

BergStak[®] Secure Connector

Product Presentation

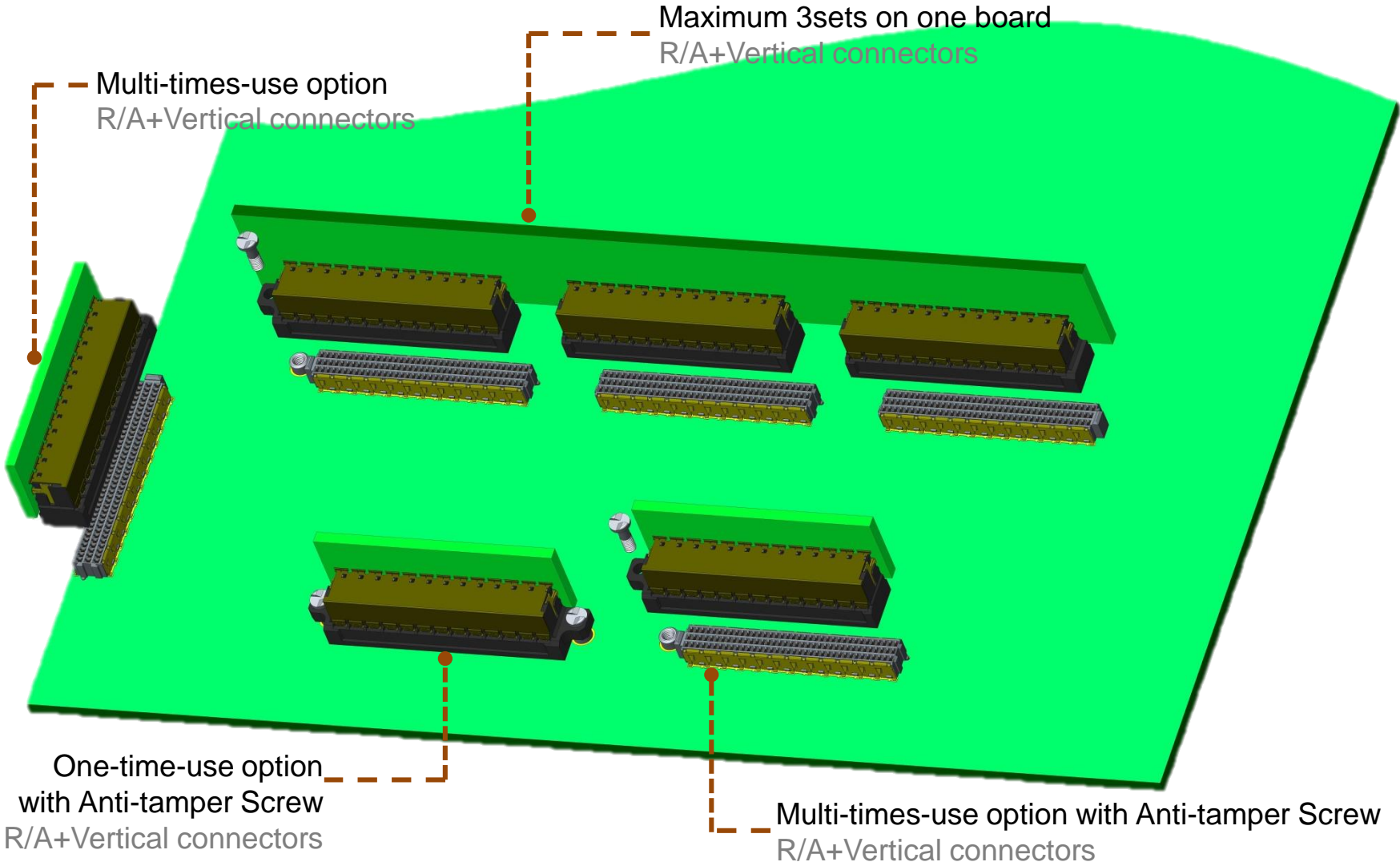
Amphenol Information Communications
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 **FCi Basics**

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- Value Proposition
- Product Overview
- Product Specifications
- Features & Benefits
- Part Numbers
- Market Applications

- Basics BergStak® Secure Connector family is known for its **high signal safety assurance**, **high pin count density**, **high data transmission**, and **high reliability**.
- This **Secure** connector offers **One-Time-Use & Multi-Times-Use(General) Solutions**. The One-Time-Use solution has unique patented lock terminal and lock shield features which are suitable for the applications need tamper-proof connections.
- This **high density** connector has 3row pins in 1.0mm pitch, currently we have 37pin per row available and can be extended in range of 13 to 40 pin per row, the type has better space utility ratio than traditional 2row similar pitch connectors.
- Its shield helps to provide **superior EMI / EMC performance**, together with optimized terminal design, this type now can support higher and more reliable data transmission up to **32Gb/s**. Suit for applications that require **high-speed** transmission.



