

HPE ProLiant ML350 Gen10

Tower server (4U rackable), dual Intel Xeon Scalable, 24 x DDR4, iLO 5

FORM FACTOR	SOCKETS	MEMORY	DRIVE BAYS	MANAGEMENT
Tower (4U rackable)	2 x LGA3647	24 x DDR4	8 to 24 SFF, 4 to 12 LFF	iLO 5

Overview

Refurbished HPE ProLiant ML350 Gen10 tower servers, tested and stocked in Doha, with dual Intel Xeon Scalable processors, 24 DDR4 DIMM slots, up to 24 SFF or 12 LFF bays and iLO 5, delivered across Qatar within a day.

The ML350 Gen10 is HPE's dual-socket tower server, the equivalent of the Dell T440 with more of everything: the full Intel Xeon Scalable range rather than a 105 W ceiling, 24 memory slots rather than 16, up to 24 drive bays, eight PCIe slots and support for up to four GPUs. It is a DL380 Gen10 in a quiet floor-standing chassis, which is exactly what a business without a rack wants when the server lives in an office, a clinic or a site cabin. It can be converted to a 4U rack unit later with HPE's rail kit.

Chassis options

The ML350 Gen10 uses the same removable cage system as the DL380 Gen10. The two base chassis are SFF (2.5") and LFF (3.5"); a unit ships with one cage and can take up to three, so drive bays can be added after purchase.

CHASSIS	BAYS	DRIVE TYPES	TYPICAL USE
8 SFF	8	SAS, SATA, SSD	Entry virtualisation hosts, application servers
16 or 24 SFF	16 or 24	SAS, SATA, SSD, NVMe with the NVMe cage	Virtualisation and database hosts
4 LFF	4	SAS, SATA	Entry file server or domain controller
8 or 12 LFF	8 or 12	SAS, SATA	File and backup servers, surveillance storage

A non-hot-plug 4 LFF entry chassis also exists; check the listing. An M.2 riser keeps the operating system off the drive bays.

Processors

The ML350 Gen10 takes first-generation (Skylake-SP, 2017) and second-generation (Cascade Lake, 2019) Intel Xeon Scalable processors in two LGA3647 sockets. Second-generation CPUs need System ROM v2.00 or later and unlock 2933 MT/s memory. Both CPUs in a system must be identical. The list below covers the SKUs most commonly found in refurbished units; the platform supports the full range up to 28 cores.

Second-generation Xeon Scalable (Cascade Lake)

PROCESSOR	CORES	BASE CLOCK	TDP	MEMORY SPEED
Xeon Silver 4210	10	2.2 GHz	85 W	2400 MT/s
Xeon Silver 4214	12	2.2 GHz	85 W	2400 MT/s
Xeon Silver 4216	16	2.1 GHz	100 W	2400 MT/s
Xeon Gold 5218	16	2.3 GHz	125 W	2666 MT/s
Xeon Gold 5220	18	2.2 GHz	125 W	2666 MT/s
Xeon Gold 6230	20	2.1 GHz	125 W	2933 MT/s
Xeon Gold 6238	22	2.1 GHz	140 W	2933 MT/s
Xeon Gold 6240	18	2.6 GHz	150 W	2933 MT/s
Xeon Gold 6248	20	2.5 GHz	150 W	2933 MT/s
Xeon Gold 6252	24	2.1 GHz	150 W	2933 MT/s
Xeon Platinum 8260	24	2.4 GHz	165 W	2933 MT/s
Xeon Platinum 8268	24	2.9 GHz	205 W	2933 MT/s
Xeon Platinum 8280	28	2.7 GHz	205 W	2933 MT/s

First-generation Xeon Scalable (Skylake-SP)

PROCESSOR	CORES	BASE CLOCK	TDP	MEMORY SPEED
Xeon Silver 4110	8	2.1 GHz	85 W	2400 MT/s

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PROCESSOR	CORES	BASE CLOCK	TDP	MEMORY SPEED
Xeon Silver 4114	10	2.2 GHz	85 W	2400 MT/s
Xeon Silver 4116	12	2.1 GHz	85 W	2400 MT/s
Xeon Gold 5118	12	2.3 GHz	105 W	2400 MT/s
Xeon Gold 5120	14	2.2 GHz	105 W	2400 MT/s
Xeon Gold 6130	16	2.1 GHz	125 W	2666 MT/s
Xeon Gold 6138	20	2.0 GHz	125 W	2666 MT/s
Xeon Gold 6140	18	2.3 GHz	140 W	2666 MT/s
Xeon Gold 6148	20	2.4 GHz	150 W	2666 MT/s
Xeon Platinum 8160	24	2.1 GHz	150 W	2666 MT/s
Xeon Platinum 8168	24	2.7 GHz	205 W	2666 MT/s
Xeon Platinum 8180	28	2.5 GHz	205 W	2666 MT/s

Silver and Gold 5xxx processors cap memory at 2400 or 2666 MT/s regardless of the DIMMs fitted. If memory bandwidth matters to your workload, a Gold 6xxx or Platinum with second-generation silicon is the difference between 2400 and 2933 MT/s on the same board.

