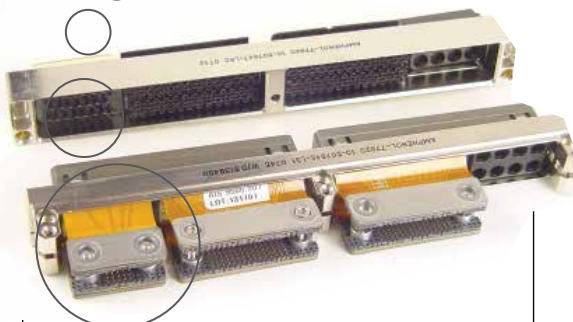


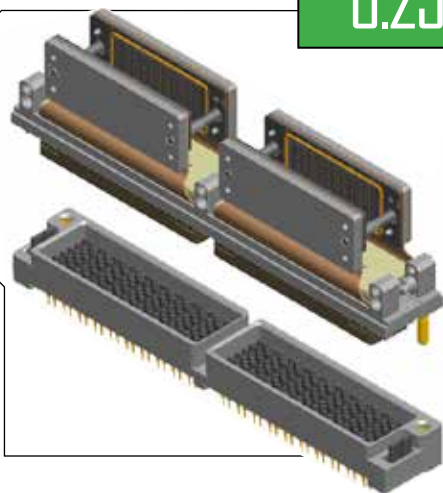
GigaStak

01100110011001101
1100110100100 Built for speed

3.125



6.25



High Speed

The Amphenol GigaStak Line Replaceable Module (LRM) connector series is designed to meet today's need for a reliable high speed interconnect for harsh environments.



The GigaStak is designed with the same modular format as the standard LRM product. This design flexibility allows for the use of standard off the shelf components in a custom



configuration to meet specific application needs. The GigaStak 6.25 Gbps high speed inserts can be combined with low speed digital, power, coax, and or fiber optic termini.



Applications include:

- Ground Vehicles
- Missiles
- Avionics
- Radar
- Space

High Speed

Features and benefits of the GigaStak LRM connector series:

- **Vibration:** Superior intermittency performance under vibration and shock.
- **ESD Protection:** Special ESD shields shunt electrostatic discharges to enclosure, protecting sensitive components on boards. Specifically designed for Level 2 (flight line) maintenance.
- **Versatility:** Unique flex and cStack termination accommodates a variety of mounting configurations and unlimited board packages. Connectors can terminate to one or both sides of a single board, one to four sides of board package separated by a heat sink, and/or an offset board package.
- **Metal Shells:** Robust metal shells provide structural support and encapsulate inserts in one unified connector body.

The Board Level Group

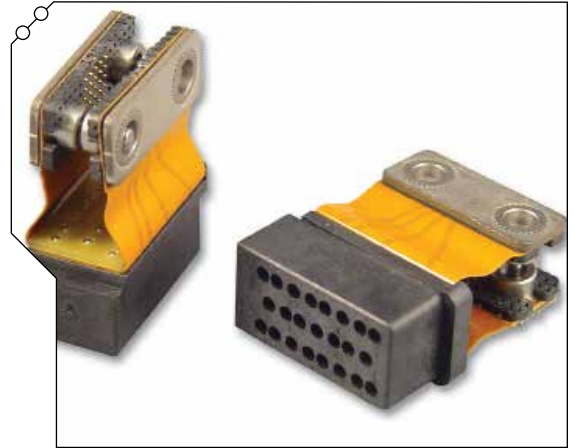
Technology Overview

cStack™ Termination

The Amphenol InterCon cLGA land grid array socket system Gold over nickel plated beryllium copper spring contacts guarantee industry understood long term connector performance in a design that also guarantees contact retention and ruggedness during handling and use.

The socket's molded thermoplastic housing acts as a positive stop at full deflection to protect contacts and yield excellent performance during shock and vibration exposure.

InterCon cStack™ flex circuit assemblies provide high speed, impedance controlled interconnection performance. Flex circuitry for all cStack™ flex assemblies can be electrically and mechanically customized to exactly fit system specifications.



The cStack™ stacking connectors used in these assemblies allow solderless interconnection between flex and board. Standard and customized hardware systems are available which allow fast, solderless interconnection to circuit boards with only screw attachment required. All standard hardware includes captive attachment screws, eliminating loose component pieces.