Product Facts

- 1.0mm pitch and 3 row contact
- Supports speed performance up to 32Gb/s
- Electromagnetic Compatibility (EMC)
- **One-Time-Use** and **Multi-Times-Use** options

Basic Specifications

Pitch	1.0 mm
Pin Count	39 to 120
PCB Termination	SMT
Configurations:	Right Angle Header, Vertical Receptacle
Plating	Gold / GXT on contact area, and tin plating on soldering tail

Technical Documents

- Product Spec.: GS-12-1607

Performance Characteristics

- **Durability:** 200 cycles for Multi-times-Use Option
- Mating and un-mating Force: 1N max./contact
- **Operating Temperature: -55°C to +105°C**
- Current Rating: 1A per contact; 10A per shield
- Voltage Rating: 100VAC.
- Insulation Resistance: $1 \times 10^{10} \Omega$ min.
- Contact Resistance: <40 m Ω max.
- Mechanical Shock and Vibration: USCAR-2 V2
- Signal Integrity
 - Data rate: up to 32Gbps

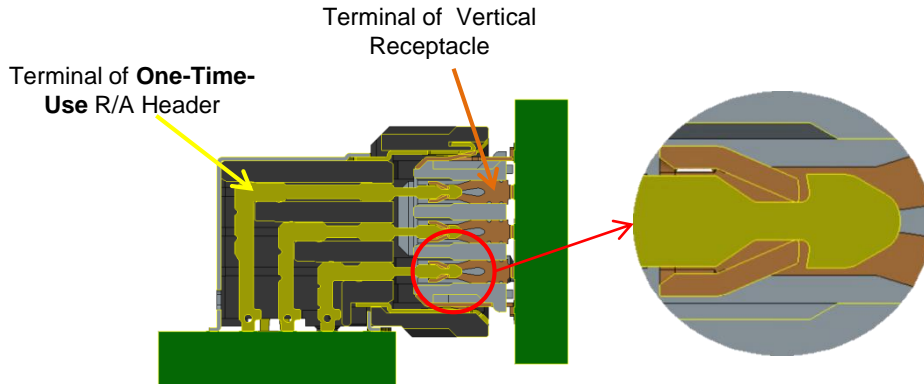
Materials

- Housing: High temperature thermoplastic LCP, Black (UL94V-0)
- Contact Base Metal
 - Receptacles: Copper Alloy, high spring
 - Headers: Copper Alloy, high spring
- Shell: Copper Alloy, high spring

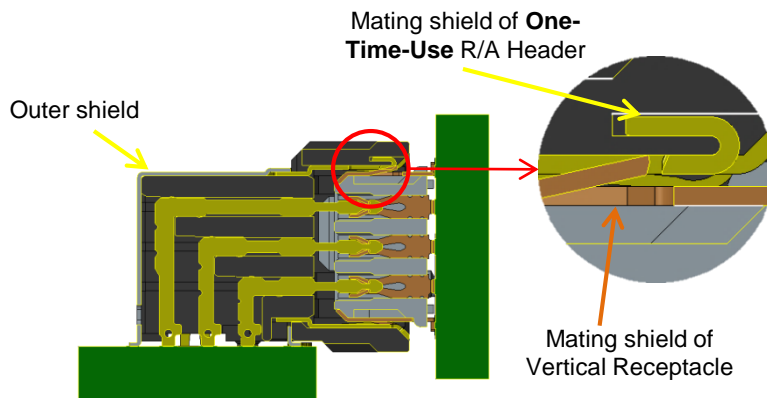
Features	Benefits
EMI Shielding	Excellent protection of signals, no possible to probe. Suitable for the applications which need signal security.
High speed performance up to 32Gb/s	Can be used in high-end computing and signal transfer applications in data communication telecommunication, computing, medical technology and industrial automation segments.
Dual-beam receptacle contacts	Provides high electrical reliability and withstands high level of vibration.
Blind-mating feature	Suit for those tasks where visual and tactile tools are compromised during mating process.
Modular design	Support maximum 3sets using together on one board, 333pins per board.
One-Time-Use option contains tamper-resistant screw and terminal& shield lock feature	These optional secure features ensure un-mating action can destroy the connection. Suitable for applications where security is a top priority.

