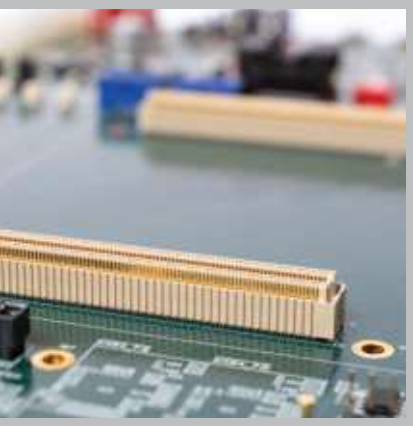
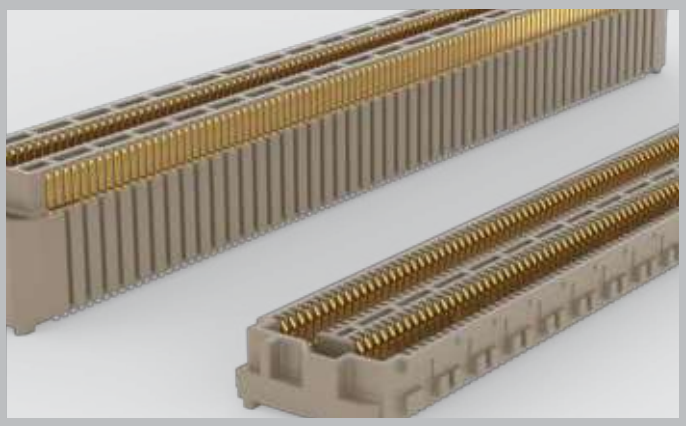
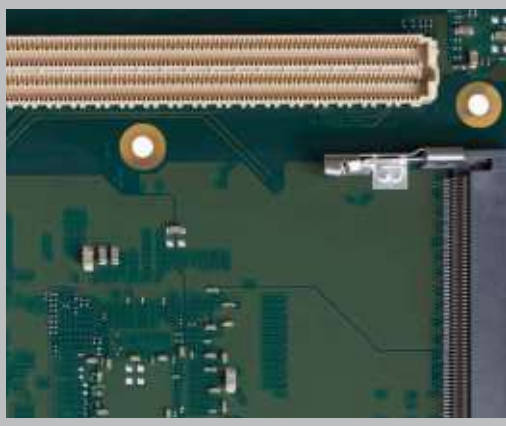
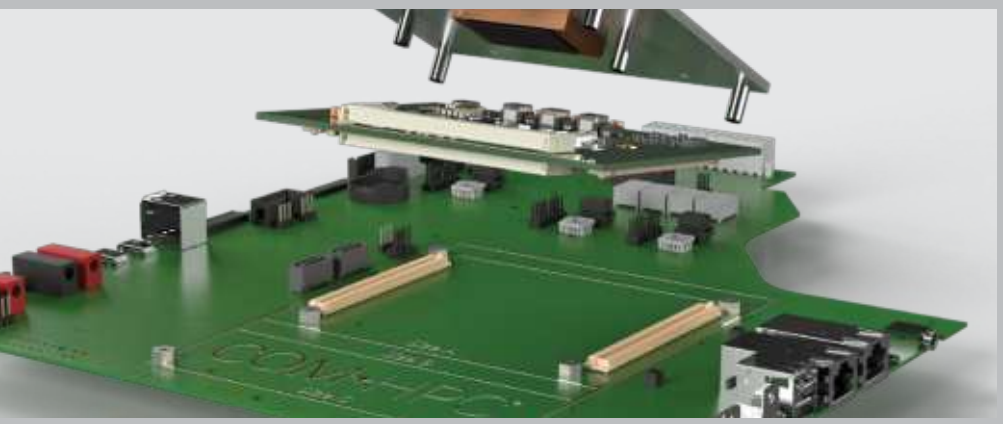
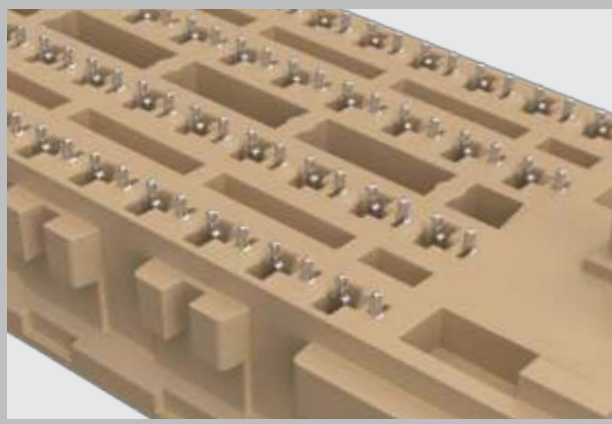
samtec

