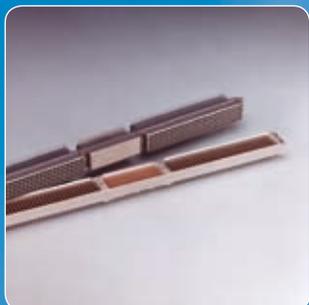
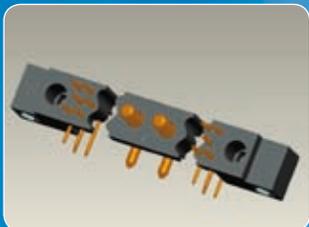


Amphenol



High Density solutions

SIM - CYLINDRICAL - PCB
High Density Interconnect

High Density

Amphenol is pleased to introduce the Next Level of performance for Interconnect systems with a complete range of **Higher Density** products. The **New HD Series** from Amphenol are available as Circular and Rectangular connector shells as well as dedicated PCB mount interconnects. Having full compatibility with well known Mil spec / Standards in mind, Amphenol developed the **HD Series** connectors as a straight forward extension of existing series i.e: Mil DTL 38999 or EN4165 ... The contacts, even of a smaller size than usual, are part of EAS 39029 standards: a guarantee of performance, cost effectiveness and large availability.

Higher Density means up to 50 % more contacts for the same shell size!

IN/OUT INTERCONNECT

• HD SIM series

EN 4165 Rectangular Modular Interconnect



30 contacts size 23 instead of 20 contacts size 22
50 % more with same size insert

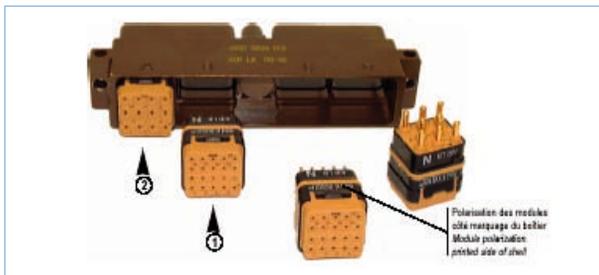
High Density Modules are Fully Compliant with the EN 4165 standard and offer the same level of Sealing and Dielectric performances... They can easily replace 20x22 or any other insert for instantly adding more contacts density without costly re-design or even change of connector shell...!

Crimp and Straight PCB contacts available.

[Note that PCB contacts are only Pins but front repairable]

Technical characteristics :

- Operating temperature -55° C to +175° C
- Shell: Thermoplastic
- Seal: Silicone elastomer
- Dielectric withstanding Voltage (sea level) 1000 volts ac, rms 50 Hz
- Insulation Resistance at ambient temperature:
5000 Megohms minimum between any pair of contacts
- Contact max. current: wire gauge 22 = 5 Amp
- Wire range 22 - 26



• Amphenol® Ruggedized

Non floating rack and panel connectors with brush contacts

Designed to Meet the Requirements of Ruggedized, Modular Radio Applications

- Exceeds many MIL-DTL-38999 performance requirements
- Utilizes low mating force brush contacts in a 0.100 in. x 0.100 in. square footprint
- Load bearing shells (supports module to rack interface)
- Tapered connector mating surfaces provide near zero X-Y plane movement between mated connectors
- EMI/ESD protection in both connector halves
 - EMI at mounting surfaces and connector interface (38999 III level)
 - ESD features allow use of Class 3 hardened chips (4KV max. voltage)



Technical characteristics :

- Signal speeds to 3.125 Gbps - (per differential pair and based on intelligent assignment of ground/signal pairs)
- Capable of 500 mating cycles
- Water tight seals both at connector interface and to mounting surfaces
- "Hybrids" available - combining signal contacts with power or RF contacts

High Density

• 38999 High Density

At least 45% more contacts than in a standard arrangement

- Increase the density of contacts by more than 45%
- Insert dimensions in accordance with MIL-DTL-38999
- Scoop proof
- Rear release #23 contacts with standard crimp barrels
- Available with PCB contacts
- MIL 39029/17-172 for the socket crimp contacts, Amphenol part number 900048
- MIL 39029/18-177 for the pin crimp contacts, Amphenol part number 900049
- AWG 22 to 28 cable. The termination could be made by the customer
- To be used in standard or custom design shells [LJT / TV / CTV / RNJ / RNJLP / PP39 / SC39]

