

Servicing the Lenovo ThinkSystem NE2552E Flex Switch

The Lenovo logo is a red vertical rectangle with the word "Lenovo" in white, oriented vertically. A small trademark symbol (TM) is located at the top right of the word.

Lenovo™

ES41722

May 2018

Prerequisites

Prerequisites for this course include the following course:

GX60607 – Servicing the Flex System Enterprise Chassis

<https://lenovoedu.lenovo.com/course/view.php?idnumber=gx60607>

Objectives

After completing the course, you will be able to:

- Provide an overview of the Lenovo ThinkSystem NE2552E Flex Switch
- Describe the ThinkSystem QLogic Ethernet adapter options
- Describe the features and specifications of the switch
- Explain how to configure the switch
- Explain how to update the firmware
- List the removal and replacement steps
- List the problem determination steps and explain how to troubleshoot the ThinkSystem NE2552E Flex Switch

Product overview

Front, rear, inside view, product description, network adapter options

Lenovo ThinkSystem NE2552E Flex Switch product overview

The Lenovo ThinkSystem NE2552E Flex Switch is an embedded switch module for the Flex System. The NE2552E Flex Switch is designed for the data center to provide 10 Gb or 25 Gb Ethernet server connectivity with 50 Gb and 100 Gb Ethernet upstream links.

The NE2552E Flex Switch interoperates seamlessly with Flex System compute nodes and connects the latest ThinkSystem SN850 and ThinkSystem SN550 servers with ThinkSystem QLogic Ethernet adapters to the network at speeds up to 50 Gbps. Adding the NE2552E Flex Switch and the ThinkSystem Qlogic Ethernet adapter can multiply networking speed 2.5 to 5 times. The NE2552E Flex Switch can support up to sixty-four 10 Gb Ethernet connections while providing Layer 2 and Layer 3 switching in addition to OpenFlow and easy connect modes.

The ThinkSystem NE2552E Flex Switch is referred to as NE2552E Flex Switch throughout this document. The ThinkSystem QLogic Ethernet adapter is referred to as QLogic Ethernet adapter.

Front view

Move your mouse pointer over each component to view the description.



For external network connectivity, the NE2552E Flex Switch offers eight SFP28/SFP+ ports that support 10 GbE SFP+ and 25 GbE SFP28 optical transceivers, active optical cables (AOCs), and direct attach cables (DACs). The switch also offers four QSFP28 ports that support 100 GbE QSFP28 optical transceivers, AOCs, and DACs. The QSFP28 ports can also be split out into four 25 GbE or two 50 GbE connections by using breakout cables.

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RJ-45
Management
network port
10 / 100 / 1000
Gb Base-T

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Rear view

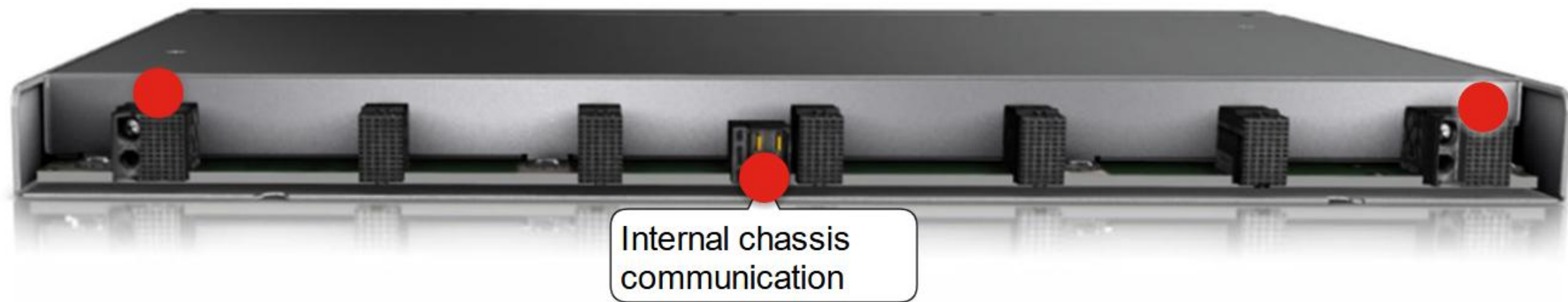
Move your mouse pointer over each component to view a description.



