SEARAY and SEARAY Slim Mezzanine Connector Family

Low-profile SEARAY Mezzanine Connectors and Jumpers deliver a 12.5-Gbps data rate, small footprint and robust solder-charge termination while SEARAY Slim Connectors also improve airflow to address thermal management issues.

Features and Benefits

- **Multiple stack heights (7.00 to 17.00mm) and circuit options (SEARAY: 90 to 500; SEARAY Slim: 40 to 200)**
  - Delivers high-speed differential and single-ended performance in low profile applications. Provide design flexibility.
- **1.27 by 1.27mm pitch grid (footprint)**
  - Maximizes routing flexibility and grounding.
- **Patented solder-charge technology:**
  - Solder precisely stamped onto terminals.
  - Provides a more reliable termination method over BGA connectors. Reduces cost over BGA connectors because connectors need to go through solder process only once.
- **12.5 Gbps data rate**
  - Delivers high-density signal transfer.
- **Large lead-in and shrouded terminal housing**
  - Prevents stubbing. Protects terminals during mating.
- **Narrow body design**
  - Provides optimal airflow and design flexibility.
- **Available with custom Copper Flex Cable Jumpers**
  - Delivers complete solution for applications needing design flexibility.
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Applications

- **Data/Computing**
  - High-end servers
  - Mid-range servers
- **Defense**
  - Radar or topographical equipment
- **Medical**
  - Data acquisition
  - Imaging equipment
  - Scanning equipment
- **Telecommunications/Networking**
  - Servers
  - Routers and switches
## Specifications

**REFERENCE INFORMATION**
- Packaging: Tray or Tape and Reel
- Designed In: Millimeters

**ELECTRICAL**
- Voltage (max.): 2.7A per Contact
- Contact Resistance: 25 milliohms nominal
- Dielectric Withstanding Voltage: 500V DC
- Insulation Resistance: 5000 Megohms
- Impedance: 100 Ohms Differential

**MECHANICAL**
- Mating Force (max.): 50g per Contact
- Unmating Force (max.): 30g per Contact
- Normal Force (max.): 82g per Contact
- Durability (max.): 100 Cycles

**PHYSICAL**
- Housing: Glass-Filled LCP, UL 94V-0
- Contact: Copper Alloy
- Plating:
  - Contact Area (min.) — 0.75µm Gold
  - Solder Tail Area (min.) — 3.80µm Tin
  - Underplating — 1.25µm Nickel
- PCB Thickness: 1.60mm
- Operating Temperature: -55 to +125°C

## Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>45970</td>
<td>SEARAY Plug</td>
</tr>
<tr>
<td>45971</td>
<td>SEARAY Receptacle</td>
</tr>
<tr>
<td>46556</td>
<td>SEARAY Slim Plug</td>
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<tr>
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<table>
<thead>
<tr>
<th>Custom Product</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Contact Molex</td>
<td>SEARAY Jumper Assemblies</td>
</tr>
</tbody>
</table>