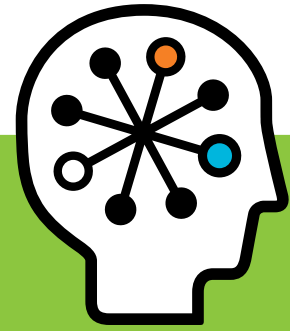




# HP ProLiant ML310 Generation 5p Server

Data sheet



## Engineered to meet the needs of corporate small sites

A fast-moving business requires an agile, easy-to-manage information technology (IT) foundation that can grow with the needs of the business. That is the HP ProLiant ML310 G5p Server.

This forward-looking server offers a broad choice of Intel® processors, including a new quad-core option, so that you get the right level of processing power for your business. You can choose from quad-core or dual-core Intel Xeon®, quad-core and dual-core, or single-core Pentium®/Celeron® processors.

In addition to this wide range of processor choices, the ProLiant ML310 G5p offers industry-leading management tools and essential data protection features for a secure, affordable platform to help you run your business more efficiently. The second NIC port can be enabled as shared NIC, instead of dedicated iLO port and thus provide better networking capabilities. Adding TPM module option support help to address new customer security requirements.

The ML310 G5p also includes Error Checking and Correcting (ECC) memory. Unlike standard memory, ECC memory can actually detect and correct single-bit errors.

The ML310 G5p Server is designed to be scalable and keep up with changing server technologies. It supports Serial-Attached SCSI (SAS) hard disk drives, as well as Serial ATA (SATA) drives. This means as you expand and add more capacity to your server, you can take advantage of the most current hard drive technology.

## Key features and benefits

The ML310 G5p is a tower server with essential availability features for a versatile and dependable backbone for expanding businesses and workgroups.

### Performance you can trust

With the right technology in place, your business becomes more efficient and your staff is free to take on priority projects that help your business grow. The ML310 G5p provides several processing options designed to let you choose the right performance for your business. These include:

- Quad- and dual-core Intel Xeon processors for ultimate performance on the most demanding business applications
- Quad-core and dual-core Pentium processors for general processing
- Single-core Pentium/Celeron processors for the most cost-sensitive implementations

# The HP ProLiant ML310 Generation 5p (G5p) is an affordable, single-processor tower server designed to provide the solid network foundation for fuel thriving small offices.

## **Solid protection**

As technology becomes a more essential part of your business, protecting your data becomes all the more critical. The ML310 G5p offers a wide array of data protection alternatives.

- Hot plug hard drives, integrated SATA or SAS redundant array of independent disks (RAID), and available HP Smart Array controllers protect transactional and archive data.
- Three removable media bays provide ample space for the backup solution you choose. Bays accept both optical media and tape backup devices, including USB tape devices.
- Available hot plug redundant power supplies offer even more protection.
- Trusted Platform Module (TPM) option support helps address new customer security requirements. No board redesign is needed to have TPM chip added to ML310 G5p.

## **Industry-leading management**

Together, ProLiant Essentials software and Lights-Out technology make server installation and management a snap.

- HP SmartStart, included in the ProLiant Essentials Foundation Pack shipped with the ML310, gets your server up and running quickly.
- HP Systems Insight Manager keeps an eye on your server so your staff can focus on priority projects. Alerts on system status can be delivered to you on your own terms.

- Get remote control with the Integrated Lights-Out 2 management tools. View the server console and install updates anytime, anywhere with iLO 2.

## **Ideal environments and applications**

### **Branch offices**

Corporate branch offices that support local users or customers and exchange data with headquarters benefit from the ML310 G5p:

- With reliable, enterprise-class hot plug SAS hard drives, replacements or upgrades are quick and easy.
- Integrated Lights-Out 2 (iLO 2) provides unmatched remote management capability. Your support team can configure and manage the server from any location – local or remote. Required installations and updates happen quickly, saving your business valuable time and resources.

### **Small businesses**

Small businesses, where technology provides an opportunity to get a competitive edge, also benefit from the ML310 G5p. The server brings you:

- Hassle-free server setup and maintenance with HP SmartStart, Systems Insight Manager and iLO 2
- Consistent, reliable server performance at an affordable price
- Enterprise-class data protection with ample room for hot plug hard drives, HP Smart Array controllers and tape backup drives