Connections at the rear of the NE2552E Flex Switch provides twenty-eight internal ports that can be configured as twenty-eight 10 GbE ports, twenty-eight 25 GbE ports, fourteen 50 GbE ports, or certain combinations of 10 GbE, 25 GbE, and 50 GbE ports.

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Rear view

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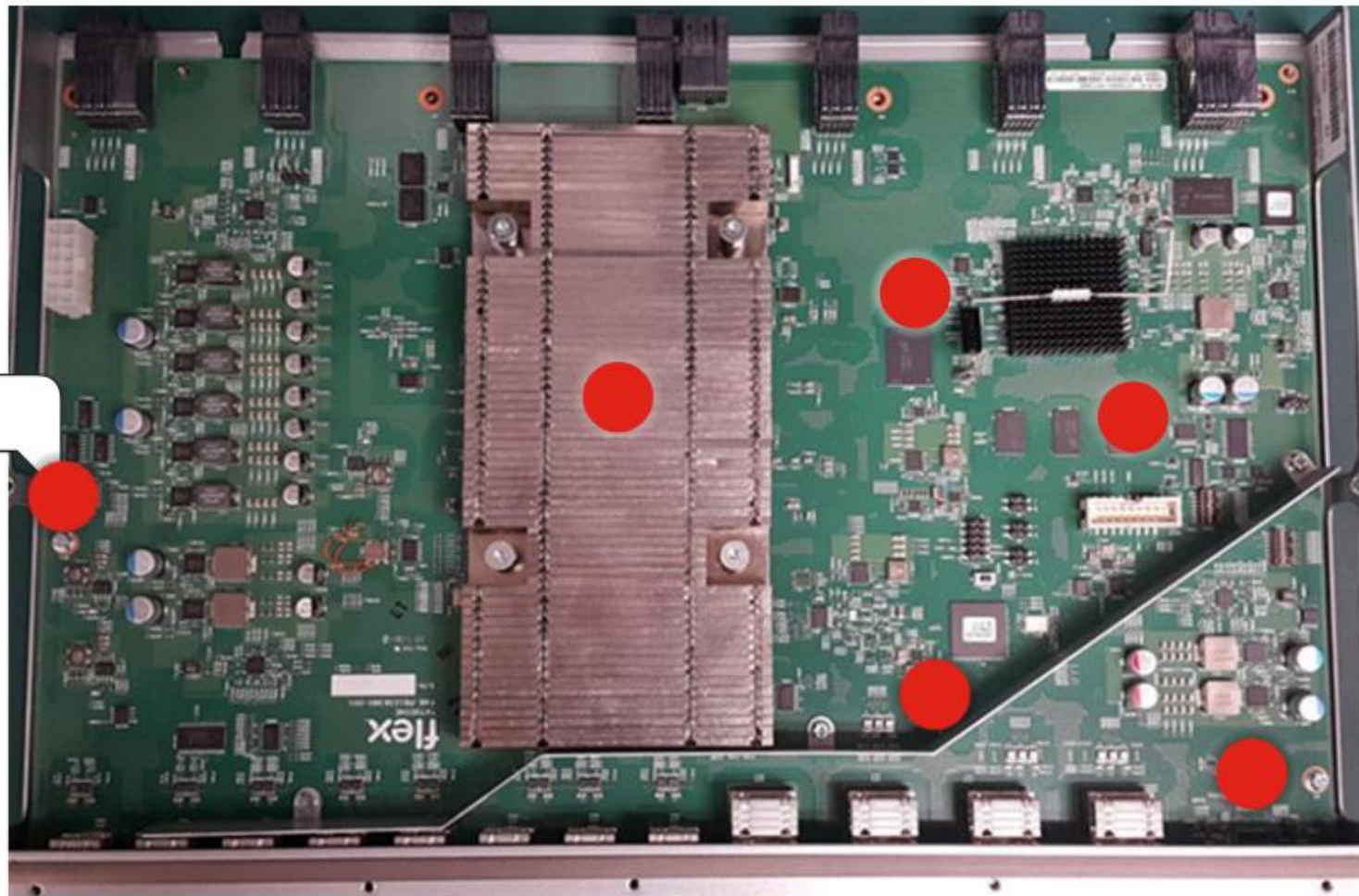


