

Samtec's New Edge Card Connectors for Higher Speeds and Proper Alignment

0.80 mm and 1.00 mm Pitch Edge Card Sockets with High-Speed Edge Rate® Contacts

New Albany, IN: Samtec has expanded their line of edge card connectors with 0.80 mm and 1.00 mm pitch sockets designed for higher speed applications and optimal mating alignment.

The 0.80 mm pitch socket ([HSEC8-DP Series](#)) is a differential pair version of Samtec's popular Edge Rate® 0.80 mm pitch sockets. Rated for speeds to 28 Gbps NRZ/56 Gbps PAM4, the socket features Edge Rate® contacts designed to increase cycle life and decrease crosstalk. The double row socket, with 8 to 56 total pairs and optional rugged weld tabs, mates with standard 1.60 mm (.062") thick cards.

Optimized for performance to 28 Gbps, the 1.00 mm pitch edge card socket ([HSEC1 Series](#)) also features signal integrity optimized Edge Rate® contacts with alignment pin and rugged weld tab options. The socket is available with up to 140 total positions and mates with standard 1.60 mm (.062") thick cards. For specific applications, this edge card socket can help mitigate misalignment in the X and Y axes to ensure optimal contact/pad connection.

The smooth, broad, milled mating surface of the [Edge Rate® contacts](#) minimizes the effects of broadside coupling, which decrease crosstalk for superior signal integrity performance. Increased impedance control is achieved by a straight, more consistent material cross section. Robust when mating and unmating, this contact system also features a long contact wipe up to 1.5 mm, which improves the mating angle tolerance. In addition, Edge Rate® contacts are suitable for a variety of high-speed protocols and standards.

"Samtec's Edge Rate® brand is known in the industry as a versatile solution that enables the use of high-speed signals, while keeping mechanical integrity at a premium," said Terry Emerson, Micro Rugged Project Manager at Samtec, Inc. "We're excited to continue the mantra of the Edge Rate® brand with the addition of these two products."

Samtec's full line of [high-speed edge card connectors](#) is available in a variety of pitches and orientations. The popular 0.80 mm pitch Edge Rate® sockets ([HSEC8 Series](#)) are available in vertical, pass-through, right-angle or edge mount orientations, and elevated stack heights to 30 mm. A micro 0.50 mm pitch socket ([MEC5 Series](#)) features a justification beam that enables the use of standard PCB tolerance and is PCIe® Gen 4 compliant.

Standard high-speed edge card sockets include: 0.635 mm ([MEC6 Series](#)), 0.80 mm ([MEC8 Series](#)), 1.00 mm ([MEC1 Series](#)), 1.27 mm ([MECF Series](#)) and 2.00 mm ([MEC2 Series](#)). The 1.00 mm pitch PCI Express® socket ([PCIE Series](#)) supports one, four, eight

and sixteen links with a low-profile version ([PCIE-LP Series](#)) compatible to Gen 4 speeds. The 1.00 mm pitch micro plane socket ([SAL1 Series](#)) is SATALink™ compatible and mounts in pairs to accommodate various mating card thicknesses.

Samtec's [Signal Integrity Group](#) provides application support via its in-house Signal Integrity engineers for these edge card connectors and many other products. These highly qualified engineers help with full-channel analysis, high-data-rate simulations, application-specific design and development assistance, and advanced design support.

For more information, please visit [Samtec's Edge Card Connector Systems webpage](#).

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