

HP ProLiant DL580 Gen8 Server

Unleash the power of your business data



Breakthrough performance, reliability, and efficiency for your most demanding, data-intensive workloads:

- Business processing (enterprise resource planning and customer relationship management)
- Business Intelligence
- Databases
- Consolidation and virtualization
- Technical compute workloads

Does your enterprise data center demand uncompromised performance and cutting-edge resiliency at a lower total cost of ownership?

The HP ProLiant DL580 Gen8 Server is an enterprise-grade four-socket (4S) x86 server offering breakthrough performance, rock-solid reliability, and compelling consolidation and manageability efficiencies. It is the ideal choice for mission-critical enterprise, business intelligence, and database applications.

Featuring Intel® Xeon® E7-4800/8800 v2 processors, the HP ProLiant DL580 Gen8 offers 2.3X performance with enhanced processor performance, more memory slots (96 DIMMs), greater I/O bandwidth (9 PCIe Gen3.0 slots), and increased storage performance (12 Gbps SAS). In addition, HP ProLiant DL580 Gen8 has security and data protection features for system resiliency that your business can depend on. Unique features such as HP Advanced Error Recovery and HP Memory Quarantine increase memory and processor reliability by over 30 percent. With intelligent manageability provided by embedded HP Integrated Lights-Out (iLO 4) capabilities, integrated management through HP OneView and an array of customer-inspired features, you realize faster, lower cost infrastructure management.

Key technology trends

- In-memory computing for accelerating data analytics
- In-server flash storage for accelerating data processing
- Co-processors (e.g., general purpose graphics processing units for accelerating technical compute)
- Maximum memory and I/O scalability for application consolidation
- Advanced error recovery techniques for even greater levels of uptime
- Automated system management for faster time-to-value and shifting focus from maintenance to innovation

Optimized for the next-generation of scale-up x86 computing

Key industry trends

While each industry has a unique set of business drivers, every company must define a plan of action for handling today's top market trends.

Data explosion

Gathered from a wide variety of sources—structured, unstructured, and semi-structured—Big Data is a big deal. And it continues to get bigger. In fact, many organizations' Big Data is too big to process and manage using traditional data processing solutions.

Real-time insight

Today, the time is now for just about everything. There's no time to wait for quarterly reports or even monthly reviews. Businesses need easy access to real-time insight gleaned from complete, accurate, up-to-date information.

Always-On

The global marketplace never sleeps. And neither should your business. To remain Always-On, companies of all sizes need highly reliable IT infrastructure that keeps systems and apps up and available, no matter what.

Accelerated innovation

Every company is looking for "the next best thing" before the competition discovers it. Defining the next best product, service, solution, or system requires dedicated think-time from workers.

Key features and benefits**Blazing-fast results on your most demanding applications**

- 2.3X performance
- 1.5X memory slots
- 2.7X I/O bandwidth
- 2X storage performance
- 1.2X internal SSD bays

Reliability your business can depend on

Building on the heritage of unprecedented reliability, HP ProLiant DL580 Gen8 Server includes cutting-edge reliability, availability, serviceability (RAS) features that improve your systems' availability:

- HP Advanced Error Recovery
- HP Memory Quarantine
- HP Advanced Error Containment
- HP Advanced Fault Resiliency
- HP Advanced Event Detection and Reporting
- HP Qualified Options

Compelling efficiencies

- Data center savings through consolidation
- Software licensing cost savings
- Class-leading manageability for exceptional time- and cost-saving benefits

Breakthrough 4S performance and scalability for blazing-fast results on your most demanding applications

- Up to 2.3X system performance and 50 percent more cores with Intel Xeon E7-4800/8800 v2 processors to speed up your mission-critical enterprise, business intelligence, and database applications.
- 1.5X memory slots (96 DIMMs) for large-scale, in-memory computing and virtualization.
- 2.7X I/O bandwidth with 9 PCIe Gen3 I/O slots including 5 x 16 FL/FH slots for greater PCIe flash storage or co-processor cores.
- 2X SSD performance with 12 Gbps HP Smart Array SAS Controllers and 1.2X higher internal storage capacity providing faster access to more data.

