear fan.

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103
Removing the FusionRA board on page 110
Removing the rear fan on page 140

Removing the CPU fan and heat sink assembly

1. Locate the CPU on the system board.

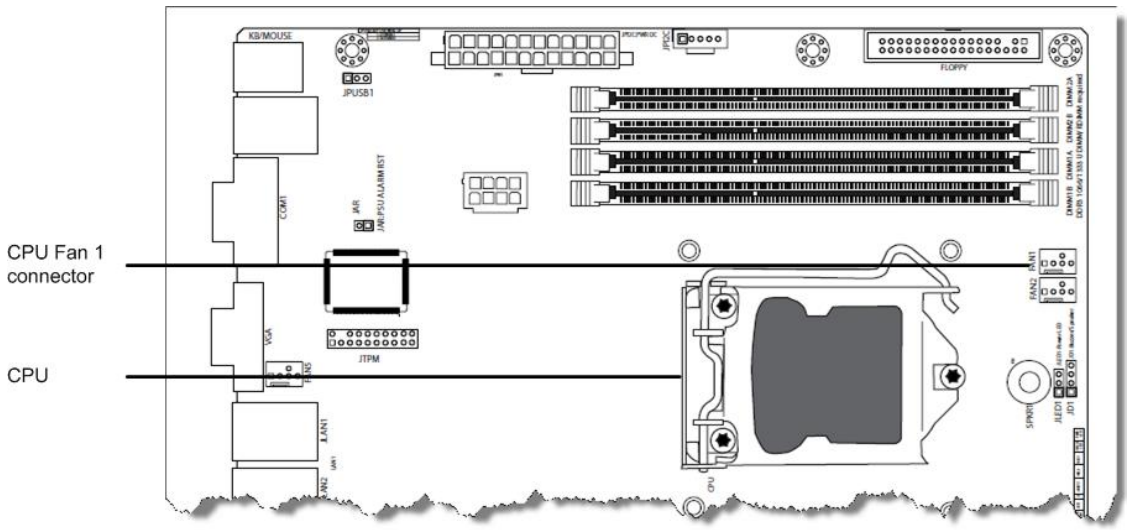
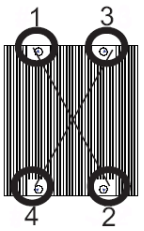


Figure 35: CPU system board location

2. Locate and disconnect the CPU fan cable from the CPU Fan1 connector.

3. 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.



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

Removing the microprocessor

1. Unlock the microprocessor socket.
   a. Press the load lever to release the load plate that covers the CPU socket, from its locking position.

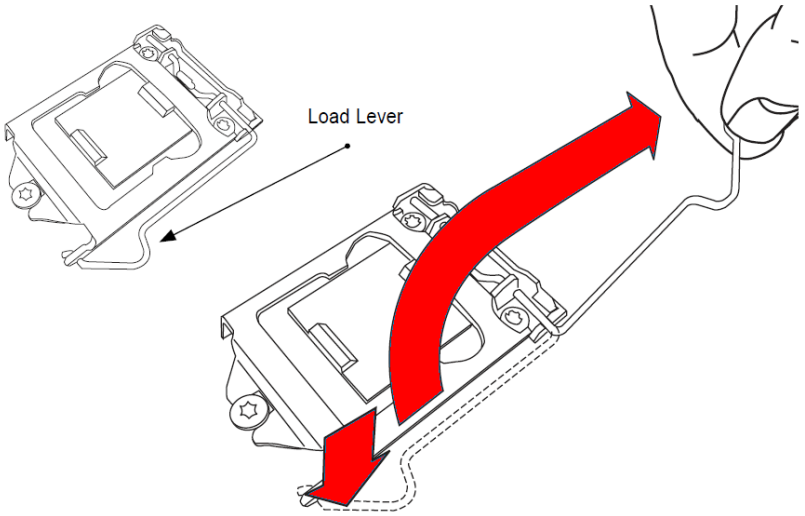


Figure 36: Unlocking the microprocessor socket

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

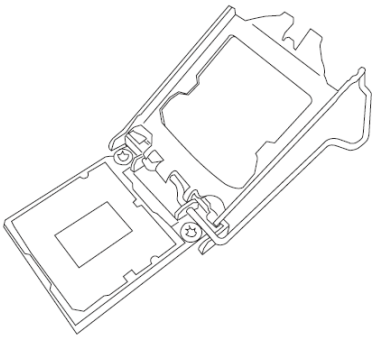


Figure 37: Opening the load plate

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.

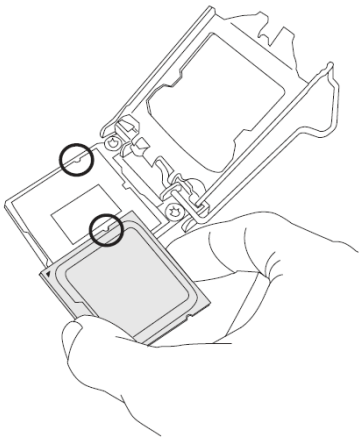


Figure 38: Removing the microprocessor

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 load lever to release the load plate that covers the CPU socket, from its locking position.

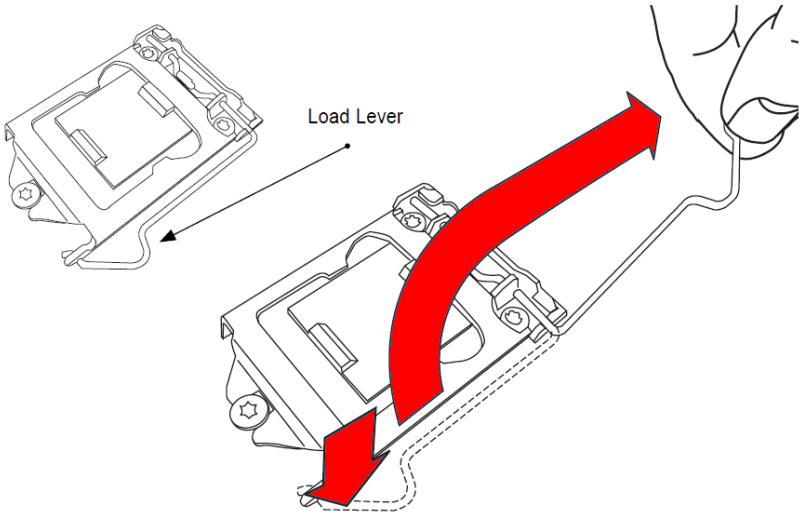


Figure 39: Microprocessor socket lever

b. Gently lift the load lever to open the load plate. Remove the plastic cap.

