

Stay away from **noise** with

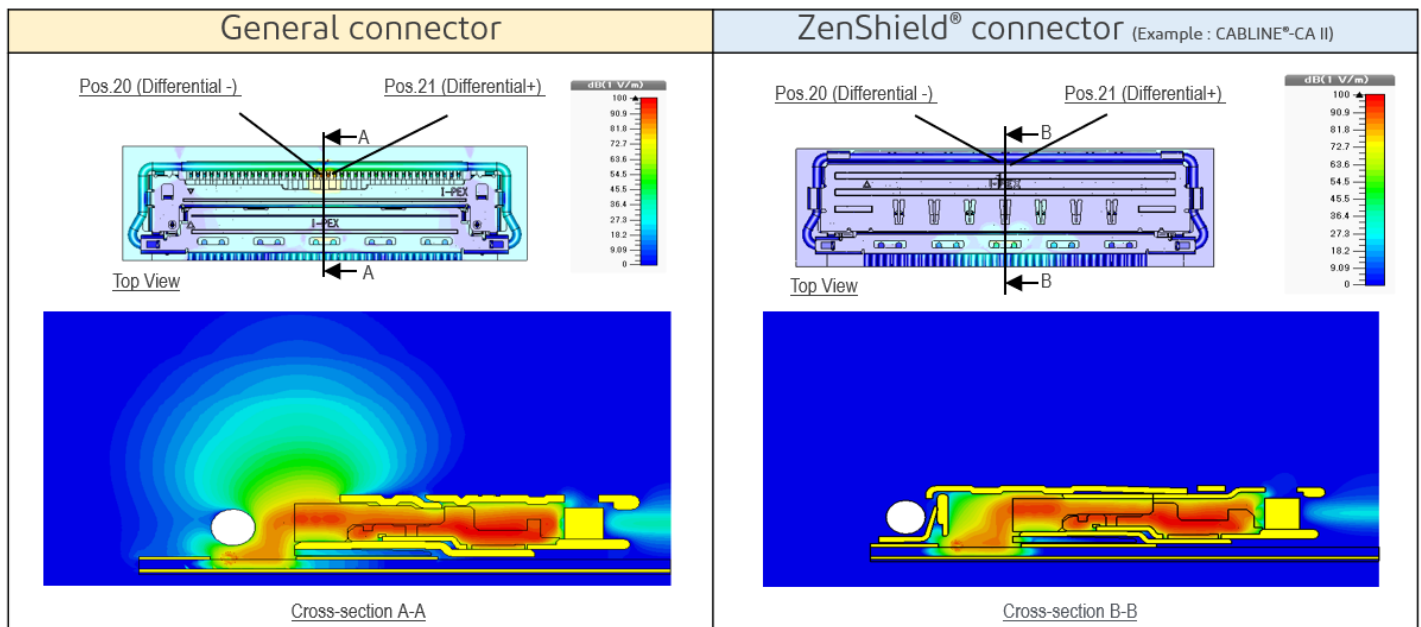


ZenShield®



ZenShield® is the brand name for the I-PEX connector series having high-performance EMC shielding design.

Example of EMI Simulation



As high-speed internet improves and the usage of large-capacity memory devices increases, high-resolution images and videos can be enjoyed more easily on consumer products such as PCs, tablets and smartphones. The amount of information that needs to be processed on these devices has dramatically increased and the signal speed in the device has been getting faster and faster.

