Today's data communication applications have increasingly demanding system power requirements— which often require better ways to dissipate heat. Traditional thermal management approaches such as riding heatsinks don't always provide the optimum solution for applications with restricted airflow, liquid cooling or cold plates. But what if there was a new way to approach this problem?

TE's new innovative thermal bridge technology provides up to 2x better thermal resistance over traditional thermal technologies such as gap pads or thermal pads. This solution was developed to dissipate more heat associated with increasing system power requirements, specifically in fixed cooling applications with restricted airflow, liquid cooling or cold plates.

**HOW THERMAL BRIDGE WORKS**

1. An interleaved series of highly parallel plates allows heat to pass from the I/O module to the cooling area
2. Integrated mechanical springs provide interface force and 1.0 mm of compression travel
3. Near-zero plate gap for compressibility and thermal transfer
4. Pre-assembled on I/O cage

**FEATURES & BENEFITS**

- **Key Features**
  - Near-zero plate gap in the thermal bridge construction for optimized compression and thermal transfer
  - Optimized for applications using cold plates with liquid cooling or heat pipes, ganged heatsinks or direct chassis conduction applications with little to no airflow
  - Elastic compression design that is resistant to set and relaxation over time
  - Low and consistent compression force between cold plate and I/O plug

- **Benefits**
  - 2x better thermal resistance
  - Better reliability and durability
  - Improved application serviceability

**APPLICATIONS**

- High Performance Computing (HPC)
- Ethernet Switches
- Servers
- Ethernet SP Routing
- 5G/Wireless

**THERMAL BRIDGE VS. THERMAL PAD**

- Thermal Pad
  - One-time usage - requires replacement
  - Requires additional components to prevent wear
  - Requires tight tolerances and compression in order to achieve thermal performance
  - Material thickness affected by each compression cycle

- Thermal Bridge
  - Reusable - no replacement required
  - No additional components to prevent wear
  - No compression set and relaxation over time
  - Consistent compression force between cold plate and I/O plug

**TE Connectivity**

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