

Prinect DFE
Machine Code: M525/M526
Field Service Manual
Ver 1.0

Latest Release: February, 2018
Initial Release: February, 2018
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Important Safety Notices

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important

- Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.

Note

- This information provides tips and advice about how to best service the machine.

General Safety Instructions

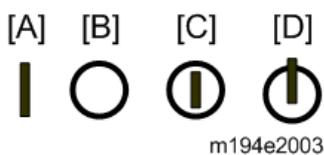
For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

Always obey the following safety precautions when using this product.

Safety During Operation

In this manual, the following important symbols and notations are used.



[A]: ON

[B]: OFF

[C]: Push ON/Push OFF

[D]: Standby

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.

Safety

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.
2. The plug should be near the machine and easily accessible.
3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
4. Always unplug the power cord from the power source before you move the product. Before you move the machine, arrange the power cord so it will not fall under the machine.
5. Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe before you move the machine.
6. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
7. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
8. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
9. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.
10. Do not use flammable sprays or solvent in the vicinity of the machine. Also, avoid placing these items in the vicinity of the machine. Doing so could result in fire or electric shock.
11. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
12. Clean the floor completely after accidental spillage of silicone oil or other materials to prevent slippery surfaces that could cause accidents leading to hand or leg injuries.
13. Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
14. Never do any procedure that defeats the function of any safety device.
15. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
16. For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.
17. For machines installed with the ADF/ARDF:
When a thick book or three-dimensional original is placed on the exposure glass and the ARDF cover is lowered, the back side of the ARDF rises up to accommodate the original. Therefore, when closing the ARDF, please be sure to keep your hands away from the hinges at the back of the ARDF.

18. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.
19. For machines installed with the anti-tip components:

The anti-tip components are necessary for meeting the requirements of IEC60950-1, the international standard for safety. The aim of these components is to prevent the products, which are heavy in weight, from toppling as a result of people running into or leaning onto the products, which can lead to serious accidents such as persons becoming trapped under the product. (U.S.: UL60950-1, Europe: EN60950-1) Therefore, removal of such components must always be with the consent of the customer. Do not remove them at your own judgment.
20. **NEVER touch** the AC circuits on the PSU board to prevent electric shock caused by residual charge. Residual charge of about 100V-400V remains in the AC circuits on the PSU board for several months even when the board has been removed from the machine after turning off the machine power and unplugging the power cord.

Health Safety Conditions

1. For the machines installed with the ozone filters:
 - Never operate the machine without the ozone filters installed.
 - Always replace the ozone filters with the specified types at the proper intervals.
2. The machine, which use high voltage power source, can generate ozone gas. High ozone density is harmful to human health. Therefore, locate the machine in a large well ventilated room that has an air turnover rate of more than 50m³/hr/person.
3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models with exceptions on some machines where the installation can be handled by the user.

Safety and Ecological Notes for Disposal

- Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
- Dispose of used toner, developer, organic photoconductors, and AIO unit in accordance with local regulations. (These are non-toxic supplies.)
- Dispose of replaced parts in accordance with local regulations.
- When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

CAUTION

The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance

with the manufacturer's instructions.

Handling Toner

- Work carefully when removing paper jams or replacing toner bottles or cartridges to avoid spilling toner on clothing or the hands.
- If toner is inhaled, immediately gargle with large amounts of cold water and move to a well-ventilated location. If there are signs of irritation or other problems, seek medical attention.
- If toner gets on the skin, wash immediately with soap and cold running water.
- If toner gets into the eyes, flush the eyes with cold running water or eye wash. If there are signs of irritation or other problems, seek medical attention.
- If toner is swallowed, drink a large amount of cold water to dilute the ingested toner. If there are signs of any problem, seek medical attention.
- If toner spills on clothing, wash the affected area immediately with soap and cold water. Never use hot water! Hot water can cause toner to set and permanently stain fabric.
- Always store toner and developer supplies such as toner and developer packages, cartridges, bottles (including used toner and empty bottles and cartridges), and AIO unit out of the reach of children.
- Always store fresh toner supplies or empty bottles or cartridges in a cool, dry location that is not exposed to direct sunlight.
- Do not use a vacuum cleaner to remove spilled toner (including used toner). Vacuumed toner may cause a fire or explosion due to sparks or electrical contact inside the cleaner. However, it is possible to use a cleaner designed to be dust explosion-proof. If toner is spilled over the floor, sweep up spilled toner slowly and clean up any remaining toner with a wet cloth.

Handling the development unit cooling system

For the machines installed the development cooling system:

1. The development unit cooling system circulates propylene glycol from a sealed tank through hoses that pass behind cooling plates on the sides of each development unit.
2. The coolant tank is located at the bottom of the cooling box on the back of the main machine.
3. Always obey local laws and regulations if you need to dispose of a tank or the propylene glycol coolant.
4. The tank must never be emptied directly into a local drainage system, river, pond, or lake.
5. Contact a professional industrial waste disposal organization and ask them to dispose of the tank.