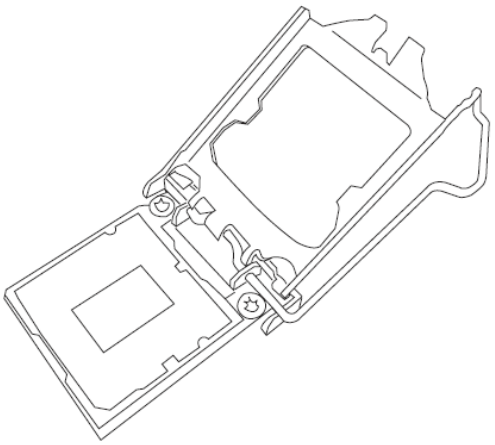


Figure 40: Opening the load plate

c. Use your thumb and your index finger to hold the CPU at the top center edge and the bottom center edge of the CPU.

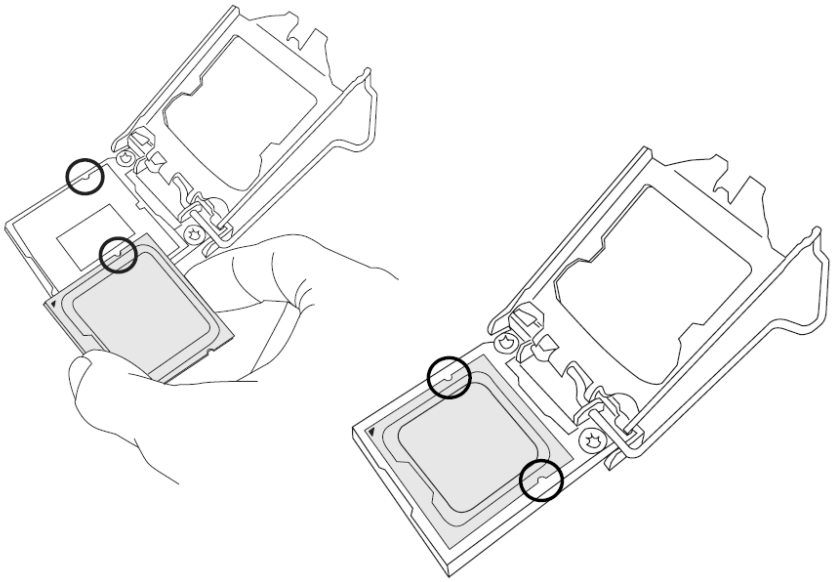


Figure 41: Inserting CPU

3. Align the CPU key that is the semi-circle cutouts against the socket keys. Once aligned, carefully lower the CPU straight down to the socket.

CAUTION: Do not drop the CPU on the socket. Do not move the CPU horizontally or vertically. Do not rub the CPU against the surface or against any pins of the socket to avoid damage to the CPU or the socket.

With the CPU inside the socket, inspect the four corners of the CPU to make sure that the CPU is properly installed.

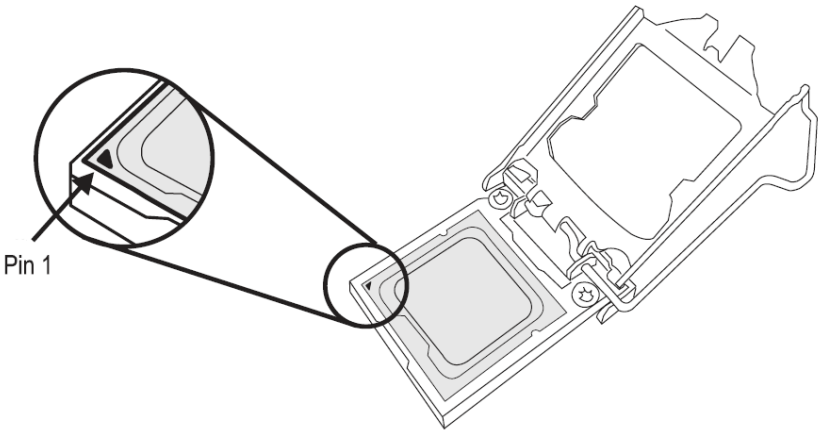


Figure 42: Locating pin 1 on the microprocessor socket

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

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

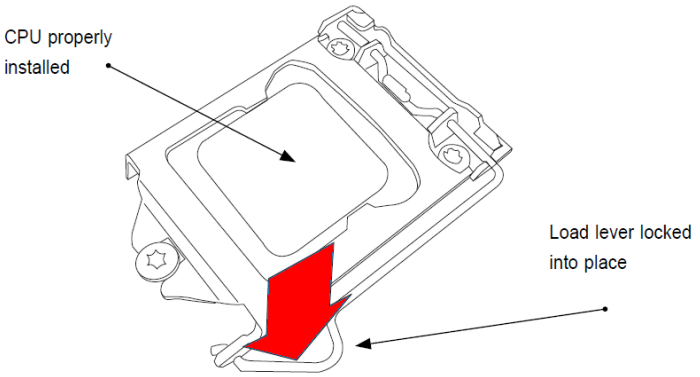


Figure 43: Locking the microprocessor

WARNING: The CPU will only seat inside the socket in one direction. Make sure it is properly inserted before closing the load plate. If the load plate does not close properly, do not force it as it may damage your CPU. Instead, open the load plate again and double-check that the CPU is aligned properly.

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. You can apply the grease with the metal frame open or closed.

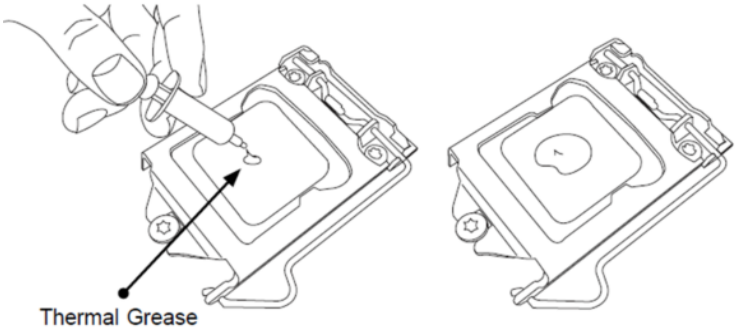


Figure 44: Applying thermal grease

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.

