Field Feature Bill of Material

PN 26L0453
Storage Expansion (FC 5047)
in IBM 3746 Model 9X0 with FC 5423
(Network Node Processor A or B - Type 6275)

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Before Installation (Steps 1-8)

1.0 Machines Affected

3746 Model 9X0 with FC 5423 (Network Node Processor A or B - Type 6275 Model 56U or 83U).

This feature should only be applied on the machine serial number for which it is specified.

2.0 Related BMs and ECs

None.

3.0 BMs to be Installed

26L0453 Network Node Processor Memory Expansion.

4.0 Preparation

1. Familiarize yourself with the purpose and details of the installation instruction before negotiating machine time with the customer.
2. Check all items listed on the BM(s) to determine that all parts have been received.

   Note: Whenever required for a dual NNP configuration, the NNP memory expansion must be installed in both processors.

5.0 Programming

None.

6.0 Purpose and Description

6.1 Purpose

To support large network configuration on 3746-9x0.

6.2 Description

To install one additional **DIMM** on system board of the Network Node Processor A or B.

7.0 Installation Time

FFBM	Machine Hrs.	System Hrs.	Nbr of CEs
26L0453	See Note.	0.0	1

Notes:

1. No machine time is required if two Network Node Processor are installed and backup function is selected.
2. If only one Network Node Processor is installed, all the lines depending on it should be deactivated for about 1 hour..

8.0 Tools/Material Required

E.S.D. Kit p/n 6428316

General Layout of Components

Figure 1 shows the Network Node Processor system unit with the covers removed. This figure illustrates the general layout of the system unit. This general layout is the same for all configurations, even though component units (input/output, storage, and so forth) may be changed or added.

Figure 2 on page 6 shows the locations of components and connectors on the current system board. Note that the locations of system board components could change with different system boards.