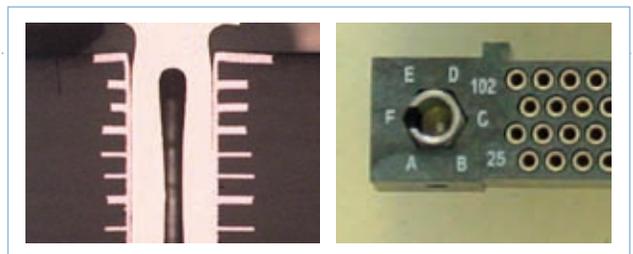


• HDAS PCB Series

- High density for this brand new connector (1,905mm vs. 2,54mm pitch, i.e. 55% more contacts)
- Screw machined socket and pin are in accordance with the MIL DTL 55302 size 23 (i.e. male dia: 0,66 mini / 0,68 maxi). 4 to 5 Amps
- Starclip socket has dramatically exceeded all our requirements and customer expectations (upgraded MIL DTL 55302).
- Screw machined socket and pin are in accordance with the MIL DTL 55302 size 23 (i.e. male dia: 0,66 mini / 0,68 maxi). 4 to 5 Amps

Sizes available:

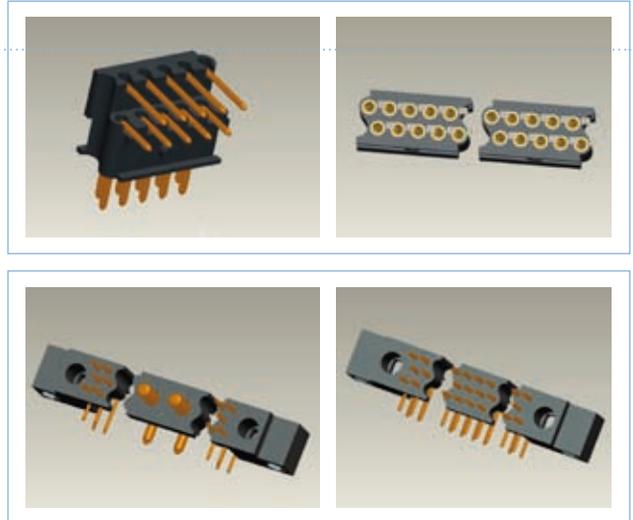
- 50 ways plug and receptacle PC tail & press fit
- 77 ways plug and receptacle PC tail & press fit
- 102 ways plug and receptacle PC tail & press fit
- 119 ways plug and receptacle PC tail & press fit
- 152 ways plug and receptacle PC tail & press fit
- 202 ways plug and receptacle PC tail & press fit
- 253 ways plug and receptacle PC tail & press fit
- 303 ways plug and receptacle PC tail & press fit
- 402 ways plug and receptacle PC tail & press fit



High Density

• HiLinx Series

- Full modularity for both side, daughter board and backplane. Individual modules of 2, 3, 4, 5 & 6 rows. Stackable construction. Same benefits as HDAS.
- Modules are maintained by 2 bonded metal skirts, guided with individual tips on each side of the modules. Other inserts are being designed (w/ coax, fiber and power), in the same overall dimensions.
- Fully QPL compatible M55302/190, /191, /192, /193



Full Modularity Concept

- The power insert comes in place of a 12 signal contacts insert. Same overall dimensions permit an optimum rationalization of the PCB boards and components.
- Modularity brings flexibility, cost reduction, and high value added a step ahead of the rest.
- Other possible mixed arrangements are possible with fiber, high frequency contacts, or diffy pairs.
- All the Amphenol technologies and capabilities can be used within the HiLinx, while keeping well known M55302 compliance.

