

NGSFF Connectors

Product Presentation

Amphenol Information Communications
and Commercial Products



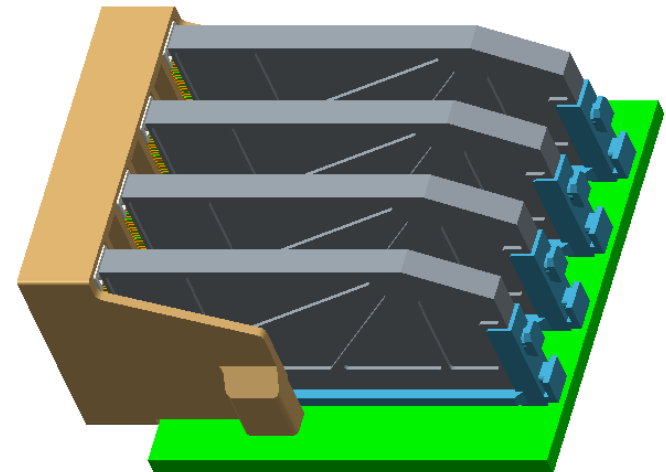
Amphenol ICC

New Product Development

NGSFF Orthogonal and Vertical Connector



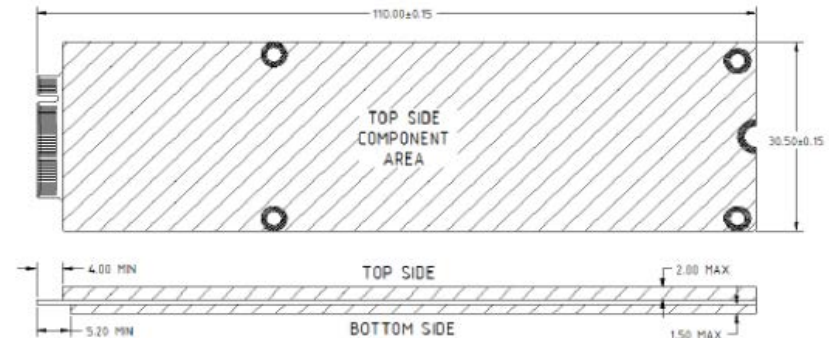
- Partnership to develop NGSFF SSD vertical and Orthogonal connector for high-capacity and small form factor storage application
- NGSFF SSD is targeted for enterprise and datacenter application
- 0.5mm pitch, 67pin, M-Key that similar to M.2 connector
- Supports NVMe SSD and meet 16Gb/s
- High capacity Max 16TB @ 2017



NGSFF Connectors

NGSFF SSD

- High capacity & small form factor SSD is required for enterprise and datacenter server

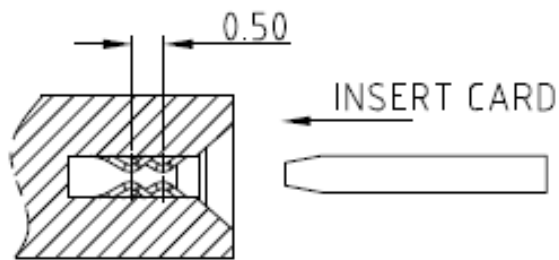


- Form Factor
 - 30.5 x 110mm, Max. 4.38mmT
 - 4 Screw holes / Indicator LEDs
- Module Mechanical
 - PCB size: Length (110mm) and thickness (0.8mm)
 - Component height
 - Bottom Side: Max. 1.5mmT
 - Top Side: Max. 2.0mmt
- Key New Features
 - Hot-Plug/Front loading
 - Power disable (Power reset)
 - Higher density (Max. 16TB @ 2017)
 - Interface
 - PCIe (Single-Port x4, Dual Port x2)
 - SAS (x4)
 - SATA (Legacy support)
 - Power Supply 12V, Max. 16W

■ Mating Sequence:

1st Mating(GND/12V Pre-charge/PWDIS)

→ 2nd Mating(Signals/Power)

