






# Cisco Unified Computing Systems Hardware





| Cisco UCS C-Series Rack Servers                    |  |  |  |  |   |   |  |
|--|--|--|--|--|---|---|--|
|  | C22 M3   | C24 M3   | C220 M3  | C240 M3  | C420 M3   | C260 M2   | C460 M2  |
| Form Factor  | 1RU  | 2RU  | 1RU  | 2RU  | 2RU   | 2RU   | 4RU  |
| Number of Sockets                                  | 2  | 2  | 2  | 2  | 4   | 2   | 4  |
| Intel® Xeon® Processor Family                      | E5-2400  | E5-2400  | E5-2600 and E5-2600 v2   |  | E5-4800   | E7-2800 and E7-8800   | E7-4800 and E7-8800  |
| Processor Model                                    | E5-2403 (4 c, 1.8)<br>E5-2430L (6 c, 2.0)  | E5-2403 (4 c, 1.8)<br>E5-2430L (6 c, 2.0)  | <b>E5-2600</b><br>E5-2609 (4 c, 2.4)<br>E5-2643 (4 c, 3.3)<br>E5-2630L (6 c, 2.0)  | <b>E5-2600 v2</b><br>E5-2640 (8 c, 2.0)<br>E5-2660 (10 c, 2.2)<br>E5-2630L (6 c, 2.4)<br>E5-2695 (12 c, 2.4)   | E5-4603 (4 c, 2.0)<br>E5-4607 (6 c, 2.2)<br>E5-4610 (6 c, 2.4)<br>E5-4620 (8 c, 2.2)<br>E5-4640 (8 c, 2.4)<br>E5-4650 (8 c, 2.7)                            | E7-2803 (6 c, 1.73)<br>E7-2830 (8 c, 2.13)<br>E7-2850 (10 c, 2.00)<br>E7-8867L (10 c, 2.13)<br>E7-2860 (10 c, 2.26)<br>E7-2870 (10 c, 2.40)                             | E7-4807 (6 c, 1.86)<br>E7-4830 (8 c, 2.13)<br>E7-8837 (8 c, 2.66)<br>E7-4850 (10 c, 2.00)<br>E7-8867L (10 c, 2.13)<br>E7-4860 (10 c, 2.26)<br>E7-4870 (10 c, 2.4)  |
| Number of Cores (c)                                | E5-2420 (6 c, 1.9)<br>E5-2430 (6 c, 2.2)<br>E5-2407 (4 c, 2.2)   | E5-2420 (6 c, 1.9)<br>E5-2430 (6 c, 2.2)<br>E5-2407 (4 c, 2.2)   | E5-2620 (6 c, 2.0)<br>E5-2630 (6 c, 2.3)<br>E5-2640 (6 c, 2.5)<br>E5-2667 (6 c, 2.9)<br>E5-2650L (8 c, 1.8)  | E5-2640 (8 c, 2.0)<br>E5-2660 (10 c, 2.2)<br>E5-2630L (6 c, 2.4)<br>E5-2695 (12 c, 2.4)<br>E5-2658 (10 c, 2.4)<br>E5-2670 (10 c, 2.5)<br>E5-2650 (8 c, 2.6)<br>E5-2630 (6 c, 2.6)<br>E5-2697 (12 c, 2.7)<br>E5-2680 (10 c, 2.8)<br>E5-2690 (10 c, 3.0)<br>E5-2667 (8 c, 3.3)<br>E5-2637 (4 c, 3.5)<br>E5-2643 (6 c, 3.5) |   |   |  |
| Clock Speed (GHz)                                  | E5-2440 (6 c, 2.4)<br>E5-2450 (8 c, 2.1)<br>E5-2470 (8 c, 2.3)   | E5-2440 (6 c, 2.4)<br>E5-2450 (8 c, 2.1)<br>E5-2470 (8 c, 2.3)   |  |  |   |   |  |
