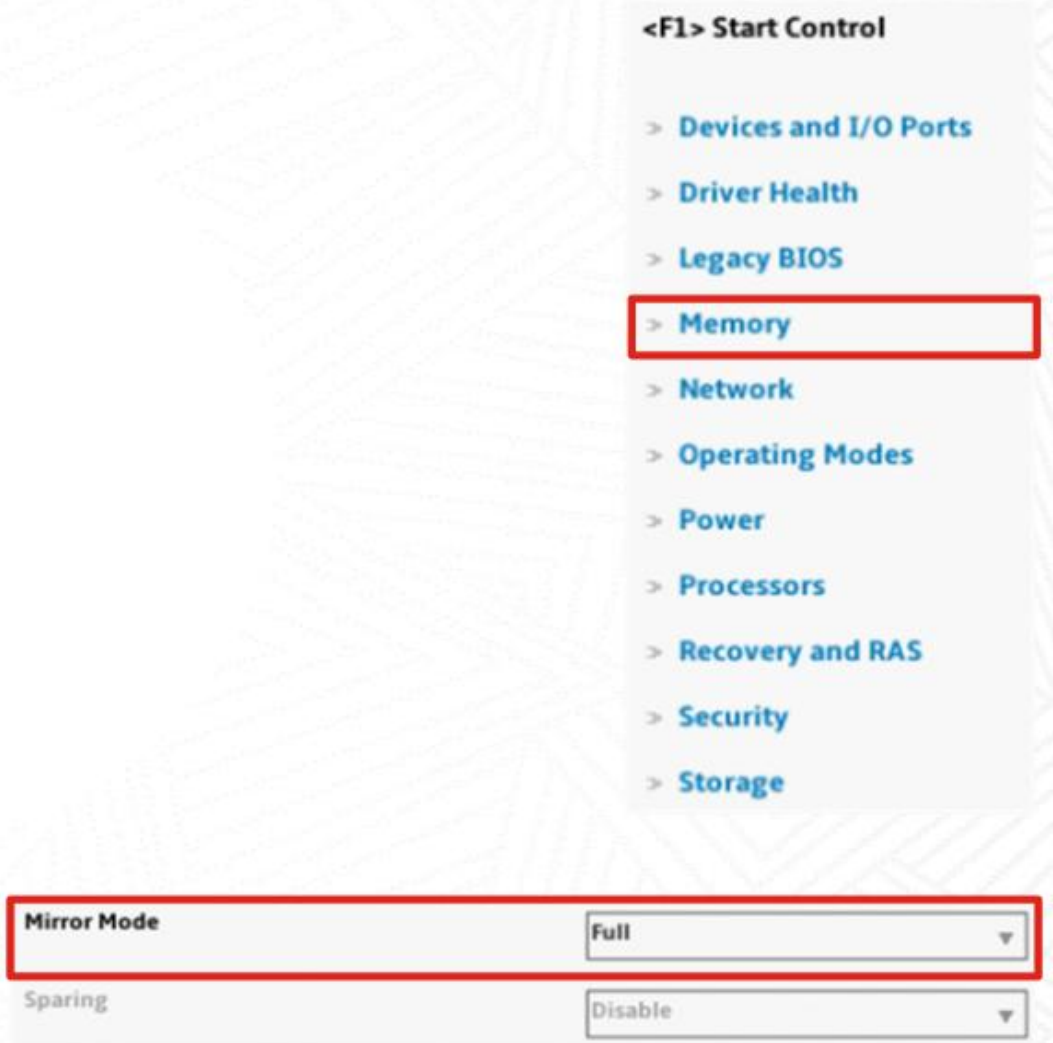
System configurations and diagrams

Memory mode configurations, memory allocations, and system board connectors

Memory mode configuration – Mirror Mode

- Three memory modes available:
  - Independent (default), memory mirroring, and rank-sparing modes
  - All modes are mutually exclusive
- All memory modes are configured using Lenovo XClarity Provisioning Manage (LXPM) in the UEFI Setup → System Settings → Memory section
- No need to configure independent memory mode as it is the default mode
- To configure memory mirroring mode, go to Mirror Mode and select **Full** from the drop-down menu
  - Sparing will automatically be disabled

