

# Edge Rate™

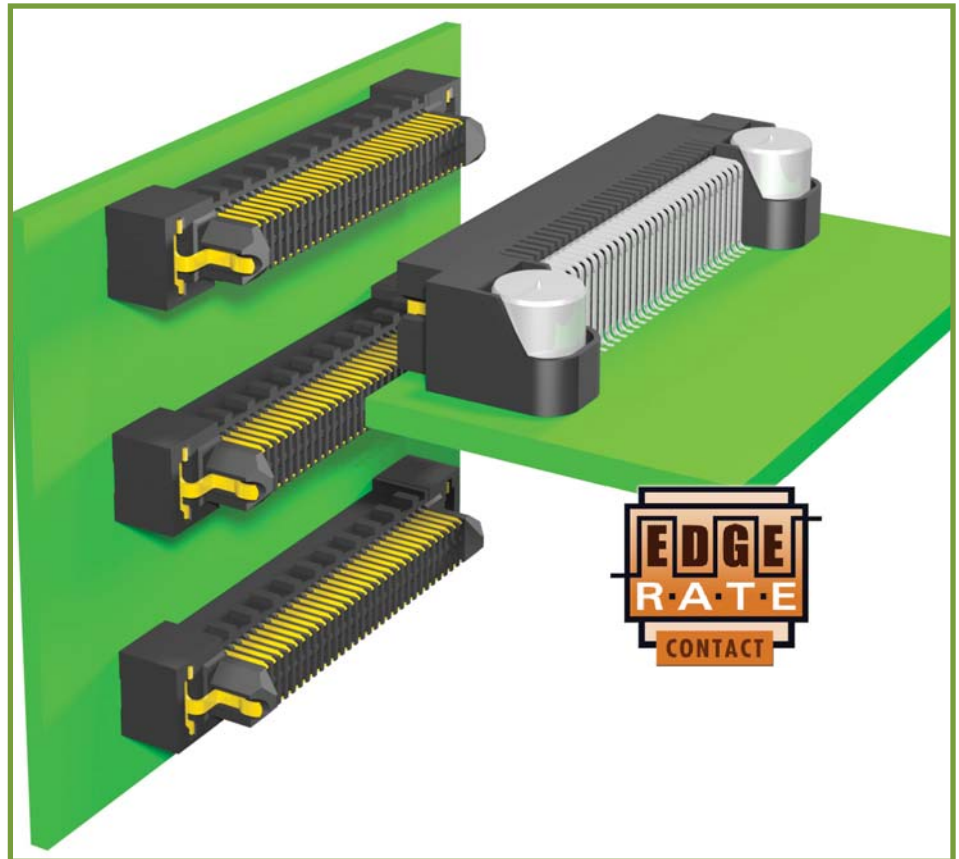
*Formed Edge Rate™ contacts offer high speeds and high cycle life*

Samtec's Edge Rate™ Contact system is designed for high speed, high cycle applications. The surface of the Edge Rate™ contact is milled creating a smooth mating surface area instead of a stamped contact that mates on a cut edge. This smooth mating surface reduces the wear tracks on the contact increasing the durability and cycle life of the contact system. It also lowers insertion and withdrawal forces allowing the connectors to be zippered when unmating. Click [here](#) to find out more about how the Edge Rate™ contact system compares to stamped or cut contacts.

In addition to increased durability and extended cycle life, the Edge Rate™ contact has superior electrical performance compared to most stamped contacts. The Edge Rate™ contacts are positioned in the plastic insulator so the narrow edges of the pins are parallel to each other. This minimizes the parallel surface area reducing broadside coupling and crosstalk.



Additionally, Edge Rate™ contacts expand the electrical benefits to include impedance matching. The intricate details of the contact



*ERM8/ERF8 available in horizontal and right angle*

geometry are designed, simulated, and optimized electrically for 50Ω and 100Ω systems given the contact pitch and appropriate grounding schematics.

For example:

**SEAM/SEAF** - .050" (1,27mm) Open Pin Field Array Connector is rated at 9.5 GHz/pair at 3dB insertion loss.

**ERM8/ERF8** - .8mm (.315") High Speed Edge rate™ Connector is rated at 10.5 GHz / pair at -3dB insertion loss.

**QRM8/QRF8** - .8mm (.0315") Q Rate® High Speed Connector with slim body is rated at 9.5 GHz/pair at -3dB insertion loss.