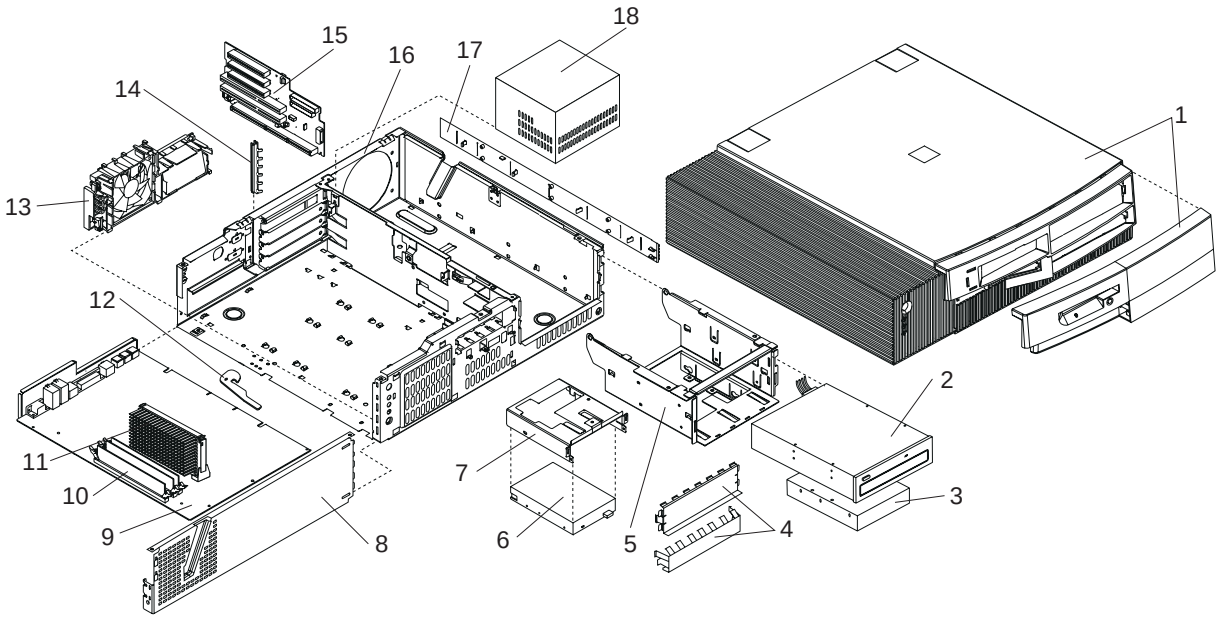


Figure 1. Network Node Processor Exploded View

9 System board
10 DIMM

8.1.1 Service Processor (Type 6275) Pentium II, Pentium III System Board

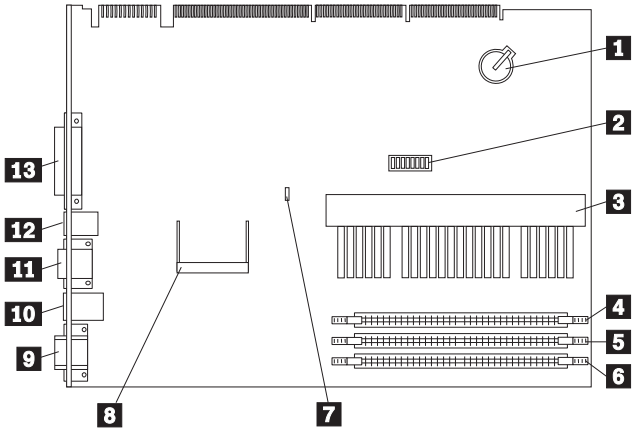


Figure 2. 6275 System Board

1	Battery
2	Switch SW1
3	Microprocessor socket
4	DIMM socket 0
5	DIMM socket 1
6	DIMM socket 2
7	CMOS clear Jumper J9
8	Video Memory connector
9	Display connector
10	Mouse/Keyboard connectors (top=mouse, bottom=keyboard)
11	Serial connectors (top=serial port 2, bottom=serial port 1)
12	USB connectors (top=USB2, bottom=USB1)
13	Parallel connector

8.2 The Network Node Processor Location

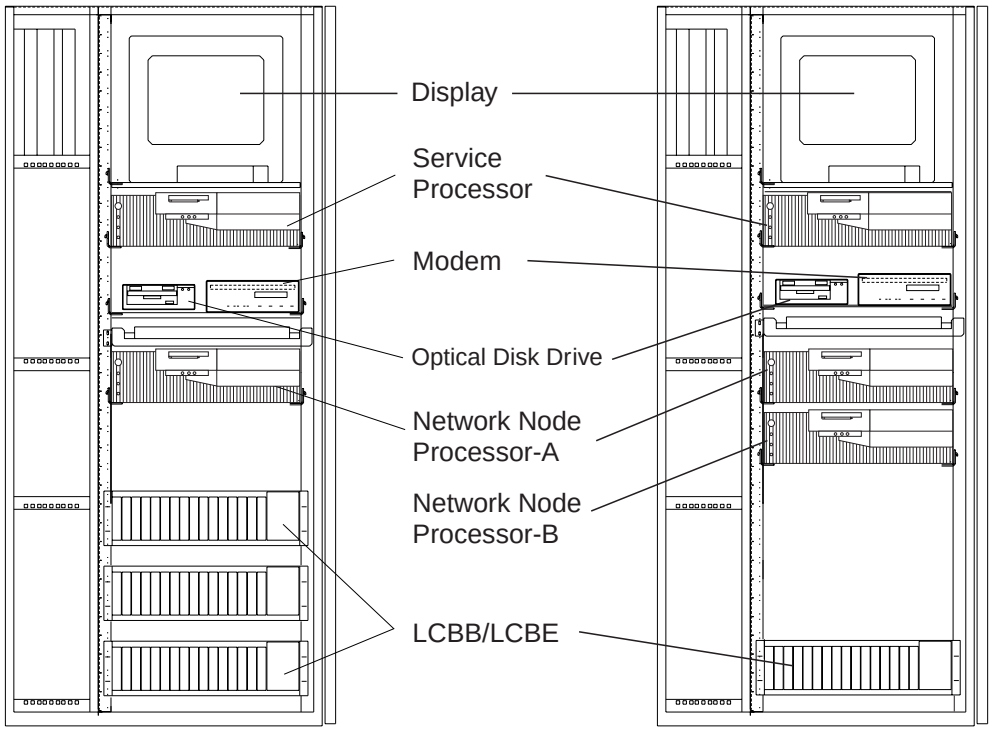


Figure 3. Units Installation in the Controller Expansion (SP and NNP Type 6275)