Contact Technology



The Brush Contact

The Brush contact is comprised of multiple strands of high tensile wire that intermesh to create an electrical connection.

Benefits of brush include:

- Redundant current paths: up to 70 gas tight points of contact per mate.
- Low mating force: 1.5 oz. Typical per contacts, 70-90% less than conventional pin and socket contacts.
- Long contact life: over 100,000 mating and unmating cycles without degradation in performance.
- Impervious to fretting corrosion: documented intermittency performance with no 10 nanosecond discontinuities during 50,000,000 cycles of 0.010" displacement.



Amphenol[®]
Aerospace

GigaStak
Built for speed

Call 800-678-0141 or visit us at www.amphenol-aerospace.com



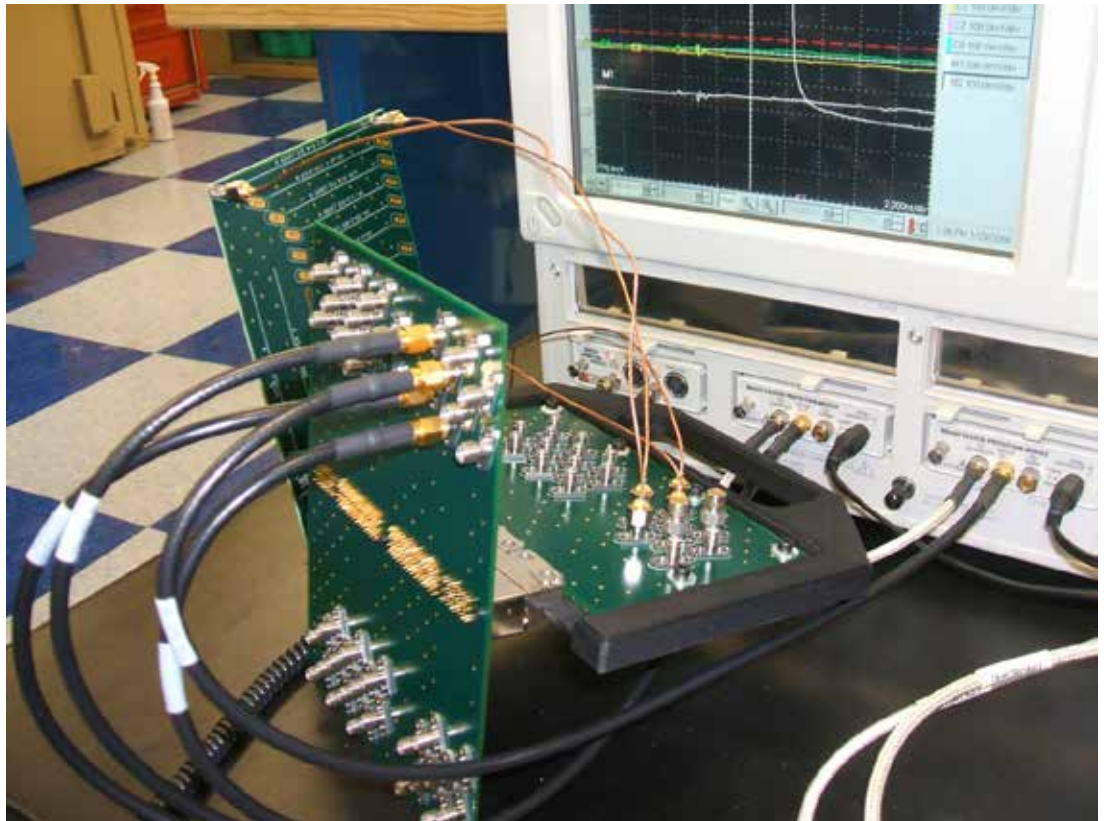
3.125

3.125 Gbps

LRM

The 3.125 Gbps GigaStak LRM connector has been designed through the strategic placement of signal and ground contacts for the perfect balance of impedance control and cross talk mitigation to operate in excess of 3.125 Gbps.

