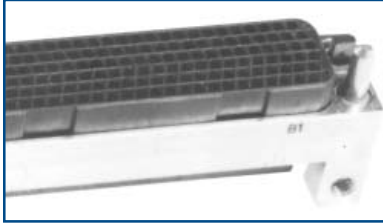


# Rectangular Printed Circuit Board Interconnects, cont.

## LRM Surface Mount Connectors with Brush Contacts

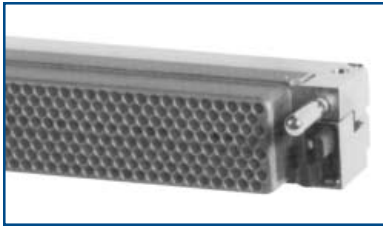
Reference L-2104 LRM Reference Guide



*Chevron Grid - Up to 300 Contacts in 6 Rows.*

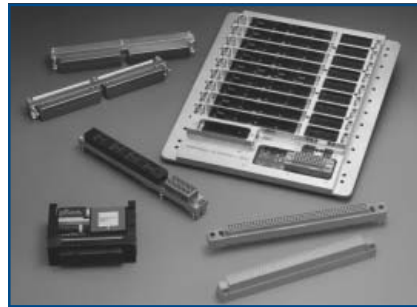


*Staggered Grid - Up to 360 Contacts in 8 Rows.*



*GEN-X Grid - Up to 472 Contacts in 8 Rows.*

APPLICATION	STANDARDS/ REQUIREMENTS	COUPLING/ MOUNTING	CONTACT TERMINATION/ ARRANGEMENTS	PERFORMANCE ENVIRON./ELECT.
Line replaceable modular interconnects with very high contact densities, for attachment to printed circuit boards. Contain Bristle Brush contacts, consisting of multiple strands of high tensile strength wire that are bundled together to form a "brush-like" contact. (See illustration of Brush contact on page 43). LRM connectors are available in SEM-E and custom form formats.	Uses Bristle Brush contact which meets MIL-C-55302. Amphenol staggered grid LRM connector is the F-22 Avionics system connector choice.	<b>Modules:</b> Surface mount/Straddle mount with .0375 spacing between leads, with rows of leads on each side of the module. Can be centered or off-centered mounted. <b>Backplanes:</b> Available with through-hole solder posts or with compliant pins. Polarization: Insert arrangement controls mating orientation. Up to 4096 keying combinations.	Brush contact termination. (Same as used in Low Mating Force Connectors. - See page 44). <b>Chevron Grid:</b> Backplane termination: PCB through-hole solder. Module/LRM termination: Surface mount on 0.025 pitch. <b>Staggered Grid:</b> Backplane termination: PCB through-hole solder or solderless compliant into 0.025 plated-through holes. Module/LRM termination: Surface mount on 0.025 pitch to flex circuit. <b>GEN-X Grid:</b> Backplane termination: PCB through-hole solder or solderless compliant into 0.025 plated-through holes. Module/LRM termination: Surface mount on 0.0375 pitch to rigid flex circuit boards.	Operating temp. from -65°C to +125°C. Suitable for vapor phase soldering. Connector bodies are aluminum alloy with electroless nickel finish. Superior performance under vibration. Connector configurations are capable of supporting data rates in excess of 1 Gbps. Staggered and GEN-X styles are standard with ESD protection - see below. Bristle Brush contacts provide: <ul style="list-style-type: none"> <li>• Low mating/unmating forces - 70% to 90% reduction from conventional pin and socket contacts.</li> <li>• Proven durability and long contact life - over 20,000 cycles of mating and unmating without performance degradation.</li> <li>• Multiple points (14-17) of contact per mated contact.</li> <li>• Intermittency-free performance.</li> <li>• Redundant current paths (stable, low resistance).</li> <li>• Proven electrical and gas tight contact sites.</li> </ul>



*Variety of Rectangular Interconnection Products, including LRMs and Low Mating Force Brush Connectors. Also shows the OBIS, Optic-Electric Backplane. (See Fiber Optic section and Backplane Rectangulars for more information).*

### OPTIONAL FEATURES

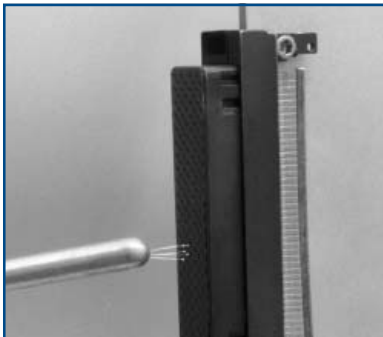
- Wide range of combinations available for PCB/heat sink accommodations.
- Ruggedized VME64-X is another LRM type connector - See next page.
- Hybrid arrangements with Brush contacts, coaxial, power and fiber optics are available in the Staggered grid style (See next page).

### MARKETS

- Military and Commercial Aviation
- Military Vehicles and GPS Systems

## LRM Connectors with ESD Protection

Reference Product Data Sheet # 171.



### OPTIONAL FEATURES

- (Also see ESD protection in MIL-DTL-38999 Series III connectors - Filter/Transient Protection section. Consult Amphenol for further availability.)

APPLICATION	STANDARDS/ REQUIREMENTS	COUPLING/ MOUNTING	CONTACT TERMINATION/ ARRANGEMENTS	PERFORMANCE ENVIRON./ELECT.
Staggered style and GEN-X style are standard with ESD protection. These connectors utilize the Faraday cage principal to shunt electrostatic discharge events to the conductive enclosure on which the connector is mounted, thus never allowing the high voltage, high current discharge event to reside on any contacts.	Exceeds protection requirements of IEC 801-2 and MIL-STD-1686.	LRM connectors with the added feature of ESD protection eliminate the need for discrete components (such as diodes) and maximizes PC board real estate.	See termination information for LRM connectors above.	Ensures that all components within a conductive enclosure will be subjected to a max. of 20V during electrostatic discharges between -26 KV and +26 KV. Response time is instantaneous. No capacitive loading of signal contacts. The ESD protection is provided on the module/LRM connector in the unmated condition, making it ideal for Level 2 maintenance.

### MARKETS

- Military and Commercial Aviation
- Military Vehicles and GPS Systems