

SEARAY™ High Speed, High Density Arrays

Samtec's family of SEARAY™ high speed, high density arrays offer ultimate design flexibility that is unmatched in the connector industry. SEARAY™ products allow for maximum grounding and routing flexibility with up to 500 I/Os, and are available in vertical, right angle, and press fit orientations, and high speed cable assemblies.

SEARAY™ can be mapped as a single-ended application, differential pair application, or a combination of both. When routed as a single-ended system, SEARAY™ is rated up to 12.5 GHz @ -3dB insertion loss, and is rated up to 13.0 GHz @ -3dB insertion loss in a differential pair system.

SEARAY™ systems utilize Samtec's patented Edge Rate™

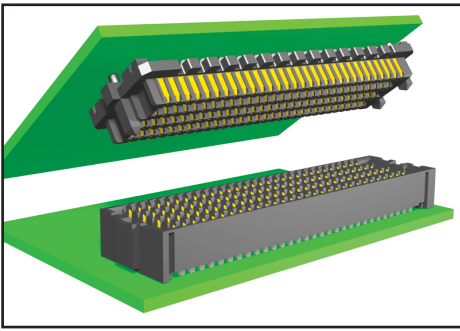
contact system for robust, high speed performance, which allows for "zippering" when mating and unmating. The Edge Rate™ contacts mate on the smooth milled surface of the contact, thus allowing for higher cycle life and superior electrical properties. This contact design also lowers insertion and extraction forces - an important consideration when designing-in high-pin-count arrays.

SEARAY™ utilizes solder charge technology to simplify IR reflow termination and improve solder joint reliability. The advantage of this technology, compared to standard BGA/solder ball attachment, is the interconnects are subject to extreme heat only once during assembly of the connector to the PCB (as opposed to twice with

solder ball attach methods). This becomes more relevant with the higher temperatures required for lead-free processing. SEARAY™ is currently available with tin-lead solder crimp as well a lead-free tin alloy solder charge which is ROHS compliant.

SEARAY™ products also meet Extended Life Products (E.L.P.™) standards. E.L.P.™ products are tested to rigorous standards which evaluate contact resistance in simulated storage and field conditions. Tests include a 10 year Mixed Flowing Gas (MFG) analysis and a High Mating Cycle Assessment (250 to 2,500).

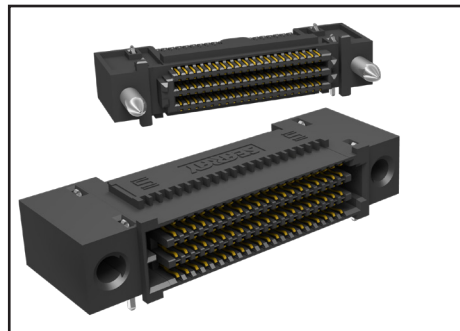
For complete details on Samtec's E.L.P.™ please visit: www.samtec.com/ELP.



VERTICAL SYSTEMS

SEAM, SEAF Series

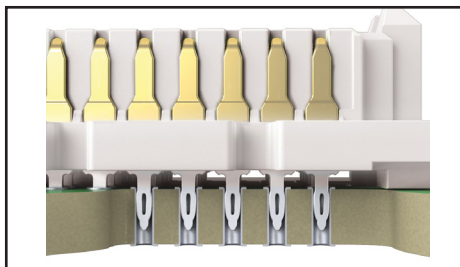
- 1,27 (.050") pitch
- 7 – 17 mm mated heights
- Up to 500 contacts
- Up to 9.5 GHz/pin @ -3dB IL (single ended)
- Up to 10 GHz/pin @ -3dB IL 9 (differential)
- Optional guide posts
- VITA 47, VITA 57, Pismo 2 certified



