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Panel Mounted SFF-TA-1002 Connectors with Common Mounting Slot

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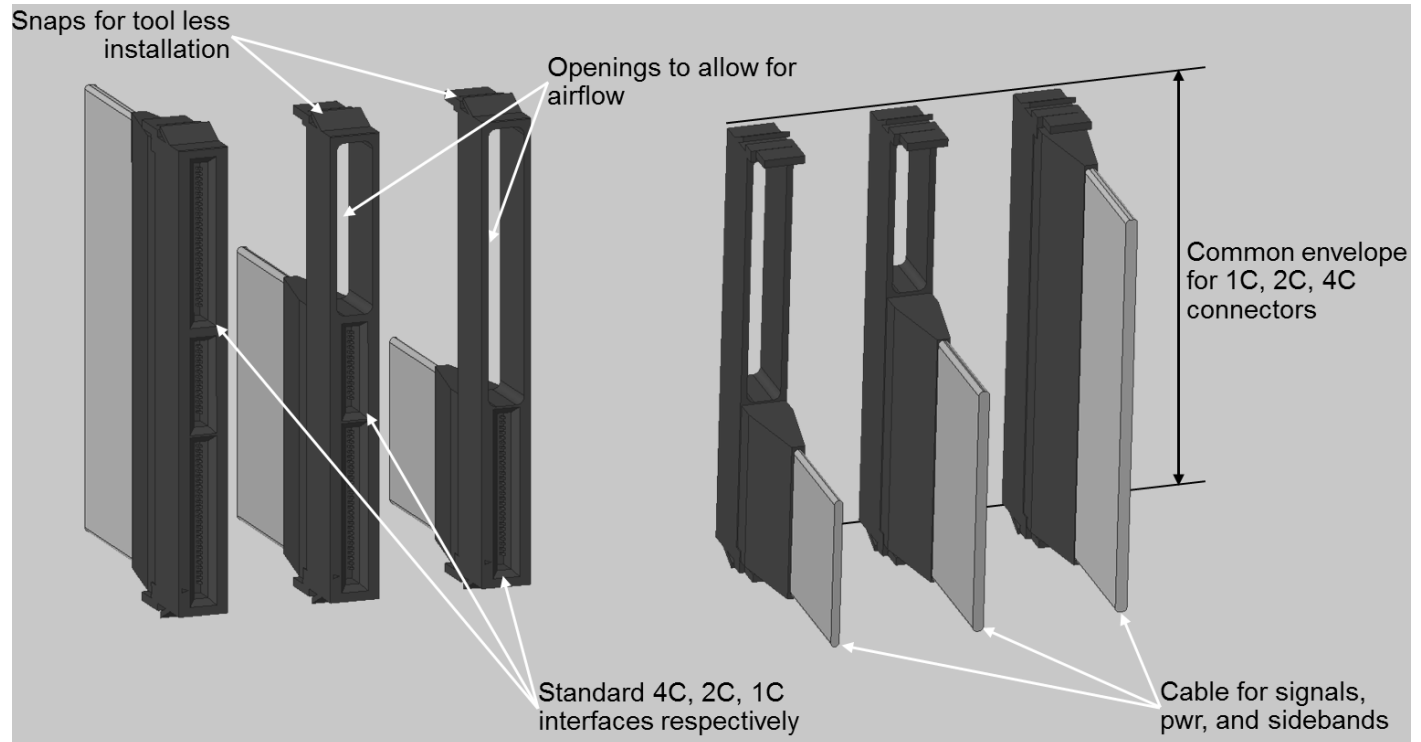


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Panel Mounted SFF-TA-1002 Connectors with Common Mounting Slot

SFF-TA-1002 is a new standard connector standardized under SNIA and adopted by multiple industry bodies such as Gen-Z, EDSFF, JEDEC and OCP. The signal integrity requirements on future high speed systems (32Gbps+) will require more directly cabled solutions that bypass host PCBs and midplanes. This invention details an SFF-TA-1002 implementation that can be panel mounted and deployed into standard backplanes constructed of either PCB or sheet metal. The figure below shows the features of the connector.



As shown, the connector has tool less snaps for retention in a bulkhead or midplane and uses a common mounting hole that can be configured and populated as needed for the bandwidth requirements of the mating device. The 4C connector takes the entire mounting envelope while the 1C and 2C allow for airflow to pass through the unused space. The connector has cable terminated directly to the connector leads for best possible signal integrity performance and connection to the host server. The figure below shows examples of the connector implemented in a midplane or sheet metal panel.