HIGH-PERFORMANCE
COM-HPC® CONNECTORS

OPEN STANDARD FOR EMBEDDED COMPUTING MODULES

COM-HPC®

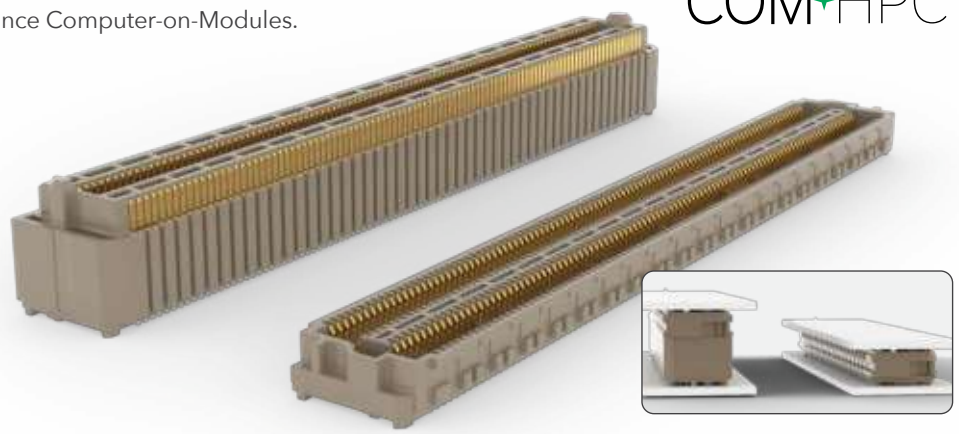
COM-HPC® INTERCONNECT SOLUTIONS

Samtec's 0.635 mm pitch, high-speed, high-density interconnect system meets the COM-HPC® specification for high-performance Computer-on-Modules.

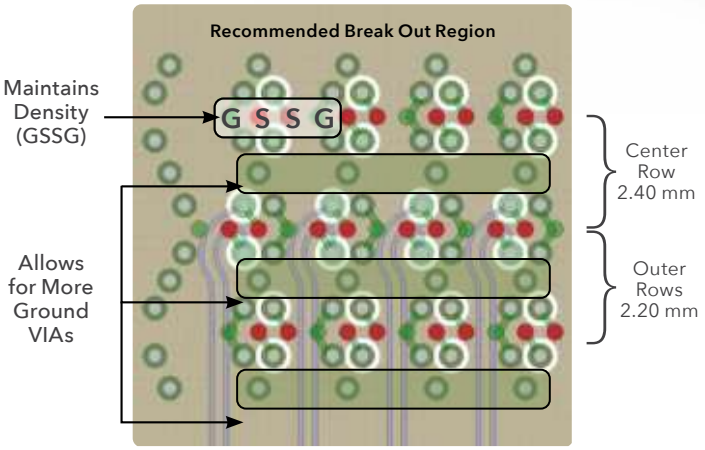
COM-HPC®

HIGH-SPEED PERFORMANCE

- Up to 64 Gbps PAM4 per channel
- PCIe® 6.0 capable
- 100 Gb (4 x 25 Gb) Ethernet capable
- 40 Gbps USB4/Thunderbolt capable
- 80 Gbps DisplayPort™ signals capable
- Up to 358 W at 11.4 – 12.6 Volts



5 mm & 10 mm Stack Heights



HIGH-DENSITY DESIGN

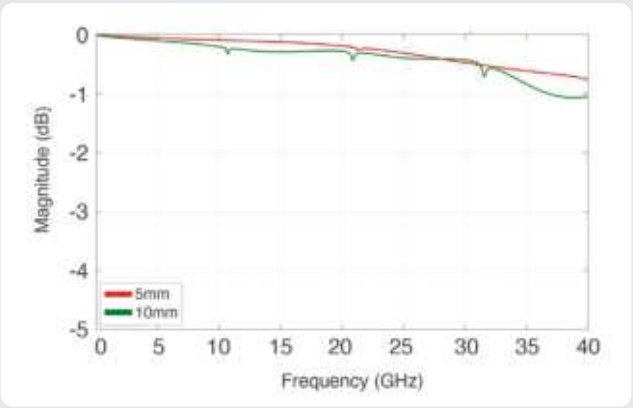
- High pin count system: 400 total pins (4 x 100)
- 0.635 mm pitch
- Overall dimensions: 68.62 mm x 9 mm x stack height
- Increased row-to-row spacing for reduced crosstalk, easier routing
  - Row 1 to Row 2: 2.20 mm
  - Row 2 to Row 3: 2.40 mm
  - Row 3 to Row 4: 2.20 mm

