



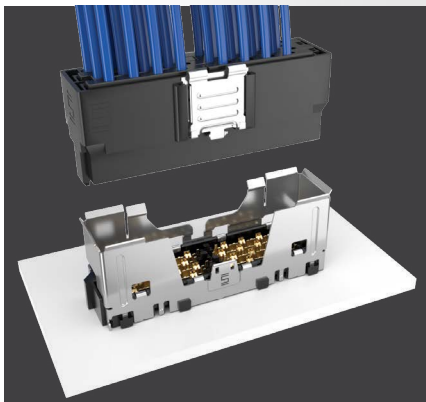
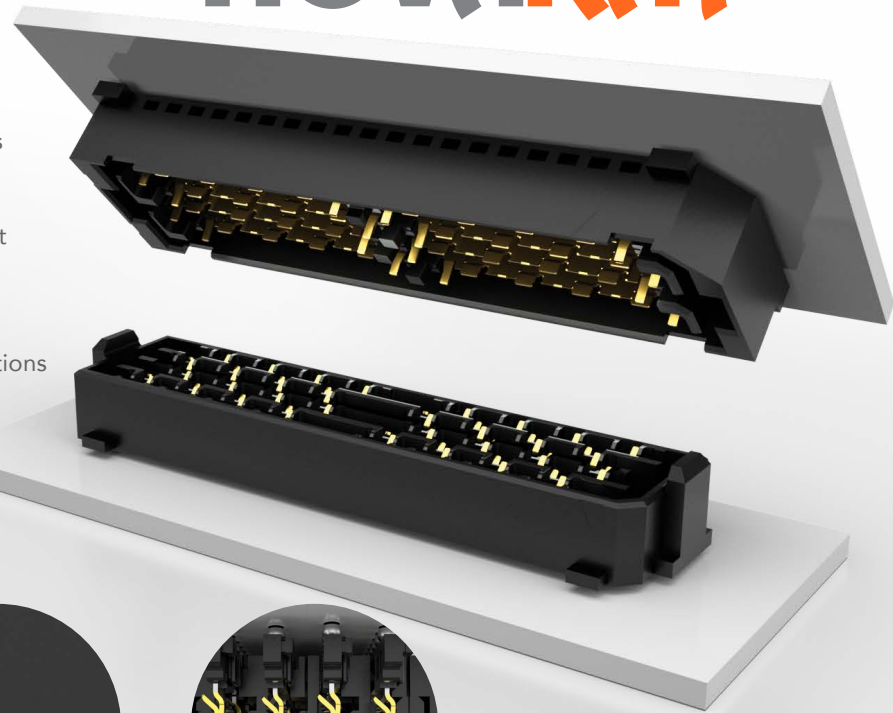
# EXTREME PERFORMANCE & DENSITY ARRAYS

0.80 mm PITCH NOVARAY™ ULTRA-HIGH SPEED SYSTEM

NRZ	PAM4
56 Gbps	112 Gbps

- 112 Gbps PAM4 per channel
- 4.0 Tbps aggregate data rate - 9 IEEE 400G channels
- Fully shielded differential pair design
- Extremely low crosstalk (beyond 40 GHz)
- Tight impedance control
- Minimal variance in data rate as stack height increases
- 112 differential pairs per square inch
- Utilizes 40% less space with the same data throughput as compared to traditional arrays
- Stub-free mating
- 92 Ω solution addresses both 85 Ω and 100 Ω applications

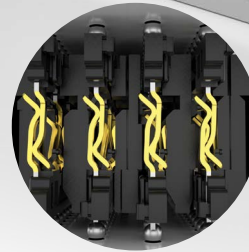
## NOVARAY™



High-speed mezzanine connector and cable in one product family



BGA attach to board for greater density and optimized trace breakout region



Guaranteed two points of contact to ensure a more reliable connection

### Aggregate Data Rate (NRZ)

448 Gbps	672 Gbps	896 Gbps		1344 Gbps	1792 Gbps	4032 Gbps*
1 Bank				2 Bank		3 Bank*
2 Row	3 Row	4 Row	2 Row	3 Row	4 Row	6 Row*
8 Pairs	12 Pairs	16 Pairs		24 Pairs	32 Pairs	72 Pairs*

\* In development

### System

- **NVAM** – 0.80 mm Pitch Terminal
- **NVAF** – 0.80 mm Pitch Socket
- **NVAC** – 0.80 mm Pitch Socket Cable Assembly
- **NVAM-C** – 0.80 mm Pitch Mating Terminal for NVAC Series

For more information about NovaRay™, please visit [samtec.com/novaray](http://samtec.com/novaray)