

Lenovo Flex System x280 X6 and x480 X6 Compute Node Type 7196 models ADU and DDU

This *Technical Update* supplements the *Lenovo® Flex System™ x280 X6, x480 X6, and x880 X6 Compute Node Types 7196 and 4258 Installation and Service Guide* that comes with your compute node. It is included with and applies only to the Lenovo Flex System x280 X6 and x480 X6 Compute Node Type 7196 models ADU and DDU.

This Technical Update provides the following information about the Flex System x280 X6 and x480 X6 Compute Node Type 7196 models ADU and DDU:

- “System-board connectors”
- “Installing memory modules” on page 2
- “Removing an eXFlash DIMM” on page 2
- “Installing an eXFlash DIMM” on page 3
- “Parts listing, Type 7196 models ADU and DDU” on page 5

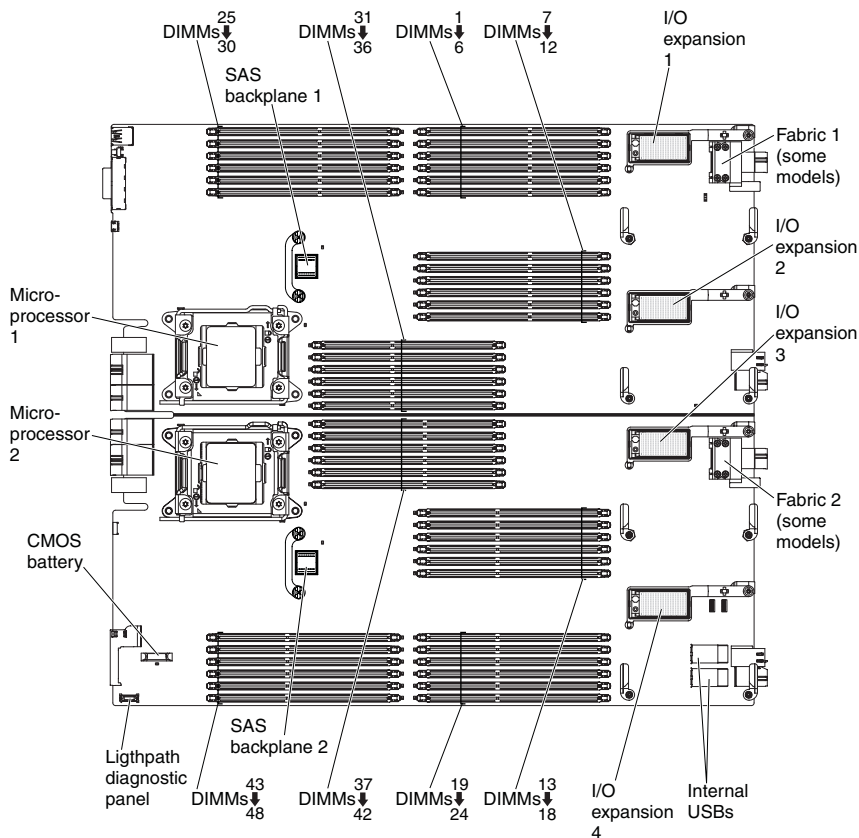
For firmware updates and additional information and requirements, see, <http://www.ibm.com/support/entry/portal/docdisplay?lnodocid=SERV-FLASHDM>.

System-board connectors

Use this information to locate compute node system-board components and connectors.

The following illustration shows the system-board components and connectors.

Note: The compute node comes populated with 16 RDIMMs and 12 eXFlash DIMMs.



Installing memory modules

The compute node comes populated with 16 GB RDIMMs. See “System-board connectors” on page 1 for the locations of the DIMM connectors.

See Table 1 for the DIMM connectors populated with RDIMMs.

Table 1. DIMM connectors populated with RDIMMs

DIMM connector	DIMM connector	DIMM connector	DIMM connector
DIMM 1	DIMM 4	DIMM 7	DIMM 10
DIMM 15	DIMM 18	DIMM 21	DIMM 24
DIMM 25	DIMM 28	DIMM 33	DIMM 36
DIMM 37	DIMM 40	DIMM 45	DIMM 48

Removing an eXFlash DIMM

Use this information to remove an eXFlash DIMM.

Before you begin

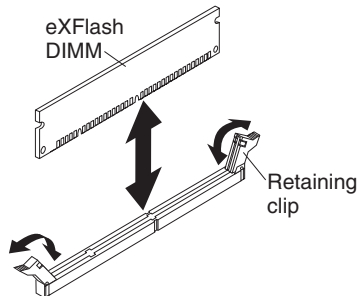
Before you remove an eXFlash DIMM, complete the following steps:

1. Review the safety information and installation guidelines in the *Installation and Service Guide* for your compute node.

2. If the compute node is installed in a Flex System chassis, remove it (see the *Installation and Service Guide* for your compute node for instructions).
3. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

Procedure

To remove an eXFlash DIMM, complete the following steps.