Leading x86 availability and rock-solid reliability your business can depend on

- 30 percent fewer memory- and processor-based outages with HP Advanced Error Recovery and HP Memory Quarantine.
- Increased system availability with HP Advanced Error Containment, HP Advanced Fault Resiliency, and HP Advanced Event Detection and Reporting.
- Improved reliability and 1,000X safer data protection with HP Smart Array Controller featuring 4G cache, Advanced Data Mirroring, and HP SmartDrive technology.
- Increased security with support for Unified Extensible Firmware Interface (UEFI) mode, Secure Boot, HP Secure Encryption, and Intel® Secure Key.
- Industry-leading performance, uptime, and productivity integrated into a personalized, simplified support experience with HP Proactive Care Support Services.

Compelling efficiencies with intelligent manageability and scale-up consolidation

- 45 percent lower total cost of ownership with scale-up consolidation efficiencies and lower core, high-frequency processor options for driving down software licensing costs.
- Faster, lower-cost infrastructure management and a single integrated view of your IT infrastructure with HP OneView.
- 3X faster administrative updates with 93 percent less downtime and 69 percent less operator time using industry-leading maintenance tools with HP Smart Update Manager.
- Comprehensive embedded manageability with HP iLO 4, HP Smart Update Manager (SUM), HP Agentless Management, HP Active Health System, HP Intelligent Provisioning, and HP Embedded Remote Support.
- Customer-inspired features such as Flexible LAN-on-motherboard (LOM) for networking choice, front-access processor/memory drawer for ease of serviceability, and quick response (QR) code for quick access to product information.

Technical specifications



HP ProLiant DL580 Gen8 Server

Processor	Intel Xeon E7 4800/8800 v2 product family
Number of processors	4, 3, or 2
Processor cores	15, 12, 10, 8, or 6
Maximum processor speed	3.4 GHz
Memory	Up to 96 DDR3 DIMM slots and 6 TB maximum memory with 64 GB DIMMs
I/O expansion	9 PCI-e Gen3 slots standard (4 x 8 and 5 x 16 slots) Note: Slot availability is dependent on the number of processors installed.
Internal storage	Up to 10 SFF drive slots (12 Gbps SAS)
Storage controller	HP Smart Array P830i/2G FBWC 12 Gbps SAS Controller
Networking	Flexible LOM; choice of 4 x 1GbE, 2 x 10GbE, or 2 x 10 Gb CNA
Power supplies	Up to four 1,500 W or 1,200 W (N+N redundant), 94 percent efficient; common slot
Fans	4 hot plug and redundant; front accessible
Security	Secure Boot, Intel Secure Key, and TPM option
Optical	External USB optical drive (optional)
Other ports	8 USB (2f, 2i, 4r); 2 video (1f, 1r); 3/5 NIC, 1 micro-SD
ROM	UEFI ROM with UEFI mode and legacy mode
System RAS features	HP Advanced Error Recovery, HP Memory Quarantine, HP Advanced Error Containment, HP Advanced Fault Resiliency, HP Advanced Event Detection and Reporting, and HP Qualified Options
Server management	HP iLO Management, HP SUM, HP OneView, HP Insight Online
Form factor	4U, Rack
Warranty	3/3/3—Server Warranty includes three years of parts, labor, and on-site support coverage

HP Services

Resources

Quick Specs

HP ProLiant DL580 Gen8 Server Technology White Paper

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment.
hp.com/go/hpfinancialservices

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment.
hp.com/go/factoryexpress

Gain the skills you need with ExpertOne training and certification from HP. With HP ProLiant training, you will accelerate your technology transition, improve operational performance, and get the best return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability. hp.com/learn/proliant

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