



➞ System configurations and diagrams

Memory and storage configurations

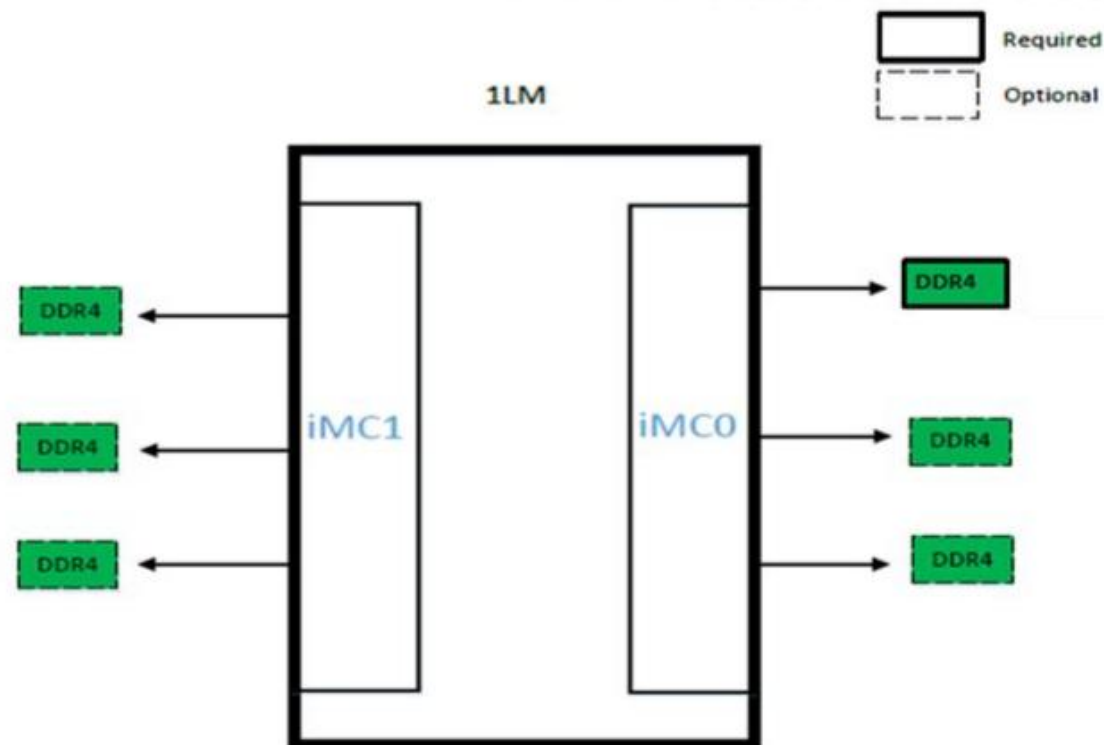


Memory configurations

SR530 supports many DDR4 DIMM types, including Registered DIMMs (RDIMM), Load Reduced DIMMs (LRDIMM) and 3DS RDIMM (available later).

Each processor contains two integrated memory controllers (IMC) with each controller providing three channels of DDR4; one DIMM per channel.

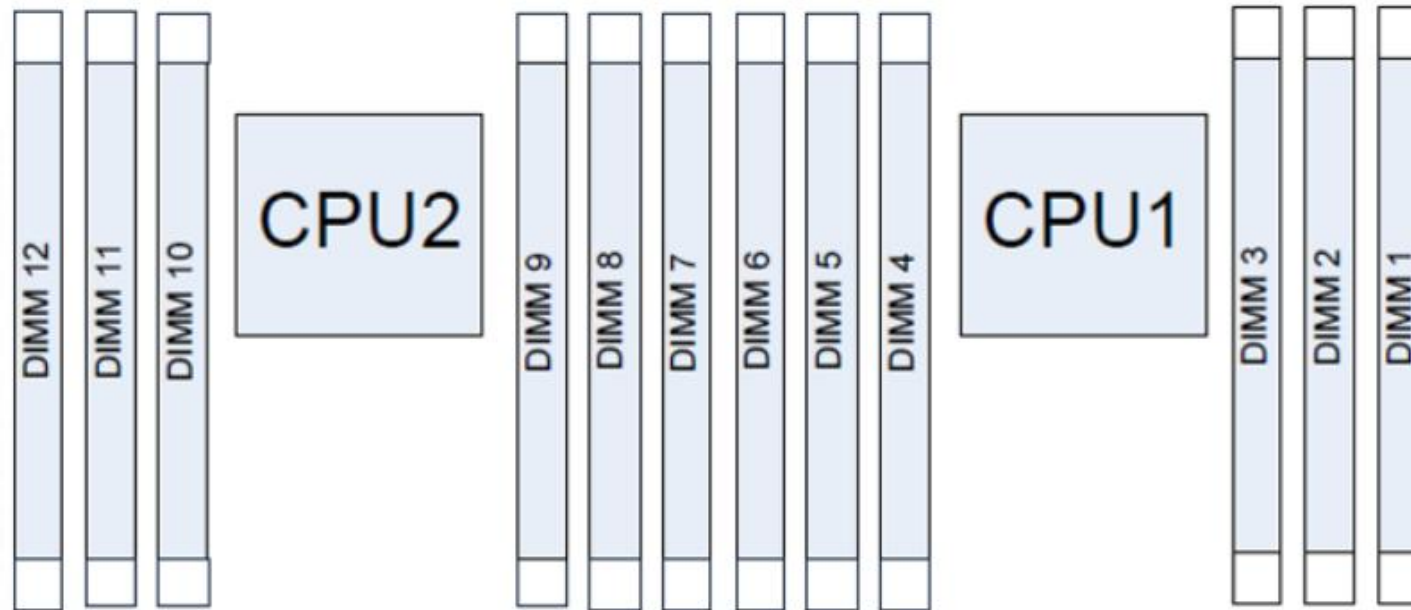
The minimum memory configuration is one DDR4 DIMM per processor.



