

Intel® Xeon® E5-4600 v4 Broadwell-EP 4S Platform Guide

Silicon Mechanics Platform Guides provide a high-level overview of server platforms including CPU details and memory population guidelines.

If you have questions about the information in this Platform Guide, please [contact us](#).

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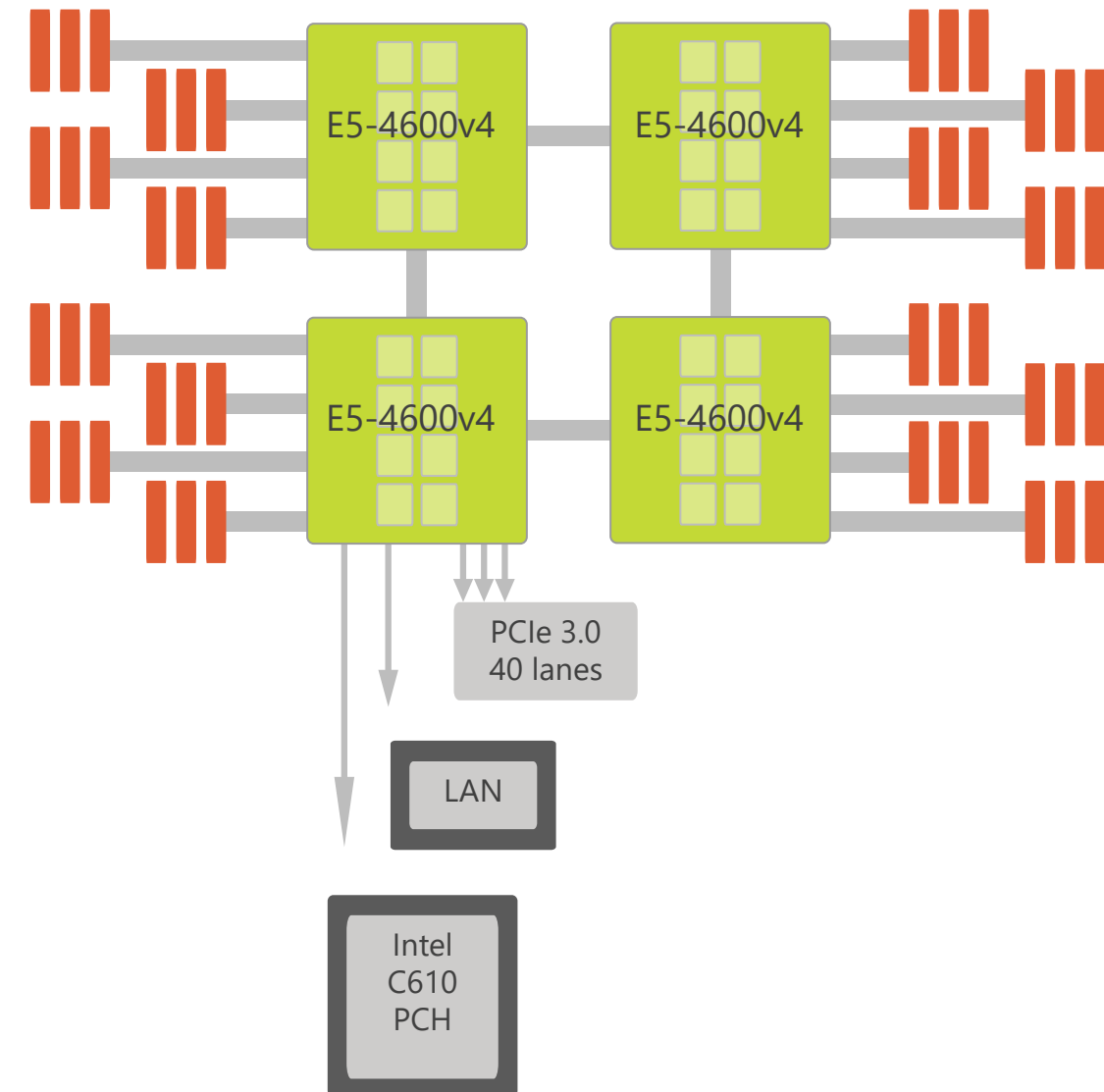


Expert included.

