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M.2 NSFF CONNECTOR FOR DOUBLE SIDE

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M.2 NSFF Connector for Double Side

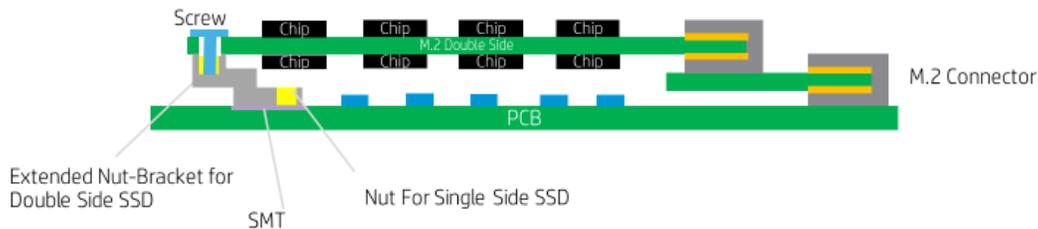
The disclosure solves the issue on M.2 Connector not supported Double-Side SSD for which the height limitation between a motherboard and SSD. The challenge we faced is the room not large enough. Components or chipsets are required to do layout beneath the SSD module. These components have occupied the area so SSD is forced to be determined the single-side SSD type. The disclosure is allowed to use double-side SSD flexibility as long as the extended connector is implemented.

The majority of the traditional M.2 connector support single side SSD. It is the layout to restrict the design. EE needs a layout area. The area beneath an SSD is useable. Given the limitation from layout, it is the reason why the system team won't go after double-side SSD.

A new frontier connector which supports double-side SSD by using an extendable connector. The connector doesn't exist in HP notebook PC before. The concept is we take another M.2 Connector mounted on a printed circuit board. When a platform needs to support double side SSD but they are heading a half way to RTP, they can use the solution to fix the supporting double side SSD issue.

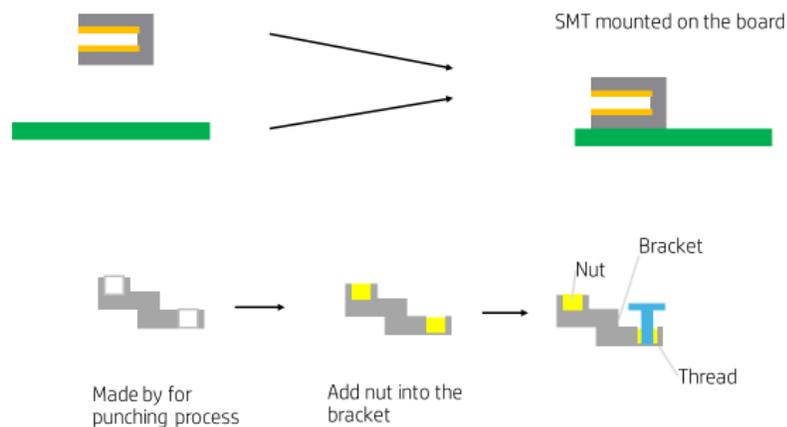


User can flexible replace single-side SSD to double-side SSD by using A extended connector. There's a Extended bracket that will both fit Single-side SSD and double-side SSD.



The disclosure includes two processes: 1) Connector mounted on PCB and 2) the supported bracket. To simplify the complexity, the connector is leveraged the ordinary M.2 connector and mounted on a PCB. The bracket is customized in order to support the extending function. The shape of bracket is a stair. The stair has two steps. The lower step is to support the M.2 mounted on the main PCB. On the other hand, the higher step is to support the M.2 mounted on the daughterboard PCB.

Process to make the Extended connector and the Extended Nut-bracket



The advantages from the disclosure:

- 1) This is the unrevealed replaceable M.2 Double Side connector in HP Notebook PC. It is the way to initiate the Double Side SSD in HP Notebook PC system.
- 2) The replaceable function is flexibility. It increases the SKU set and won't impact the complexity on PCB.
- 3) SKU team easily manages the complexity if the disclosure in the Notebook PC. It benefits the cost-saving.
- 4) It is a transition device to mitigate the impact on the current connector market.
- 5) It is accessible for those who want to change M.2 SSD for larger storage in their system.
- 6) It benefits the previous generation because the user system is upgradable.

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