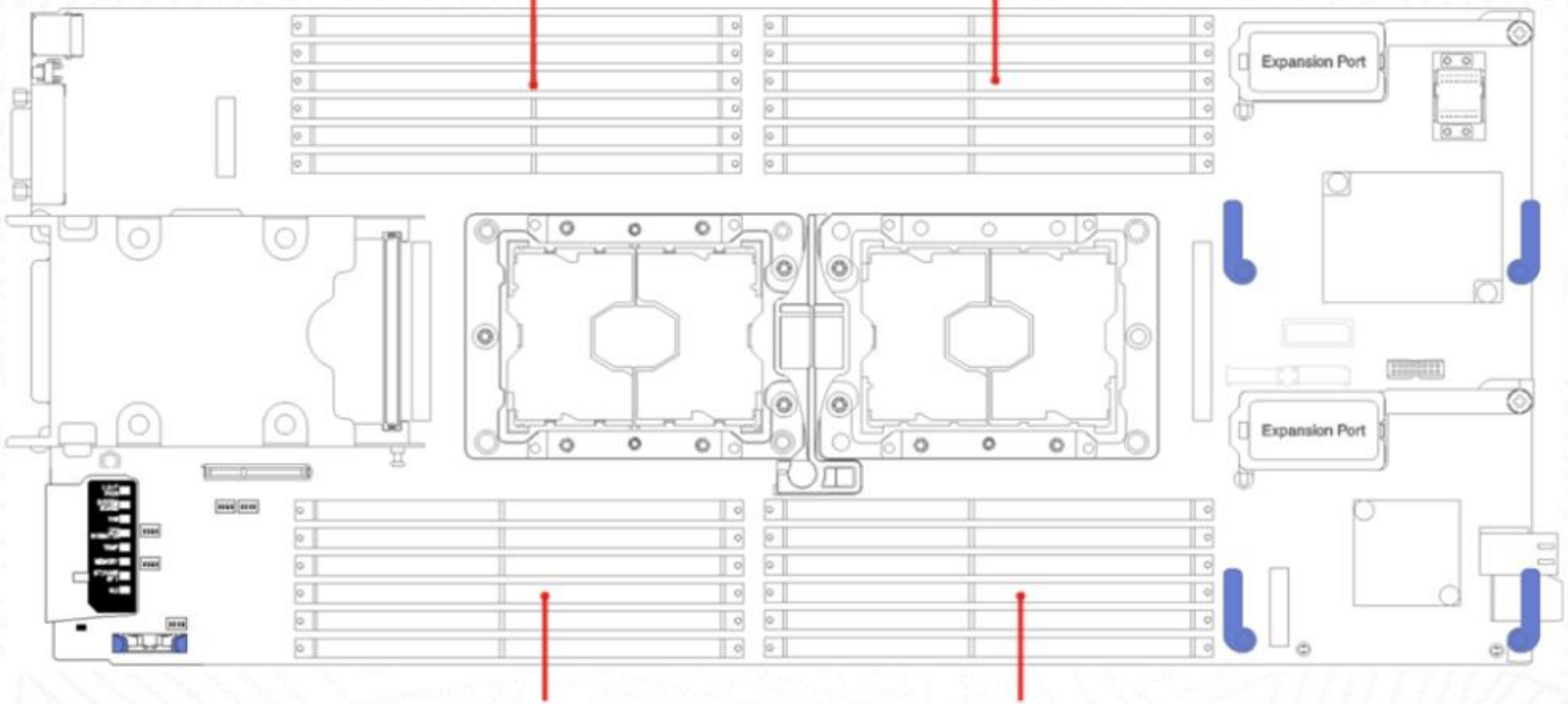


Memory mode configuration – Sparing

- To configure rank sparing mode, go to Sparing and select **Enable** from the drop-down menu.
  - Mirror Mode will automatically be disabled.
- For specific DIMM population and configuration details, refer to the *Lenovo ThinkSystem SN550 Type 7X16 Setup Guide* for more information.

Memory slot locations

There are total of 24 memory slots on the system board.



Operating modes and memory speed

- Effective memory speed is a combination of the processor installed and the operating mode selected
  - DIMM speed is not dependent on DPC; one or two DPCs run at the same speed.
- Four preset operating modes are available
  - Maximum performance, efficiency - favor power, efficiency - favor performance, and minimal power modes
  - All modes are mutually exclusive
- To configure the operating mode, go to:
  - **UEFI Settings > Operating Modes**