Features & Benefits

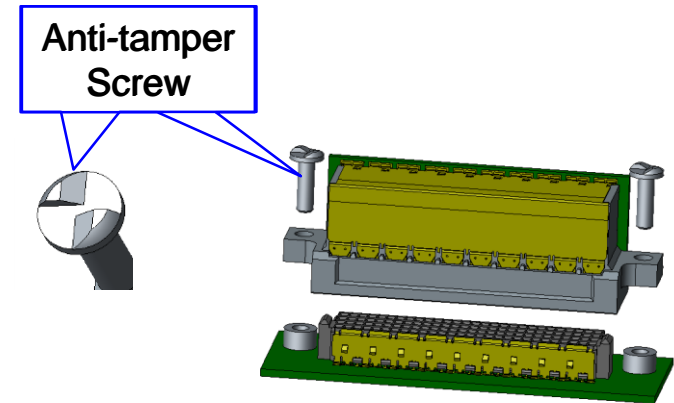
-Security Feature of One-Time-Use Option



Unique patented lock feature on terminals.



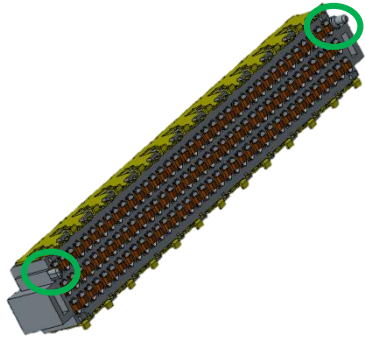
Unique patented lock feature on mating shields.
Outer shield protects the connection not to be probed.



- ✓ For this One-Time-Use option, once connectors mate together, not possible to separate them without damaging PCB of Vertical receptacle (more than 90% soldering pad will peel off when do unmating action). The lock features on terminal and shield make the most contribution to achieve this.
- ✓ Outer shield can protect the connection not to be probed.
- ✓ Optional Anti-tamper screw provides additional security.

Features & Benefits

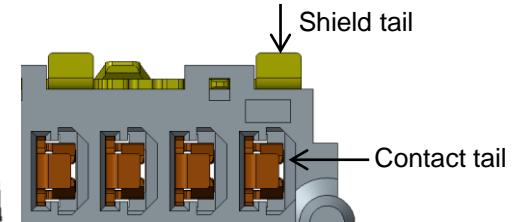
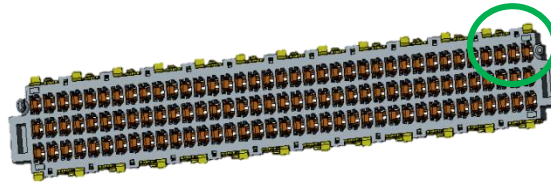
-Advanced Features of General solution



Easier to locate to board with help of post pegs.

1

2

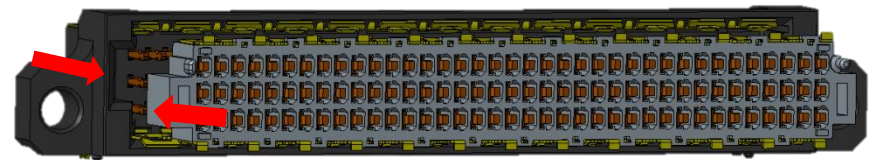


Both contact & shield tails ensure **robust connection** with board.

3



OK

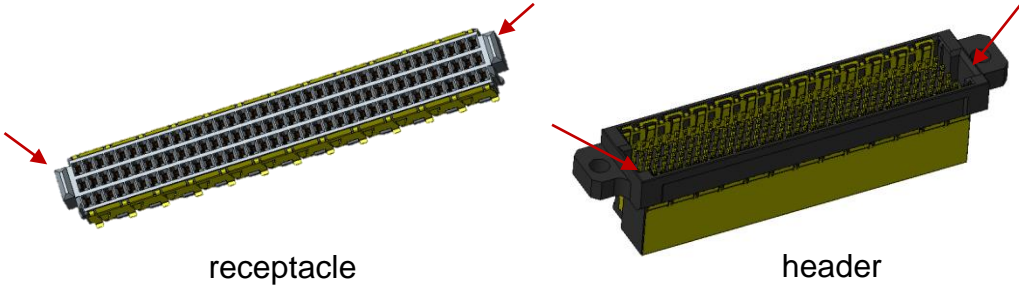


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POKA-YOKE feature on HSG to avoid reverse mating.