| Memory   | 384 GB (12 DIMMs)  | 384 GB (12 DIMMs)  | 512 GB (16 DIMMs)  | 768 GB (24 DIMMs)  | 1.5 TB (48 DIMMs)   | 1 TB (64 DIMMs)<br>Expansion to 64 DIMM slots requires optional memory riser board: one per socket  | 2 TB (64 DIMMs)<br>Expansion to 64 DIMM slots requires optional memory riser board: one per socket   |
| Network Ports                                      | Dual Gigabit Ethernet  | Dual Gigabit Ethernet  | Dual Gigabit Ethernet  | Quad Gigabit Ethernet  | Quad Gigabit Ethernet   | Dual GE and Dual 10-Gbps SFP+   | Dual GE and Dual 10 GE   |
| Internal Disks                                     | Up to 8 SFF drives: 146 GB 15K, 300 GB 15K, 300 GB 10K, 600 GB 10K, and 900 GB 10K, SAS; and 500 GB 7.2K and 1 TB 7.2K SATA<br>Up to 4 LFF drives: 500 GB 7.2k, 1 TB 7.2k, 2 TB 7.2k, 3 TB 7.2k  | Up to 16 or 24 SFF drives: 146 GB 15K, 300 GB 15K, 300 GB 10K, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; Up to 12, LFF drive options: 500 GB 7.2k, 1 TB 7.2k, 2 TB 7.2k, 3 TB 7.2k | Up to 4 LFF or 8 SFF drives<br>LFF drive options: 300 GB 15K, 450 GB 15K, 600 GB 15K, 1 TB 7.2K, 2 TB 7.2K, 3 TB 7.2K SAS; and 500 GB 7.2 SATA; SFF drive options: 146 GB 15k, 300 GB 10K, 300 GB 15K, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K, and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, and 400 GB SSD | Up to 12 LFF or 16/24 SFF drives   | Up to 16 SFF drives: 300 GB 10K, 300 GB 15K, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, and 400 GB SSD | Up to 16 SFF drives: 146 GB 15K, 300 GB 10K, 300 GB 15K, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, and 400 GB SSD | Up to 12 SFF drives: 146 GB 15K, 300 GB 10K, 300 GB 15K, 400 GB SSD, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, and 400 GB SSD                                    |
| RAID   | Embedded 3G SAS/SATA RAID controller (RAID 0, 1, 5, and 10), 6G LSI MegaRAID SAS 9270CV-8i with SuperCap (RAID 0, 1, 5, 6, 10, 50), 6G LSI MegaRAID 9240-8i RAID controller card (RAID 0, 1, 5, 10, 50), 6G LSI Mega RAID 9220-8i controller card (RAID 0, 1, 10), 6G LSI Mega RAID 9220-4i controller card (RAID 0, 1, 10) (only on UCS C22 M3) |  | Embedded 3G SAS and SATA RAID controller (RAID 0, 1, and 10) and optional 6G LSI MegaRAID SAS 9271CV-8i with SuperCap (RAID 0, 1, 5, 6, 10, 50, and 60), LSI MegaRAID SAS 9286CV-e, and 6G Cisco UCS RAID SAS 2008M-8i (RAID 0, 1, 5, 10, and 50)  | Embedded 3G SAS and SATA RAID controller (RAID 0, 1, and 10) and optional 6G LSI MegaRAID SAS 9271CV-8i