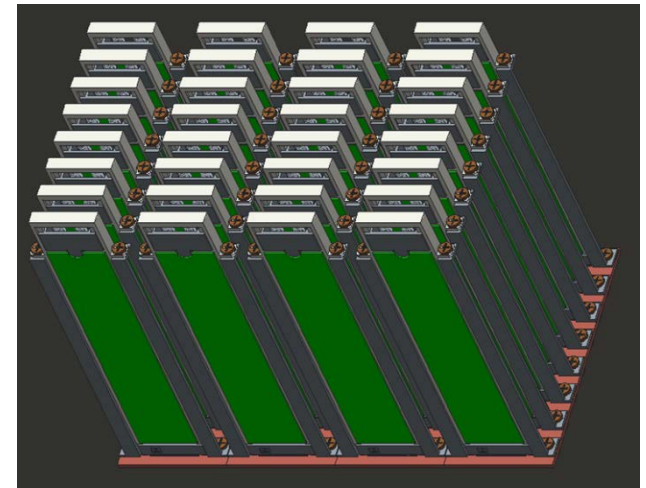
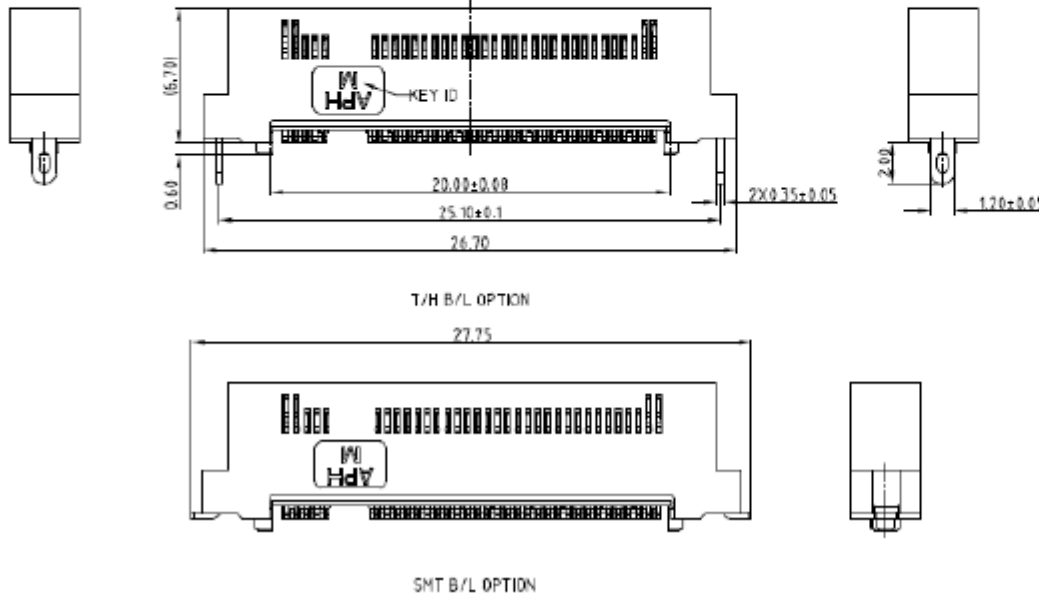
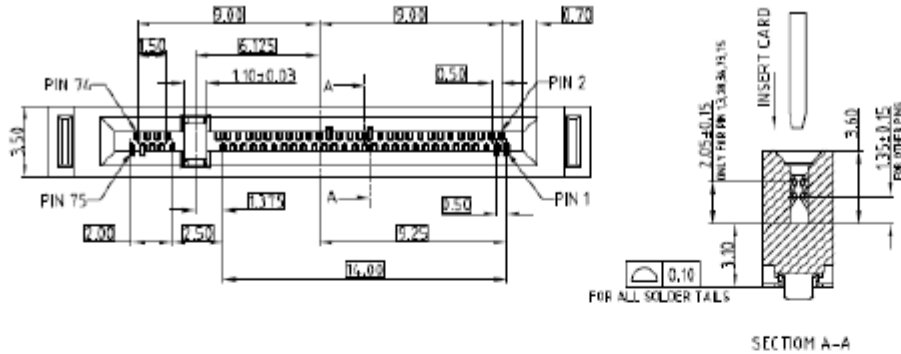