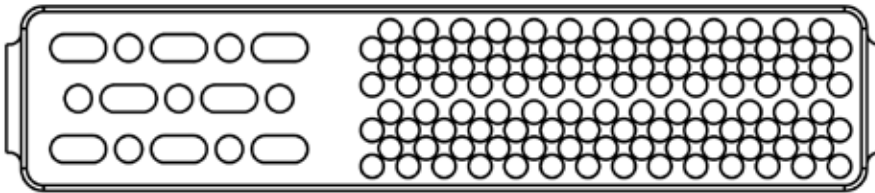
The 3.125 Gbps GigaStak connectors have been tested in a simulated daughter card – backplane – daughter card configuration through two interconnects and 14 inches of FR-4 board material and was proven to exceed the requirements of IEEE 802.3ap while supporting a 3.125 Gbps data rate. Additional tests have demonstrated that this connector arrangement can also support data rates in excess of 6.25 Gbps over shorter lengths of FR-4 board material. Test reports, Spice models, and hardware available for review.





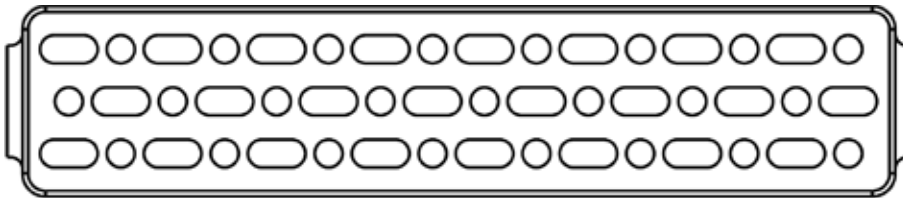
The 3.125 Gbps GigaStak LRM connector series has been designed with the same modularity as standard LRM. GigaStak can be combined with any standard insert to create a custom connector for any application. Standard inserts are available with digital, power, RF, and fiber (for a full list of available insert arrangements see catalog 12-037). GigaStak is currently available in the following tooled arrangement.

8 Differential Pair & 108 Digital

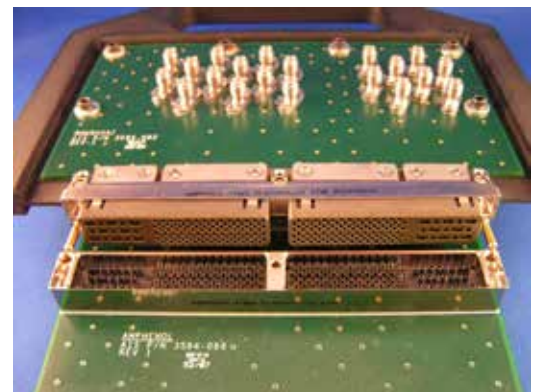
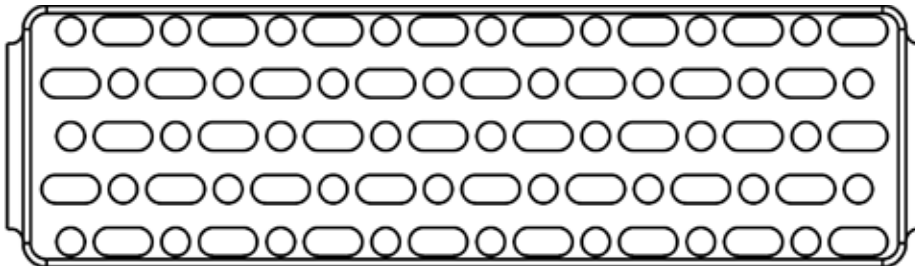


The 3.125 Gbps GigaStak pattern can be expanded to offer the following fully populated insert arrangements.

24 differential pair (SEM-E form factor)