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Inside view

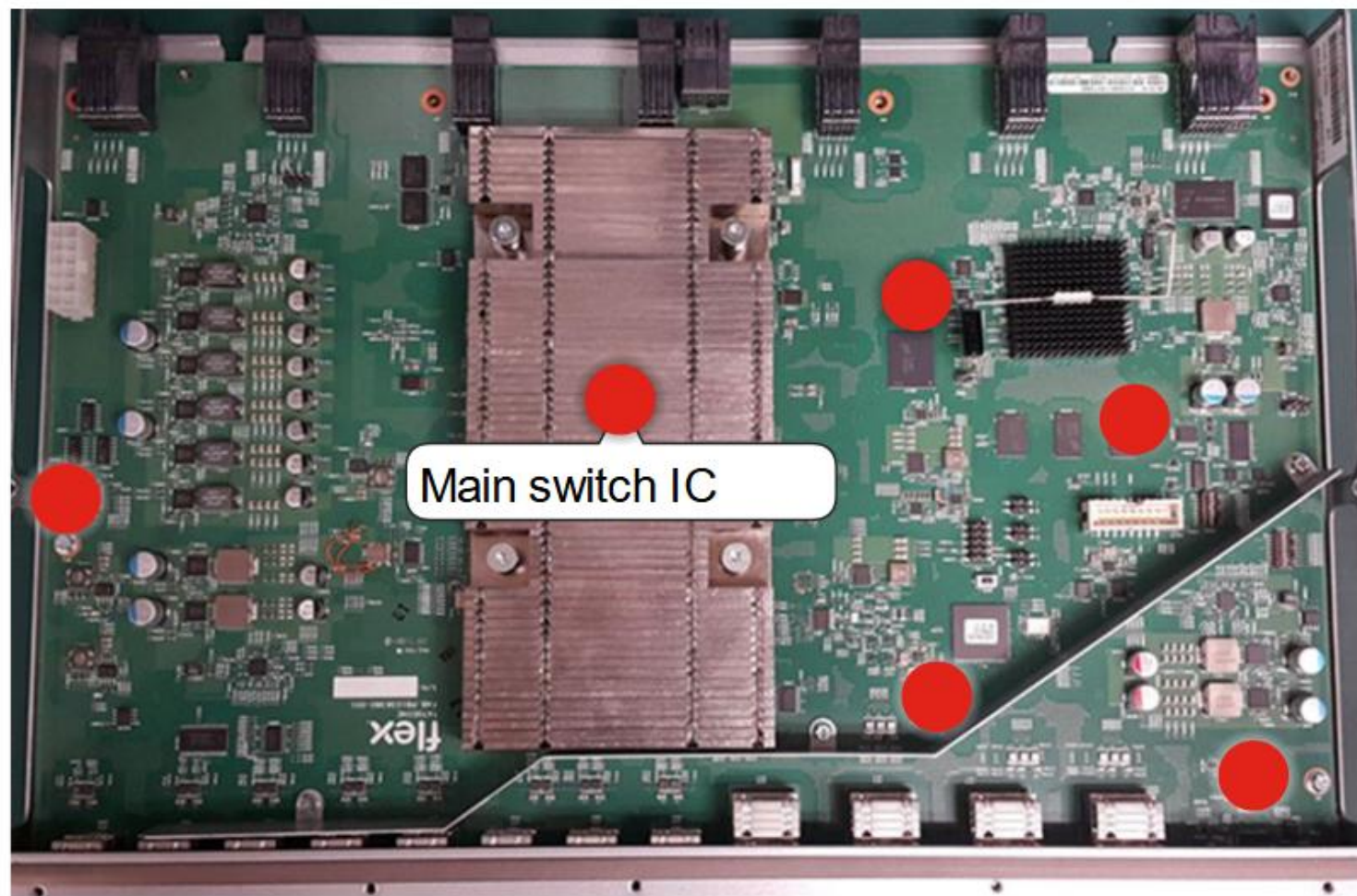
Move your mouse pointer over each component to view a description.