Lithium Batteries for Taiwan

警告

本機器內的鋰電池如果更換不正確型號會有爆炸的危險。
只能使用相同或製造商推薦同等類型的電池進行更換。
請依製造商說明書處理用過之廢棄電池。

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

⚠ WARNING

- Use of controls, or adjustment, or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

WARNING FOR LASER UNIT

WARNING:
Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes.

>PS<
_safe006

>PS<
_safe007

>PS<
_safe008

Safety Instructions for the Color Controller

Fuse

The color controller uses a double pole fuse. If this fuse blows, be sure to replace it with an identical fuse.

Batteries

⚠ CAUTION

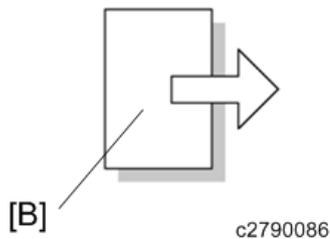
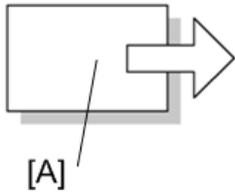
Always replace a battery with the same type of battery prescribed for use with the color controller unit. Replacing a battery with any type other than the one prescribed for use could cause an explosion.

- Never discard used batteries by mixing them with other batteries or other refuse.
- Always remove used batteries from the work site and dispose of them in accordance with local laws and regulations regarding the disposal of such items.

Symbols, Abbreviations

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

| Symbol | What it means |
|---|---------------------|
|  | Clip ring |
|  | Screw |
|  | Connector |
|  | Clamp |
|  | E-ring |
|  | Flat Flexible Cable |
|  | Timing Belt |
| SEF | Short Edge Feed |
| LEF | Long Edge Feed |
| K | Black |
| C | Cyan |
| M | Magenta |
| Y | Yellow |
| B/W, BW | Black and White |
| FC | Full color |



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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- Windows® Internet Explorer® 9
- Internet Explorer® 10
- Internet Explorer® 11

The proper name of Edge is Microsoft® Edge™.

The proper names of the Windows operating systems are as follows:

- The product names of Windows Vista are as follows:
 - Microsoft® Windows Vista® Ultimate
 - Microsoft® Windows Vista® Business
 - Microsoft® Windows Vista® Home Premium
 - Microsoft® Windows Vista® Home Basic
 - Microsoft® Windows Vista® Enterprise
- The product names of Windows 7 are as follows:
 - Microsoft® Windows® 7 Home Premium
 - Microsoft® Windows® 7 Professional
 - Microsoft® Windows® 7 Ultimate
 - Microsoft® Windows® 7 Enterprise
- The product names of Windows 8.1 are as follows:
 - Microsoft® Windows® 8.1
 - Microsoft® Windows® 8.1 Pro
 - Microsoft® Windows® 8.1 Enterprise
- The product names of Windows 10 are as follows:
 - Microsoft® Windows® 10 Home
 - Microsoft® Windows® 10 Pro

Microsoft® Windows® 10 Enterprise

Microsoft® Windows® 10 Education

- The product names of Windows Server 2008 are as follows:
Microsoft® Windows Server® 2008 Standard
Microsoft® Windows Server® 2008 Enterprise
- The product names of Windows Server 2008 R2 are as follows:
Microsoft® Windows Server® 2008 R2 Standard
Microsoft® Windows Server® 2008 R2 Enterprise
- The product names of Windows Server 2012 are as follows:
Microsoft® Windows Server® 2012 Foundation
Microsoft® Windows Server® 2012 Essentials
Microsoft® Windows Server® 2012 Standard
- The product names of Windows Server 2012 R2 are as follows:
Microsoft® Windows Server® 2012 R2 Foundation
Microsoft® Windows Server® 2012 R2 Essentials
Microsoft® Windows Server® 2012 R2 Standard
- The product names of Windows Server 2016 are as follows:
Microsoft® Windows Server® 2016 Standard
Microsoft® Windows Server® 2016 Essentials

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1. Differences

Differences between TotalFlow Print Server R-62/R-62A and Prinect DFE

The following are the differences between TotalFlow Print Server R-62/R-62A and Prinect DFE*:

- The Prinect DFE has a graphic board, USB board, and an additional HDD.
- Both models share the same installation procedure.
- A local console is not provided for users to operate the Prinect DFE.
- Do not set the power interlock switch to EN for the Prinect DFE.
- The Prinect DFE comes with a monitor, mouse, and keyboard as standard.