RIGHT ANGLE SYSTEMS

SEAM-RA, SEAF-RA Series

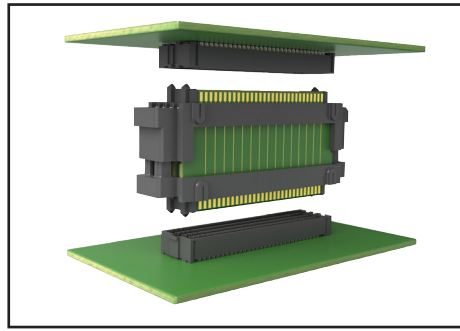
- 1,27 (.050") pitch
- Up to 500 contacts
- Optional guide posts and latching posts for blind mating
- Ideal for micro backplane applications



PRESS FIT DESIGN

SEAMP Series

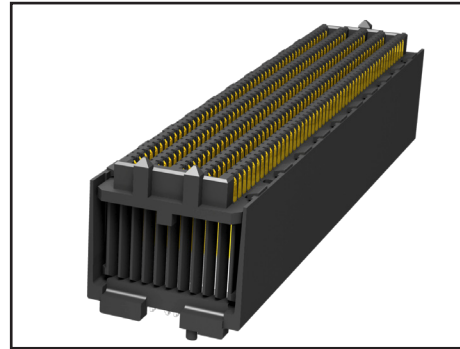
- 1,27 (.050") pitch
- Up to 400 contacts
- .062" or .093" board thickness
- Contact ipg@samtec.com for other thicknesses
- 7, 8, 8.5mm mated heights



RISER SYSTEM

SEAR Series

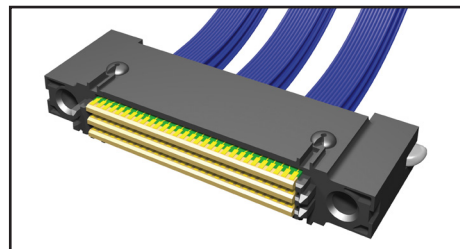
- High speed, high density riser
- 20 – 40mm stacks (mated with SEAF -05.0)
- Designed for 85Ω systems
- 1,27 (.050") pitch
- Up to 500 contacts



85Ω RISER SYSTEM

SEAMI Series

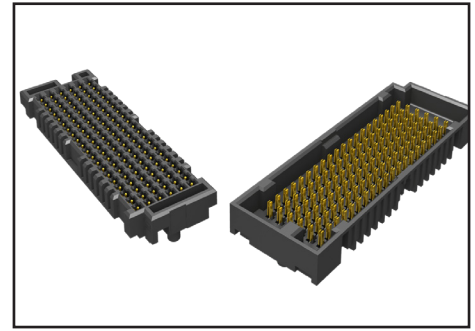
- High speed, high density riser
- 85Ω tuned
- 16, 17, 17.5mm stacks
- 1,27 (.050") pitch
- Up to 500 contacts



HIGH SPEED CABLE ASSEMBLY

SEAC Series

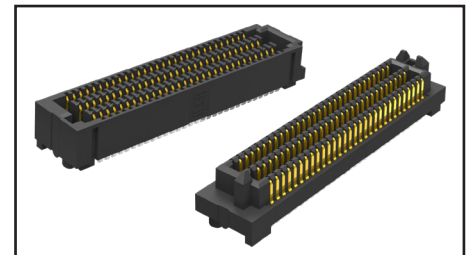
- Male (plug) assembly
- 36AWG micro coax ribbon cable
- Positive latching system
- Up to 500 I/Os



LOW PROFILE SYSTEMS

LPAM, LPAF Series

- 4, 4.5, 5mm stack heights
- Dual beam contact system
- 1,27 (.050") pitch
- Up to 180 contacts



.8mm PITCH SYSTEM

SEAM8, SEAF8 Series

- .8mm pitch
- Up to 50% board space savings compared to SEAM, SEAF
- 7mm, 10mm stack heights
- Up to 180 contacts

Final Inch®

Final Inch® is a "reference design" for one of the most difficult design issues on the board - the Breakout Region (BOR) around the connector. Samtec can provide empirical TDR and frequency domain data, test boards, and validated electrical models for the SEARAY™ system.



Please visit www.samtec.com/finalinch for more information or contact our Signal Integrity Group at SIG@samtec.com.