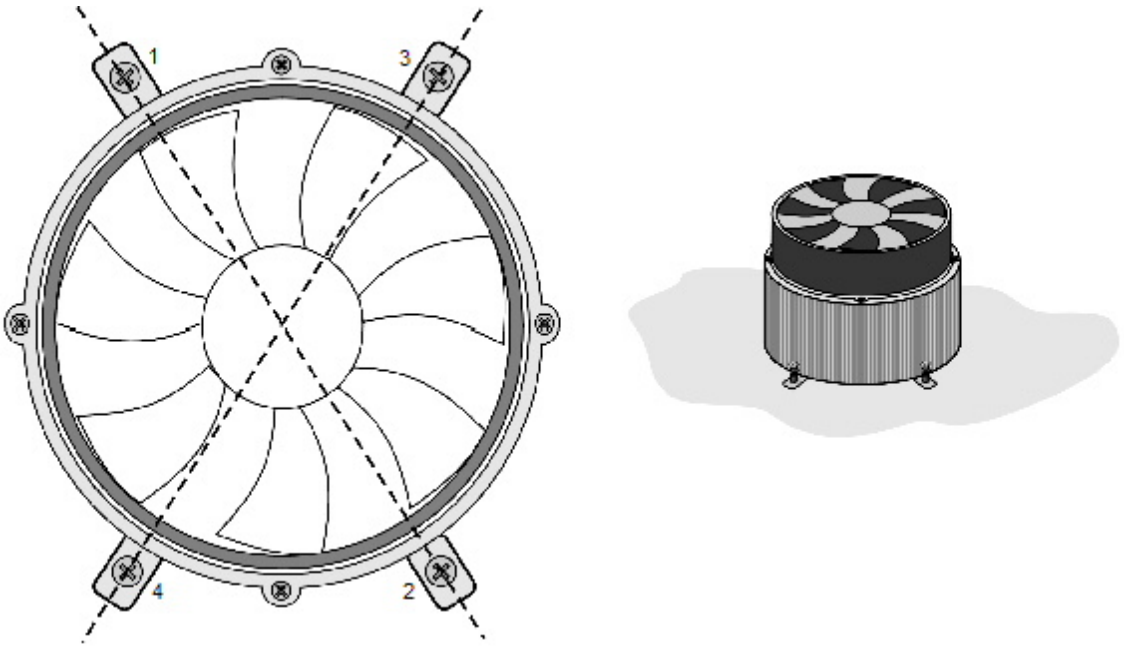


Figure 45: Securing the CPU fan and heat sink assembly

5. Connect the CPU fan cable to the CPU Fan 1 connector.
6. If you have other options to install or remove, do so now.
7. Return the FusionRA board.
8. Return the rear fan.
9. Return the side cover.

10. Reconnect all external cables and power cords, and turn on the server.

See also:

Returning the side cover on page 104
Installing the FusionRA board on page 111
Removing the CPU fan and heat sink assembly on page 120
Installing the rear fan on page 141

8 .5 .6 Removing and installing 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.

Note: After you replace the battery, reconfigure the Color Controller C-81 and reset the system date and time.

Removing the battery

1. Follow any special handling and installation instructions supplied with the replacement battery.
2. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
3. Remove the side cover.
4. Remove the FusionRA board to gain access to the battery.
5. Locate the onboard battery.

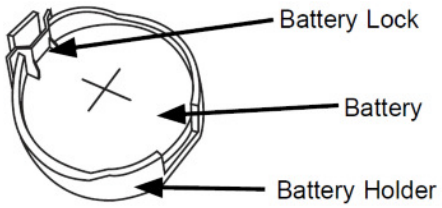


Figure 46: Removing the battery

6. Using a tool such as a pen or a small screwdriver, push the battery lock outwards to unlock it.

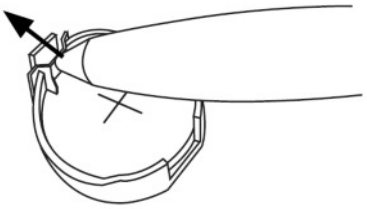


Figure 47: Unlocking battery

Once unlocked, the battery will pop out from the holder.

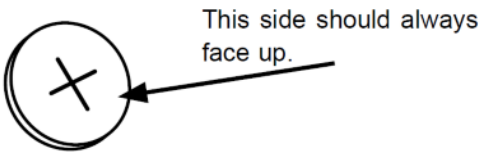
7. Use your thumb and index finger to lift the battery from the socket.

See also:

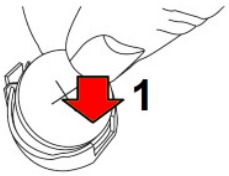
System reliability considerations on page 102
Removing and replacing the side cover and front panel on page 103

Installing the battery

1. Identify the battery's polarity. The positive (+) side should be facing up.



2. Tilt the battery so that you can insert it into the socket on the side opposite the battery clip.



3. Insert the battery into the battery holder and push it down until you hear a click to ensure that the battery is securely locked.

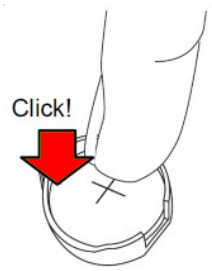


Figure 48: Inserting the new battery

4. Return any adapters that you removed.
5. Return the side cover.
6. 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 properly by performing the procedures in the BIOS setup topic.