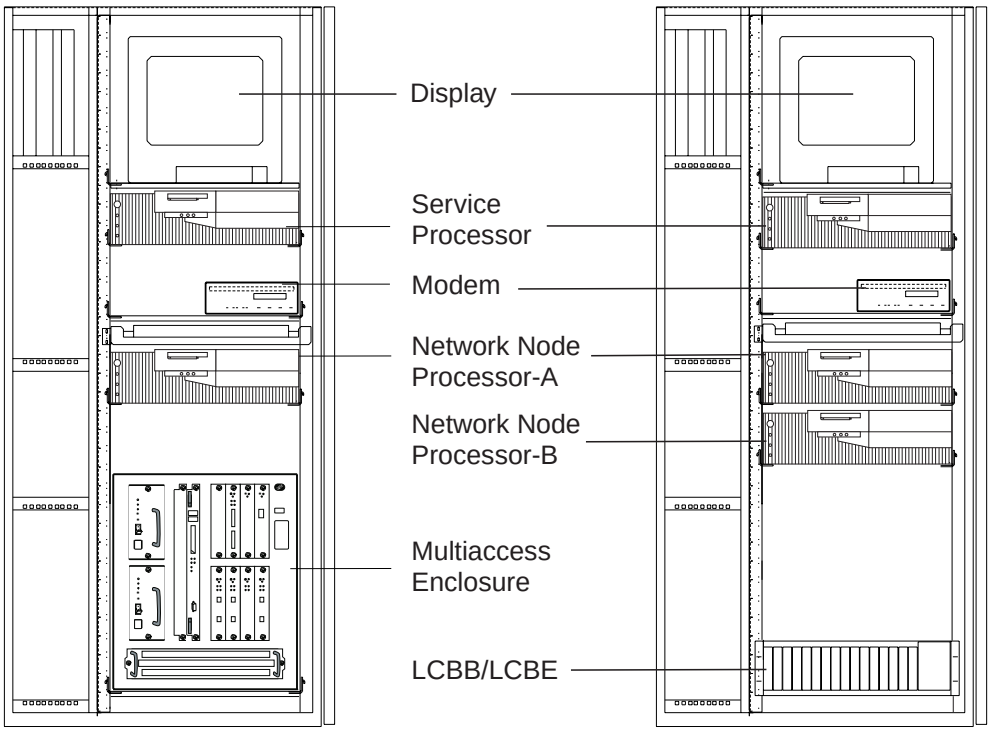


Figure 4. Units Installation in the Controller Expansion (SP and NNP Type 6275 + MAE)

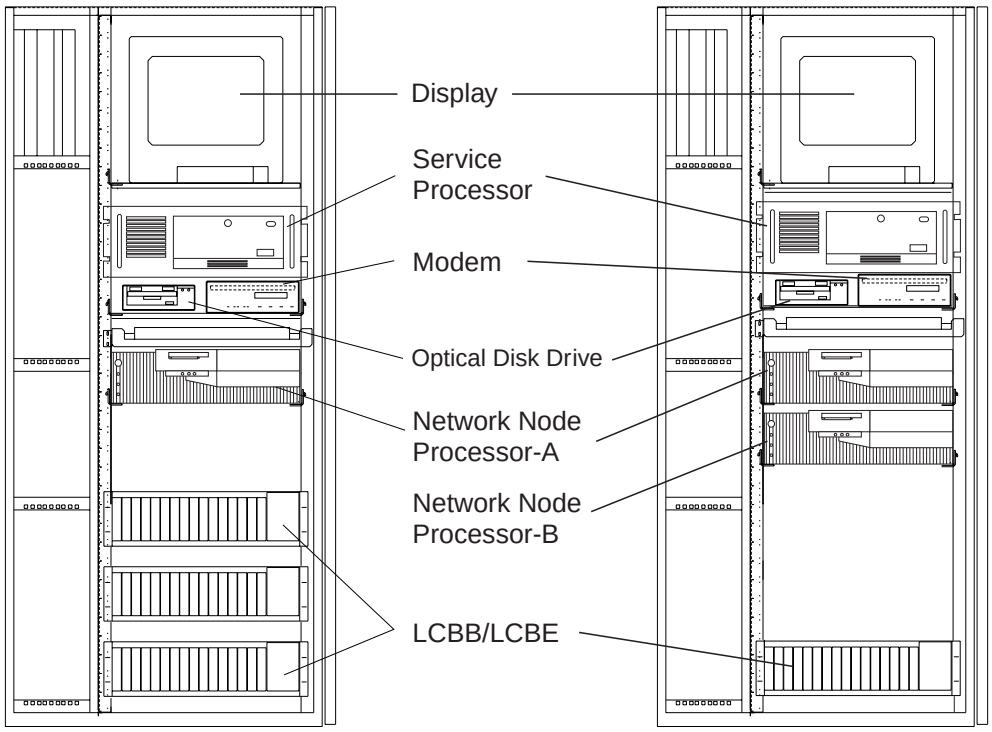


Figure 5. Units Installation in the Controller Expansion (SP Type 7585 NNP Type 6275)