Power manager



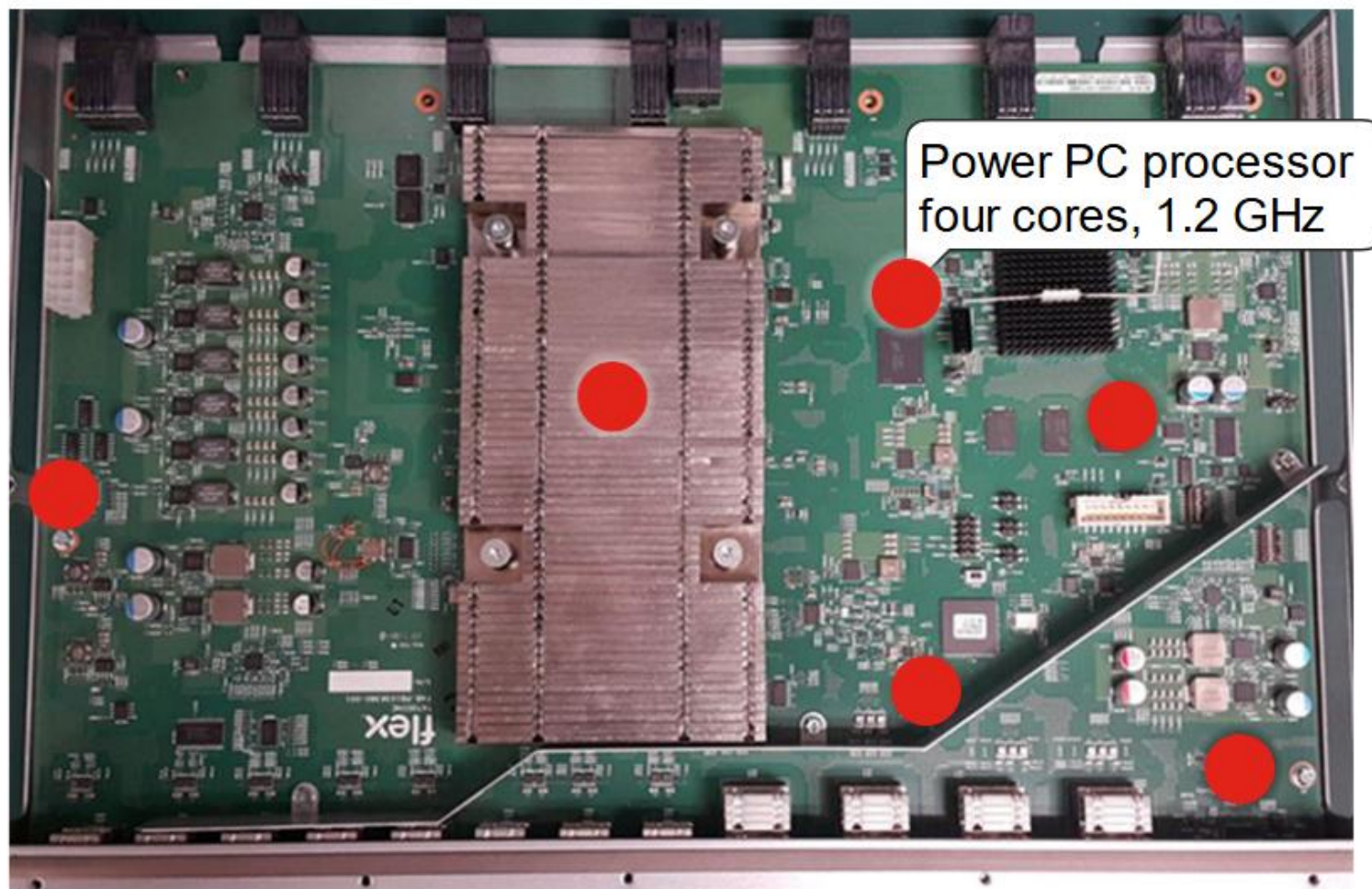
Inside view

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Inside view