See also:

Using the configuring tools on page 69
Configuring the order for hard disk drives on page 75
Returning the side cover on page 104

8 .6 Removing and installing the DVD-RW drive

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

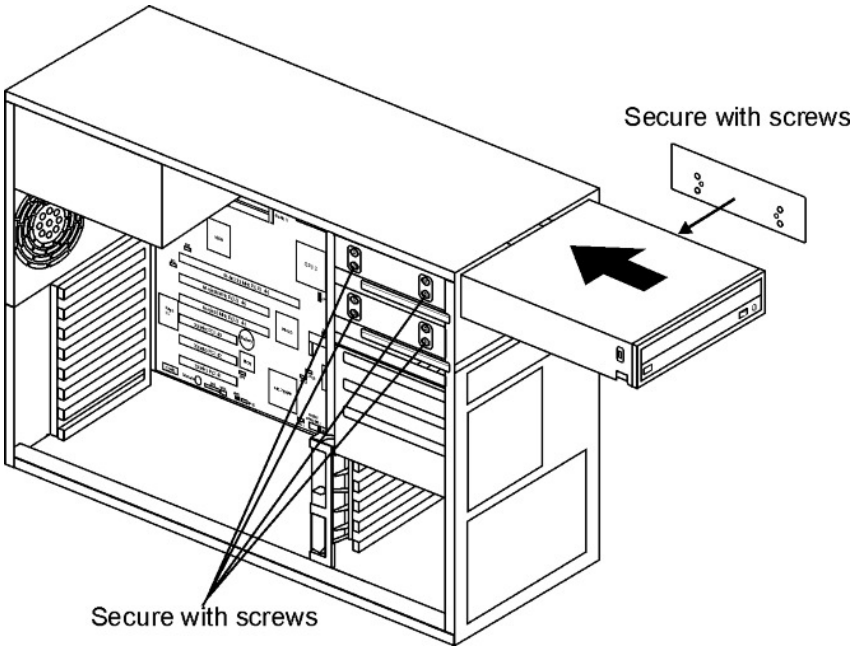


Figure 49: Bay1 DVD-RW drive

8 .6 .1 Removing the DVD-RW drive

1. Before removing the DVD-RW drive, review the safety precautions.
2. Turn off the Color Controller C-81 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the front panel and side cover.
4. Disconnect the SATA and power cable connected to the DVD-RW.
5. Using a cross-head screwdriver remove the screws that secure the DVD-RW to the DVD-RW drive cage.
6. Gently slide the DVD-RW drive toward the front of the server, and remove the drive.
7. Remove and set aside the metal plate from the side DVD-RW drive.

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103

8 .6 .2 Installing the DVD-RW drive

1. Remove the screws that secure the DVD-RW rail to the drive, and remove the rail.
2. Position the DVD-RW rail opposite the matching holes in the new drive. Insert the screws and tighten.
3. Insert the new DVD-RW drive, and gently slide it to the rear of the server.
4. Reconnect the SATA and power cable to the DVD-RW drive.
5. Secure the DVD-RW drive to the DVD-RW cage.
6. Return the front panel and side cover.
7. Reconnect all external cables and power cords, and turn on the server.

See also:

Removing and replacing the side cover and front panel on page 103

8 .7 Replacing a hard disk drive

The tasks that you need to perform before and after you remove a hard disk and install a new one differ for a system disk and an image disk.

To replace a system disk or both system disks and image disks, perform the following tasks:

1. Archive any important customer jobs to an external device.
2. Back up system configuration (Preferences window).
3. Replace disk.
4. Configure RAID volume.
5. Reinstall DVD 1 and DVD 2 on the Color Controller C-81.
6. Restore system configuration (Preferences window).
7. Restore any important customer jobs that you archived.

Important: Before replacing or formatting a 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#.

To replace only image disks, perform the following tasks:

1. (Optional) Archive any important customer jobs to an external device.
2. Replace disk.
3. Configure RAID volume.

4. Format image disks.
5. (Optional) Restore any important customer jobs that you archived.

See also:

Archiving jobs on page 16
Retrieving jobs on page 22
Installing the operating system and software on page 58
Formatting image disks on page 96
Removing a hard disk drive on page 131
Installing a hard disk drive on page 132
Recreating a volume on page 133
Recreating volumes for both system and image disks on page 135

8 .7 .1 Removing a hard disk drive

1. Turn off the Color Controller C-81 and all peripheral devices. Disconnect all external cables and power cords.
2. Remove the side cover.

   Tip: You may find it easier to work if you lay the server on its side.
3. Disconnect the SATA and power cable from all the hard disks.
4. Remove the three screws that secure the drive cage to the server chassis.
5. Lift the drive cage out of the server.

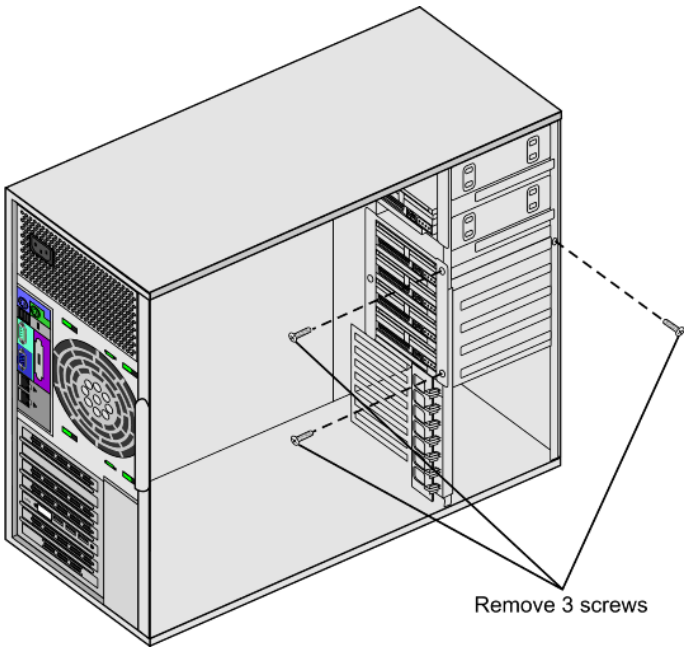
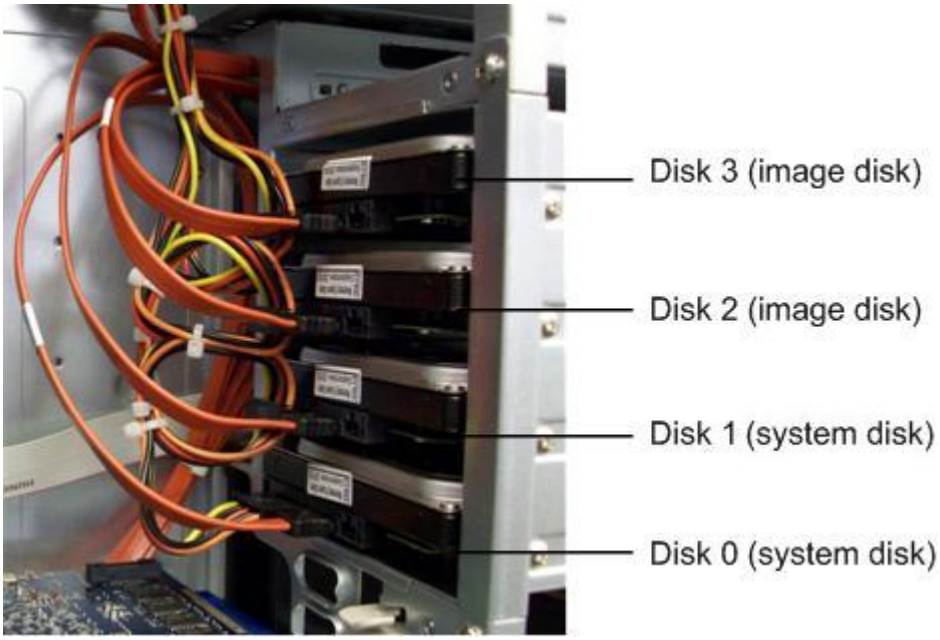