Memory

Twenty-four DDR4 DIMM slots, twelve per processor across six channels. HPE SmartMemory registered (RDIMM) and load-reduced (LRDIMM) modules are supported; they cannot be mixed in the same system. With one CPU installed, only the twelve slots on that side are usable. Third-party DIMMs work but the system reports them as non-HPE memory and disables some HPE Fast Fault Tolerance features.

MODULE	CAPACITIES	MAXIMUM SYSTEM MEMORY
RDIMM	8 GB, 16 GB, 32 GB, 64 GB	1.5 TB with 24 x 64 GB
LRDIMM	64 GB, 128 GB	3 TB with 24 x 128 GB
Intel Optane DC Persistent Memory (second-gen CPUs only)	128 GB, 256 GB, 512 GB	Up to 12 modules alongside DRAM, in mixed configurations

For best performance populate all six channels per CPU in matched sets: 6, 12 or 24 DIMMs in total for a dual-CPU system. Memory runs at the lower of the DIMM rating and the CPU limit.

Storage and RAID

Drive support depends on the cages fitted. All cages are hot-plug. HPE Smart Array controllers come in two forms: modular (fitted to a dedicated slot) and PCIe card. The controller options are:

CONTROLLER	TYPE	CACHE	RAID LEVELS	NOTES
Smart Array S100i	Software RAID (SATA)	None	0, 1, 5, 10	Onboard; SATA only, adequate for boot mirrors
Smart Array E208i-a	Hardware RAID / HBA	None	0, 1, 5, 10	No cache, so write-heavy RAID 5 is slow; good HBA-mode choice
Smart Array P408i-a	Hardware RAID	2 GB FBWC	0, 1, 5, 6, 10, 50, 60	The common choice for virtualisation and database hosts
Smart Array P816i-a	Hardware RAID	4 GB FBWC	0, 1, 5, 6, 10, 50, 60	16 lanes; needed for 24 SFF without an expander

The E208i-a and P408i-a can be switched to HBA (pass-through) mode for ZFS, Storage Spaces and Ceph. Supported drive types are 12 Gb/s SAS and 6 Gb/s SATA in hard disk and SSD form, plus U.2 NVMe with the NVMe cage. Drives need HPE Gen10 Smart Carriers.

Networking and expansion

Onboard networking is an embedded HPE 369i quad-port 1 GbE adapter. Faster networking goes into one of up to eight PCIe Gen3 slots across the primary and secondary risers, full-height, which is where the tower beats its 1U and 2U siblings for a mixed workload:

- HPE 562T or 562SFP+ dual-port 10 GbE

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- HPE 640SFP28 dual-port 25 GbE
- A Fibre Channel or SAS HBA for a tape drive or expansion shelf
- Up to four double-width GPUs with the GPU enablement kit and 1600 W supplies, such as the NVIDIA V100 or A-series cards

Power supplies

Two hot-plug redundant Flex Slot power supply bays, configured 1+1. Options are 500 W, 800 W and 1600 W in Platinum and Titanium grades. A dual-CPU system with 24 drives and a Smart Array sits within 800 W; GPU configurations need 1600 W units. Both supplies in a system should be the same rating.

Management

Every ML350 Gen10 includes iLO 5 with a dedicated management port. iLO Standard covers remote power, health monitoring and basic alerts; iLO Advanced adds the virtual console, virtual media, remote firmware updates and the full Redfish API, which is what most buyers actually want for a server they do not visit. Advanced licences can be added to any unit. Intelligent Provisioning handles bare-metal OS installs, and HPE OneView or iLO Amplifier Pack cover fleet management.

Physical specification

Form factor	Tower, 2 socket; 4U when rack-mounted
Height	Approximately 468 mm with feet
Width	Approximately 175 mm
Depth	Approximately 648 mm
Weight	Up to approximately 33 kg fully configured
Rack conversion	HPE tower-to-rack kit with sliding rails
Acoustics	Designed for office use; noticeably quieter than a rack server under the same load
Operating temperature	10 to 35 °C continuous

Supported operating systems

Windows Server 2016, 2019 and 2022; Red Hat Enterprise Linux 7, 8 and 9; SUSE Linux Enterprise Server 12 and 15; Ubuntu Server LTS releases; VMware ESXi 6.5, 6.7, 7.0 and 8.0; Citrix Hypervisor; and Proxmox VE, which is unsupported by HPE but widely deployed on this platform. Confirm your hypervisor's hardware compatibility list before buying if you need vendor support.