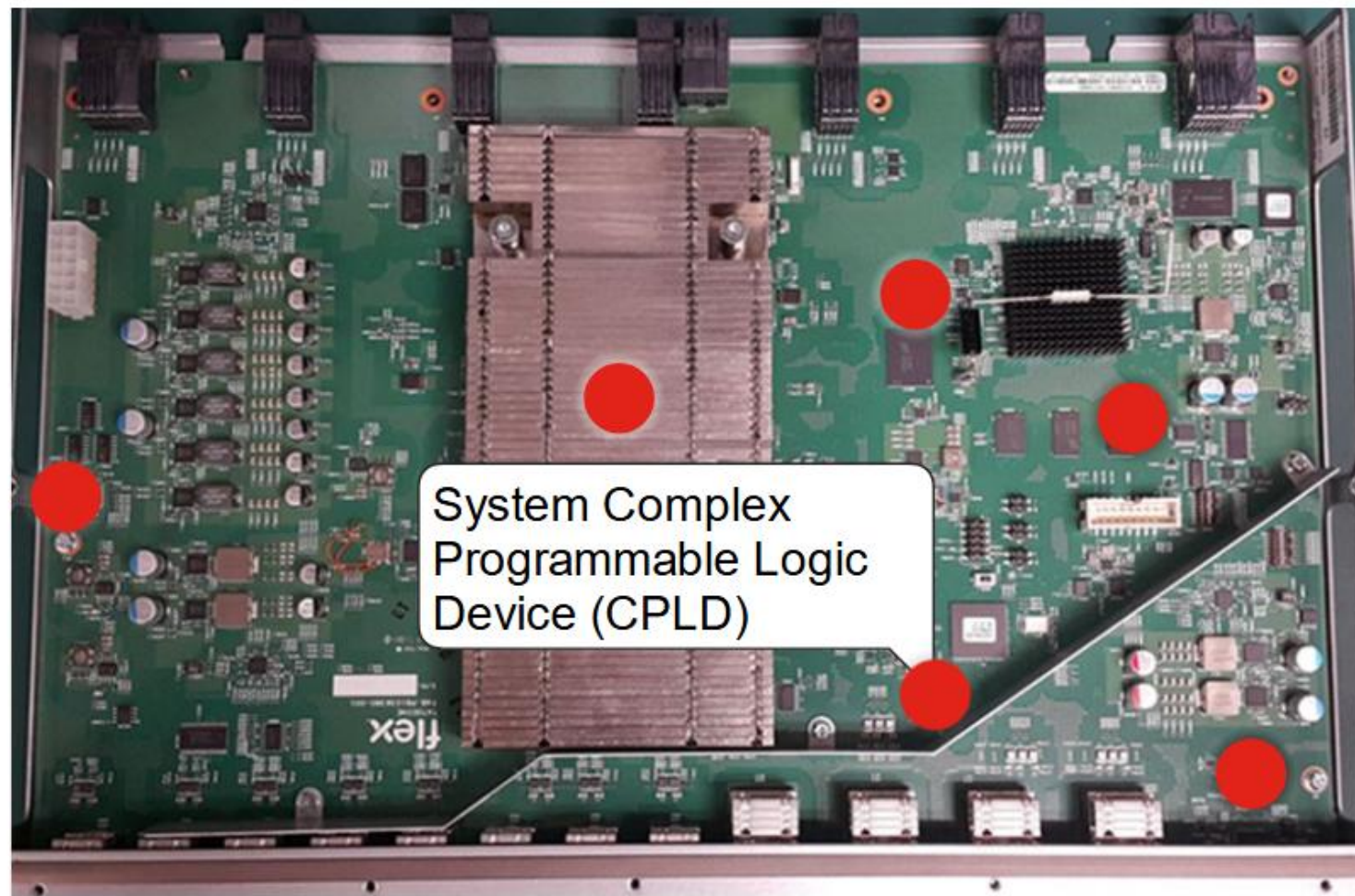
Move your mouse pointer over each component to view a description.