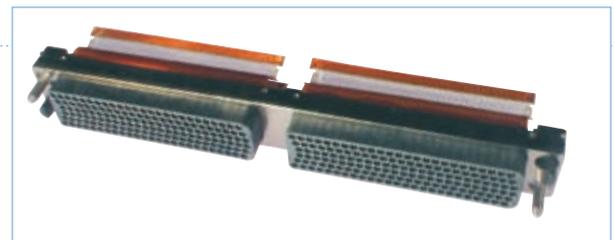
• SMASH

With its new SMASH PCB connector family, Amphenol Socapex increases the density in a SEM E form factor. The SMASH connector offers extremely high robustness where signal integrity is required. With its modular design, based on an aluminum shell, the SMASH can house up to 450 contacts, per bay of 150 contacts. This in a chevron grid pattern 1,905 x 1,905mm.

The sculptured flex circuit termination of the daughter cars connector can accept the largest board thicknesses. Backplane connectors are available in both solder dip and press fit terminations. The SMASH connector can also provides RF, Power and FO management solution with hybrid arrangements.

The starclip technology of the socket contact offers high mechanical and electrical reliability, while gentle insertion forces with the 0,68mm male contact diameter.

The SMASH connector has shown its superiority in many fields such as salt spray (144H), vibrations (2ns continuity control) and contact resistance.



High Density

• VHDM HSD series

Amphenol's VHDM-HSD™ connector is a shielded, high-density, high-speed press-fit connector system optimized for differential pair architectures. VHDM-HSD is formatted with the same modularity features and full breadth of component solutions as the single-ended version, VHDM®. This modularity and its inherent design flexibility allow the designers to incorporate both differential and single-ended requirements in the same connector and optimize their system designs.

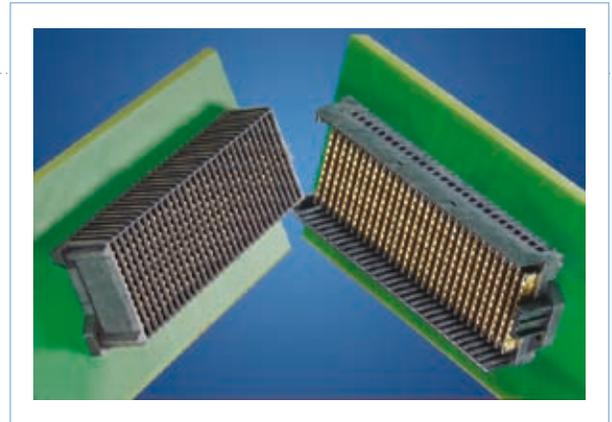
- Data rates up to 6.25 Gb/s
- Crosstalk as low as 2%



• NEXLEV series

NeXLev means more flexibility and a better way to think about PCB design. Amphenol's NeXLev Parallel Board Connector makes it simpler to achieve these goals, with:

- Performance — NeXLev handles data rates of up to 12.5 Gb/s.
- High density — NeXLev provides up to 57 real signals per linear centimeter (145 signals per linear inch).
- Reliability — NeXLev features rugged wafer construction and a compliant BGA-style attachment.
- Flexibility — NeXLev allows you to partition your system in different ways, optimizing performance while you design for manufacturability.

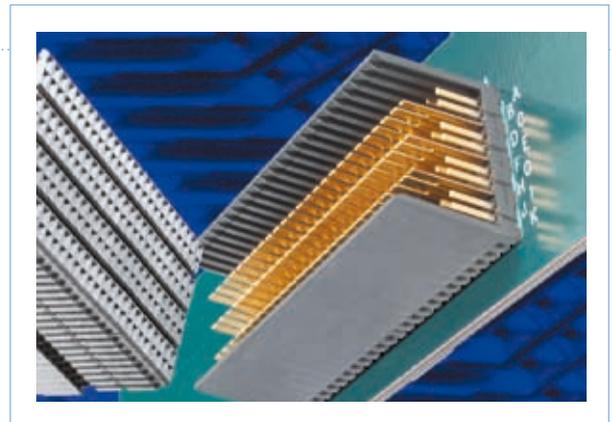


• GBX series

Amphenol's GbX® connector platform provides a range of interconnect solutions designed to optimize cost and scale to leading-edge data rates. With increased density, exceptional impedance matching, and low crosstalk, the GbX product family enables data rates greater than 10 Gb/s.