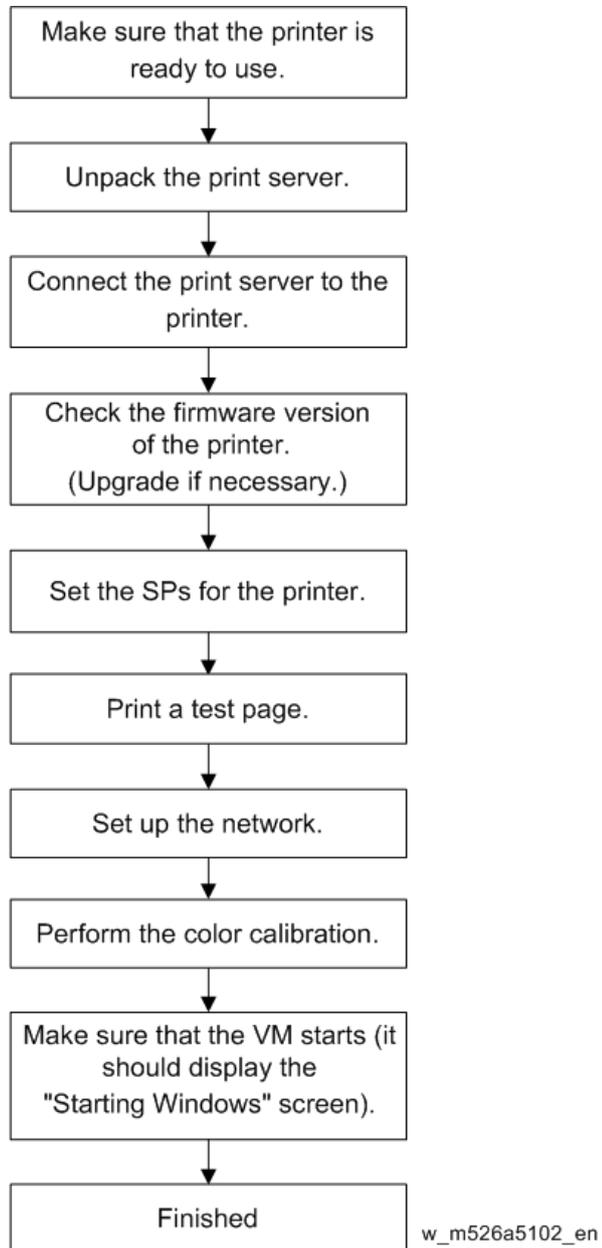
* OEM model for Heidelberg

Installation Flow Chart (For Prinect DFE)

First install the printer (Versafire CV/ Versafire CP).

Then install Prinect DFE.

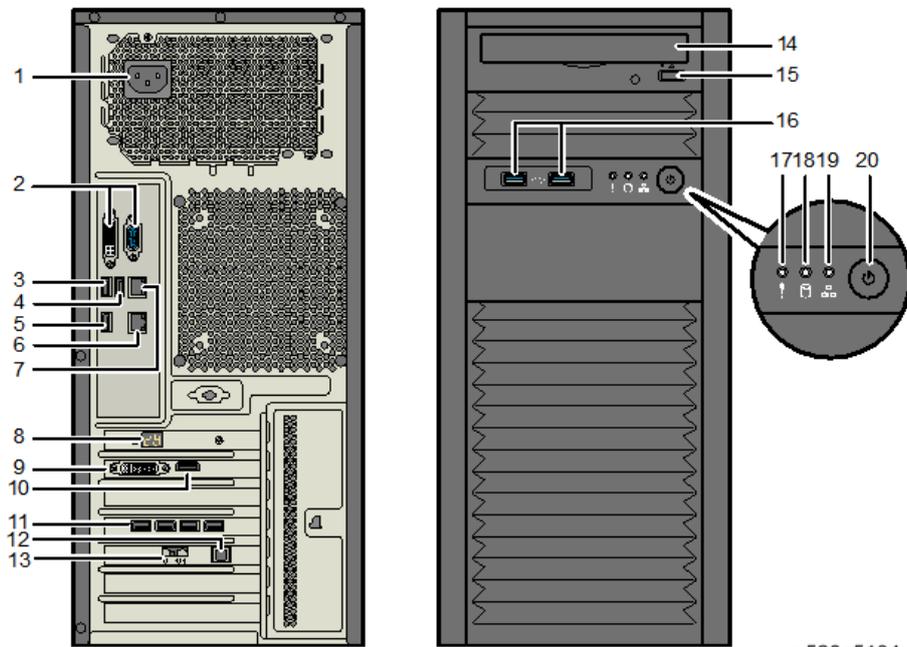
Recommended installation steps are as follows:



Machine Installation (Differences)