1. Remove the cover (see the *Installation and Service Guide* for your compute node for instructions).
2. Remove the air baffle that is installed over the DIMM connector.
3. Locate the DIMM connectors (see “System-board connectors” on page 1 for the locations of the DIMM connectors). Determine which eXFlash DIMM you want to remove from the compute node.
Attention: To avoid breaking the retaining clips or damaging the DIMM connectors, handle the clips gently.
4. Make sure that both retaining clips on the DIMM connector from which you are removing the eXFlash DIMM are in the open position.
5. Pull the eXFlash DIMM out of the connector.
6. If you are not immediately replacing the eXFlash DIMM, install the air baffle.

Attention:

- Install the air baffles with the arrow indicating air flow direction pointing to the rear of the compute node.
- To maintain proper system cooling, do not operate the compute node without air baffles installed over the DIMM connectors.

What to do next

If you are instructed to return the eXFlash DIMM, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Installing an eXFlash DIMM

Use this information to install an eXFlash DIMM.

Before you begin

Before you install an eXFlash DIMM, complete the following steps:

1. Review the safety information and installation guidelines in the *Installation and Service Guide* for your compute node.
2. Read the documentation that comes with the eXFlash DIMMs.
3. If the compute node is installed in a Flex System chassis, remove it (see the *Installation and Service Guide* for your compute node for instructions).

4. Carefully lay the compute node on a flat, static-protective surface, orienting the compute node with the bezel pointing toward you.

About this task

The following notes describe information that you must consider when you install eXFlash DIMMs:

- The compute node supports 12 eXFlash DIMMs only.
- Lockstep mode, mirrored-channel mode, and rank sparing are not supported when eXFlash DIMMs are installed.
- eXFlash DIMMs operate at the same DIMM frequency as the speed of the RDIMMs installed in the compute node.
- eXFlash DIMMs operate only at 1.5 V.
- For more information about eXFlash DIMM requirements, see <http://www.ibm.com/support/entry/portal/docdisplay?lnodocid=SERV-FLASHDM>.

Note: The amount of eXFlash DIMM storage that is displayed in the Setup utility might be different from the amount of eXFlash DIMM storage installed in the compute node.

See Table 2 for the DIMM connectors populated with eXFlash DIMMs. See “System-board connectors” on page 1 for the locations of the DIMM connectors.

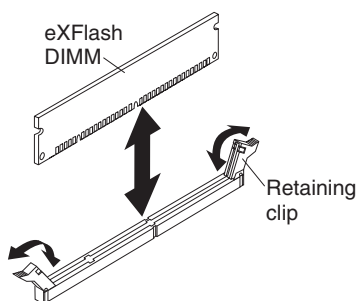
Table 2. DIMM connectors populated with eXFlash DIMMs

DIMM connector	DIMM connector	DIMM connector	DIMM connector
DIMM 2	DIMM 5	DIMM 8	DIMM 11
DIMM 14	DIMM 17	DIMM 20	DIMM 23
DIMM 26	DIMM 29	DIMM 44	DIMM 47

Procedure

To install an eXFlash DIMM, complete the following steps:

1. Remove the cover (see the *Installation and Service Guide* for your compute node for instructions).
2. Read the documentation that comes with the eXFlash DIMM.
3. Remove the air baffle installed over the DIMM connector.
4. Locate the DIMM connectors (see “System-board connectors” on page 1 for the locations of the DIMM connectors). Determine in which DIMM connector you want to install the eXFlash DIMM.
5. Touch the static-protective package that contains the eXFlash DIMM to any *unpainted* metal surface on the Flex System chassis or any *unpainted* metal surface on any other grounded rack component in the rack in which you are installing the eXFlash DIMM for at least 2 seconds; then, remove the eXFlash DIMM from the package.



6. Make sure that both retaining clips on the DIMM connector are in the open position.

7. Turn the eXFlash DIMM so that the eXFlash DIMM keys align correctly with the DIMM connector on the system board.
Attention: To avoid breaking the retaining clips or damaging the DIMM connector, handle the clips gently.
8. Press the eXFlash DIMM into the DIMM connector. The retaining clips lock the eXFlash DIMM into the connector.
9. Make sure that the small tabs on the retaining clips engage the notches on the eXFlash DIMM. If there is a gap between the eXFlash DIMM and the retaining clips, the eXFlash DIMM has not been correctly installed. Press the eXFlash DIMM firmly into the connector, and then press the retaining clips toward the eXFlash DIMM until the tabs are fully seated. When the eXFlash DIMM is correctly installed, the retaining clips are parallel to the sides of the eXFlash DIMM.
10. Install the air baffle over the DIMM connector.
Attention:
 - Install the air baffles with the arrow indicating air flow direction pointing to the rear of the compute node.
 - To maintain proper system cooling, do not operate the compute node without air baffles installed over the DIMM connectors.