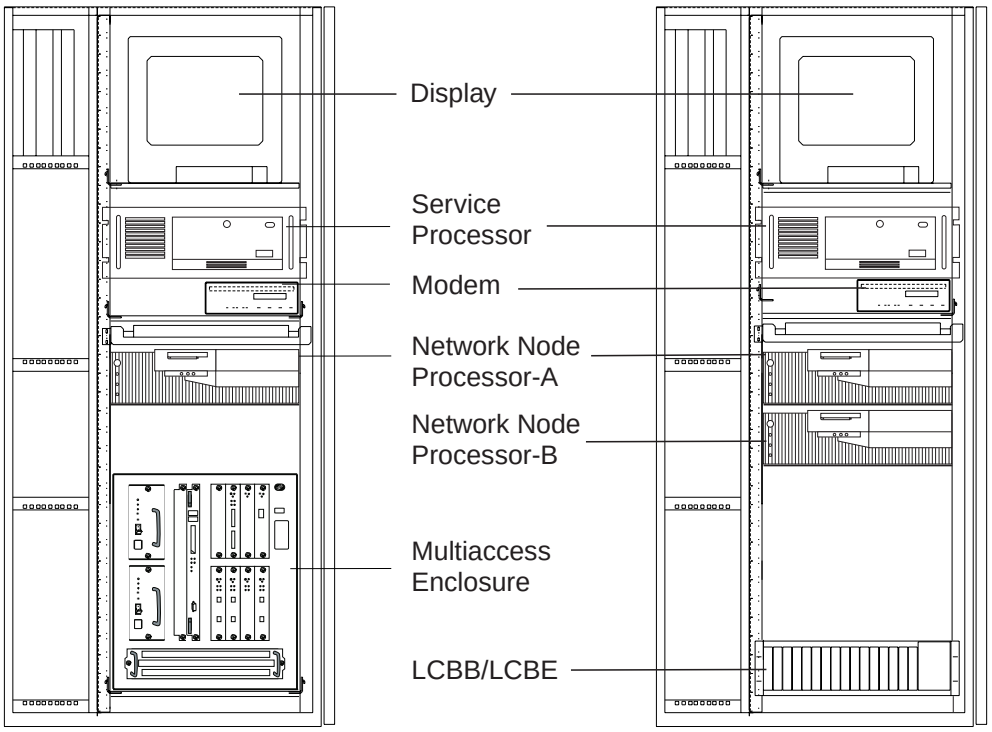


Figure 6. Units Installation in the Controller Expansion (SP Type 7585 NNP Type 6275 + MAE)

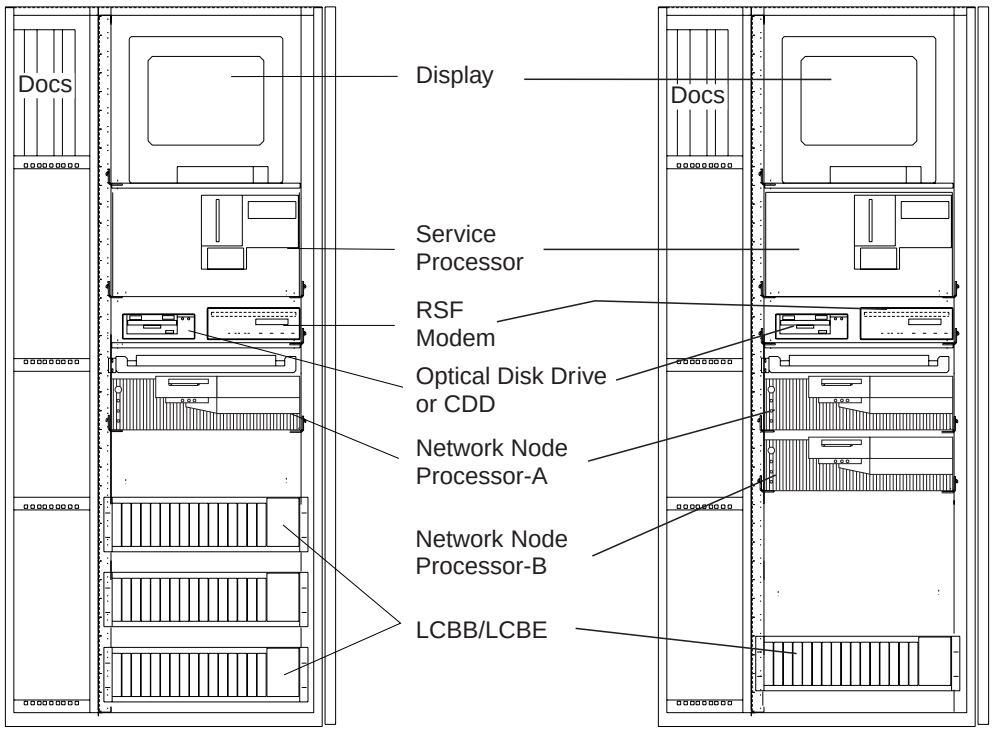


Figure 7. Units Installation in the Controller Expansion (SP Type 3172 NNP Type 6275)