Note: Even though system will function with one DIMM, six DIMMs per processor is recommended to improve system performance.

Memory population rules

There are total of 12 memory slots on the system board.



Click each memory mode to view population rules.

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

There are total of 12 memory slots on the system board.

X

The table contains memory population rule of one CPU with independent mode.

Total DIMMs	Processor 1						Total DIMMs
	6	5	4	3	2	1	
1				3			1
2			4	3			2
3			4	3	2		3
4		5	4	3	2		4
5		5	4	3	2	1	5
6	6	5	4	3	2	1	6

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

X

The table contains memory population rule of two CPUs with independent mode.

Total DIMMs	Processor 2						Processor 1						Total DIMMs
	12	11	10	9	8	7	6	5	4	3	2	1	
2				9						3			2
3				9					4	3			3
4			10	9					4	3			4
5			10	9					4	3	2		5
6			10	9	8				4	3	2		6
7			10	9	8			5	4	3	2		7
8		11	10	9	8			5	4	3	2		8
9		11	10	9	8			5	4	3	2	1	9
10		11	10	9	8	7		5	4	3	2	1	10
11		11	10	9	8	7	6	5	4	3	2	1	11
12	12	11	10	9	8	7	6	5	4	3	2	1	12

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

X

The table contains memory population rule of one CPU with rank sparing mode.

All DIMMs to be installed must be the same type with the same capacity, frequency, voltage, and number of ranks.

Single-rank DIMMs do not support rank sparing mode.

Total DIMMs	Processor 1						Total DIMMs
	6	5	4	3	2	1	
1				3			1
2			4	3			2
3			4	3	2		3
4		5	4	3	2		4
5		5	4	3	2	1	5
6	6	5	4	3	2	1	6

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

X

The table contains memory population rule of two CPUs with rank sparing mode.

Total DIMMs	Processor 2						Processor 1						Total DIMMs
	12	11	10	9	8	7	6	5	4	3	2	1	
2				9						3			2
3				9					4	3			3
4			10	9					4	3			4
5			10	9					4	3	2		5
6			10	9	8				4	3	2		6
7			10	9	8			5	4	3	2		7
8		11	10	9	8			5	4	3	2		8
9		11	10	9	8			5	4	3	2	1	9
10		11	10	9	8	7		5	4	3	2	1	10
11		11	10	9	8	7	6	5	4	3	2	1	11
12	12	11	10	9	8	7	6	5	4	3	2	1	12

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

There are total of 12 memory slots on the system board.

X

The table contains memory population rule of one CPU with mirroring mode.

All DIMMs to be installed must be the same type with the same capacity, frequency, voltage, and rank.

Total DIMMs	Processor 1						Total DIMMs
	6	5	4	3	2	1	
2				3	2		2
3				3	2	1	3
4		5	4	3	2		4
6	6	5	4	3	2	1	6

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

Memory population rules

X

The table contains memory population rule of two CPUs with mirroring mode.

Total DIMMs	Processor 2						Processor 1						Total DIMMs
	12	11	10	9	8	7	6	5	4	3	2	1	
4				9	8					3	2		4
5				9	8					3	2	1	5
6				9	8	7				3	2	1	6
7				9	8	7		5	4	3	2		7
8		11	10	9	8			5	4	3	2		8
9				9	8	7	6	5	4	3	2	1	9
10		11	10	9	8		6	5	4	3	2	1	10
12	12	11	10	9	8	7	6	5	4	3	2	1	12

Independent
One CPU

Independent
Two CPU

Rank sparing
One CPU

Rank sparing
Two CPU

Mirroring
One CPU

Mirroring
Two CPU

SR530 chassis matrix

The table contains the SR530 storage and controller configurations.