with SuperCap (RAID 0, 1, 5, 6, 10, 50, and 60), LSI MegaRAID SAS 9286CV-e, and 6G Cisco UCS RAID SAS 2008M-8i (RAID 0, 1, 5, 10, and 50)  | LSI MegaRAID SAS 9271CV-8i (RAID 0, 1, 5, 6, 10); LSI MegaRAID SAS 9286CV-8e (RAID 0, 1, 5, 6, 10)  | Optional LSI MegaRAID 9261-8i with BBWC (RAID 0, 1, 5, 6, 50, and 60)   | Optional LSI MegaRAID 9240-8i (RAID 0, 1, and 10) and LSI MegaRAID 9260-8i 512WC (RAID 0, 1, 5, 6, 10, 50, and 60)   |
|  |  |  | These servers include onboard SATA controller offering RAID 0 and 1 and optional LSI MegaRAID controllers listed above.  |  |   |   |  |
| Power Supplies                                     | 1 650W or 450W   | N+1 (2) 450W or 650W   | N+N (2) 450W or 650W   | N+N (2) 650W or 1200W  | N+N (2) 1200W   | N+N (2) 1200W   | N+N (4) 850W   |
| PCI Slots (Lane Widths)                            | 2 PCI Express (PCIe) Generation (Gen) 3 slots: 1 x 16 half length, full height 1 x 8 half length, half height  | 5 PCIe slots: 1 Gen 3 x16 slots: full height and half length 2 Gen 3 x8 slots: half height and half length 2 x4 slots: 1 Gen3 half height and half length, and 1 Gen 2 half height and half length           | 2 PCIe slots: 1 x8 half height and half length 1 x16 full height and half length   | PCIe 1, 3–full-height, half-length, x8 PCIe 2,5–full-height, 3/4-length (10.5 in.), x16 PCIe 4–half-height, 3/4-length, x8   | 7 PCIe Gen3 Slots: 2 x16 full height, half length, 5 x8 half height, half length  | 6 PCIe Gen2 Slots: 3 x8 low profile and half length 2 x16 full height and half length 1 x4 low profile and half length  | 4 PCIe Gen 2 x8 (3/4 length, full height), 3 PCIe Gen 2 x4 (1/2 length, full height), 1 PCIe Gen2 x16 (3/4 length, full height), 1x PCIe Gen1 x4 (half length, full height), 1x PCIe Gen1 x4 (1/2 length, full height) |
| Interfaces (Front Panel (FP)) and (Internal (Int)) | VGA port, 4 USB 2.0 ports, 1 serial port, 1 GE Mgmt port, 2 1 GE network ports, 2 (FP) USB 2.0 ports   |  | 1 RJ45 serial port, 2 USB 2.0 ports, 1 VGA port, 1GB Mgmt, 2 GE Ntwk ports   | 1 RJ45 serial port, 2 USB 2.0 ports, 1 VGA port, 1GB Mgmt, 2 GE Ntwk ports   | 1 serial port, 3 USB 2.0, 1 VGA, 1 GE Mgmt, 4 GE Ntwk   | 1 serial port, 4 USB ports, 1 VGA port, 2 10/100 Mgmt port, 2 GE Ntwk ports   | 1 serial port, 2 USB 2.0 ports, 1 VGA ports, 2 10/100 GB Mgmt, 2 1GE Netw; FP: 1 VGA, 3 USB 2.0 ports  |