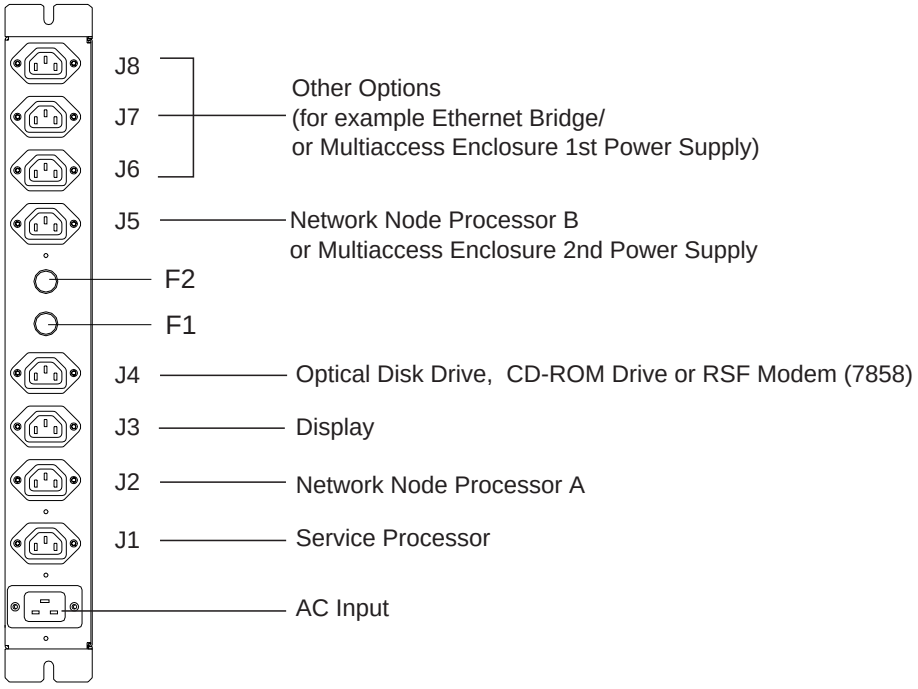
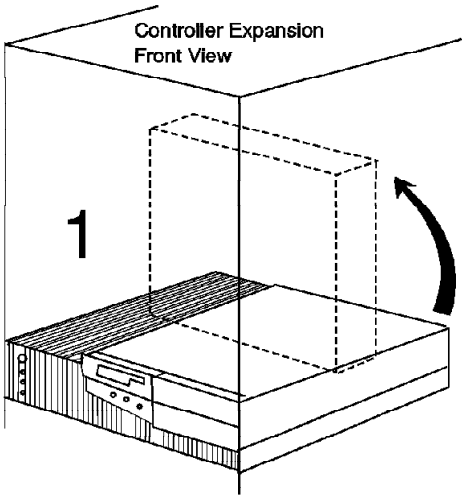


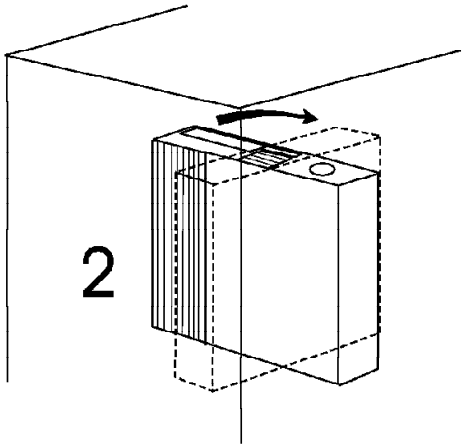
Figure 8. Connecting the Units to the ac Outlet Distribution Box.

8.3 Removing the 6275 From the Controller Expansion

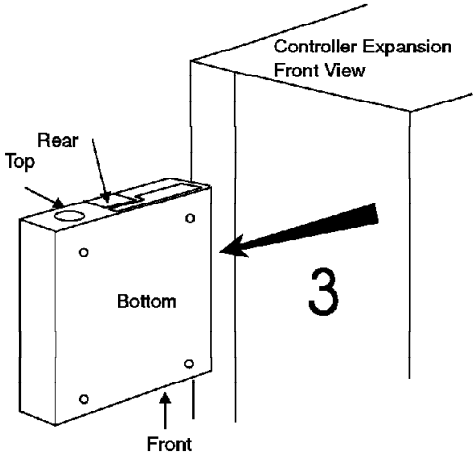
- You need about 50 centimeters (21 inches) free above the brackets where the 6275 is installed. Remove any material necessary to satisfy this requirement.
- Inside the controller expansion, rotate the 6275 to have the rear of the 6275 on the top (see reference **1**).
- Once the 6275 is vertical, place it in the middle of the controller expansion.