Power PC processor
four cores, 1.2 GHz

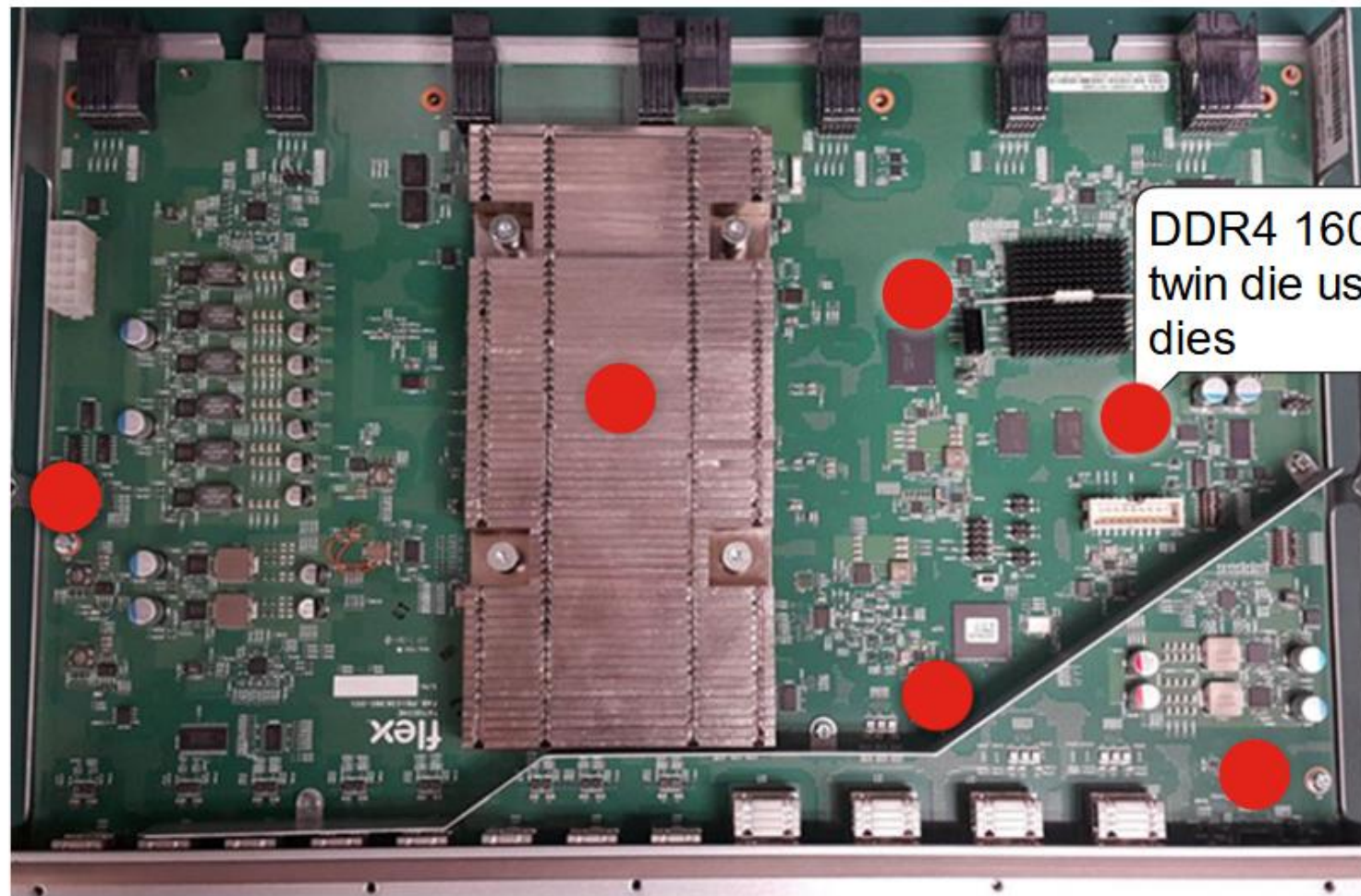
Inside view

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Inside