Connector/ Front Panel

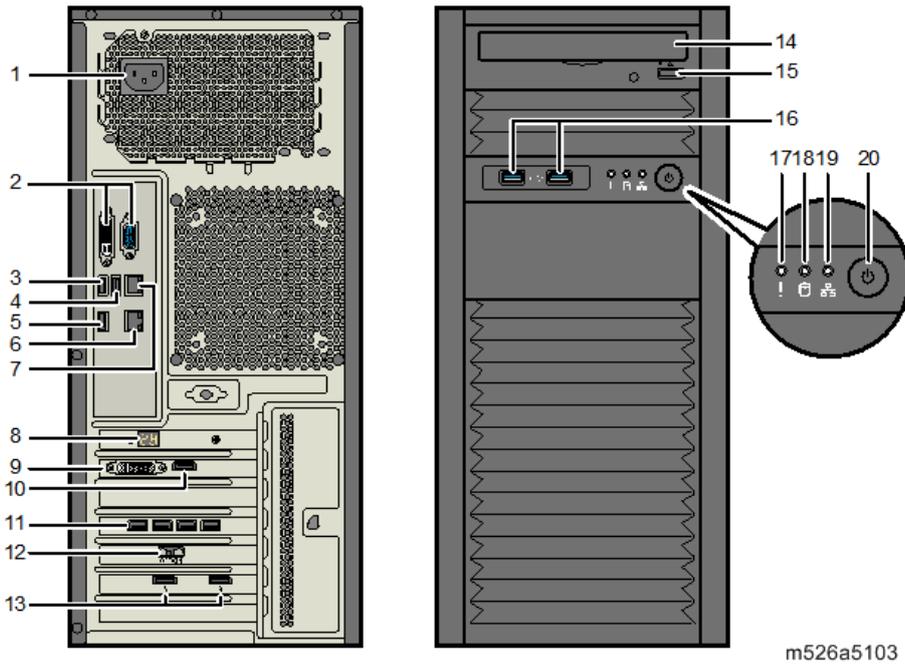
Princt DFE for Versafire CV



m526a5104

| No. | Name | No. | Name |
|-----|---|-----|---|
| 1 | Power connector | 11 | USB port x4 (VM support) |
| 2 | Monitor ports | 12 | USB port for power interlock (not used) |
| 3 | USB port (keyboard) | 13 | Power interlock switch (not used) |
| 4 | USB port (mouse) | 14 | Optical disc drive |
| 5 | USB port (backup) | 15 | Disc eject button |
| 6 | Gigabit Ethernet port (printer to print server) | 16 | Front USB ports |
| 7 | Gigabit Ethernet port (print server to network) | 17 | System error indicator |
| 8 | Digital display (7-segment) | 18 | HDD access indicator |
| 9 | DVI monitor port | 19 | Network indicator |
| 10 | HDMI port | 20 | Power switch |

Prinect DFE for Versafire CP



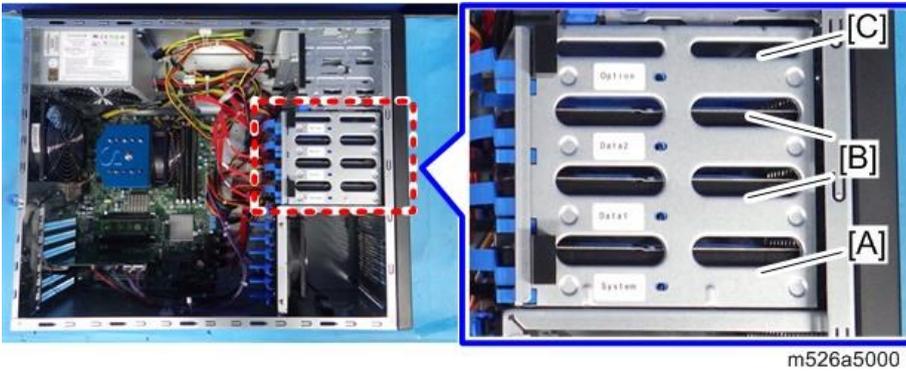
m526a5103

| No. | Name | No. | Name |
|-----|---|-----|-----------------------------------|
| 1 | Power connector | 11 | USB port x 4 (VM support) |
| 2 | Monitor ports | 12 | Power interlock switch (not used) |
| 3 | USB port (keyboard) | 13 | Data Transfer Unit ports |
| 4 | USB port (mouse) | 14 | Optical disc drive |
| 5 | USB port (backup) | 15 | Disc eject button |
| 6 | Gigabit Ethernet port (printer to print server) | 16 | Front USB ports |
| 7 | Gigabit Ethernet port (print server to network) | 17 | System error indicator |
| 8 | Digital display (7-segment) | 18 | HDD access indicator |
| 9 | DVI monitor port | 19 | Network indicator |
| 10 | HDMI port | 20 | Power switch |

Unit Removal (Differences)