Figure 50: Removing a hard disk drive

6. Identify which hard disk you want to remove.



7. Remove the four screws that secure the hard disk drive to the drive cage, and slide the disk out of the cage.

See also:

Removing and replacing the side cover and front panel on page 103

8 .7 .2 Installing a hard disk drive

1. Slide the hard disk drive into the drive cage.
2. Insert the four screws that secure the hard disk drive 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.

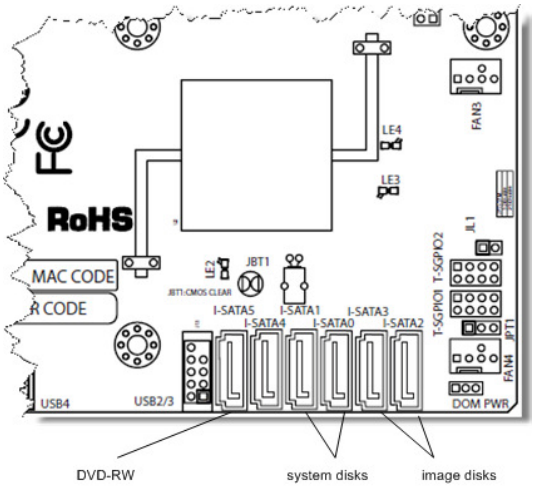


Figure 51: SATA2 connectors on the system board

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.
12. Reconnect all external cables and power cords, and turn on the server.

See also:

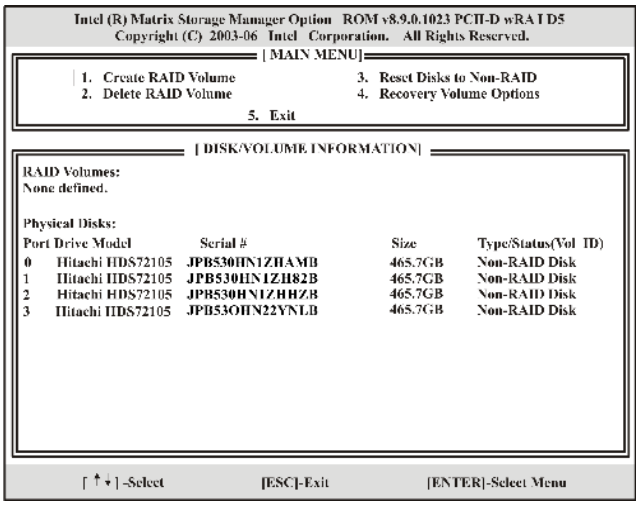
Returning the side cover on page 104

8 .7 .3 Recreating a volume

Recreate a volume if you have replaced a system disk or an image disk that was previously a member of a volume.

1. From the Windows **Start** menu, select **Shut Down** > **Restart** > **OK**.
2. While the Color Controller C-81 is restarting, press `<CTRL +I>` to enter the Configuration Utility.

   Important: If you do not press `<CTRL+I>`, the Color Controller C-81 starts normally and you will then have to repeat this procedure.



3. In the Configuration Utility, select **2. Delete RAID Volume**.
4. Use the **Up** and **Down** arrows to highlight the disk that you want to mark as non-RAID, and then press the space bar to select the disk.
5. Press `Enter`.
   A message appears asking you to confirm that you want the volume deleted.
6. Press `y`.
   The volume is deleted from the RAID Volumes list.
7. In the Physical Disks list confirm that all the members of the volume that you have deleted are indicated as non-RAID disks.
8. To create the volume, choose **1. Create RAID Volume** and press `Enter`.
9. Press `Enter` to keep the default volume name.
10. Press `Enter` to keep the default **RAID Level** (RAID0(Stripe).
11. Press `Enter` to choose the **Stripe Size** (128KB).
12. Press `Enter` to choose the **Capacity** (931.5 GB).

13. Press `Enter` to create the specified volume.
    A message appears warning you that all data on the selected disks will be lost.
14. Type `y` to continue.
    The volume is created and added to the list of RAID volumes.
15. For a system volume, make sure that DVD 1 is in the DVD-RW drive.
16. Using the arrow keys choose **5. Exit** and then press `Enter` to exit the configuration utility.
    A message appears asking you to confirm that you want to exit the Configuration Utility.
17. Depending on the type of volume that you are recreating, do the following actions :

Which volume are you recreating?	Do these steps
System volume	**a.** Press `y` to continue. **b.** When the Creo Color Server startup menu appears, perform a complete installation as described in *Installing the operating system and software*.
Image volume	**a.** Press `y` to continue. **b.** If the Color Controller C-81 is already installed, format the image disks volume.