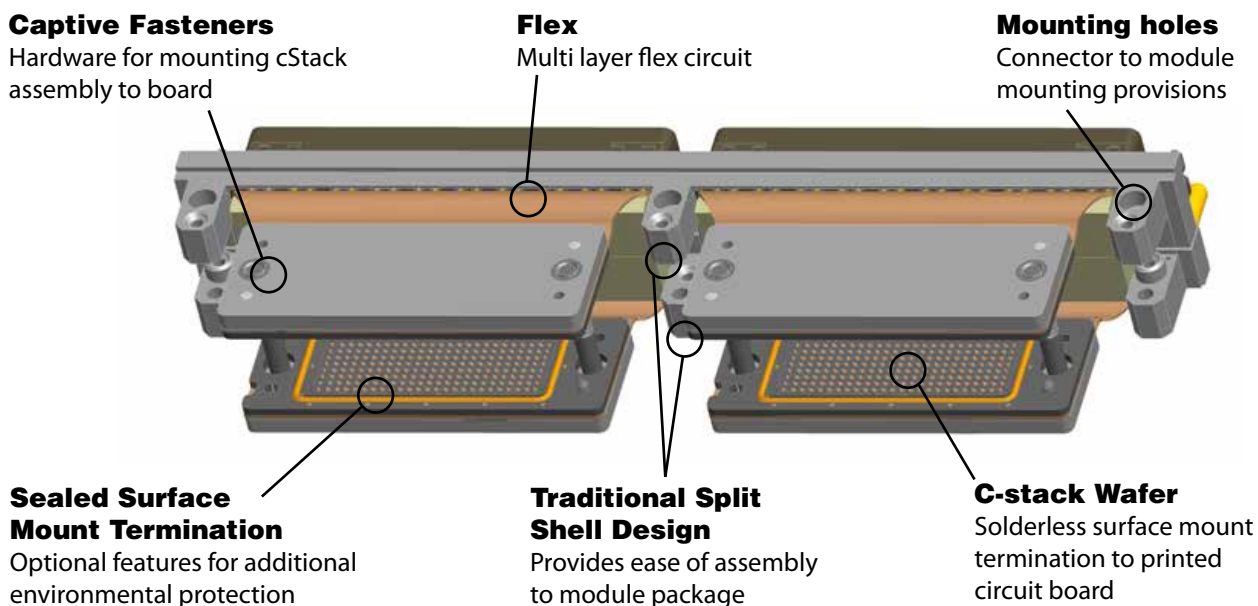
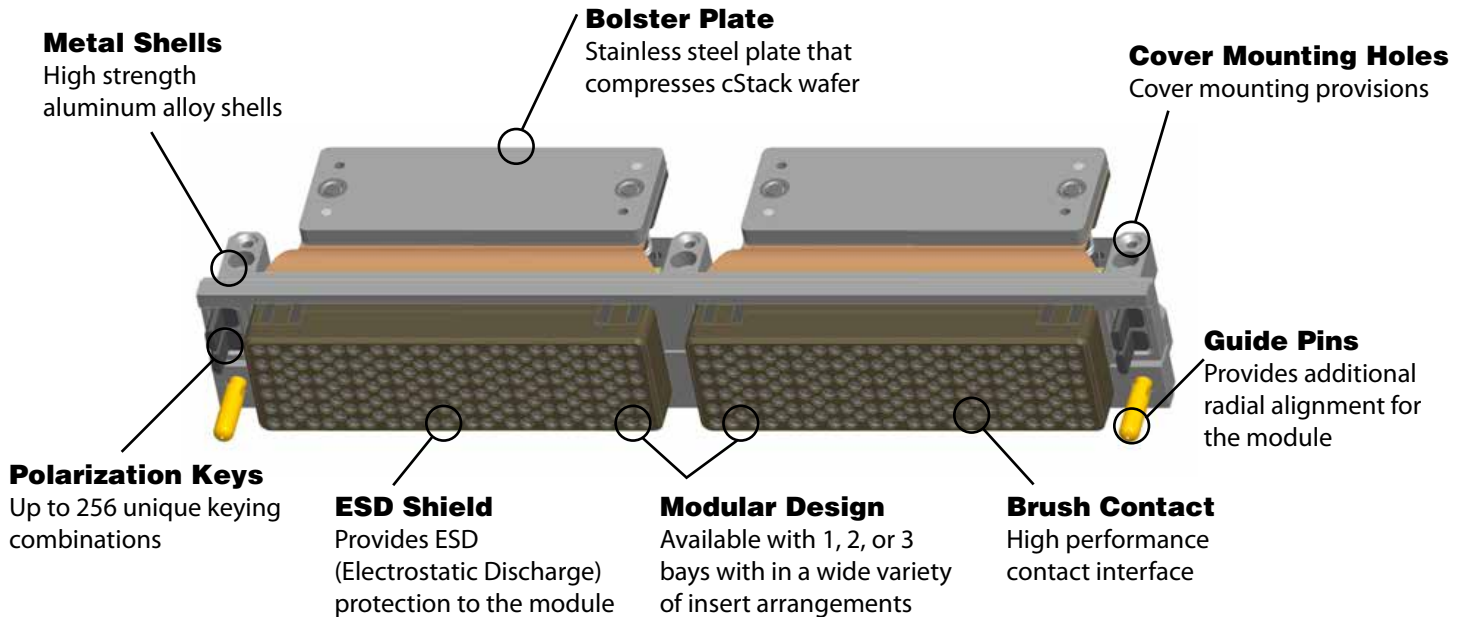