Chassis	HDD configuration	Back-plane	Hard drive type					Riser type					LOM	RAID	
			3.5-inch SATA	3.5-inch SAS	2.5-inch with 3.5-inch cage	2.5-inch SAS/SATA	M.2 SSD	X8x8 ML2 riser 1	x8x16 LP+LP riser 1	x8x16 LP+FH riser 1	x16 LP riser 2	x8 LP riser 2		SW RAID	HW RAID
Four 3.5-inch	Four 3.5-inch SATA SS	SATA cable from backplane	x				x	x	x	x	x	x	x	x ¹	
	Four 3.5-inch SAS/SATA HS	4x1 3.5-inch	x	x	x		x	x	x	x	x	x	x		x
Eight 2.5-inch	No drive / backplane	N/A					x	x	x	x	x	x	x		
	Eight 2.5-inch SAS/SATA HS	4x2 2.5-inch				x	x	x	x	x	x	x	x		x

¹ Software RAID cannot be upgraded to hardware RAID in the field.

RAID configurations

Click chassis one or chassis two to view the details.

Chassis one: 3.5-inch chassis supports up to four bays

Chassis two: 2.5-inch chassis supports up to eight bays

Chassis two: 2.5-inch chassis supports up to eight bays

X

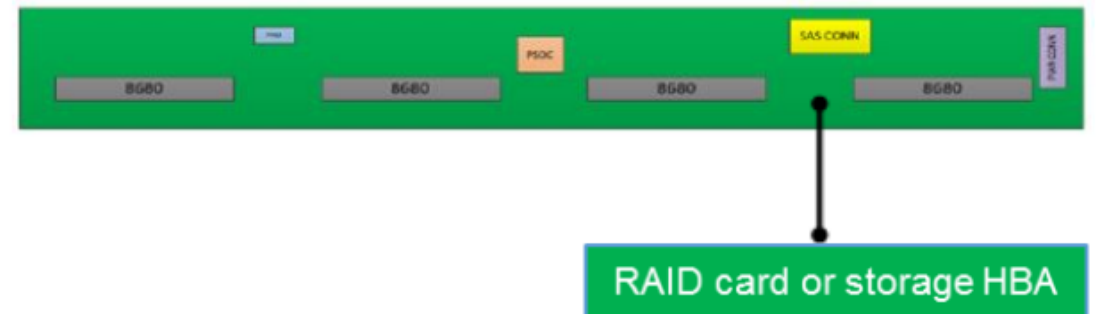
Four 3.5-inch simple-swap SATA



Four 3.5-inch SAS/SATA



**SATA cable from
backplate to onboard
connectors**



Chassis two: 2.5-inch chassis supports up to eight bays

X

No backplane



Eight 2.5-inch SAS/SATA



RAID card or storage HBA

HDD filler population rules

The 3.5-inch chassis only comes with a single 3.5-inch filler. The 2.5-inch chassis comes with one 2x2 2.5-inch filler and four single 2.5-inch fillers. For other filler rules, refer to the chart below.



HDD assembly
No HDD with single filler
No HDD with 2x2 2.5-inch filler

0	2	4	6
1	3	5	7

No HDD

0	2	4	6
1	3	5	7

One HDD

0	2	4	6
1	3	5	7

Two HDDs

0	2	4	6
1	3	5	7

Three HDDs

0	2	4	6
1	3	5	7

Four HDDs

0	2	4	6
1	3	5	7

Five HDDs

0	2	4	6
1	3	5	7

Six HDDs

0	2	4	6
1	3	5	7

Seven HDDs

0	2	4	6
1	3	5	7

Eight HDDs



Single 2.5-inch filler



2x2 2.5-inch filler

HDD population rules



SR530 HDD population rules are listed here:

- Mix HDD vendor is supported with Lenovo qualified drives.
- Mix HDD capacity is supported with Lenovo qualified drives.
 - Mixed HDD capacity in one system, but not in one RAID Array.
 - Install lower capacity HDD first.
- Mix 2.5-inch HDD and 3.5-inch HDD into 3.5-inch HDD tray is supported with Lenovo qualified drives.
 - Mix 2.5-inch and 3.5-inch HDD in one system, but not in one RAID Array.
 - Support mix 2.5-inch of SSD/SAS/SATA into 3.5-inch HDD tray.
 - Install 2.5-inch HDD first.
 - Install lower capacity HDD first.
 - HDD type priority: SSD > SAS > SATA
- Mix SSD/SAS/SATA HDD into 2.5-inch HDD tray is supported with Lenovo qualified drives
 - Mix SSD/SAS/SATA into 2.5-inch HDD tray in one system, but not in one RAID Array.
 - Install lower capacity HDD first.
 - HDD type priority: SSD > SAS > SATA