

## GPT vs MBR TABLE

FEATURE	GPT	MBR
Maximun size disk	9,4ZiB	2TiB
Partition types	Primary	Primary, Extended, Logical
Max. number of partitions	By default 128 primary partions, but the GPT format allows a maximum number of $2^{32}$ partitions.	4 primary partions (or 3 primary + 1 extended)
Size of a partition entry	By default 128 bytes, but the GPT format allows a $2^{32}$ partition entry size.	16 bytes
Partition table size	By default 16384 bytes, but the GPT format allows a of $2^{64}$ partition table size.	64 bytes
BIOS vs GPT/MBR	Theoretically YES, but in practice, due to serious issues and problems working together BIOS and GPT, the answer is NO.	YES
UEFI vs GPT/MBR	YES	Backward compatibilty through the Compatibility Support Module (CSM) that provides legacy BIOS compatibility.
OS Compatibility (Linux/Windows)	a) Full compatibility starting with Linux Debian 7 b) Compatibility with Windows: <a href="https://technet.microsoft.com/en-us/library/hh824898.aspx">https://technet.microsoft.com/en-us/library/hh824898.aspx</a>	W98,WMe,W2000,WNT, WXP, W7 32 bits, Any version of Linux Debian
Security	a) Backup partition tables b) CRC for data integrity	a) No backup b) No CRC for data integrity
Admitted partitions format	16 bytes (65536 formats)	1byte (256 formats)

### **Advantages of UEFI over BIOS**

Ability to use large disks (over 2 **TB**) with a GPT table  
 Support for more tha 4 paritions with GPT  
 Backward and forward compatibility  
 CPU-independent architecture (Intel, AMD, ARM...)

Security  
 Efficient power and system management  
 Fast booting  
 Most powerful and standarized interface

## **What is GPT?**

a) GPT is the abbreviation of **GUID Partition Table**. It's a new partition-table format for storage devices developed in the late 1990s. It's a part of the UEFI specification. GPT is designed as an improvement to the MBR partitioning system. All modern PC operating systems support GPT.

b) GUID is a 128-bit number used to identify a disk partition. When generated according to the standard methods, GUIDs are for practical purposes unique, without depending for their uniqueness on a central registration authority or coordination between the parties generating them. While the probability that a GUID will be duplicated is not zero, it is close enough to zero to be negligible. Thus, anyone can create a GUID and use it to identify something with near certainty that the identifier does not duplicate one that has already been, or will be, created to identify something else.

For any further information: [http://download.intel.com/support/motherboards/server/sb/gpt\\_white\\_paper\\_1\\_1.pdf](http://download.intel.com/support/motherboards/server/sb/gpt_white_paper_1_1.pdf)