- Rotate the 6275 90 degrees clockwise (see reference **2**).

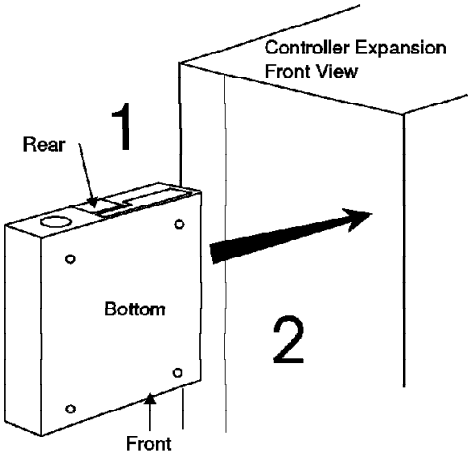


- Extract the 6275 from the controller expansion (see reference **3**).
- Continue the procedure from where you came.

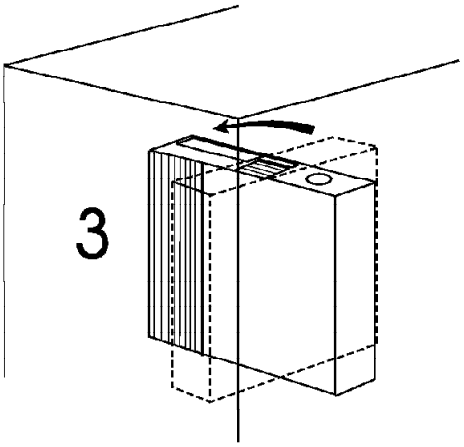


8.4 Installing the 6275 into the Controller Expansion

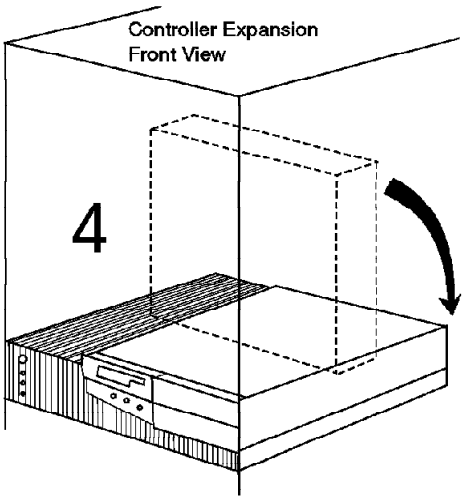
- You need about 50 centimeters (21 inches) free above the brackets where you want to install the 6275. Remove any material necessary to satisfy this requirement.
- Turn the 6275 vertically to have the rear panel on the top (see drawing **1**).
- Insert vertically the 6275 into the controller expansion (**2**).



- When the 6275 is in the middle of the controller expansion, rotate the 6275 90 degrees counterclockwise (see reference **3**).



- Rotate the 6275 to have its rear panel near the rear of the controller expansion (**4**).
- Once the 6275 is horizontal in the controller expansion, install it on the brackets.
- Continue the procedure from where you came.



Installation (Steps 9-12)

9.0 Safety

See *Safety Notices* located in the:

- *Network Node Processor Installation and Maintenance (Based on 6275)* manual SY33-2126, and
- *3745 Communication Controller Models 210 to 61A Maintenance Information Procedures*, SY33-2054, or
- *3745 Communication Controller Models 130 to 17A Maintenance Information Procedures*, SY33-2070