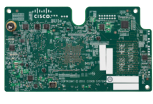
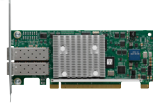





Cisco UCS B-Series Blade Servers


|                               | B22 M3   | B200 M3  | B230 M2   | B420 M3   | B440 M2   |  |
|-------------------------------|--|--|---|---|---|--|
|                               |   |   |    |    |    |  |
| Form Factor                   | Half width   | Half width   |   | Full width  | Full width  |  |
| Number of Sockets             | 2  | 2  |   | 4   | 4   |  |
| Intel® Xeon® Processor Family | E5-2400  | E5-2600 and E5-2600 v2   |   | E5-4600   | E7-4800/E7-8800   |  |
| Processor Model               | E5-2403 (4 c, 1.8)<br>E5-2430L (6 c, 2.0)<br>E5-2420 (6 c, 1.9)<br>E5-2440 (6 c, 2.4)<br>E5-2450 (8 c, 2.1)<br>E5-2470 (8 c, 2.3)          | <b>E5-2600</b><br>E5-2637 (2 c, 3.0)<br>E5-2609 (4 c, 2.4)<br>E5-2643 (4 c, 3.3)<br>E5-2630L (6 c, 2.0)<br>E5-2620 (6 c, 2.0)<br>E5-2630 (6 c, 2.3)<br>E5-2640 (6 c, 2.5)<br>E5-2667 (6 c, 2.9)<br>E5-2650L (8 c, 1.8)<br>E5-2650 (8 c, 2.0)<br>E5-2660 (8 c, 2.2)<br>E5-2665 (8 c, 2.4)<br>E5-2670 (8 c, 2.6)<br>E5-2680 (8 c, 2.7)<br>E5-2690 (8 c, 2.9) | <b>E5-2600 v2</b><br>E5-2643 (6 c, 3.5)<br>E5-2637 (4 c, 3.5)<br>E5-2667 (8 c, 3.3)<br>E5-2690 (10 c, 3.0)<br>E5-2680 (10 c, 2.8)<br>E5-2697 (12 c, 2.7)<br>E5-2630 (6 c, 2.6)<br>E5-2650 (8 c, 2.6)<br>E5-2670 (10 c, 2.5)<br>E5-2695 (12 c, 2.4)<br>E5-2658 (10 c, 2.4)<br>E5-2630L (6 c, 2.4)<br>E5-2660 (10 c, 2.2)<br>E5-2640 (8 c, 2.0) | E7-2803 (6 c, 1.73)<br>E7-2830 (8 c, 2.13)<br>E7-8867L (10 c, 2.13)<br>E7-2850 (10 c, 2.00)<br>E7-2860 (10 c, 2.26)<br>E7-2870 (10 c, 2.40) | E5-4603 (4 c, 2.0)<br>E5-4607 (6 c, 2.2)<br>E5-4610 (6 c, 2.4)<br>E5-4617 (6 c, 2.9)<br>E5-4620 (8 c, 2.2)<br>E5-4640 (8 c, 2.4)<br>E5-4650 (8 c, 2.7)<br>E5-4650L (8 c, 2.6) | E7-4807 (6 c, 1.86)<br>E7-4830 (8 c, 2.13)<br>E7-8837 (8 c, 2.66)<br>E7-4850 (10 c, 2.0)<br>E7-4860 (10 c, 2.26)<br>E7-4870 (10 c, 2.4)<br>E7-8867L (10 c, 2.13) |
| Number of Cores (c)           |  |  |   |   |   |  |
| Clock Speed (GHz)             |  |  |   |   |   |  |
| Maximum Memory                | 384 GB (12 DIMMs)  | 768 GB (24 DIMMs)  |   | 1.5 TB (48 DIMMs)   | 1 TB (32 DIMMs)   |  |
| Maximum Bandwidth             | 80 Gbps  | 80 Gbps  |   | 160 Gbps  | 160 Gbps  |  |
| Internal Disks                | Up to 2 SFF drives: 146 GB 15K, 300 GB 15K, 300 GB 10K, 500 GB 7.2k, 600 GB 10K SAS; 900 GB 10k SAS, 1 TB 7.2k SATA and 100 GB, 400 GB SSD | Up to 2 SFF drives: 146 GB 15K, 300 GB 10K, 300 GB 15K, 600 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, 400 GB SSD   |   | Up to 2 drives: 32-GB, 100 GB, 200 GB, 300 GB and 400 GB SSD  | Up to 4 SFF drives: 146 GB 15K, 300 GB 15K, 300 GB 10K, and 900 GB 10K SAS; and 500 GB 7.2K and 1 TB 7.2K SATA; and 100 GB, 200 GB, 300 GB, 400 GB SSD                        |  |
| Internal RAID                 | RAID 0 and 1   | RAID 0 and 1   |   | RAID 0, 1, 5, and 10  | RAID 0, 1 and 5   |  |
| Mezzanine Cards               | 1 + 1 Cisco UCS VIC 1240   | 1 + 1 Cisco UCS VIC 1240   |   | 2 + 1 Cisco UCS VIC 1240  | 2   |  |






| Cisco UCS® 6200 Series Fabric Interconnects |   |   |
|---|---|---|
|   | Cisco UCS 6296UP<br>96-Port Fabric Interconnect                                   | Cisco UCS 6248UP<br>48-Port Fabric Interconnect                                   |
|   |  |  |
| Form Factor                                 | 2RU   | 1RU   |
| Maximum Ports                               | 96  | 48  |
| Cisco UCS Manager Version                   | Cisco UCS Manager 2.0 (2)   | Cisco UCS Manager 2.0 (1)   |
| Expansion Modules                           | Up to 3x 16-port UP   | Up to 1x 16-port UP   |
| Fixed Base Ports                            | 48  | 32  |
| Prelicensed Base Ports                      | 18  | 12  |
| Fans  | 4   | 2   |
| Power Supply Units                          | 2   | 2   |
| Throughput                                  | 1920 Gbps   | 960 Gbps  |
| Maximum Chassis per System                  | 20  | 20  |

