

SHIELDED INTERCONNECTS

360 DEGREE SHIELDED SOLUTIONS FOR EMI REDUCTION

At Samtec, EMI (Electromagnetic Interference) protection is considered early on in the design process. From noise on the lines to crippling entire infrastructures, whether large or small, EMI presents a serious problem. As all active electrical systems emit electrical noise, every device is susceptible to the damages of EMI. Working both in-house with our Signal Integrity Group and through various partners, Samtec simulates and tests its connectors to ensure EMI reduction using methods such as:

HFSS Simulation of Designs

- Total Radiated Power [TRP]
- EMI Mitigation Using Absorber

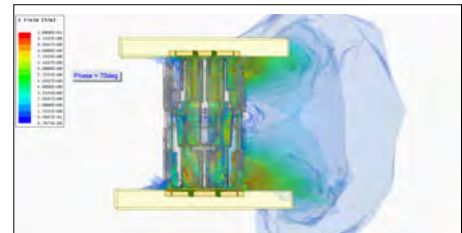
Shielding Effectiveness Testing in Mode Stirred Chamber

- Raw Cable / Cable Assembly Performance
- TRP of Active Devices

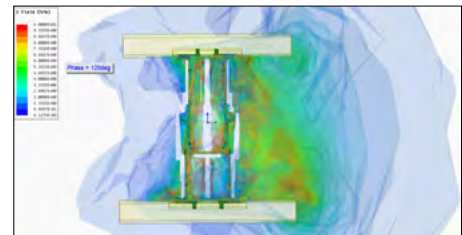
Shielding Effectiveness in Dual Reverb Chambers

- Shielded I/O Cages
- Power Transfer Through Connector Shields

OATS Range Through 3rd Parties for Compliance



With Shielding



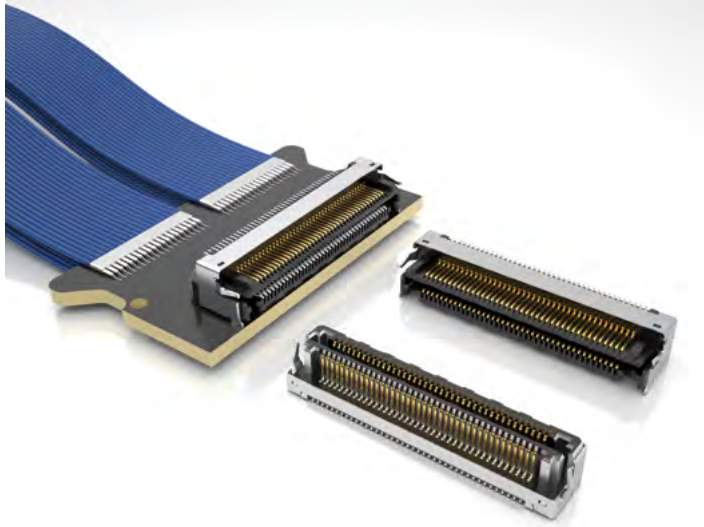
Without Shielding

Industries

- 5G Networking
- Test Connectivity
- Automotive
- Industrial
- Medical
- AI/Machine Learning
- Military/Aerospace
- Instrumentation
- Broadcast Video

To learn more about Samtec's shielded solutions, please visit [samtec.com](https://www.samtec.com)

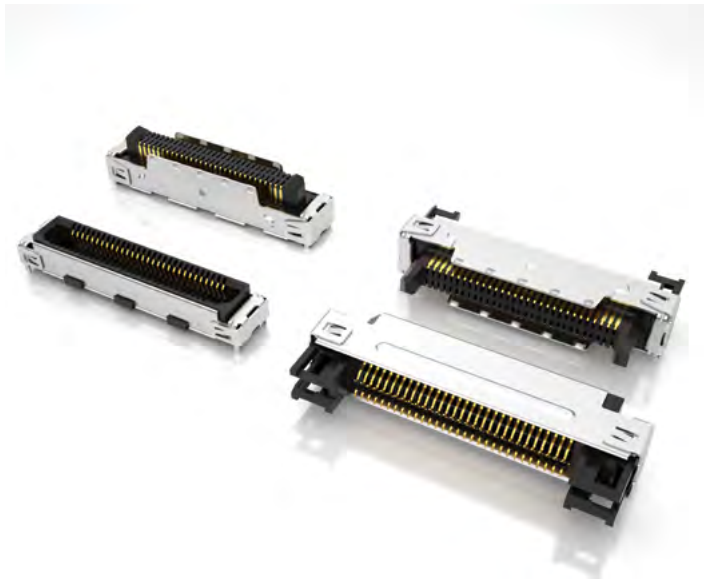
SHIELDED SOLUTIONS



Shielded LSHM Connectors

0.50 mm pitch Razor Beam™ high-speed hermaphroditic terminal/socket connectors

- 360 degrees of shielding for EMI protection
- 14 Gbps NRZ performance
- Stack heights: Ten options from 5 - 12 mm
- Up to 100 I/Os
- Razor Beam™ contact system for high-speed and fine pitch systems
- Parallel, perpendicular, and coplanar systems
- Mating/Unmating forces 4 - 6x greater than typical micro pitch connectors
- Audible click when mated
- Self-mating system reduces inventory cost
- Lubricated option available
- High-speed mating cable (HLCD) available
- Severe Environment Testing (SET) qualified



Shielded ERM8/ERF8 Connectors

0.80 mm pitch Edge Rate® high-speed, high-cycle terminal/socket connectors

- 360 degrees of shielding for EMI protection
- 56 Gbps PAM4 performance
- Stack heights: 7, 9, 12 and 16 mm
- 20 - 60 I/Os
- Edge Rate® contact system optimized for signal integrity performance
- Orientations: Vertical and edge mount
- Single-ended or differential pair signal routing
- Extended guide post option
- 1.5 mm contact wipe
- Severe Environment Testing (SET) qualified



Shielded QMSS/QFSS Connectors

0.635 mm pitch Q2™ shielded ground plane terminal/socket connectors

- 360 degrees of shielding for EMI protection
- 14 Gbps NRZ performance
- Stack height: 11 mm
- Up to 208 I/Os
- Differential pair signaling available
- Power combo option
- Optional guide posts
- Increased insertion depth