40 differential pair (airflow-thru form factor)



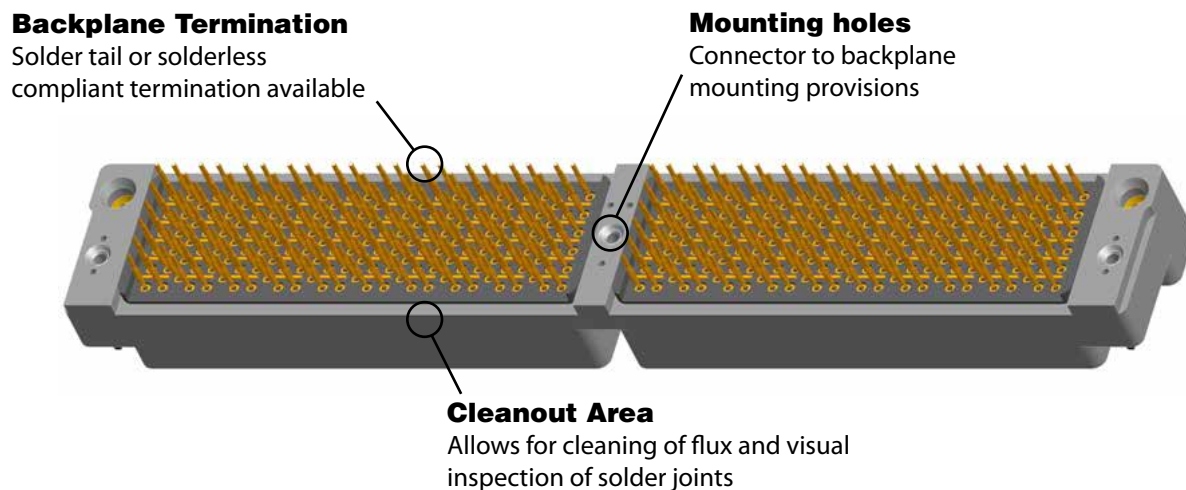
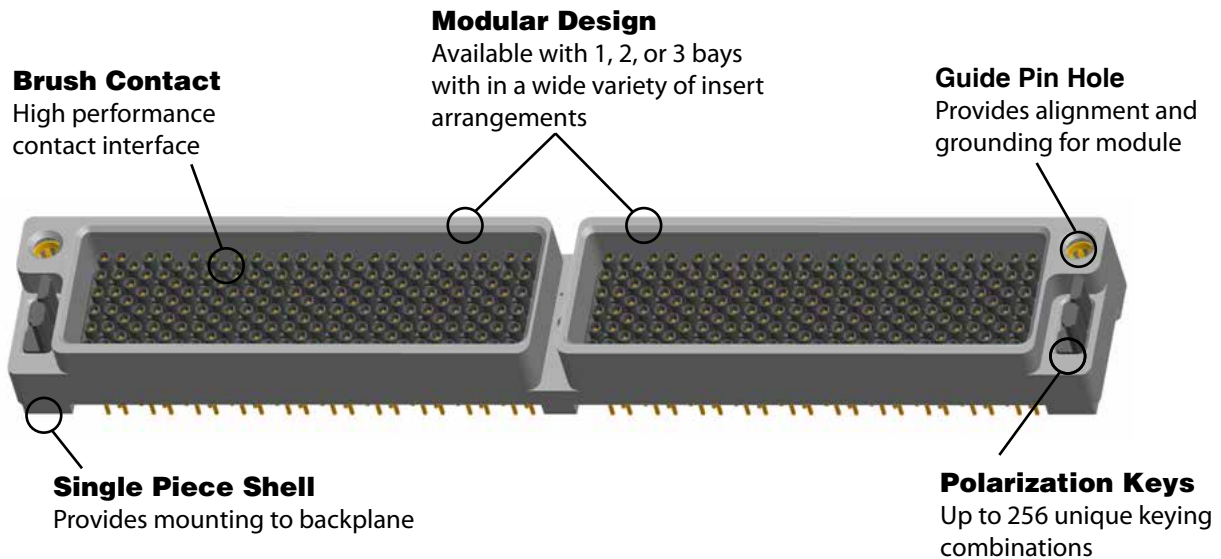