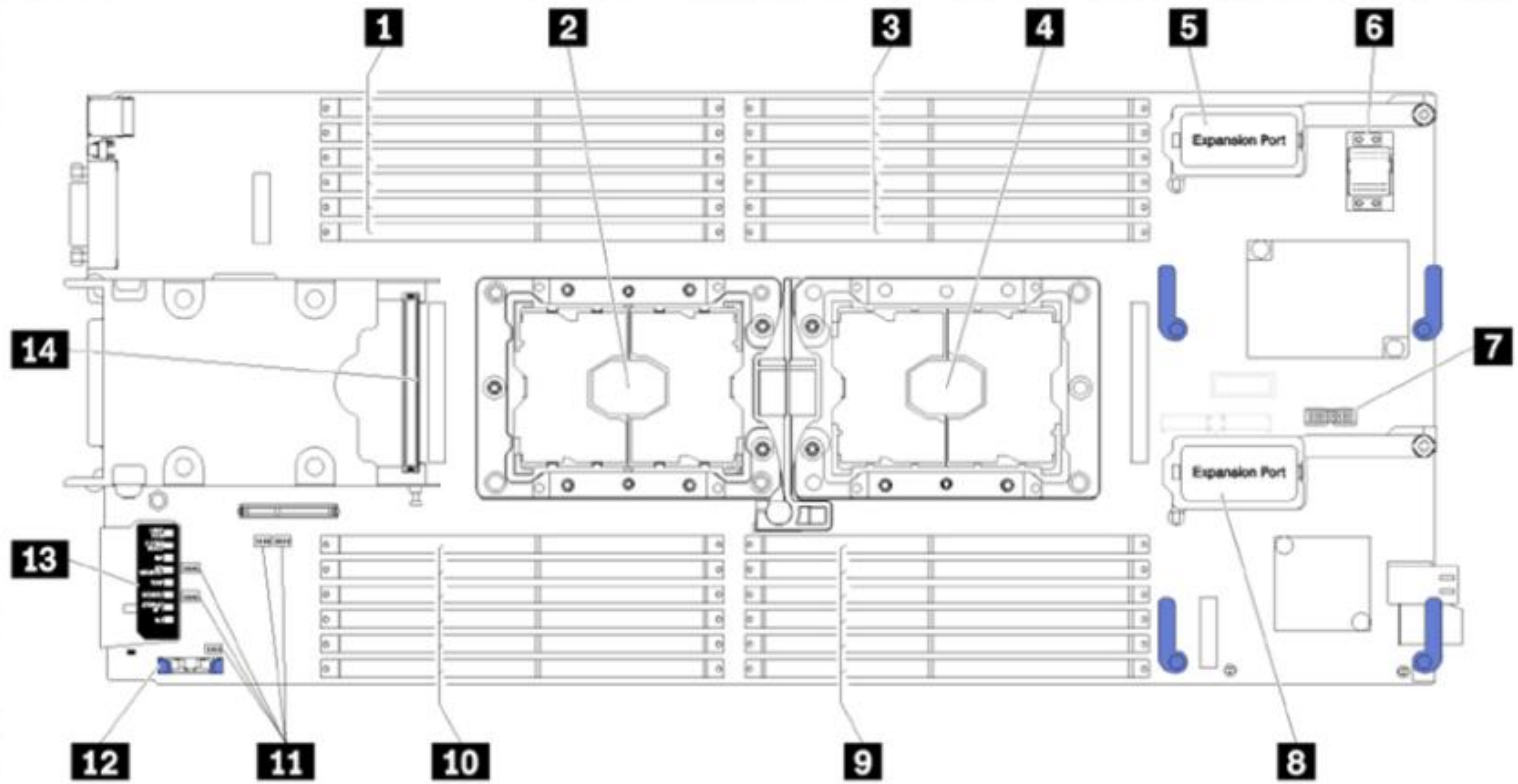
	Operating mode			
Processor series	Maximum performance	Efficiency – favor performance	Efficiency – favor power	Minimal power
Xeon 8100	2666 MHz	2666 MHz	2400 MHz	1600 MHz
Xeon 6100	2666 MHz	2666 MHz	2400 MHz	1600 MHz
Xeon 5100	2400 MHz	2400 MHz	2133 MHz	1600 MHz

Storage configurations

- Valid storage configurations combine:
  - Backplanes
    - SATA HDD/SSD (default), NVMe/SATA, or SATA/SAS (included with RAID kit options)
  - Integrated and optional RAID adapters
    - Integrated 6 Gbps SATA controller (standard), RAID 530-4i (optional) or RAID 930-4i-2GB (optional)
  - Drive types
    - SATA, SAS, and U.2 NVMe
- All storage is configured using LXPM in the UEFI Setup → System Settings → Storage section
- For specific storage configuration details, refer to the *Lenovo ThinkSystem SN550 Type 7X16 Setup Guide* for more information.

System board connectors

Index	Description
1	DIMM slots 13 – 18
2	Processor socket 2
3	DIMM slots 1 – 6
4	Processor socket 1
5	I/O adapter slot 1
6	Fabric connector socket
7	Trusted cryptographic module (TPM) connector
8	I/O adapter slot 2
9	DIMM slots 7 – 12
10	DIMM slots 19 – 24
11	Switch blocks
12	CMOS battery
13	Light path diagnostics
14	Storage backplane connector



Summary

This course enabled you to:

- Describe the Lenovo ThinkSystem SN550 MT 7X16 server and components.
- List the Lenovo ThinkSystem SN550 MT 7X16 server features and specifications.
- List the Lenovo ThinkSystem SN550 MT 7X16 server configurations and diagrams.
- Describe the problem determination steps and explain how to troubleshoot the server and components.