**Processor and memory**

<b>Number of processors</b>	1
<b>Maximum number of cores</b>	4
<b>Processor type</b>	Intel Xeon; Intel Core2; Intel Pentium; Intel Celeron
<b>Processors supported</b>	Xeon X3370: Quad-Core 3.00 GHz, 12 MB L2 Cache, 1333 MHz FSB Xeon X3360: Quad-Core 2.83 GHz, 12 MB L2 Cache, 1333 MHz FSB Core2 Q9400: Quad-Core 2.66 GHz, 6 MB L2 Cache, 1333 MHz FSB Xeon X3330: Quad-Core 2.66 GHz, 6 MB Cache, 1333 MHz FSB Xeon X3220: Quad-Core 2.4 GHz, 8 MB L2 Cache, 1066 MHz FSB Xeon E3120: Dual-Core 3.16 GHz, 6 MB Cache, 1333 MHz FSB Core2 E8400: Dual-Core 3.00 GHz, 6 MB L2 Cache, 1333 MHz FSB Xeon X3075: Dual-Core 2.66 GHz, 4 MB L2 Cache, 1333 MHz FSB Xeon X3065: Dual-Core 2.33 GHz, 4 MB L2 Cache, 1333 MHz FSB Core2 E6400: Dual-Core 2.13 GHz, 2 MB L2 Cache, 1066 MHz FSB Pentium E2160: Dual-Core 1.8 GHz, 1 MB L2 Cache, 800 MHz FSB Celeron 440: Single-Core 2.0 GHz, 512 KB L2 Cache, 800 MHz FSB Celeron 420: Single-Core 1.6 GHz, 512 KB L2 Cache, 800 MHz FSB
<b>Processor core</b>	Single, dual or quad
<b>Cache</b>	12 MB Cache: X3370, X3360 8 MB Cache: X3220 6 MB Cache: Q9400, X3330, E3120, E8400 4 MB Cache: X3075, X3065 2 MB Cache: E6400 1 MB Cache: E2160 512 KB Cache: 440, 420
<b>Maximum processor speed</b>	3.16 GHz
<b>Multi-processor</b>	1
<b>Maximum front-side bus speed</b>	1333 MHz
<b>Memory type</b>	PC2-6400 DDR2 800 MHz
<b>Standard memory</b>	Q9400 and E8400: 1 GB
<b>Maximum memory</b>	8 GB
<b>Memory protection</b>	ECC
<b>Storage</b>	
<b>Storage type</b>	Pluggable 3.5 inch SATA/SAS, Optional Hot plug 3.5 inch SATA/SAS
<b>Drives supported</b>	Up to 4: Hot plug LFF SAS 15K 450/300/146/72 GB Hot plug LFF SAS 10K 400 GB Hot plug LFF SAS 7.2K 1 TB/750 GB Hot plug LFF SATA 7.2K 1 TB/750/500/250/160 GB
<b>Maximum internal storage</b>	4.0 TB
<b>Maximum internal drives</b>	4
<b>Removable media bays</b>	3 (1 for DVD-ROM)
<b>Expansion slots</b>	Up to 5 total: One (1) PCI Express x8; Three (3) PCI Express x1; Optional Extender Board for one (1) 64-bit, 100 MHz PCI-X
<b>Storage controller</b>	Integrated SATA controller and support for optional SAS controller or HBA
<b>Deployment</b>	
<b>Form factor</b>	Tower with Rack-Mount Optional Tray Kit
<b>Rack height</b>	5U
<b>Networking</b>	NC326i Dual Integrated Gigabit NIC
<b>Remote management</b>	Integrated Lights-Out 2 (iLO 2)
<b>Redundant power supply</b>	1 built-in non-hot-plug, non-redundant power supply; Optional redundant power supplies (standard on RPS models)
<b>Redundant fans</b>	Not available
<b>Warranty (parts/labour/on-site)</b>	1-year/1-year/1-year 3-year/1-year/1-year Asia Pacific region only

For additional information, including descriptions of all models of the ProLiant ML310 G5 and an extensive list of supported options from HP, see the ML310 G5 Server QuickSpecs, available via [http://h18000.www1.hp.com/products/quickspecs/13217\\_div/13217\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/13217_div/13217_div.pdf)

## Financial services

HP Financial Services provides financing and financial asset management programmes to help you cost-effectively acquire, manage and ultimately retire your HP solutions. For more information, contact your HP representative or visit [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## For more information

For more information about the HP ProLiant ML310 G5p Server, contact your local HP representative or visit [www.hp.com/servers/ml310-g5p](http://www.hp.com/servers/ml310-g5p)

## HP Services

### When Technology Works, Business Works

The challenge of virtually every IT organisation is similar: to develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs.

HP Technology Services offer a comprehensive range of HP Care Pack Services to help design, deploy, manage and support your IT environment, enabling cost-effective upgrades to standard warranty with easy-to-buy, easy-to-use support packages.

### Minimum Recommended HP Care Pack services

- Three-year, next business day response on-site, 9-hour x 5-day coverage, hardware support
- Hardware Installation only

### Enhanced service level Care Pack services

- Three-year same business day, 4-hour response on-site, 13-hour x 5-day coverage, hardware support
- Hardware Installation plus operating system installation and start-up

### Benefit from HP Care Pack Services helping you:

- Reduce deployment time and manage ProLiant server solutions smoothly and efficiently
- Increase uptime and performance of servers availability to your business
- Detect, diagnose and repair problems to quickly save time, money, and resources

For more information, visit

[www.hp.com/services/proliantservices](http://www.hp.com/services/proliantservices) or [www.hp.com/go/proliant/carepack](http://www.hp.com/go/proliant/carepack)

## Technology for better business outcomes

To learn more, visit [www.hp.com/servers/ml310-g5p](http://www.hp.com/servers/ml310-g5p)

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