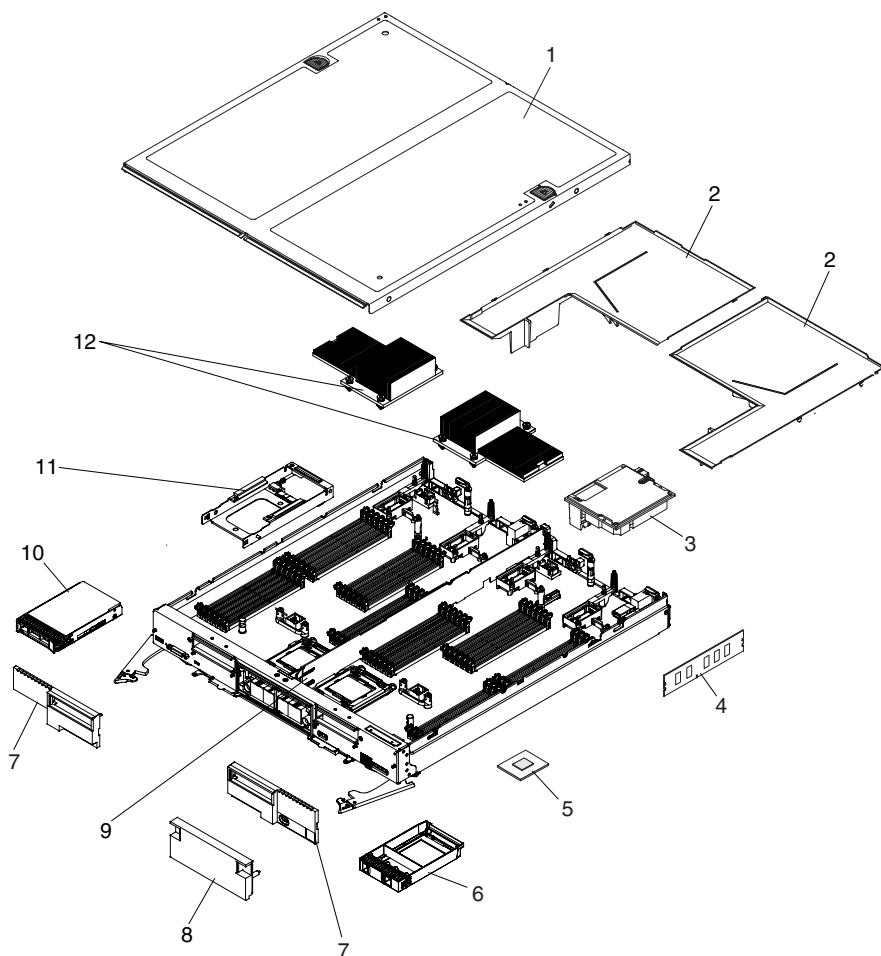
What to do next

After you install the eXFlash DIMM, complete the following steps:

1. Install the cover onto the compute node (see the *Installation and Service Guide* for your compute node for instructions).
2. Install the compute node into the chassis (see the *Installation and Service Guide* for your compute node for instructions).

Parts listing, Type 7196 models ADU and DDU

The following replaceable components are available for the Flex System x280 X6 and x480 X6 Compute Node Type 7196 models ADU and DDU.



Index	Description	Tier 1 CRU part number	FRU part number
1	Top cover (when ordering this part, order the Label Kit part number 00MP305)	00AG908	
2	Air baffle kit	00AG905	
3	Flex System CN4054R 10 Gb Virtual Fabric Adapter	00Y3309	
4	Memory, 16 GB 2R x 4 4 Gbit DDR-3 1600 MHz 1.35V LP RDIMM	46W0674	
5	Intel Xeon Processor E7-2870V2 15C 2.3 GHz 30 MB Cache 1600 MHz 130W		00Y3974
5	Intel Xeon Processor E7-4890V2 15C 2.8 GHz 37.5 MB Cache 1600 MHz 155W		44X3998
6	Not available		
7	Bezel, front assembly kit	00MP304	
8	SMP filler	00AG911	
9	Center partition	00AG904	
10	Solid state drive, 200 GB SAS 2.5 inch Enterprise MLC G3 hot-swap	00AJ208	
11	Hard disk drive backplane, SAS single 2.5 inch	00Y3878	
12	Heat sink, microprocessor	00AG887	
	Alcohol wipes	59P4739	

Index	Description	Tier 1 CRU part number	FRU part number
	Thermal grease kit	41Y9292	
	Adapter connector retention kit	00AG916	
	Base assembly (includes chassis and system board)		00MT370
	Label kit	00MP305	
	Microprocessor installation tool	94Y9971	
	Miscellaneous parts kit	00AG910	
	CMOS battery, 3.0 volt (all models)	33F8354	
	CRM handle kit	00AG915	
	Rear bulkhead assembly full wide	46M2833	
	eXFlash DIMM, 400 GB SATA MLC	00FE006	

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