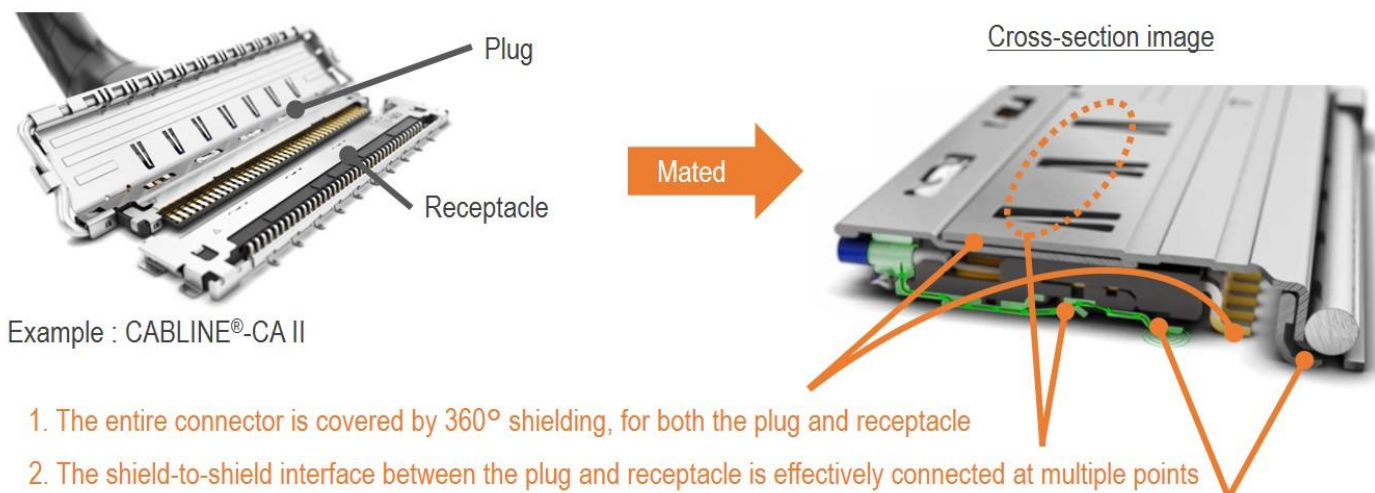
When electromagnetic noise is added from the outside in such electronic devices, unintended electrical signals may be induced to the circuits in the devices causing a malfunction or damage to high-performance electronic components which may also lead to electronic device breakage.

A second class of problems can occur when electromagnetic noise generated from the devices' own internal digital timing signals or electronic components causes failure of other parts within the same system. This is called an intra-system EMC, (Electromagnetic Compatibility), problem. It often causes headaches for engineers who must develop high-performance, hand-held or portable electronic devices, in which high density electronic components are mounted. When interconnects are required in these types of devices, EMC shielding connectors are often required in order to prevent electromagnetic noise from becoming a problem.

With its unique shielding designs, the I-PEX ZenShield® connector series can provide excellent EMC countermeasures. The 360-degree EMC shielding design prevents electromagnetic noise radiation not only from the contact points of the plug and receptacle, but also from the board mounting part (SMT positions) of the signal terminals. In addition, both plug and receptacle shields are properly connected for grounding at multiple points when the connectors are mated and are properly grounded to the board. This ensures enough ground return paths for the current generated in the metal shields of the connector. This works to suppress the emission of electromagnetic noise from its shield.

ZenShield® connector series design

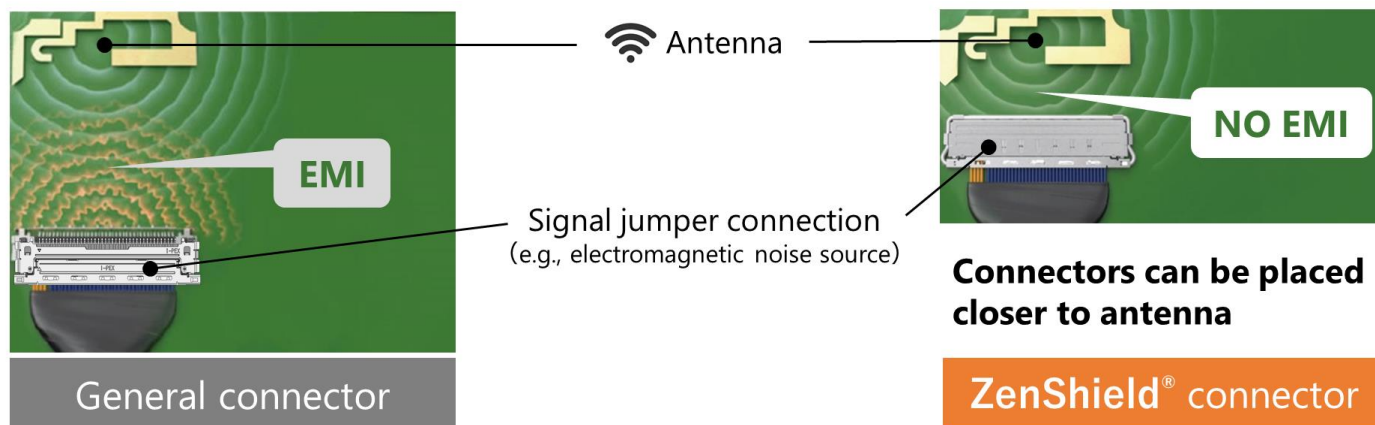
1. The entire connector is covered by 360° shielding, for both the plug and receptacle not only the contact part of the signal terminal, but also the board mounting part (SMT positions).
2. The shield-to-shield interface between the plug and receptacle is connected at multiple points.
3. Furthermore, the connector shield-to-board interface is properly grounded at multiple points on the board, thereby improving the ground return path.