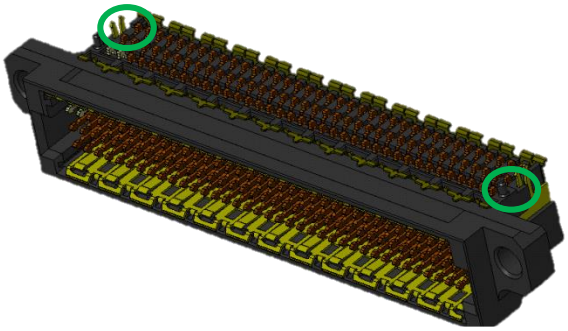
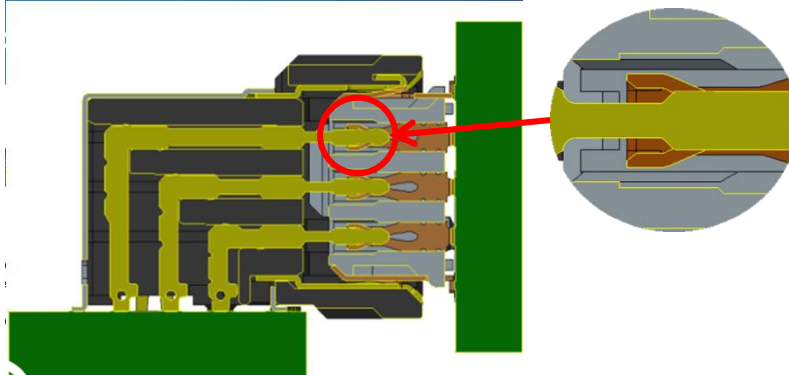
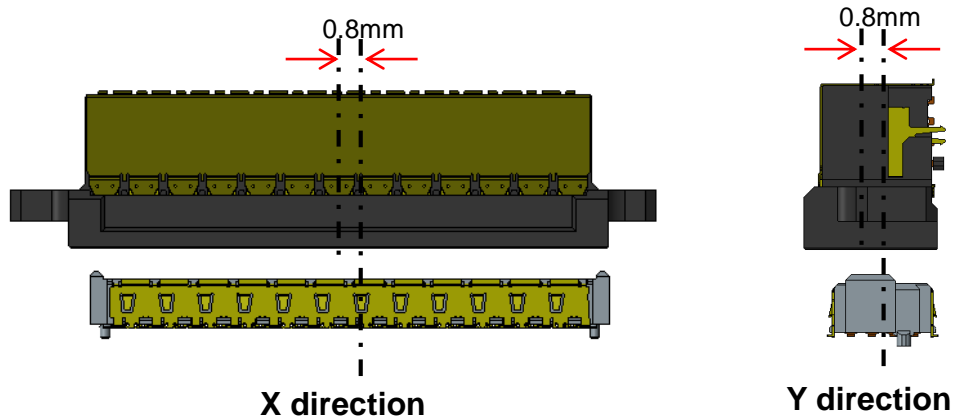
Features & Benefits