- The hot-plug and mechanical requirements yields staggered pin arrangements.
- Six pins (GNDs, 12V Pre-charge and PWDIS Pins) should be mated to Gold fingers earlier than signals and power pins.
- Pin numbers of earlier mated six pins are 1, 3, 73 and 75 at top-side and 28 and 36 at bottom-side

NGSFF Connectors

Vertical NGSFF Connector

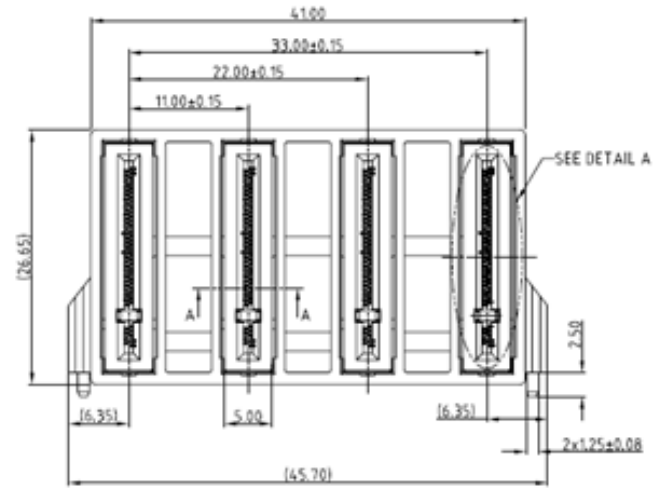
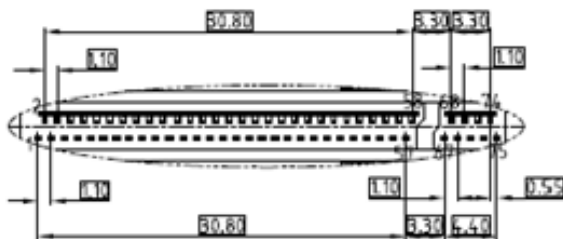
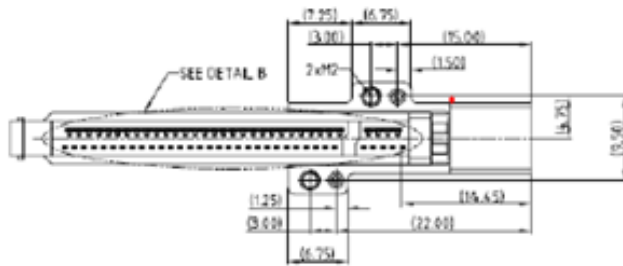
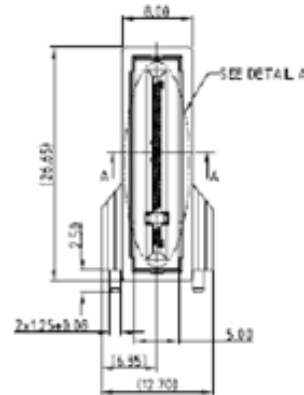
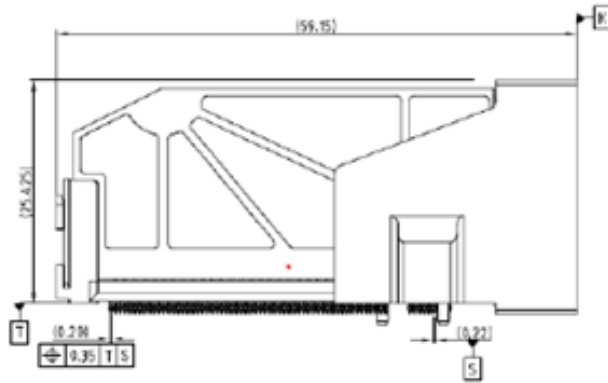
- Vertical Connector