Example : CABLINE®-CA II

1. The entire connector is covered by 360° shielding, for both the plug and receptacle
2. The shield-to-shield interface between the plug and receptacle is effectively connected at multiple points
3. The connector shield-to-board interface is properly grounded at multiple points on the board

With these design features, the connector itself provides significant mitigation of EMI. ZenShield® gives board designers more flexibility for designing the board by allowing the connectors to be placed in close proximity to sensitive subsystems, such as transmit/receive antennas, that are commonly found in high-performance wireless communication systems. These types of systems typically require aggressive shielding solutions for intra-system EMI isolation problems.



Connectors can be placed closer to antenna

ZenShield® connector

Available ZenShield® connector series

The I-PEX ZenShield® connector series offers a number of EMC shielding connectors to meet various applications and design conditions.

- **Micro-Coaxial Connectors:**

[CABLINER®-CA II / CA II PLUS](#) (0.4 mm pitch, horizontal mating type)

[CABLINER®-VS II](#) (0.5 mm pitch, horizontal mating type)

[CABLINER®-UM](#) (0.4 mm pitch, vertical mating type)

- **RF connector:**

[MHF® 7S](#) (foot pattern 2.0 x 2.0 mm, compatible frequency up to 15 GHz)

- **Board-to-Board (FPC) Connectors:**

[NOVASTACK® 35-HDP](#) (0.35 mm pitch, with power supply terminal)

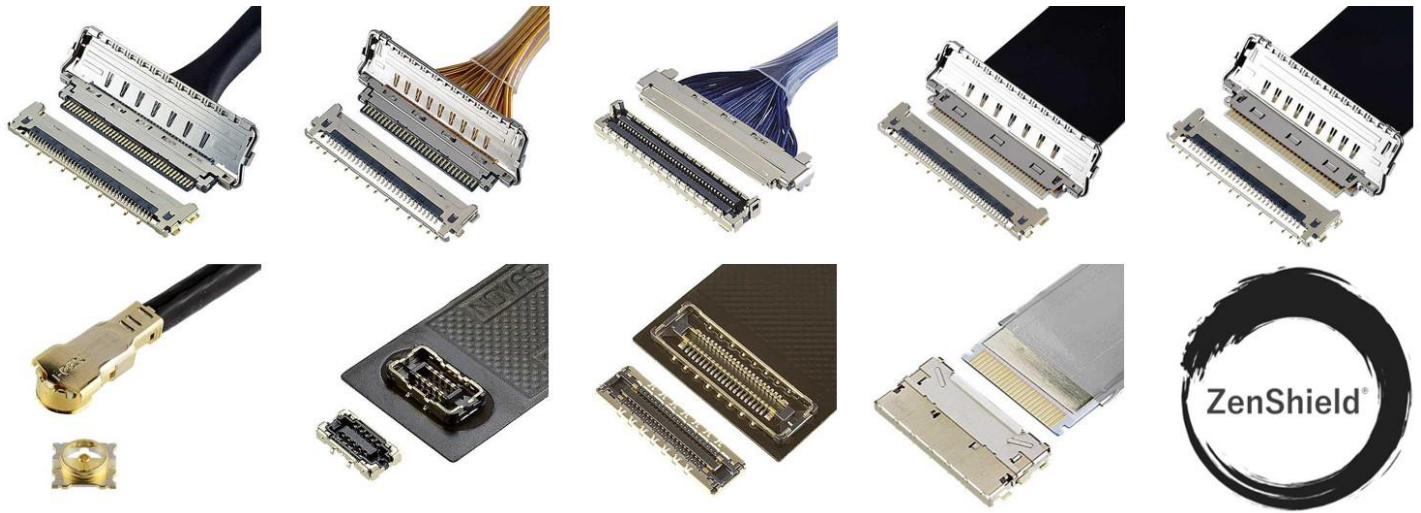
[NOVASTACK® 35-HDN](#) (0.35 mm pitch, space saving design type)

- **FPC/FFC connectors:**

[EVAFLEX® 5-HD](#) (0.5 mm pitch, with auto-locking function)

[CABLINER®-CA IIF](#) (0.4 mm pitch, horizontal mating type)

[CABLINER®-VS IIF](#) (0.5 mm pitch, horizontal mating type)



[Contact us](#) for more detailed information. [www.i-pek.com]

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