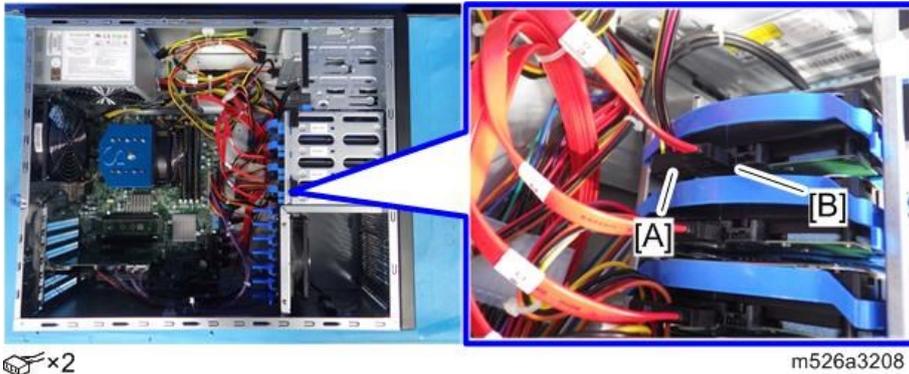
HDD

The print server has four HDDs. One is for the operating system [A], the other two are for data storage [B] and the other one is for VM support [C].



HDD (for VM Support)

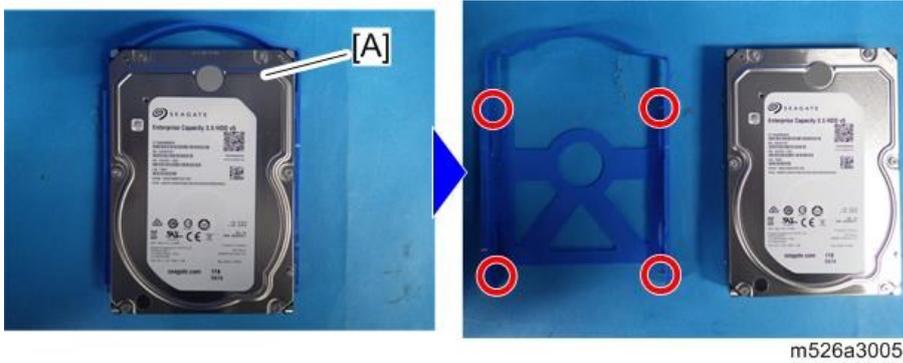
- 1.** Remove the left cover.
- 2.** Remove the power cord [A] and SATA cable [B] from the HDD (for VM support).



- 3.** Push the lever [A] and pull out the HDD (for VM support) [B] with the bracket.



4. Remove the HDD [A]. (hook ×4)



Note

- Windows VM and Prinect software are not installed in an HDD spare part that is used for replacement. Heidelberg's service representative must install this software after replacing the HDD.

Graphic Board

⚠ CAUTION

- Do not touch the terminal part of the graphic board. Clean with alcohol if you touched the terminal.

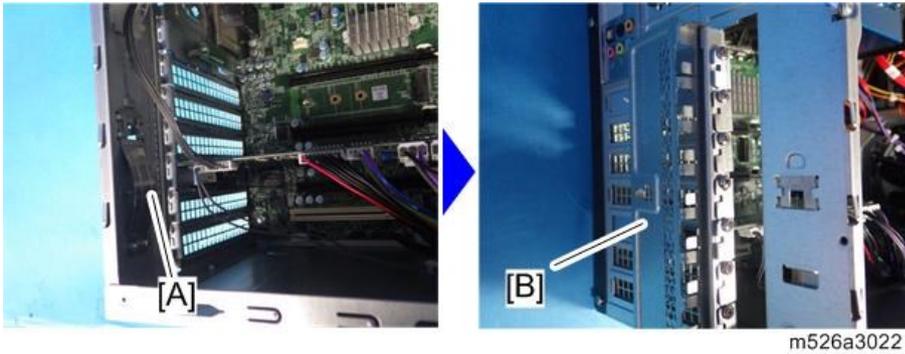


- 1.** Remove the left cover.
- 2.** Lay down the machine.

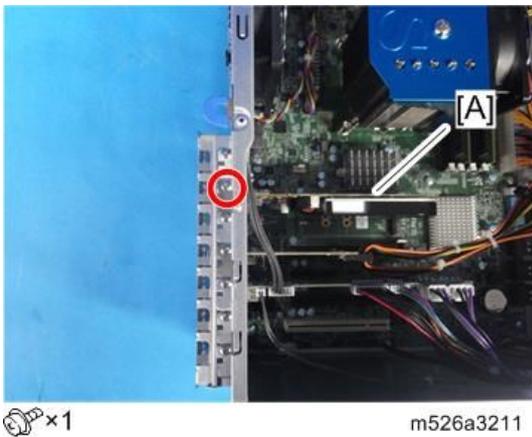


1. Differences

3. Push the flat spring [A] to open the rear cover [B].



4. Remove the graphic board [A]. (⚙️ ×1)



USB Board

⚠️ CAUTION

- Do not touch the terminal part of the USB board. Clean with alcohol if you touched the terminal.