NGSFF Connectors

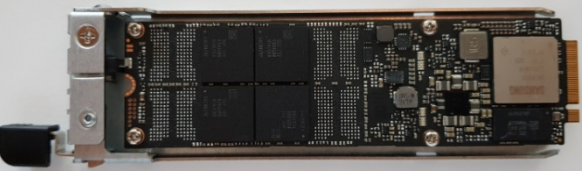
Orthogonal NGSFF Connector

- Orthogonal Connector

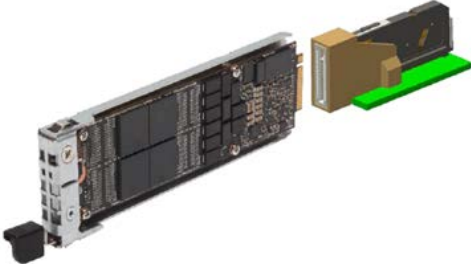


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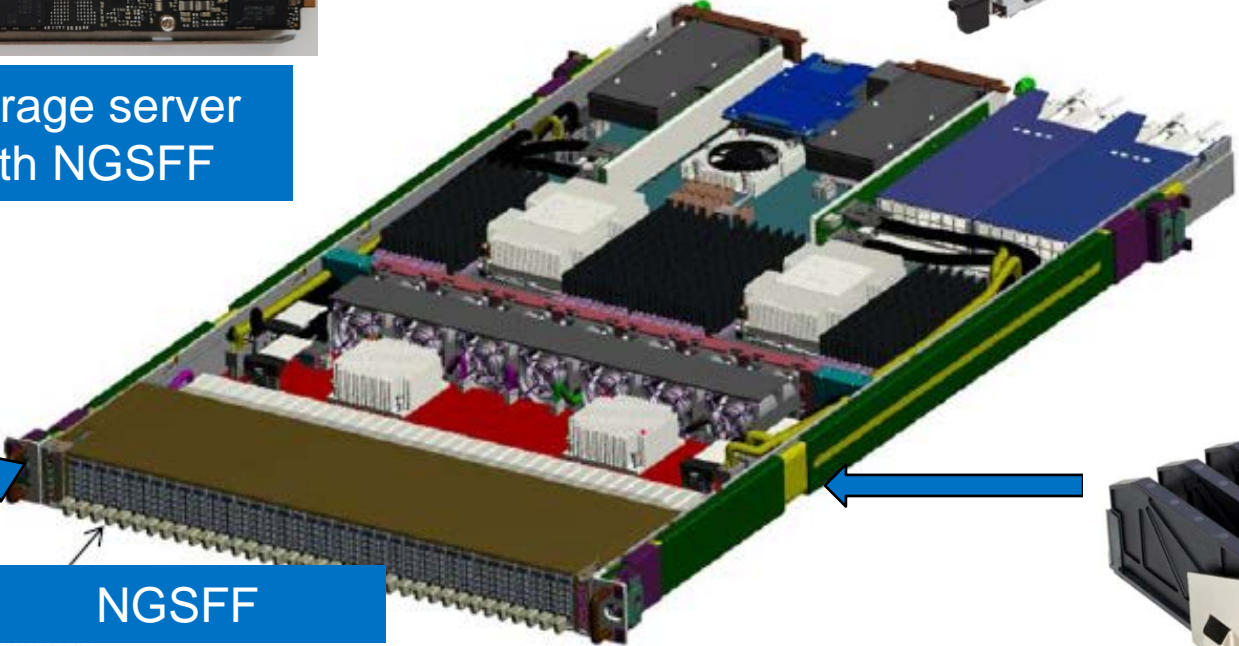
High Performance Computing Application



Storage server with NGSFF



NGSFF



- The small form factor has 1U system optimized form factor
- 1U system has about 570TB capacity
- Support next generation NVMe 16Gb/s data speed
- Air slot design between connector provide superior thermal performance
- Special pin design supports hot plug application
- Robust gang bracket design provide good mechanical support
- Staggered mounting feature allow connector gang sit side-by-side

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Thank You!