view

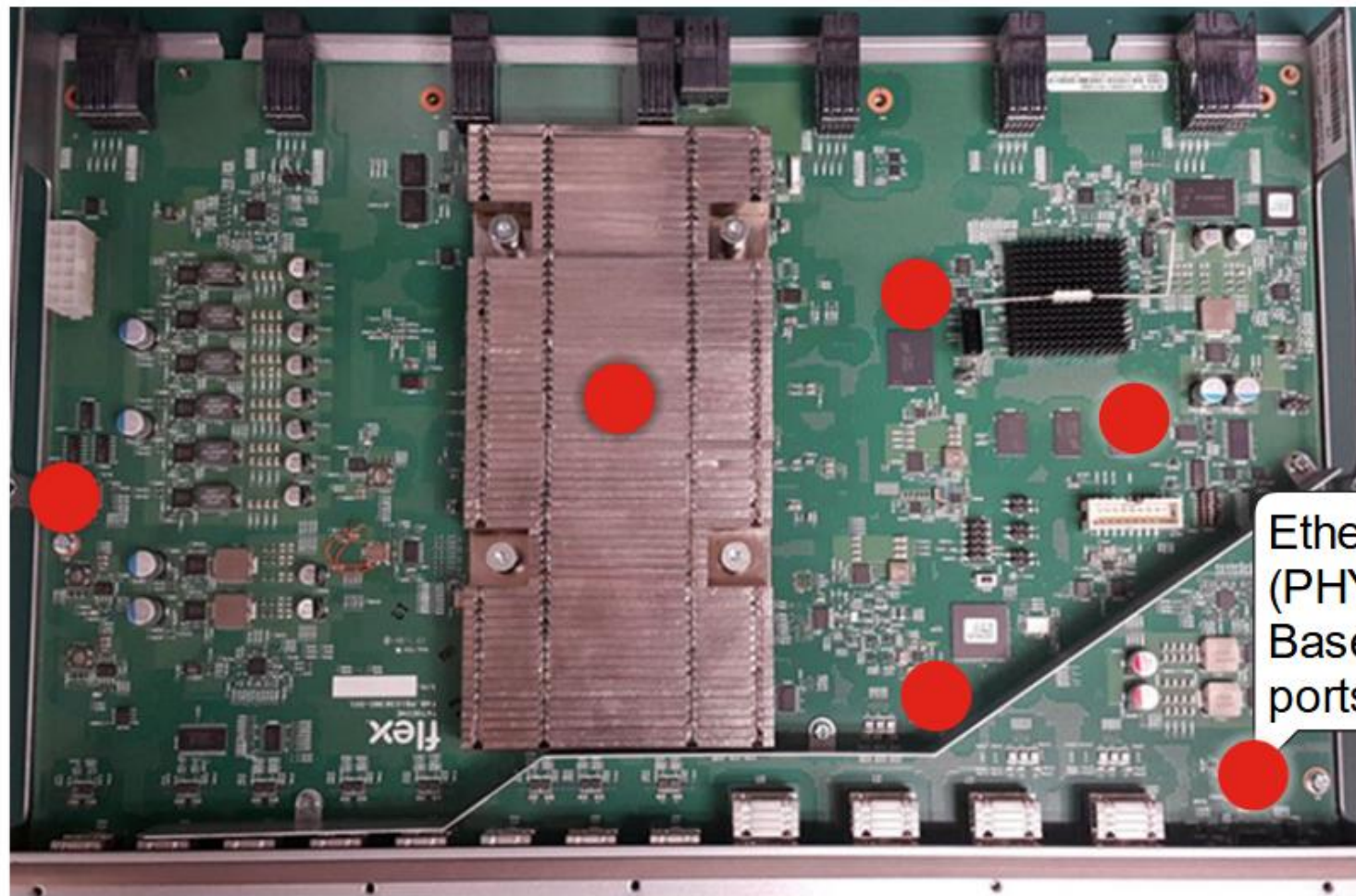
Move your mouse pointer over each component to view a description.



