# HPE ProLiant DL360 Gen9

1U rack server, dual Intel Xeon E5-2600 v3/v4, 24 x DDR4, iLO 4

| FORM FACTOR | SOCKETS | MEMORY | DRIVE BAYS | MANAGEMENT |
|---|---|---|---|---|
| 1U rack | 2 x LGA2011-3 | 24 x DDR4 | 4, 8 or 10 | iLO 4 |

## Overview

Refurbished HPE ProLiant DL360 Gen9 1U rack servers, tested and stocked in Doha, with dual Intel Xeon E5-2600 v3 or v4 processors, 24 DDR4 DIMM slots and 4, 8 or 10 front bays, delivered across Qatar within a day.

The DL360 Gen9 is HPE's dual-socket 1U server from 2014, refreshed for v4 processors in 2016, and the direct equivalent of the Dell R630. It is the predecessor of the DL360 Gen10 with the same 1U footprint, the same 24 memory slots and up to 10 front bays, on the E5-2600 v3 and v4 platform. It gives up memory speed and NVMe breadth against the Gen10 and gives back price. For a lab, a branch office, a Proxmox or ESXi host with modest memory needs, or a node to match an existing Gen9 cluster, it is the most cost-effective dual-socket 1U HPE server you can buy today.

## Chassis options

The DL360 Gen9 shipped in three front-bay layouts. The base chassis (SFF or LFF) is fixed at the factory; an 8 SFF unit can take a 2 SFF bay in the optical slot to reach 10.

| CHASSIS | FRONT BAYS | DRIVE TYPES | TYPICAL USE |
|---|---|---|---|
| **4 LFF** | 4 | SAS, SATA | Bulk capacity, backup targets, file servers |
| **8 SFF** | 8 | SAS, SATA, SSD | General virtualisation and application hosts |
| **10 SFF** | 10 | SAS, SATA, SSD, up to 6 NVMe with the Express Bay kit | Databases and flash-heavy workloads |

An internal microSD or dual microSD kit gives a hypervisor boot device, and a PCIe M.2 adapter is the modern alternative.

## Processors

The DL360 Gen9 takes Intel Xeon E5-2600 v3 (Haswell-EP, 2014) and v4 (Broadwell-EP, 2016) processors in two LGA2011-3 sockets. v4 CPUs need System ROM P89 v2.00 or later and unlock 2400 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 22 cores.

### Xeon E5-2600 v4 (Broadwell-EP)

| PROCESSOR | CORES | BASE CLOCK | TDP | MEMORY SPEED |
|---|---|---|---|---|
| **Xeon E5-2620 v4** | 8 | 2.1 GHz | 85 W | 2133 MT/s |
| **Xeon E5-2630 v4** | 10 | 2.2 GHz | 85 W | 2133 MT/s |
| **Xeon E5-2640 v4** | 10 | 2.4 GHz | 90 W | 2133 MT/s |
| **Xeon E5-2650 v4** | 12 | 2.2 GHz | 105 W | 2400 MT/s |
| **Xeon E5-2660 v4** | 14 | 2.0 GHz | 105 W | 2400 MT/s |
| **Xeon E5-2680 v4** | 14 | 2.4 GHz | 120 W | 2400 MT/s |
| **Xeon E5-2690 v4** | 14 | 2.6 GHz | 135 W | 2400 MT/s |
| **Xeon E5-2695 v4** | 18 | 2.1 GHz | 120 W | 2400 MT/s |
| **Xeon E5-2697 v4** | 18 | 2.3 GHz | 145 W | 2400 MT/s |
| **Xeon E5-2698 v4** | 20 | 2.2 GHz | 135 W | 2400 MT/s |
| **Xeon E5-2699 v4** | 22 | 2.2 GHz | 145 W | 2400 MT/s |

### Xeon E5-2600 v3 (Haswell-EP)

| PROCESSOR | CORES | BASE CLOCK | TDP | MEMORY SPEED |
|---|---|---|---|---|
| **Xeon E5-2620 v3** | 6 | 2.4 GHz | 85 W | 1866 MT/s |
| **Xeon E5-2630 v3** | 8 | 2.4 GHz | 85 W | 1866 MT/s |
| **Xeon E5-2640 v3** | 8 | 2.6 GHz | 90 W | 1866 MT/s |
| **Xeon E5-2650 v3** | 10 | 2.3 GHz | 105 W | 2133 MT/s |
| **Xeon E5-2660 v3** | 10 | 2.6 GHz | 105 W | 2133 MT/s |

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| PROCESSOR | CORES | BASE CLOCK | TDP | MEMORY SPEED |
|---|---|---|---|---|
| **Xeon E5-2670 v3** | 12 | 2.3 GHz | 120 W | 2133 MT/s |
| **Xeon E5-2680 v3** | 12 | 2.5 GHz | 120 W | 2133 MT/s |
| **Xeon E5-2690 v3** | 12 | 2.6 GHz | 135 W | 2133 MT/s |
| **Xeon E5-2695 v3** | 14 | 2.3 GHz | 120 W | 2133 MT/s |
| **Xeon E5-2697 v3** | 14 | 2.6 GHz | 145 W | 2133 MT/s |
| **Xeon E5-2699 v3** | 18 | 2.3 GHz | 145 W | 2133 MT/s |

The lower-tier parts cap memory at 1866 or 2133 MT/s regardless of the DIMMs fitted. If memory bandwidth matters, an E5-2650 v4 or above with v4 silicon runs 2400 MT/s on the same board.