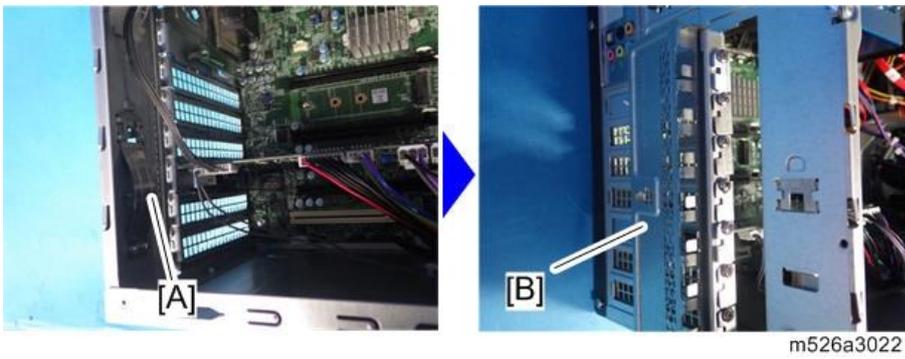


1. Remove the left cover.

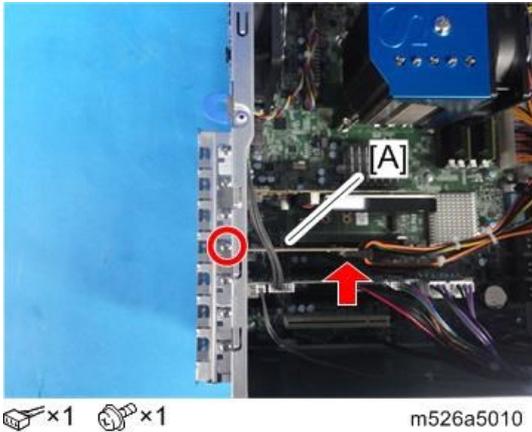
2. Lay down the machine.



3. Push the flat spring [A] to open the rear cover [B].



4. Remove the USB board [A].

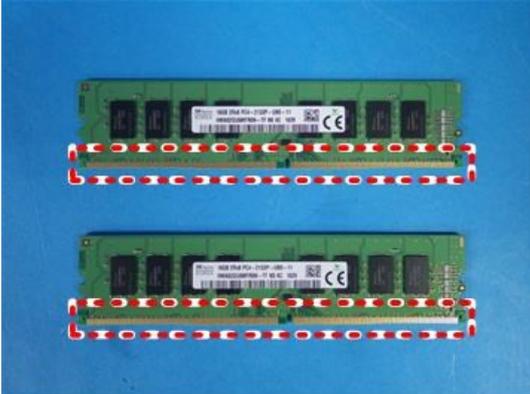


1. Differences

DIMM

CAUTION

- Do not touch the terminals of the DIMM. Clean with alcohol if you touched the terminals.



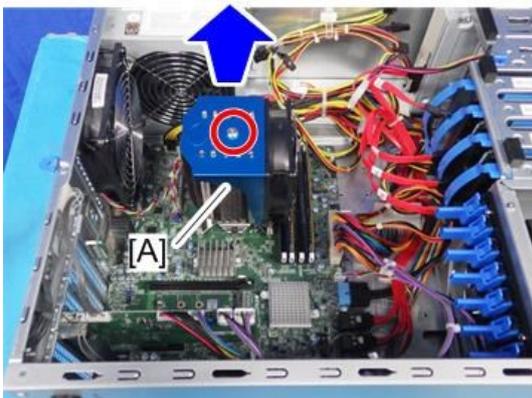
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1. Remove the left cover.
2. Lay down the machine.



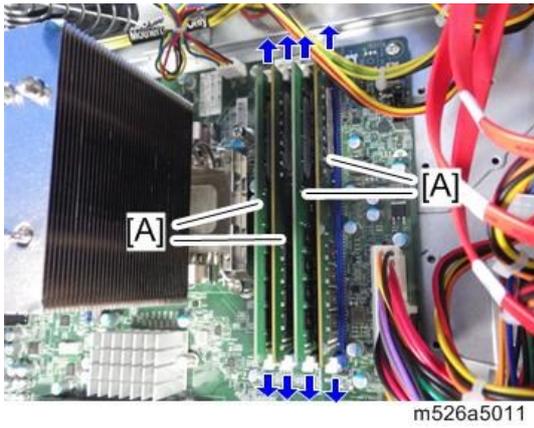
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3. Lift the CPU fan bracket. ( x 1)



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- 4.** Open both sides of the lever, and pull out the DIMMs (×4) [A] from the sockets.