NEW FEATURES

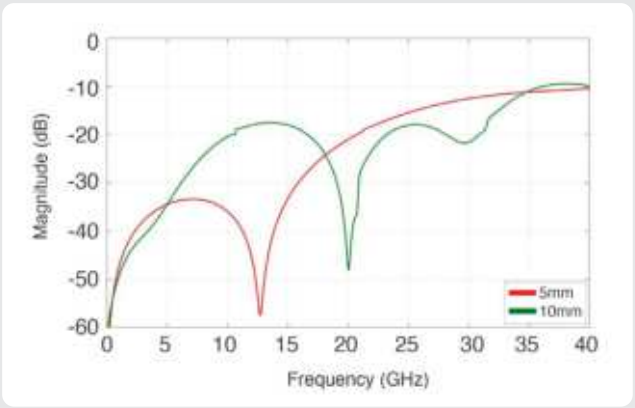
- Contacts without solder balls improve alignment and signal integrity while reducing crosstalk at high speeds
- Weld tabs increase mechanical strength of the connector to the board
- Alignment pins for secure mating



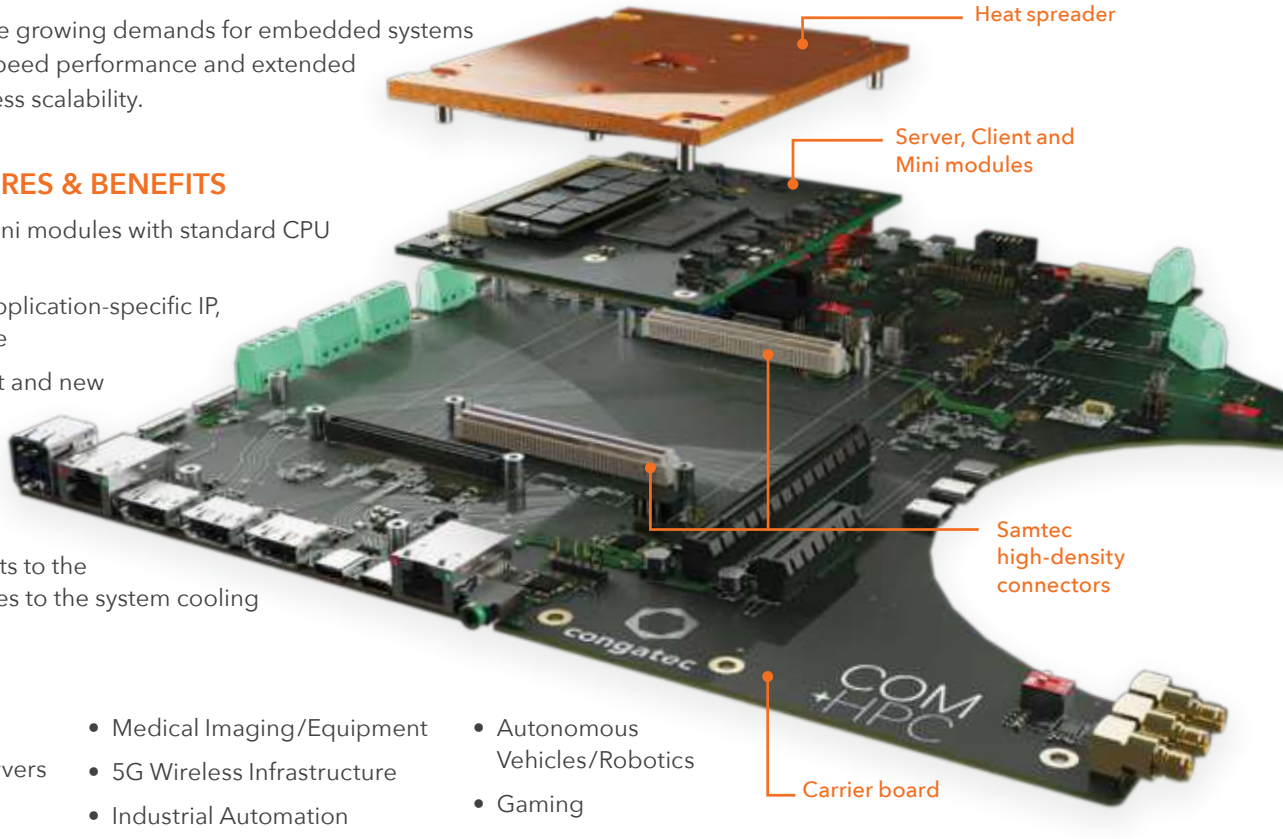
Connector-Only Insertion Loss (IL)



Connector-Only Return Loss (RL)



COM-HPC® exceeds the growing demands for embedded systems to provide ultra-high-speed performance and extended connectivity with limitless scalability.