See also:

Installing the operating system and software on page 58
Formatting image disks on page 96

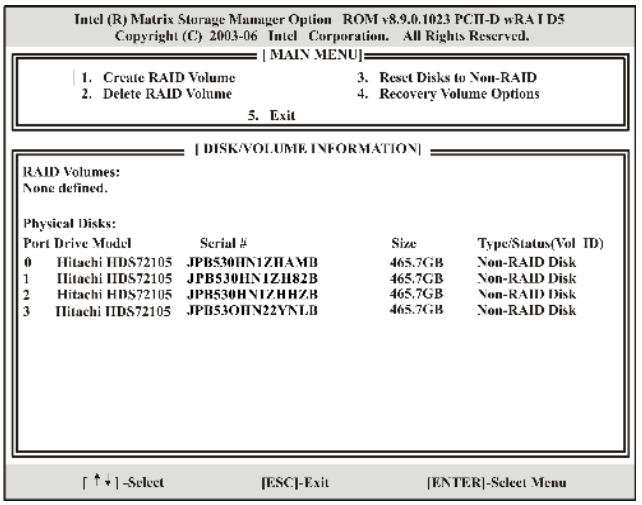
8 .7 .4 Recreating volumes for both system and image disks

Recreate both the system volume and image volume if you have replaced a system disk and an image disk.

1. From the Windows **Start** menu, select **Shut Down** > **Restart** > **OK**.

2. While the Color Controller C-81 is restarting, press <CTRL +I> to enter the Configuration Utility.

   Important: If you do not press <CTRL+I>, the Color Controller C-81 starts normally and you will then have to repeat this procedure.



3. Choose **3. Reset Disks to Non-RAID**, and press Enter.
4. Use the **Up** and **Down** arrows to highlight the disk that you want to mark as non-RAID, and choose it by pressing the space bar.
5. Press Enter.
   In the Physical Disks list, the disk is indicated as non-RAID.
6. To create the system volume, select **1. Create RAID Volume** and press Enter.
7. Press Enter to keep the default volume name.
8. Press Enter to keep the default **RAID Level** (RAID0(Stripe).
9. Press Enter to choose **Select Disks**.
   A window appears listing the available disks.
10. Using the **Up** and **Down** arrows, navigate to disk **0**, and then press the space bar to choose the disk.
11. Using the **Up** and **Down** arrows, navigate to disk **1**, and then press the space bar to choose the disk.
12. Press Enter to choose the **Stripe Size** (128KB).
13. Press Enter to choose the **Capacity** (931.5 GB).
14. Press Enter to create the specified volume.
    A message appears warning you that all data on the selected disks will be lost.
15. Type y to continue.
    The volume is created and added to the list of RAID volumes.
16. To create the image volume, select **1. Create RAID Volume** and press Enter.

17. Press `Enter` to keep the default volume name.
18. Press `Enter` to keep the default **RAID Level** (RAID0(Stripe).
19. Press `Enter` to choose the **Stripe Size** (128KB).
20. Press `Enter` to choose the **Capacity** (931.5 GB).
21. Press `Enter` to create the specified volume.
    A message appears warning you that all data on the selected disks will be lost.
22. Make sure that DVD 1 is in the DVD-RW drive.
23. Using the arrow keys choose **5. Exit** and then press `Enter` to exit the configuration utility.
    A message appears asking you to confirm that you want to exit the Configuration Utility.
24. Press `y` to continue.
25. When the Creo Color Server startup menu appears, perform a complete installation as described in *Installing the operating system and software*.

8 .8 Removing and installing the power supply

Perform the following procedures to remove and install the power supply.

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

8 .8 .1 Removing the power supply

1. Before you remove the power supply, review the safety precautions.
2. Turn off the Color Controller C-81 and peripheral devices.
3. Disconnect all AC power cords and external cables.
4. Remove the side cover.
5. Disconnect the power supply cables to the drives, and to the system board (JPW1, JPW2).

6. Apply pressure to the tabs to remove the fan and grill.

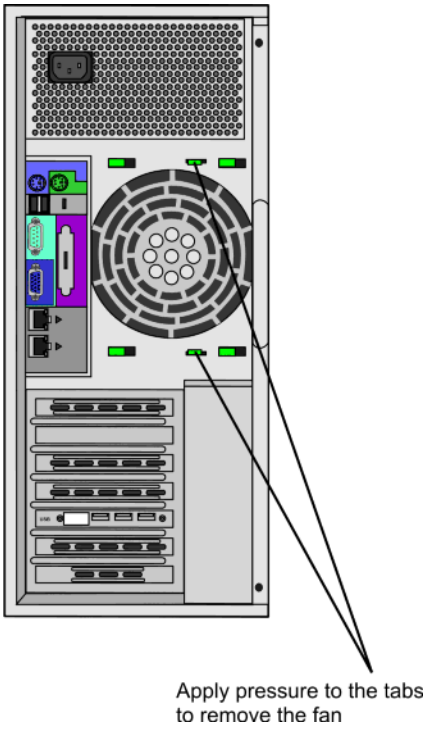


Figure 52: Removing the power supply unit

7. 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.

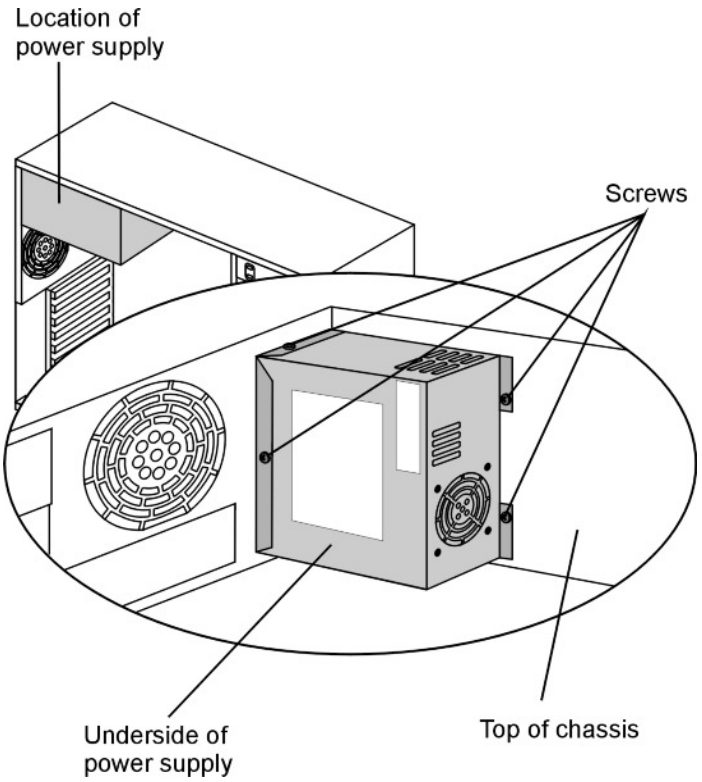


Figure 53: Removing the power supply from the server

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

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103

8 .8 .2 Installing the power supply

1. Insert the power supply into the opening at the rear of the chassis.
2. Align the holes in the power supply with the holes in the chassis.
3. Insert the four power supply screws and tighten them.
4. Press the rear-fan bracket against the rear of the server, until all of the tabs are in their slots, and then move the rear-fan bracket downward until it locks into position.
5. Reconnect the internal cables from the power supply to the system board and to the drives.
6. Return the side cover.