The GbX connector's enhanced mechanical gathering features provide additional connector robustness needed in today's systems.

- Organizing stiffener provides alignment and daughtercard support
- Large funneling features designed to gather up to 1,525mm radially
- Two points of contact for redundancy and high reliability
- Proven press-fit technology
- Protected receptacle contact eliminates pin stubbing
- Identical, fully intermateable/interchangeable second source



High Density

• VENTURA series

When high-performance and high-density are required, Amphenol's Ventura™ connector meets the challenge. The Ventura platform can deliver data at 6.25 Gb/s per signal - the fastest single-ended connector available - and reach speeds of 12 Gb/s when driven differentially. With a density of up to 178 pins/inch, Ventura offers the most pins per inch of any connector on the market. Utilizing surface mount technology to minimize via effects, Ventura is designed to meet the most demanding high performance applications. The ability to route horizontally & vertically out of the connector helps designers reduce costly PCB layer count.



• Amphenol® HDB3 Series

Mother Board & Daughter Board Connectors
New Rectangular Interconnects with Higher Density

.070" X .060" Grid Spacing

- Higher density contact pattern and lower mated height than Amphenol's original Low Mating Force rectangular connectors
- Still utilizes the same durable and reliable brush contact system
- Optional keys offer 36 unique keying combinations
- Uses less board space and allows for shorter mated height than competitive connectors (Hypertronic HPH and Airborn RM4)



High Density

• Amphenol® LRM Surface Mount Connectors

Mother Board & Daughter Board Connectors
New Rectangular Interconnects with Higher Density

High density surface mount connectors with Bristle Brush® contacts for integrated avionics packaging

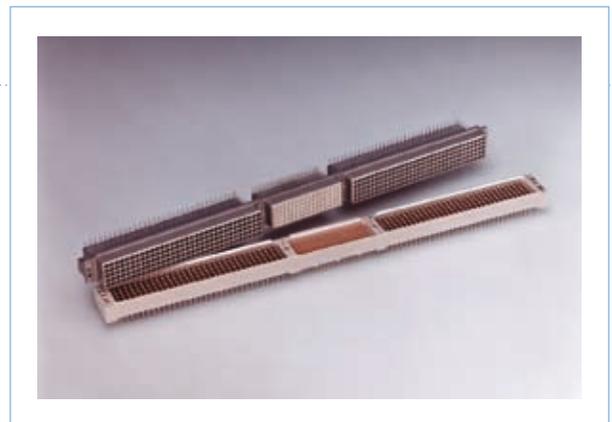
- The B3 Brush contact is the standard contact for the LRM due to its low mating force, stable electrical performance and extended service life
- LRMs can also facilitate custom combinations of digital, fiber optics, RF, power and special high speed inserts to meet customer requirements
- Available in SEM-E and custom form factors
- Staggered Grid LRM
- 180 contact insert pattern grid in 8 rows
- Wide range of PC board/heat sink combinations
- ESD protection
- Designed for level 2 (flight line) maintenance
- Staggered grid Airflow-thru LRM - allow for wider board packages and airflow cooling
- GEN-X LRM
- Provides higher contact densities and improved electrical performance
- 236 contact pattern grid in 8 rows



• Amphenol® Ruggedized VME64-X Connectors

High density modular and backplane connectors for attachment to VME64X printed circuit boards.

- Designed to meet the needs for a more ruggedized interconnect for harsh environments requiring Level 2 maintenance.
- Metal shells, ESD protection and a robust contact system
- High data rate compatibility for electrical and optical interfaces
- Mount to standard VME64X cards and backplanes, but do not mate to other types of VME commercial connectors.
- 3 module inserts can have different combinations:
 - P1, P2 and 2mm electrical P0
 - P1 and P2 combination
 - P1, P2 and fiber optic MT ferrules in the P0 position
 - Designed to meet customer specifications



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