| Cisco UCS Virtual Interface Cards             |   |   |   |   |   |
|---|---|---|---|---|---|
|   | Cisco UCS 1280<br>Virtual Interface Card  | Cisco UCS 1240<br>Virtual Interface Card  | Cisco UCS 1225<br>Virtual Interface Card  | Cisco UCS M81KR<br>Virtual Interface Card   | Cisco UCS P81E<br>Virtual Interface Card  |
|   |  |  |  |  |  |
| Maximum Number of Interfaces (vNICs or vHBAs) | 256   | 256   | 256   | 128   | 128   |
| Interface Type                                | Dynamic   | Dynamic   | Dynamic   | Dynamic   | Dynamic   |
| Cisco Data Center VM-FEX                      | Hardware  | Hardware  | Hardware  | Hardware  | Hardware  |
| Failover Handling                             | Fabric failover; no driver required   |   |   |   |   |
| Form Factor                                   | Mezzanine card  | Modular LOM   | PCI Express (half height)   | Mezzanine card  | PCI Express (full height)   |
| Network Throughput                            | 80 Gbps   | 40 Gbps 80 Gbps with Port Expander  | 20 Gbps   | 20 Gbps   | 20 Gbps   |
| Cisco UCS Server Compatibility                | Cisco UCS M3 blade servers, Cisco UCS B230 M2, and Cisco UCS B440 M2                | Cisco UCS M3 blade servers  | Cisco UCS M3 rack servers, Cisco UCS C260 M2, and Cisco UCS C460 M2                 | Cisco UCS M1 and M2 blade servers   | Cisco UCS M1 and M2 rack servers  |

| Cisco R-Series Racks         |   |
|------------------------------|---|
|                              | Cisco R42610 Rack<br>                                   |
| Tested with Cisco UCS        | Industry-standard, EIA-310-D 42RU, 2100 lb (161 kg) capacity rack that has been optimized for Cisco UCS rack and blade servers            |
| Standard and Expansion Racks | Standard and expansion racks ideal for single- or multiple-rack Cisco UCS deployments   |
| Front and Rear Doors         | 80 percent perforation increases airflow; locks added for additional security; split rear doors reduce clearance required at rear of rack |
| PDU Mounting                 | Sidewall spaces and PDU trays allow quick installation of 0-RU and 1-RU PDUs; toolless mounting for optional 0-RU Cisco RP-Series PDUs    |

| Cisco UCS 5108 Blade Server Chassis |  |
|-------------------------------------|--|
|                                     | Cisco UCS 5108 Blade Server Chassis<br> |
| Chassis                             | 6RU with flexible bay configurations supporting up to 8 half-width or 4 full-width blade servers                           |
| Fabric Extenders                    | Up to 2 Cisco UCS 2204XP or 2208XP Fabric Extenders  |
| I/O Bandwidth                       | Maximum of 80 Gbps to each half-width blade and 160 Gbps to each full-width blade  |
| Power Supply Units                  | 4 N+N 2500W  |

| Cisco® Fabric Extenders |   |   |   |
|-------------------------|---|---|---|
|                         | Cisco UCS 2208XP<br>Fabric Extender   | Cisco UCS 2204XP<br>Fabric Extender   | Cisco Nexus® 2232PP<br>10 GE Fabric Extender  |
|                         |  |  |  |
| Form Factor             | Chassis fabric extender (up to 2 per chassis)   | Chassis fabric extender (up to 2 per chassis)   | Rack fabric extender (1RU)  |
| Server-Facing Ports     | 32  | 16  | 32  |
| Port Speeds             | 10 GE with FCoE   | 10 GE with FCoE   | 1 GE and 10 GE with FCoE  |
| 10-Gbps Fabric Ports    | 8   | 4   | 8   |
| Throughput              | 80 Gbps   | 40 Gbps   | 80 Gbps   |