10.0 Details of Installation.

10.1 Preparing for the Installation

__ 1. Open the front and rear doors of the Controller Expansion.

__ 2. Locate the Network Node Processor. (Refer from Figure 3 on page 7 to Figure 7 on page 11).

__ 3. If a diskette is installed in the diskette drive, remove it and store safety until installation is completed.

__ 4. Switch the power **OFF (O)**.

__ 5. From the rear side of the Network Node Processor, disconnect the Power cord and the LAN cable.

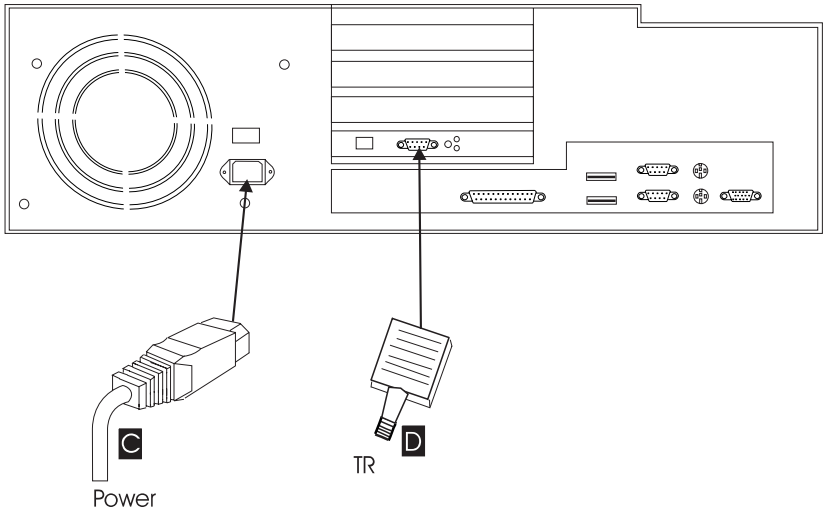


Figure 9. Network Node Processor Cables Connection

__ 6. Remove the Network Node Processor unit from the Controller Expansion. If you have any difficulty to remove the unit, refer to 8.3, “Removing the 6275 From the Controller Expansion” on page 12, then go to next step.

__ 7. Take the unit and put it down on a table.

10.2 Removing the NNP Cover.

__ 1. Refer to Figure 10

__ 2. Unlock cover from back of the system unit

__ 3. Then, remove the cover.

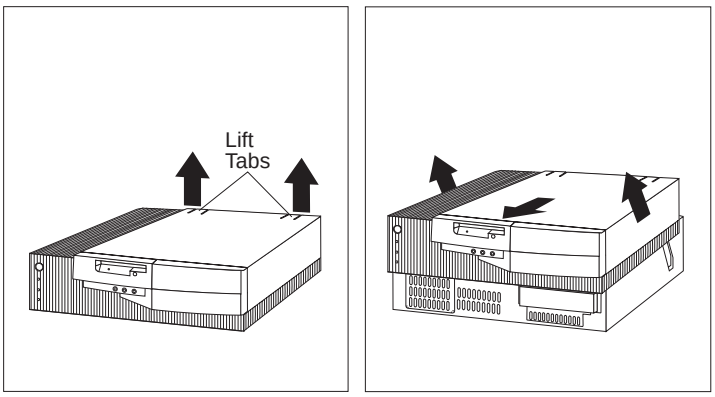


Figure 10. Remove the 6275 Covers

10.3 DIMM installation.

Caution

You should use the field electrostatic discharge (ESD) kit when you are handling a DIMM. Guidelines for using the ESD tools are printed inside the kit lid.

__ 1. Refer to Figure 1 on page 5 and locate the system board **9** .

__ 2. Refer to Figure 2 on page 6 and locate the DIMM sockets **4** , **5** , and **6** of Network Node Processor system board.

__ 3. Plug the DIMM into:

- Socket 1 **5** if you have one 128 MB memory installed in socket 0 **4** .
- Socket 2 **6** if you have two 64 MB memory installed in socket 0 **4** and 1 **5** .

__ 4. Reinstall the cover on the network node processor frame.

10.4 Reinstalling the Network Node Processor.

Reinstall the Network Node Processor in its original location:

__ 1. Slide the network node processor unit in the controller expansion from the front side If you have any difficulty to reinstall the unit, refer to 8.4, “Installing the 6275 into the Controller Expansion” on page 13, then go to next step.

__ 2. From the rear panel of the Network Node Processor, reconnect the Power cord and the LAN cable refer to Figure 9 on page 15 and Figure 8 on page 11 to connect the NNP to the ac outlet distribution box.

11.0 Test Procedures

__ 1. Power **OFF** the service processor.

__ 2. Disconnect the display and keyboard, from the rear side of the Service Processor.

__ 3. Connect the display and keyboard at the rear of the network node processor.

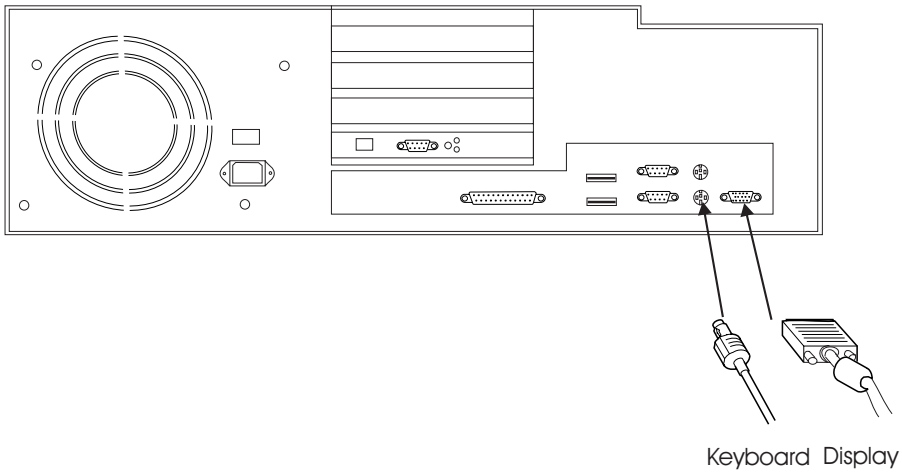


Figure 11. How to Connect the Display and the Keyboard on the Network Node Processor.