7. Reconnect all external cables and AC power cords, and turn on the server.

See also:

Returning the side cover on page 104

8 .9 Removing and installing fans

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

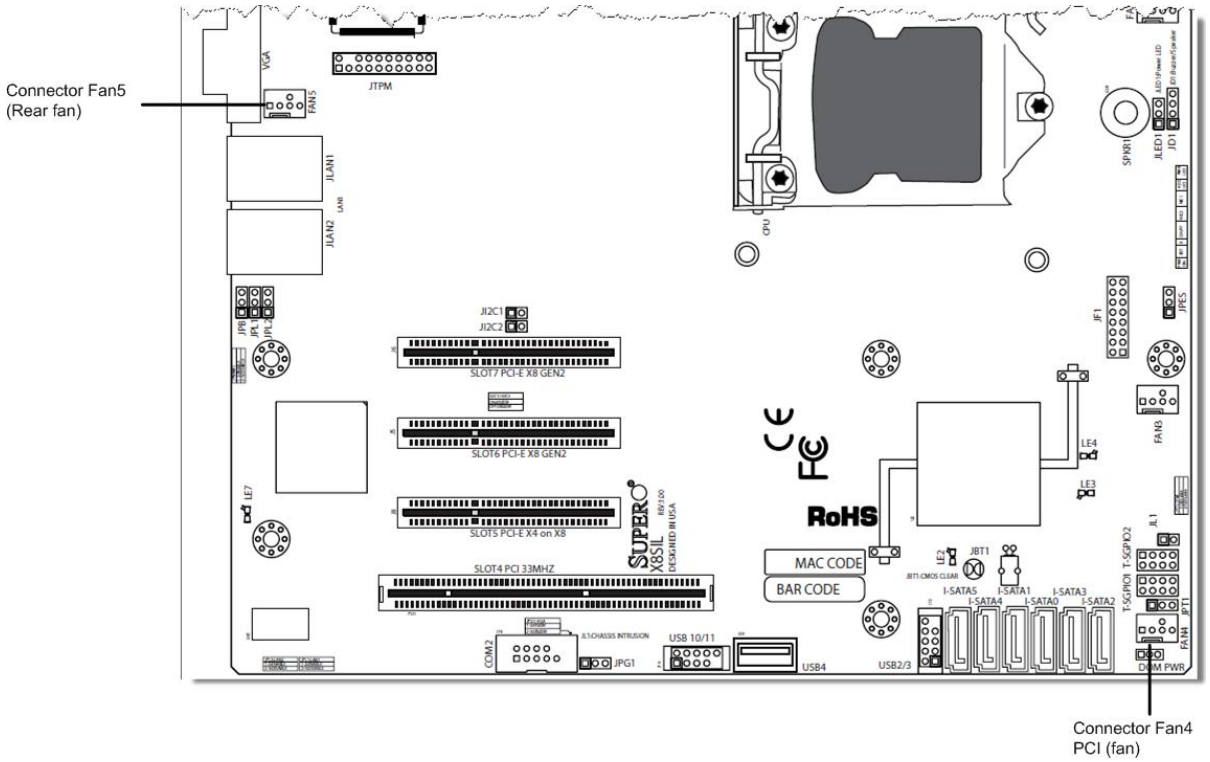


Figure 54: Rear and PCI fan connector locations

8 .9 .1 Removing the rear fan

1. Before you remove the rear fan, review the safety precautions.
2. Turn off the Color Controller C-81 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the side cover.
4. Disconnect the fan cable from the system board connector (Fan5).
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 four screws that secure the fan to the rear-fan bracket.

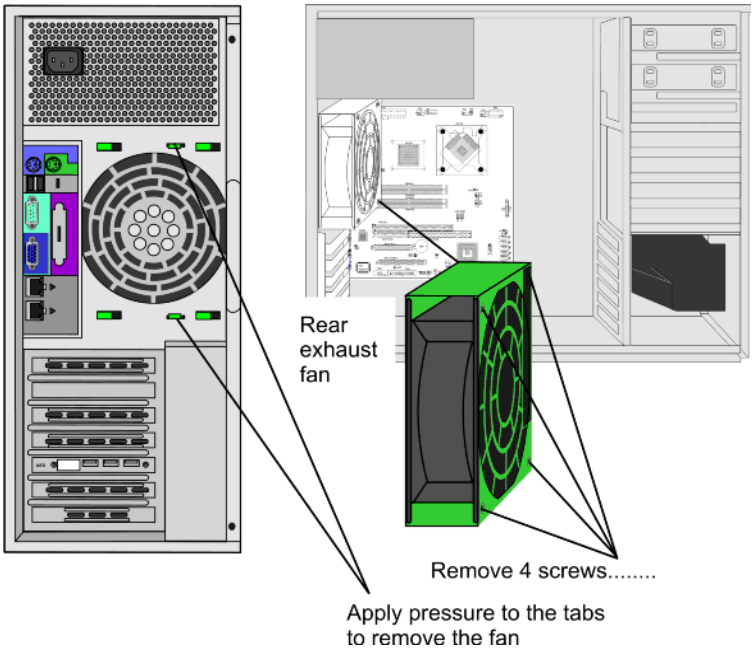


Figure 55: Rear fan

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103

8 .9 .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.
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, 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.
7. Reconnect all external cables and power cords, and turn on the Color Controller C-81

See also:

Returning the side cover on page 104

8 .9 .3 Removing the PCI fan

1. Before you remove the PCI fan, review the safety precautions.
2. Turn off the Color Controller C-81 and peripheral devices. Disconnect all power cords and external cables.
3. Remove the front panel and side cover.
4. Disconnect the fan cable from the system board connector (Fan 4).
5. Remove the screw securing the fan to the chassis.
6. Release the two tabs from the front of the server.
7. Tilt the fan backwards and lift it upward and out of the server.
8. Remove the fan bracket and retain for future use.