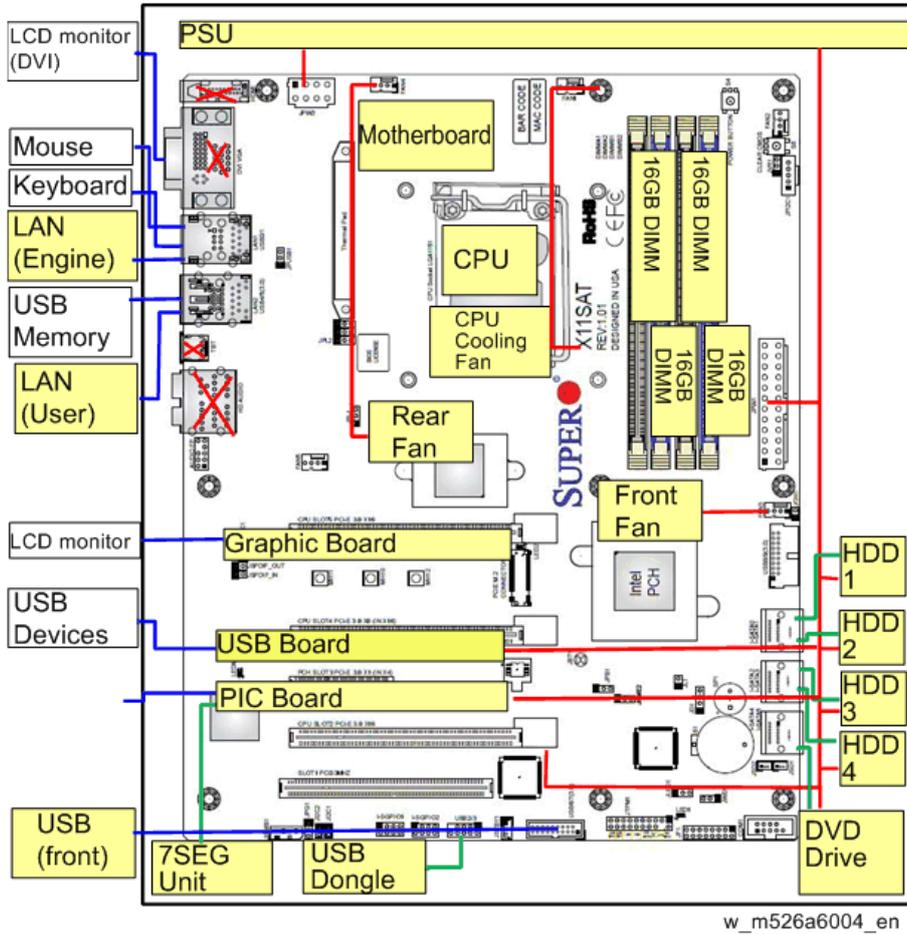
Note

- When installing, gently slide the DIMM straight down into the socket and push it into the slot. Make sure that the levers close securely around the ends of the DIMM.
- DIMMs fit in the socket only one way.

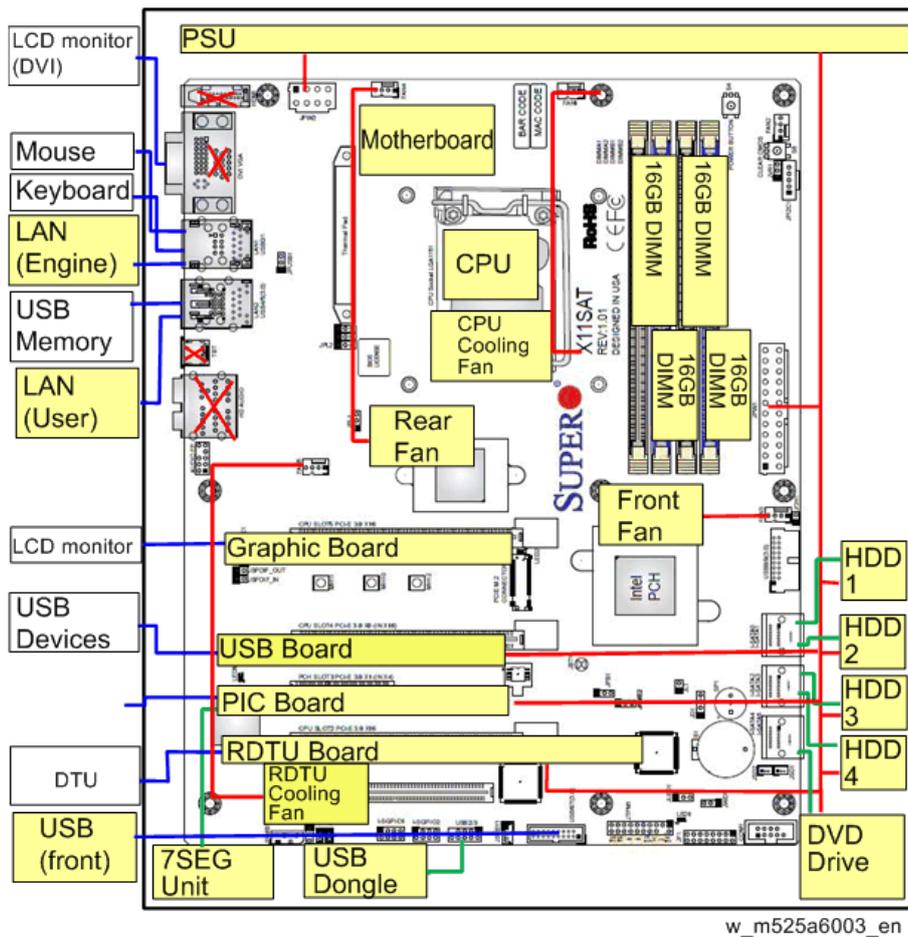
Block Diagram and Functions (for Prinect DFE)