**HSEC8** - .8mm (.0315") High Speed Edge Card is rated at 8.0 GHz/pair at -3dB insertion loss.

**BEC5** - .5mm (.0197") High Density Edge Card

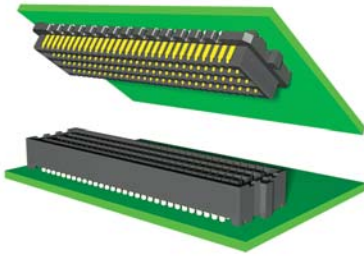
**DSEC** - .8mm (.0315") Dual Stack Edge Card

Other Edge Rate™ product series include **IJ5/IP5** (Isolated Transmission Line Interconnects), **HSF8** (High Speed Flex Data Link) and **ERCDA**, **EPLSP**, **ER18**, and **EEDP** (High Speed Data Rate Cable Systems).

For more information, contact our Signal Integrity Group at [SIG@samtec.com](mailto:SIG@samtec.com).

## HIGH SPEED SYSTEMS

### SEARAY™

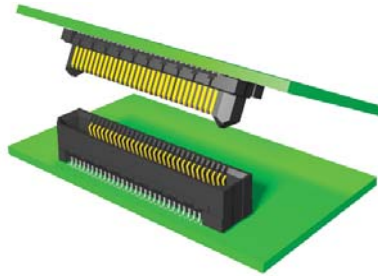


#### SEAM/SEAF

##### *High Speed/High Density Array*

- **Rows:** 4, 5, 6, 8, 10
- **Centerline:** .050" (1,27mm)
- **Positions:** 10, 15, 20, 30, 40, 50 per row
- **Stack Height (mm):** 7-19
- **Orientation:** Vertical and Right Angle

### Edge Rate™

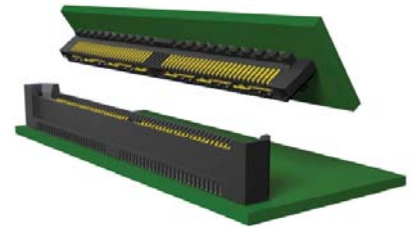


#### ERM8/ERF8

##### *High Speed Edge Rate*

- **Rows:** Dual
- **Centerline:** .8mm (.0315")
- **Positions:** 5, 10, 13, 20, 25, 30, 40, 50, 60, 70, 75 per row
- **Stack Height (mm):** 7, 9, 10, 12, 13, 14, 15, 16
- **Orientation:** Vertical, Right Angle, and Edge Mount

### Q RATE®



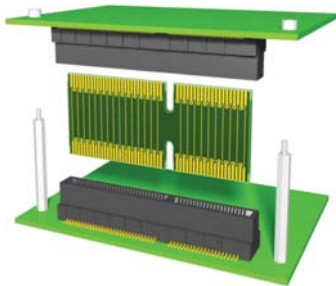
#### QRM8/QRF8

##### *High Speed Edge Rate with Integral Ground Planes*

- **Rows:** Dual
- **Centerline:** .8mm (.0315")
- **Positions:** 26, 52, and 78 per row
- **Stack Height (mm):** 7, 9, 10, 12, 14
- **Orientation:** Vertical and Right Angle

## EDGE CARD SYSTEMS

### High Speed Edge Card

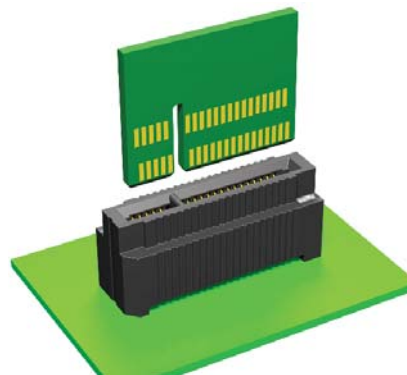


#### HSEC8

##### *High Speed Edge Card*

- **Rows:** Dual
- **Centerline:** .8mm (.0315")
- **Positions:** 10, 13, 20, 25, 30, 37, 40, 49, 50, 60 per row
- **Mates with:** 1,60mm (.062") cards
- **Orientation:** Vertical, Right Angle, and Edge Mount

### High Density Edge Card

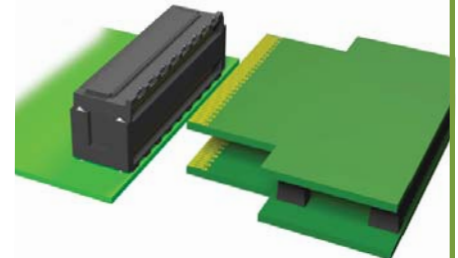


#### BEC5

##### *High Density Edge Card*

- **Rows:** Dual
- **Centerline:** .5mm (.0197")
- **Positions:** 80, 100, 120, 140 per row
- **Mates with:** 1,60mm (.062") and 2,40mm (.094") cards
- **Orientation:** Vertical

### Dual Stack Edge Card



#### DSEC

##### *Dual Stack Edge Card*

- **Rows:** Dual
- **Centerline:** .8mm (.0315")
- **Positions:** 30, 40, 50 per row
- **Mates with:** 1,60mm (.062")
- **Orientation:** Right Angle