

## FAQ No. 02326

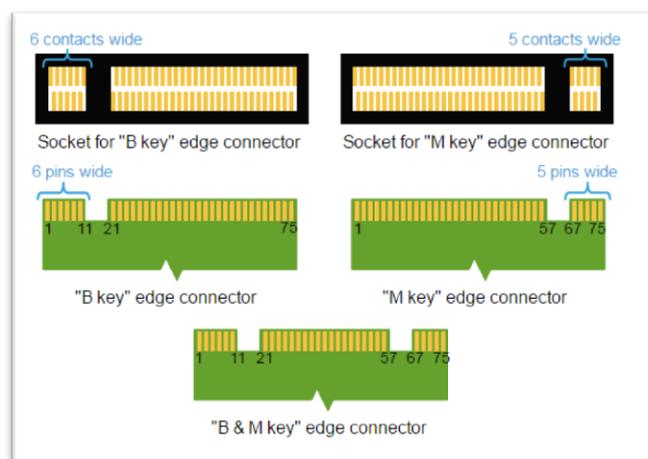
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**Q:** There are so much information on M.2 spec, how to identify them?

**A:** M.2 is a new form factor of the spec in flexible size, which allows M.2 devices to be designed in different lengths and widths combination. The vendor can implement different interfaces in one form factor, such as SATA, PCIe and other interfaces.

You will see “Type 2280” shown in the spec sheet on those M.2 products or notebooks (or shown in other numbers). This number means the physical size of the M.2 device. Type 2280 means the width is 22mm and the length is 80mm.

Since M.2 form factor supports lots of interfaces, certain pin positions of the M.2 module are removed for key notches to identify the interfaces. For SATA M.2 module, usually it uses B Key or both B and M Key. For PCIe x4 module, it uses M Key only.



For M.2 SSD, the most common interfaces are SATA Gen3, PCIe Gen3 x4 (NVMe/AHCI), PCIe Gen2 x4 (NVMe / AHCI), and PCIe Gen2 x2 (AHCI)

M.2 SATA Gen3 which can provide theoretical transfer speed up to 600MB/s.

And for PCIe, the newer generation provides higher transfer speed than older one can provide, for example, by given the same lanes, PCIe Gen3 is faster than PCIe Gen2. And x2 / x4 means the lanes of the PCIe resource. With more lanes, it can transfer more data at the same time. As for the NVMe, it is a new technology specially designed for high speed transferring and is more suitable for SSD.

For most MSI notebooks with Intel 6<sup>th</sup> Gen Core i processors, they support PCIe Gen3 x4 Type 2280 M.2 SSDs which have the maximum lanes and the fastest controller by now.\*1

Note:

1. For the supported SSD device spec of each notebook model, please refer to [FAQ-1117](#).