See also:

Safety precautions on page 3
Removing and replacing the side cover and front panel on page 103

8 .9 .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. Insert the screw that secures the fan to the chassis.
6. Reconnect the fan cable to the system board.
7. Return the front panel and side cover.
8. Reconnect all external cables and power cords, and turn on the server.

See also:

Removing and replacing the side cover and front panel on page 103

9 Specifications and standards

9 .1 Environmental requirements

This chapter lists the software installation steps, includes specifications for the Color Controller C-81 operating environment, and provides a list of the international safety standards to which the Color Controller C-81 conforms.

9 .2 Installation steps

- Color Controller C-81 software installation—time: approximately 30 minutes
- Full installation, operating and software—time: approximately 1 hour
- System loading—time: approximately 15 minutes

9 .3 Specifications

9 .3 .1 Dimensions and weight

Color Controller C-81 (All contents)	L x W x H (cm)	L x W x H (in.)	Weight
Packed	80 × 62 × 51	31.5 × 24.4 × 20.1	35kg/77.2 lb

Color Controller C-81			Weight
Unpacked	56 × 44.7 ×18.2	22 × 17.6 ×7.2	16.4 kg/36.2 lb
Packed	66 × 61 × 30	26 × 24 × 11.8	18.9 kg/41.67 lb

WARNING:

- The Color Controller C-81 is heavy, and must be lifted by two people.
- Each person must place both hands underneath the Color Controller C-81 from the sides.

X-Rite i1 Spectrophotometer	L x W x H (cm)	L x W x H (in.)	Weight
Unpacked	15.3 x 6.7 x 7.8	6 × 2.6 × 3.1	0.25 kg/0.55 lb.
Packed	47.5 × 35.3 × 16.5	18.7 × 13.9 × 6.3	2.7 kg/6 lb.

Monitor 19''	L x W x H (cm)	L x W x H (in.)	Weight
Unpacked	45 × 6.5 × 39	17.7 × 2.6 × 15	4.1 kg/9.0 lb.
Packed	51.5 x 12 x 12.5	20.3 × 4.7 × 16.7	5 kg/11 lb.

Keyboard and mouse	L x W x H (cm)	L x W x H (in.)	Weight
Unpacked	44.5 x 18 x 3	17.5 x 7 x 1.2	0.8 kg/1.8 lb.
Packed	54.3 x 21 x 5.5	21.3 x 8.3 x 2.2	1.1 kg/2.4 lb.

Stand (Contents and Carton) [Optional]	D x W x H (cm)	D x W x H (in.)	Weight
Unpacked	77× 67 × 104	30.3 x 26.4 x 40.9	28 kg/61.7 lb.
Packed	114 × 82.5 × 37	44.9 × 32.5 × 14.6	45 kg/99.2 lb.

9 .4 Operating environment

9 .4 .1 Electrical (color server and monitor)

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

9 .4 .2 Energy consumption

- 220 Vac–1.14 Aac = > 250 W = 854 BTU/hour
- 110 Vac–2Aac = > 220 W = 751 BTU/hour

9 .4 .3 Transportability

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

9 .4 .4 Acoustic Noise Level

Acoustic power level	level
LwA	54.39 dB

9 .4 .5 Temperature and relative humidity

Items complying with IEC 721-3-1, 2, 3		
Temperature	Operating	10° C to 35° C (50° F to 95° F)
	Storage	–20° C to 60° C (–4° F to 140° F)
Relative humidity	Operating	20% to 80%
	Storage	Max 5% to 65° C non-condensing

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

9 .5 Standards

9 .5 .1 Safety approvals

United States and Canada	cCSAus marking for the US and Canada. Standards: UL 60950-1, 2nd Edition, CSA 60950-1-07, Second Edition
CB Countries	CB Report & Certificate according to standards IEC 60950-1:2005 (2nd Edition), EN 60950-1:2006, and National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations; AU; CA; KR; NZ; US

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

Argentina	Italy
Australia	Japan
Austria	Kenya
Belgium	Korea
Canada	Netherlands
China	Norway
Czech Republic	Poland
Denmark	Portugal
Finland	Russian Federation
France	Singapore
Germany	Slovakia
Greece	Slovenia
Hungary	Sweden
India	Switzerland
Israel	United Kingdom

9 .5 .2 EMC requirements

United States	FCC 47CFR part 15: 2009, subpart B class B
Canada	ICES-003: 2004 issue 4, class B
Japan	VCCI V-3/2008.04, class B
Australia and New Zealand	NS/NZS CISPR22:2009, class B
Europe	EMC Directive 2004/108/EC

Radiated Emissions	EN55022:2006+A1:2007 Class B
Harmonics	EN61000-3-2:2006
Flicker	EN61000-3-3:1995+ A1:2001+ A2:2006
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: 2006
Immunity to fast transients	EN61000-4-4: 2004
Immunity to voltage surges	EN61000-4-5: 2006
Immunity to radio frequency conducted disturbances	EN61000-4-6: 2007
Immunity to power frequency magnetic fields	EN61000-4-8: 1993 +A1(01)
Immunity to supply voltage dips, and variations	EN61000-4-11: 2004

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取扱説明書に従って正しい取り扱いをして下さい。 VCCI－B

9.6 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).

Table 2: MTBF calculation results

Description	MTBF
CMPTR,DVD R/W, SATA, IVORY	1,680,320
CMPTR,DRIVE,HD,500GB, 7.2KRPM,SATA2	2,742,980
CMPTR,MEM MODULE, 1GB,DDR3,ECC,1333MHZ	4,887,586

Description	MTBF
FAN+BACKPLATE,CPU INTEL P4 LGA1156	218,023
CMPTR,MB,X8SIL-F	350,564
CMPTR,500W, PS2 POWER SUPPLY	96,533
REAR FAN 120MM FOR SUPERMICRO CHASSIS	218,023
FRONT FAN 92MM FOR SUPERMICRO CHASSIS	218,023
FUSIONRA [LF] BRD ASSY	247,361
MONITOR,LCD 19" WIDE,BLACK(1440X900)	48,387
CMPTR,BASIC BLACK USB KB & MOUSE	58,066

9 .7 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 cross-head) • Antistatic kit • Side cutters

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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