Module Connector Features



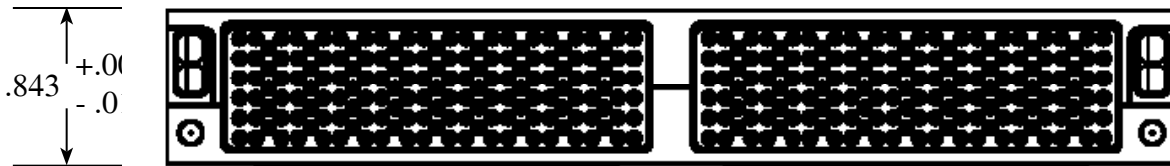
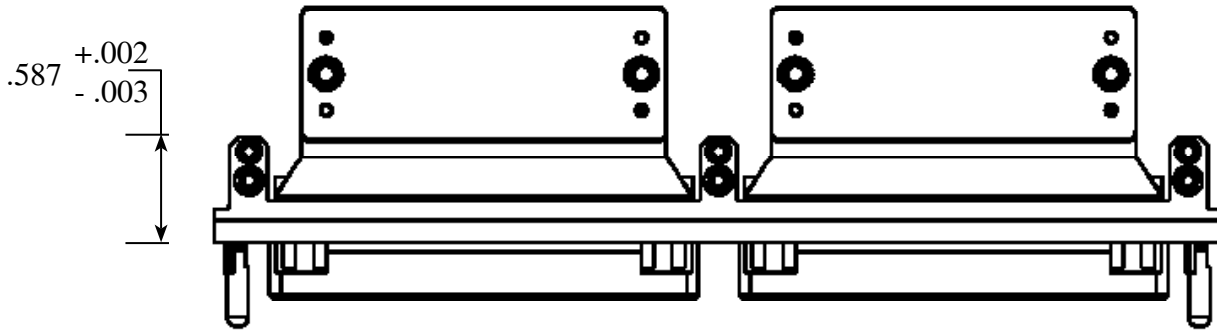