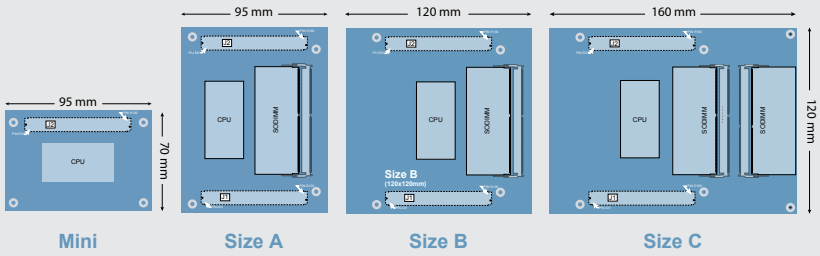
COM-HPC® FEATURES & BENEFITS

- Server, Client and Mini modules with standard CPU core functions
- Carrier board with application-specific IP, functionality, and size
- Faster time to market and new technologies
- Reduced inventory and development costs
- Heat spreader mounts to the module and interfaces to the system cooling

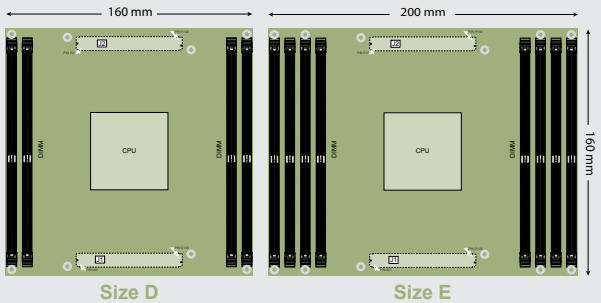
APPLICATIONS

- Datacom & Telecom
- Embedded Edge Servers
- Instrumentation
- Military/Aerospace
- Medical Imaging/Equipment
- 5G Wireless Infrastructure
- Industrial Automation
- Autonomous Vehicles/Robotics
- Gaming

Standard Client Module Sizes



Standard Server Module Sizes



COM-HPC® MODULES

The base COM-HPC® specification defines two pinout types: **COM-HPC® Server** and **COM-HPC® Client**.

COM-HPC® Mini, a more compact Client form factor, was also introduced to support small form factor applications.

- COM-HPC® Server Modules are targeted for edge server applications
- COM-HPC® Client Modules support robust embedded computing
- COM-HPC® Mini offers a compact footprint, along with fewer power and cost constraints

Module photography courtesy of congatec GmbH.

COMHPC@samtec.com

COM-HPC® PRODUCT SOLUTIONS

Samtec Part Number	Connectors			Options		
	Module Receptacle	Carrier Plug	Stack Height	Termination	Weld Tabs	Plating*
ASP-230332-03	✓			Column	✓	-L
ASP-230333-03		✓	5 mm	Column	✓	-L
ASP-230336-03		✓	10 mm	Column	✓	-L
ASP-230332-04	✓			Column	✓	-S
ASP-230333-04		✓	5 mm	Column	✓	-S
ASP-230336-04		✓	10 mm	Column	✓	-S
ASP-230332-01	✓			Ball	✓	-L
ASP-230333-01		✓	5 mm	Ball	✓	-L
ASP-230336-01		✓	10 mm	Ball	✓	-L
ASP-230332-02	✓			Ball	✓	-S
ASP-230333-02		✓	5 mm	Ball	✓	-S
ASP-230336-02		✓	10 mm	Ball	✓	-S
ASP-209946-01	✓			Ball		-L
ASP-214802-01		✓	5 mm	Ball		-L
ASP-209948-01		✓	10 mm	Ball		-L
ASP-209946-02	✓			Ball		-S
ASP-214802-02		✓	5 mm	Ball		-S
ASP-209948-02		✓	10 mm	Ball		-S

* -L = 10µ" Gold
-S = 30µ" Gold

For more information, please visit **samtec.com/COMHPC** or email **COMHPC@samtec.com**.

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