__ 4. Power **ON** the network node processor

__ 5. You get the following error messages:

a. *164 Memory Size Error*

b. *POST Startup Error* screen, press **Enter** to continue

c. *Configurator Error* screen, press **Enter** to continue

From the following window select **System Summary** **1**

```
Configuration/Setup Utility

Select Option:

- System Summary              1
- Product Data
- Device and I/O Ports
- Start Options
- Date and Time
- System Security
- Advanced Setup
- ISA Legacy Resources
- Power Management

Save Settings
Restore Settings
Load Default Settings

Exit Setup
```

__ 6. If your network node processor is based on 6275 Model 56U go to Step 7. Otherwise go to Step 8.

__ 7. The following window is displayed, check that the value of the System Memory is 160 MB.

```
          System Summary

Processor         Pentium II
Processor Speed   350MHz
L2 Cache Size     512 KB
Cache State       Enabled with NO ECC
System Memory     160 MB
Memory Type       Non-Parity
Video Controller  S3 Incorporated. TRIO3D.
Diskette Drive A  1.44 MB 3.5"
Diskette Drive B  Not Installed
IDE Hard Disk Drive 0 3228 MB
IDE Hard Disk Drive 1 Not Installed
IDE Hard Disk Drive 2 Not Installed
IDE Hard Disk Drive 3 Not Installed
```

Go to Step 9 on page 19.

__ 8. The following window is displayed, check that the value of the System Memory is 160 MB.

```
          System Summary

Processor         Pentium III
Processor Speed   450MHz
L2 Cache Size     512 KB
Cache State       Enabled with NO ECC
System Memory     160 MB
Memory Type       Non-Parity
Video Controller  S3 Incorporated. TRIO3D.
Diskette Drive A  1.44 MB 3.5"
Diskette Drive B  Not Installed
IDE Hard Disk Drive 0 4224 MB
IDE Hard Disk Drive 1 Not Installed
IDE CD-ROM Drive 2 Installed
IDE Hard Disk Drive 3 Not Installed
```

Go to Step 9 on page 19.

__ 9. **Is the System Memory = 160 MB ?**

- **YES**, go to Step 10.
- **No**, Refer to **Chapter 3 . Network Node Processor Problem Determination** in *Network Node Processor Installation and Maintenance (Based on 6275)*, SY33-2126 to solve the problem.

__ 10. Press **Escape** to return to the **Configuration/Setup Utility** screen.

__ 11. On the **Configuration/Setup Utility** screen, select **Start Options**.

__ 12. Verify or set the keyboardless Operation Mode to **Enabled**.

```
          Start Options

  Startup Sequence

  Keyboard Numlock State     (ON)
  Keyboard Speed             (Fast)
  Keyboard Reset Delay       (Disabled) (Note)
  Disketteless Operation     (Disabled)
  Keyboardless Operation Mode(Enabled)
  Power On Self-Test         (Quick)
  Power On Logos             (Enabled )
  Power On F1/Esc Options    (Enabled )
  Power On Status            (Disabled)
  Virus detection            (Disabled)
```

Note: This option appears only on 6275 Model 83U.

__ 13. Press **Escape** to return to the **Configuration/Setup Utility** screen.

__ 14. On the **Configuration/Setup Utility** screen, select **Save settings** press **Enter** twice to save the parameters.

__ 15. On the **Exit Configuration/Setup Utility** screen, select **Exit Setup** and press **Enter** to leave the configuration setup utility and reboot the NNP.

__ 16. Power **OFF** the NNP.

__ 17. Disconnect the Display and keyboard from the NNP, then reconnect them to the Service Processor.

__ 18. Power **ON** the service processor and the NNP.

__ 19. On the **Service Processor** (**MOSS-E View** screen), the NNP icon should be **green** when the NNP has been successfully re-started and the configuration has been activated.

12.0 Field Updating

None.

After Installation (steps 13-15)

13.0 Publications Update

None.

14.0 Parts Disposition

14.1 Purchased Machines

- For EMEA/APG/AG Areas, refer to *Hardware and General Service Code Description*.
- For Domestic Areas, return parts to the customer.

15.0 Machine Records

- Install the new **MACHINE HISTORY** supplied.
- Report installation and quality problems using existing procedures

End of instructions.