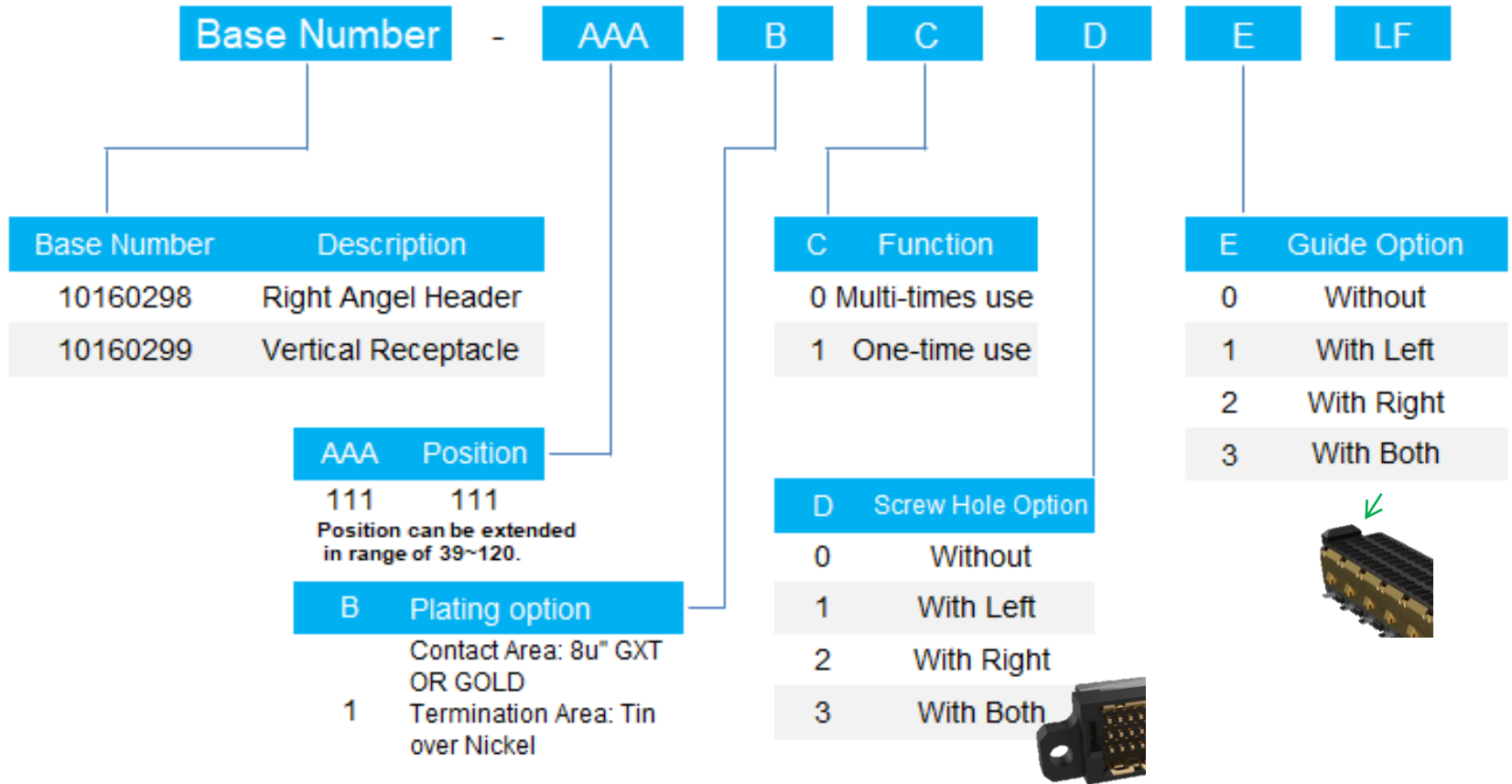
-Advanced Features of General solution



Extended guide on receptacle and chamfered header HSG work together to achieve **Blind mating**.

Misalignment tolerance: +/-0.8 mm for both X/Y direction.





Remark: More options can be extended according to the market needs

Description	Part Numbers
BergStak® Secure Connector, Right Angle Header, 3x37positions, Multi-times use, Left Screw hole, Left Guide	10160298-1111011LF
BergStak® Secure Connector, Right Angle Header, 3x37positions, Multi-times use	10160298-1111000LF
BergStak® Secure Connector, Right Angle Header, 3x37positions, Multi-times use, Right Guide	10160298-1111002LF
BergStak® Secure Connector, Right Angle Header, 3x37positions, One-time use, Left Screw hole, Left Guide	10160298-1111111LF
BergStak® Secure Connector, Right Angle Header, 3x37positions, One-time use	10160298-1111100LF
BergStak® Secure Connector, Right Angle Header, 3x37positions, One-time use, Right Guide	10160298-1111102LF
BergStak® Secure Connector, Vertical Receptacle, 3x37positions, Left Guide	10160299-1111001LF
BergStak® Secure Connector, Vertical Receptacle, 3x37positions	10160299-1111000LF
BergStak® Secure Connector, Vertical Receptacle, 3x37positions, Right Guide	10160299-1111002LF

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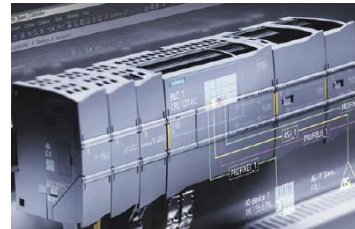
Datacom/Telecom

- Server
- Storage



Industrial & Instrumentation

- Factory automation
- PLC



Communications

- BBU



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Thank you!