Backplane Connector Features



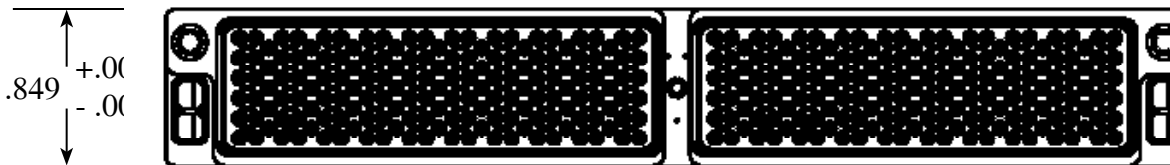


Connector Envelope Dimensions



5.533 $^{+.007}_{-.008}$

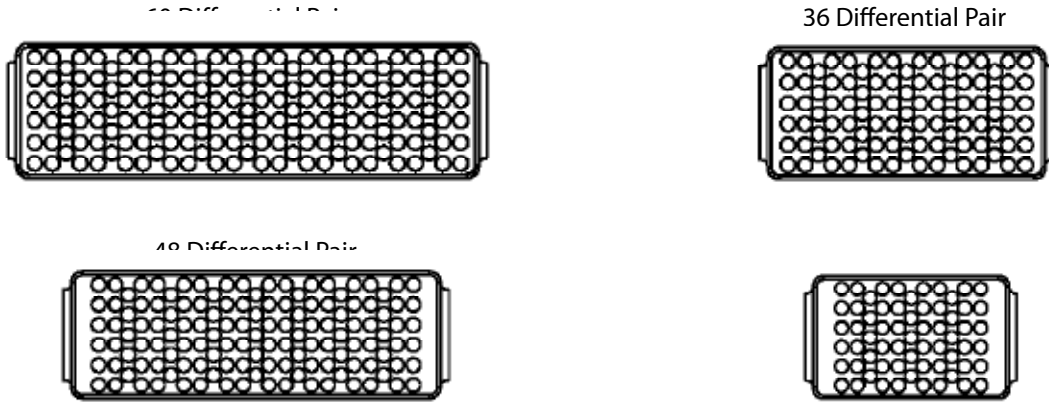
5.524 $^{+.001}$





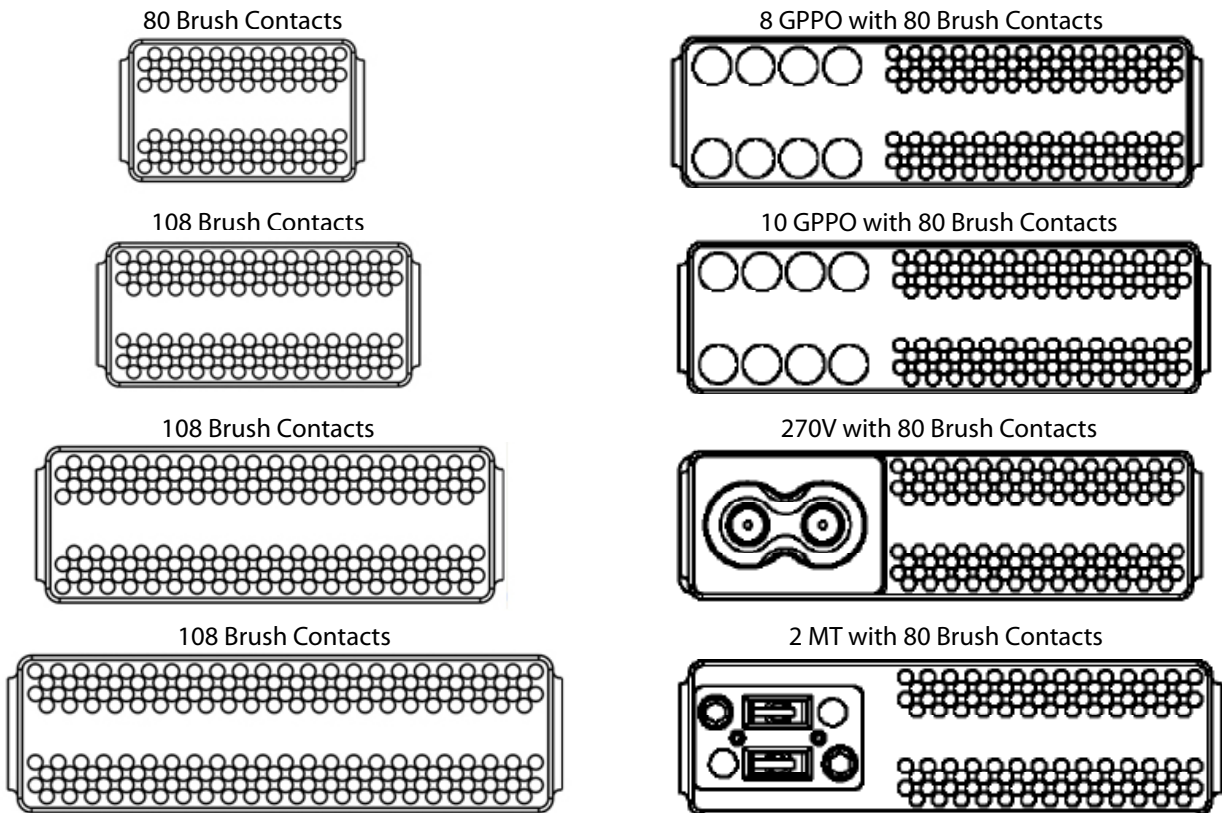
GigaStak Insert Arrangements

GigaStak inserts are arranged with a combination of signal and ground contacts to maximize contact density and exceed 6.25 Gbps. Standard arrangements are shown below.



Design Flexibility

The GigaStak LRM is designed with the same modular format as standard LRM connectors. Any of the standard air flow thru inserts can be arranged in a one, two, or three bay configuration with any high speed insert to create a custom interconnect solution.



Notice: Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all connectors.