DDR4 1600 MHz 16 Gb
twin die uses two 8 Gb
dies

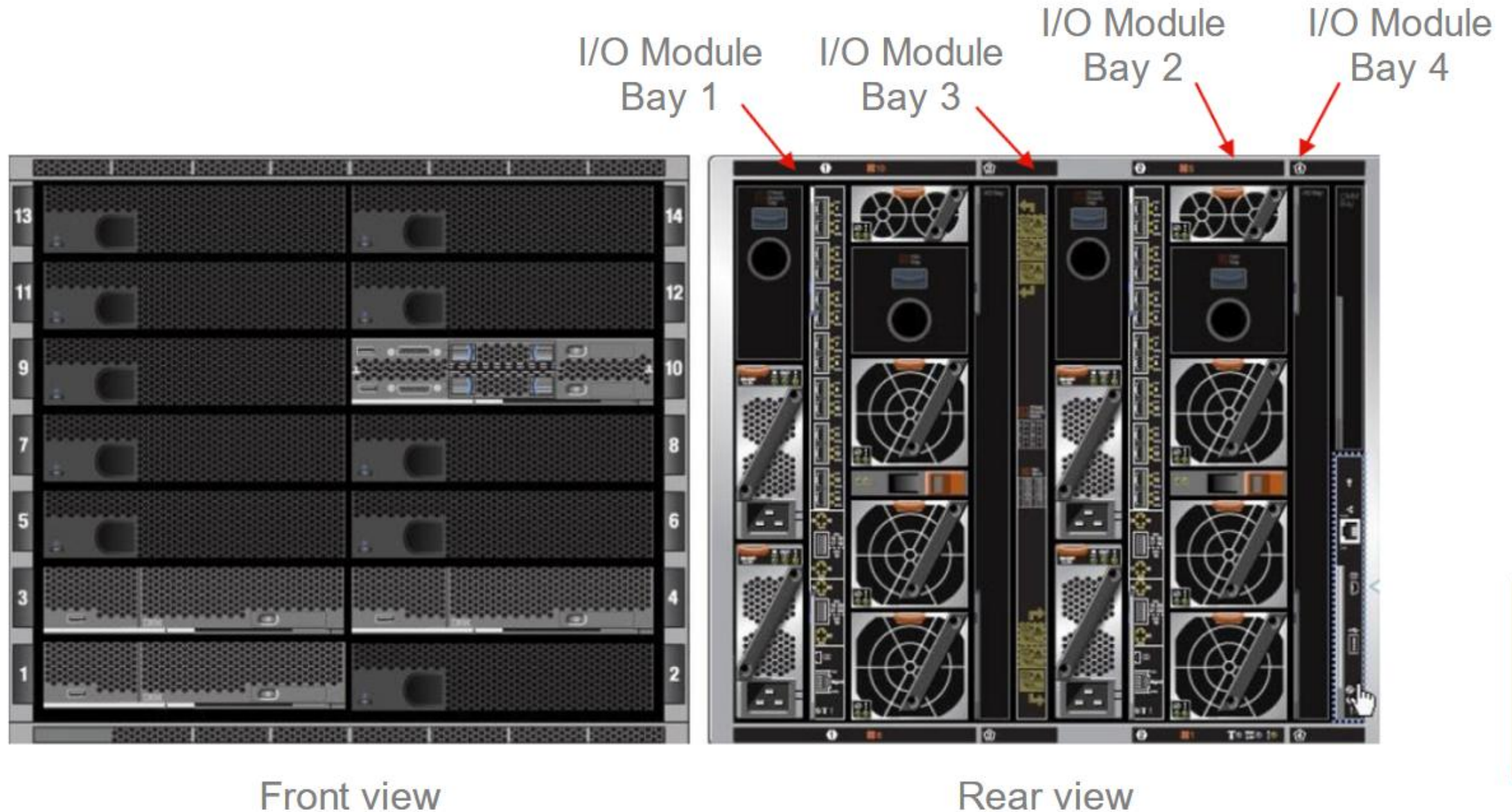
Inside view

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Ethernet physical layer (PHY) IC for the RJ-45 Base-T management ports

Flex chassis front and rear views



QLogic Ethernet adapters

The QLogic Ethernet adapters are designed to perform accelerated data networking for servers. The QLogic Ethernet adapters include a 10 Gb, 25 Gb, and 50 Gb, Ethernet MAC with full-duplex capability. The NE2552E interoperates seamlessly with Flex System compute nodes and connects the latest ThinkSystem SN850, ThinkSystem SN550, and QLogic Ethernet adapters to the network at speeds up to 50 Gbps.

Using both NE2552E and QLogic Ethernet adapters extend the Flex System with the following features:

- Utilization of full high-speed chassis midplane bandwidth
- Universal Fabric Port (UFP) for NIC virtualization
- CMM integration
- Use of efficient Flex System redundant power and adaptive cooling