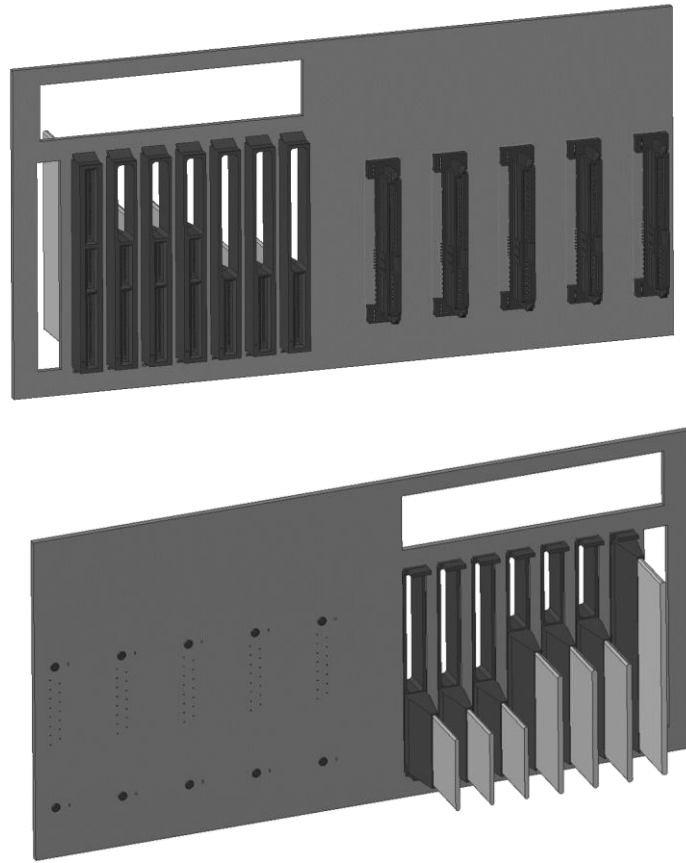
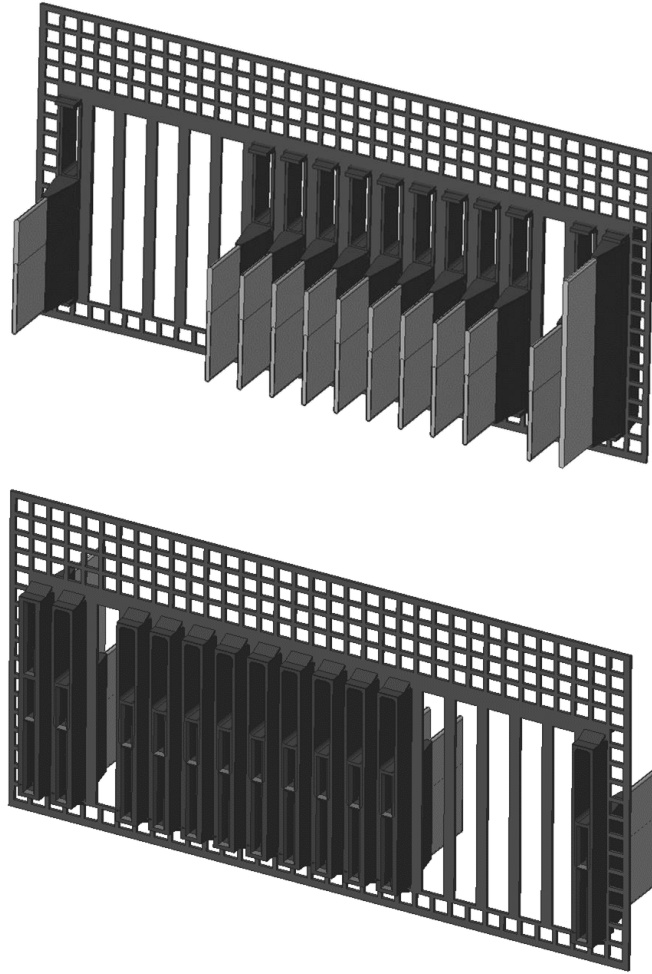


Figure 2: Midplane with a mixture of 1C, 2C, 4C panel mount connectors and standard connectors



The tool less installation method allows a single PCB midplane design to support current form factors while enabling the connectivity configurability required by Gen-Z. In addition, sheet metal “midplanes” may be used to lower development cost and system material cost. As shown, the panel mount implementation of SFF-TA-1002 allows configurability, limits proliferations of midplanes or eliminates them entirely, and delivers high performance signal integrity.

Disclosed by John Norton – Hewlett Packard Enterprise