E5-4600v4 Platform Overview

Formerly Known as "Grantley-EP 4S"

E5-4600v3 CPU (Haswell-EP 4S)	Up to 22 cores TDP: Up to 145 W
Socket	Socket R3
Memory	4 x DDR4 channels 2400 (1 DPC), 2133 (2 DPC), 1866, 1600 Up to 3TB capacity
	RDIMM, LRDIMM
QPI	2 x QPI 1.1 channels 9.6, 8.0, 6.4 GT/s
PCIe	PCIe 3.0 (8, 5, 2.5 GT/s)
	40 x PCIe 3.0
C610 PCH (Wellsburg)	DMI2 – 4 lanes; 10 x SATA3 ports
LAN	40GbE (Fortville), 1GbE (Springville)



Comparing E5-4600v3 and E5-4600v4

Haswell vs Broadwell

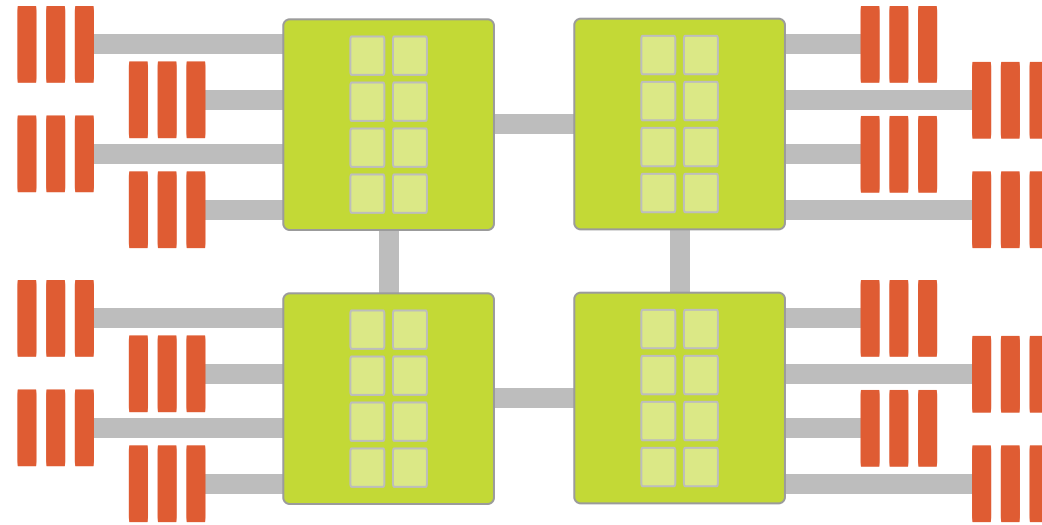
Feature	Haswell	Broadwell
Technology	22 nm	14 nm
Max Core Count	Up to 18	Up to 22
Max LL Cache	Up to 45 MB	Up to 55 MB
Memory Channels	4 DDR4 channels	4 DDR4 channels
Max Memory Speed	2133 MT/s	2400 MT/s
Max DIMM Slots / Capacity	48 / 3 TB	48 / 3 TB
QPI Ports	2 channels, up to 9.6 GT/s	2 channels, up to 9.6 GT/s
PCI	40 lanes PCIe 3.0	40 lanes PCIe 3.0
Chipset	Intel® C610 series (Wellsburg PCH)	Intel® C610 series (Wellsburg PCH)
Onboard SATA Ports	10 SATA3	10 SATA3

E5-4600v4 Models

Max RAM Speed (MT/s)	Model	Freq (GHz)	TDP (W)	Cores	LLC Cache	Hyper-threading	Turbo Boost	Segment
2400	E5-4669v4	2.2	135W	22	55	HT	Y	High Performance
	E5-4667v4	2.2	135W	18	45	HT	Y	
	E5-4655v4	2.5	135W	8	30	HT	Y	Frequency Optimized
	E5-4627v4	2.6	135W	10	25		Y	
	E5-4660v4	2.2	120W	16	40	HT	Y	Advanced
	E5-4650v4	2.2	105W	14	35	HT	Y	
2133	E5-4640v4	2.1	105W	12	30	HT	Y	Standard
	E5-4620v4	2.1	105W	10	25	HT	Y	
1866	E5-4610v4	1.8	105W	10	25	HT		Basic

Memory Population Guidelines

24-DIMM Mainboards



Mainboards with 3 DIMMs per Channel (48 DIMM Slots)

	Ranks	Max MT/s, 1.2V DIMMs		
		1 DPC	2 DPC	3 DPC
RDIMM	1R or 2R	2400	2133	1600
LRDIMM	4R	2400	2400	1866

Platform Based on E5-4600v4

Rackform R420.v6



2U Ultra server

- 4 x E5-4600v4
- 48 x RDIMMs or LRDIMMs
- Up to 3TB DDR4 RAM
- 24 x 2.5-inch HS drives (4 NVMe)
- Up to 11 PCIe 3.0 slots
- Redundant 1000W power supply