Block Diagram

Prinect DFE for Versafire CV



Prinect DFE for Versafire CP



 Functions

 Network

Cable requirements:

- 10BaseT (Ethernet): Unshielded Twisted Pair (UTP), Category 3 or higher
- 100BaseTX (Fast Ethernet): UTP, Category 5 or higher (4-pair/8-wire, short-length)
- 1000BaseT (Gigabit Ethernet): UTP, Category 5e or higher (4-pair/8-wire, short-length)

 RDTU Board

Performs as an interface* between the print server and the printer.

*Command/Status I/F and Image Data I/F

 HDD

The print server has four HDDs:

- HDD 1 for operation system
- HDD 2, HDD 3 for data storage with RAID0
- HDD 4 for VM support

1. Differences

Motherboard

- CPU: 3.4 GHz
- SDRAM: 16 GB (2,133 MHz DDR4) × 4, Total 64 GB
- Performs a self-diagnosis by BIOS and displays the error code on the digital display board (7-segment).

Digital Display Board

Displays the status of the print server in a 7-segment display.

USB Dongle

Stores product information such as a license.

The print server cannot be used without the USB dongle.

DVD Drive

The DVD drive can read the items below.

- Print data
- File for system updating
- User created ICC profiles
- Font data

Note that these data cannot be written to a DVD, because the DVD drive is read only.

USB I/F

USB I/F are used for the following purposes.

Front USB port

1. Reading the following data that are saved in the USB memory:
 - Print data
 - File for system updating
 - User created ICC profiles
 - Font data
2. Writing the following data to USB memory:
 - Tracing data
 - Logging data

USB port (backup)

Automatic backup for configuration data

USB port (VM support)

For VM support

Graphic Board (for VM support)

- Sapphire Radeon HD5450 1G DDR3 PCI-E
- Up to 2,560 × 1,600 32bpp 60Hz
- VM pass-through capable

USB Board (for VM support)

- Sunix USB4300NS
- USB 3.0 ports × 4

Specifications (for Prinect DFE)

General Specifications

Prinect DFE for Versafire CV

| Item | Description |
|------------------------|--|
| CPU | 6th Gen Core i7-6700 3.4GHz |
| Memory | 64 GB (16 GB ×4) |
| HDD | SATA connection 1TB 3.5 inch HDD (7,000rpm) ×4 |
| DVD Drive | SATA connection DVD-ROM drive |
| Interface | Gigabit Ethernet ×2 (100BASE-TX/10BASE-T/1000BASE-T), USB2.0 Type-A x 3 (Rear x 2, Internal x 1), USB3.0 Type-A x 3 (Front x 2, Rear x 5), DVI |
| Input Data Streams | Only a down-link from Prinect |
| Print Resolution | 1,200dpi (2-bit) |
| Supported Data Formats | PDF Version 1.7 |
| Built-in Fonts | Roman PS font: 138 fonts |
| Power Source | 100-240 V, 3.9 A, 50/60MHz |
| Power Consumption | 400 W |
| Dimensions (W x D x H) | 193 × 525.3 × 424 mm (7.6 × 20.7 × 16.7 inches) |
| Weight | Approximately 17 kg (37.5 lbs.) |

Prinect DFE for Versafire CP

| Item | Description |
|------------------------|---|
| CPU | 6th Gen Core i7-6700 3.4GHz |
| Memory | 64 GB (16 GB ×4) |
| HDD | SATA connection 1TB 3.5 inch HDD (7,000rpm) ×4 |
| DVD Drive | SATA connection DVD-ROM drive |
| Interface | Gigabit Ethernet ×2 (100BASE-TX/10BASE-T/1000BASE-T), USB2.0 Type-A x 3 (Rear x 2, Internal x 1), USB3.0 Type-A x 3 (Front x 2, Rear x 5), RDTU x2, DVI |
| Input Data Streams | Only a down-link from Prinect |
| Print Resolution | 1,200 dpi (8-bit) |
| Supported Data Formats | PDF Version 1.7 |

| Item | Description |
|------------------------|---|
| Built-in Fonts | Roman PS font: 138 fonts |
| Power Source | 100-240 V, 3.9 A, 50/60MHz |
| Power Consumption | 400 W |
| Dimensions (W x D x H) | 193 × 525.3 × 424 mm (7.6 × 20.7 × 16.7 inches) |
| Weight | Approximately 17 kg (37.5 lbs.) |