Technical Disclosure Commons

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PRINTER MASS STORAGE AND USB INTEGRATION, CONNECTION AND MOUNTING

HP INC

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Printer Mass Storage and USB Integration, Connection and Mounting

High end LaserJet products typically require a mass storage device such as a hard drive mounted to the formatter. Some products also include a module with USB ports mounted to the formatter board or as a separate module that can be added as an accessory. The hard drive could be added as an accessory or included with the product at purchase. The hard drive and the USB module both require "tool-less" installation and removal.

The existing solution of using a separate hard drive assembly and USB module requires cables to connect the USB module to the formatter board. During installation of the USB module, the correct cable and plastic cradle must be chosen and attached to the appropriate connector on the formatter board. Additional space is required for the USB module to mount within the formatter cage and must be available on all products, regardless of if a module is installed.

To simplify the installation process and reduce the space required for the hard drive assembly and USB modules, the two assemblies can be combined. A riser card is used to connect the hard drive to the formatter board, which allows other components to be placed beneath the hard drive.
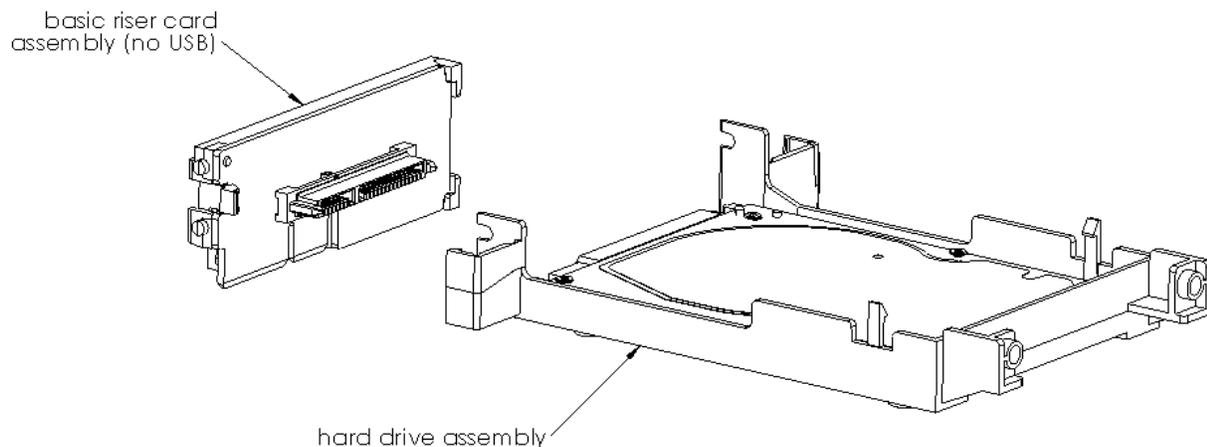
The riser card can have two variations, with or without USB ports. The riser card is held in place with a plastic cradle, the hard drive is mounted into a separate plastic cradle. The riser card cradle is designed to attach to the hard drive cradle to complete the assembly. The riser card cradle can be easily removed from the hard drive cradle and the riser card changed to include USB ports.

riser card cradle

USB ports

riser card

USB thumbdrives
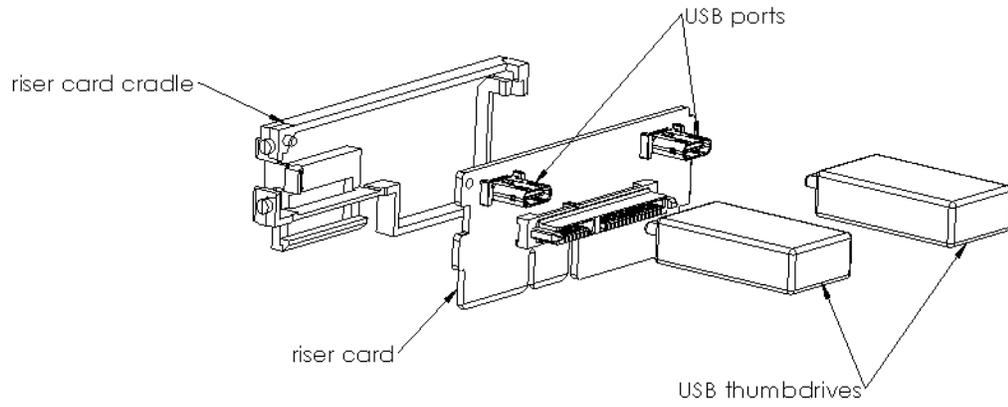
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