## Memory

Twenty-four DDR4 DIMM slots, twelve per processor across four 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.

| MODULE | CAPACITIES | MAXIMUM SYSTEM MEMORY |
|---|---|---|
| **RDIMM** | 8 GB, 16 GB, 32 GB | 768 GB with 24 x 32 GB |
| **LRDIMM** | 32 GB, 64 GB, 128 GB | 3 TB with 24 x 128 GB on v4 processors |

Populate all four channels per CPU in matched sets: 8, 16 or 24 DIMMs in total for a dual-CPU system. Memory runs at the lower of the DIMM rating and the CPU limit, and three DIMMs per channel drops the speed to 1866 MT/s, so 24-DIMM configurations trade bandwidth for capacity.

## 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 |
|---|---|---|---|---|
| **Dynamic Smart Array B140i** | Software RAID (SATA) | None | 0, 1, 5, 10 | Onboard; SATA only, adequate for boot mirrors |
| **Smart HBA H240ar** | Pass-through HBA | None | 0, 1, 5 (simple) | Direct disk access for vSAN, Ceph, ZFS, Storage Spaces |
| **Smart Array P440ar** | Hardware RAID | 2 GB FBWC | 0, 1, 5, 6, 10, 50, 60 | The common choice for virtualisation and database hosts |
| **Smart Array P840ar** | Hardware RAID | 4 GB FBWC | 0, 1, 5, 6, 10, 50, 60 | Larger cache and 16 lanes; for 24 SFF and SSD arrays |

Supported drive types are 12 Gb/s SAS and 6 Gb/s SATA in hard disk and SSD form; NVMe needs the 10 SFF Express Bay configuration. Drives need HPE Gen8 or Gen9 Smart Carriers, which are the same family and easy to source; Gen10 carriers are not interchangeable.

## Networking and expansion

Onboard networking is an embedded HPE 331i quad-port 1 GbE adapter, and a FlexibleLOM slot takes a second adapter without using a PCIe slot. Common FlexibleLOM options:

- HPE 366FLR quad-port 1 GbE
- HPE 361FLR-T dual-port 10 GbE BASE-T
- HPE 560FLR-SFP+ dual-port 10 GbE SFP+
- HPE 640FLR-SFP28 dual-port 25 GbE

Beyond the FlexibleLOM, the DL360 Gen9 offers up to three PCIe Gen3 slots: one full-height x16 and one low-profile x8 on the primary riser, plus a low-profile x16 on the secondary riser with the second CPU fitted. That is enough for a Fibre Channel HBA, a 10 GbE adapter and a RAID or NVMe card. Full-height or double-width GPUs need the 2U DL380 Gen9.

## Power supplies

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Two hot-plug redundant Flex Slot power supply bays, configured 1+1. Options are 500 W, 800 W and 1400 W in Platinum and Titanium grades. A dual-CPU system with a full memory load and a Smart Array generally sits within the 800 W envelope. Both supplies in a system should be the same rating.

## Management

Every DL360 Gen9 includes iLO 4 with a dedicated management port. iLO Standard covers remote power, health monitoring and basic alerts; iLO Advanced adds the virtual console, virtual media and remote firmware updates. On current firmware the HTML5 console works in any modern browser without plugins, and a basic Redfish API is available. Advanced licences can be added to any unit, and Intelligent Provisioning handles bare-metal OS installs.

## Physical specification

| | |
|---|---|
| **Form factor** | 1U rack, 2 socket |
| **Height** | 42.9 mm (1U) |
| **Width** | 434.6 mm |
| **Depth** | Approximately 707 mm without bezel |
| **Weight** | Up to approximately 16 kg fully configured |
| **Rails** | HPE Easy Install rails, ball-bearing or friction |
| **Operating temperature** | 10 to 35 °C continuous, with ASHRAE A3 and A4 support in qualified configurations |

## Supported operating systems

Windows Server 2012 R2, 2016 and 2019; Red Hat Enterprise Linux 6, 7 and 8; SUSE Linux Enterprise Server 12; Ubuntu Server LTS releases; VMware ESXi 6.0, 6.5, 6.7 and 7.0; and Proxmox VE. Windows Server 2022 and ESXi 8.0 run on this platform but are not on HPE's support matrix for it. Confirm your hypervisor's hardware compatibility list before buying if you need vendor support.