



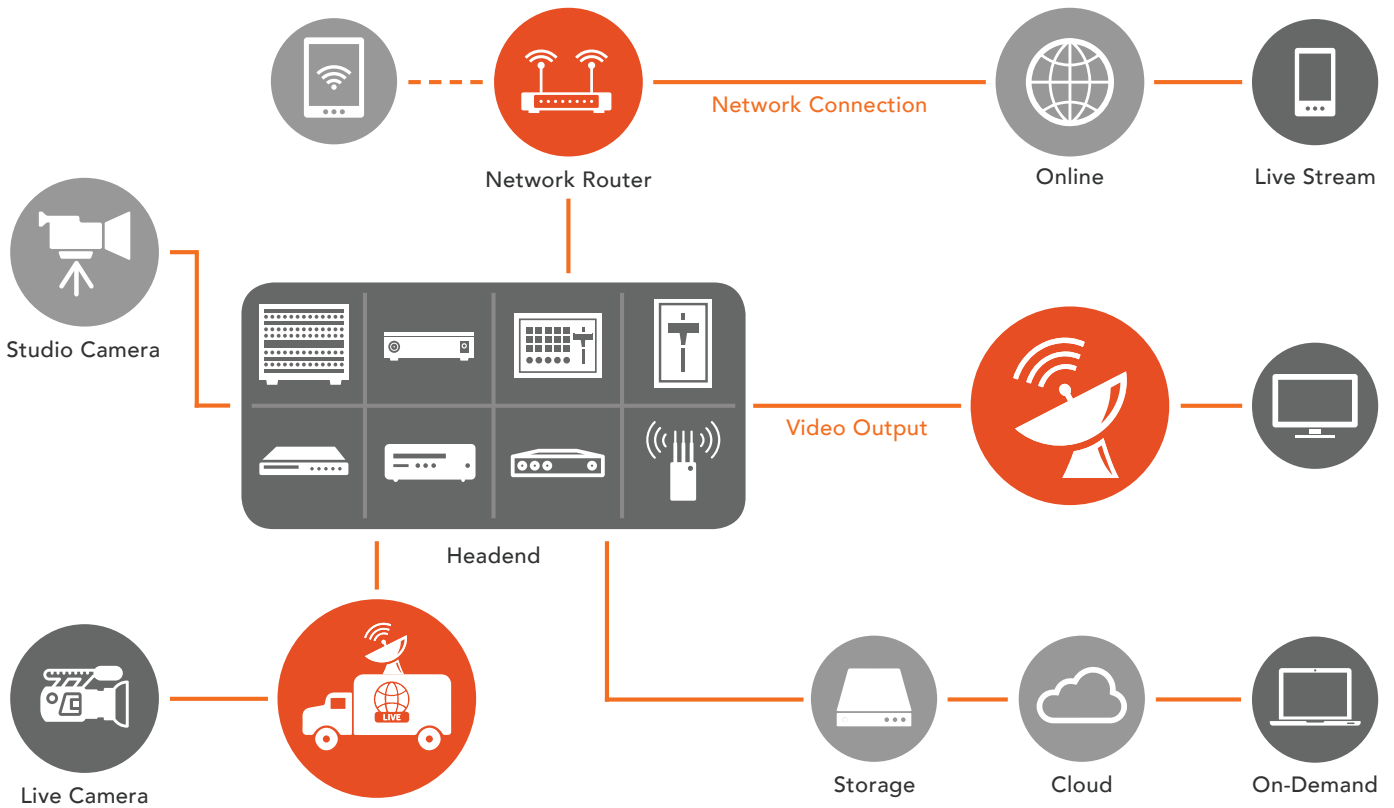
# BROADCAST VIDEO SOLUTIONS

HIGH-PERFORMANCE INTERCONNECT SYSTEMS FOR **4K & BEYOND**



# SOLUTIONS

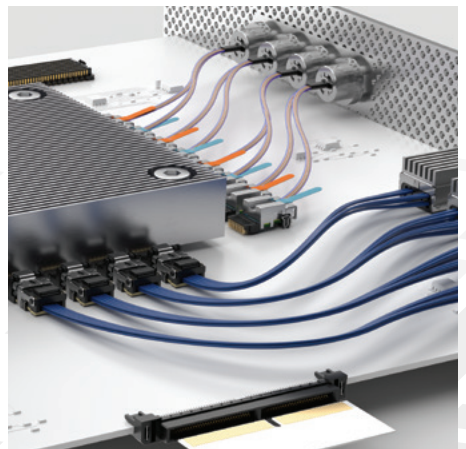
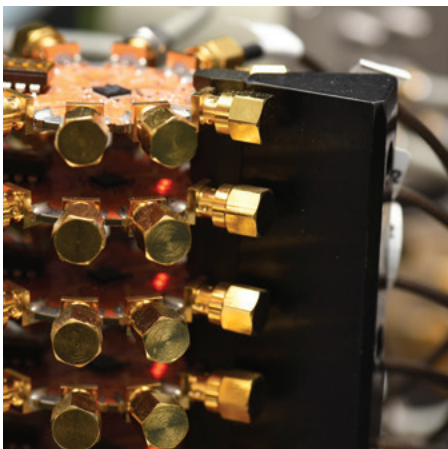
The broadcast video ecosystem is changing, resulting in increased demands for high-capacity 4K and beyond digital transmission through today's SDI infrastructures and the emerging video-over-IP infrastructures. This requires expanded capabilities throughout the broadcast video chain, from camera to consumer. Samtec offers a full line of high-performance solutions and design-in support for each of these applications.



RF TECHNICAL GROUP

12G-SDI 75Ω

HIGH-PERFORMANCE  
SYSTEM SOLUTIONS





# RF TECHNICAL GROUP

Samtec's dedicated engineering team of in-house RF and SI technical experts provides application-specific design-in support that meets any design challenge.



For solution optimization at the connector, cable assembly or throughout the system, Samtec's RF Technical Group offers the following capabilities:

- Customer-dedicated RF/SI engineer(s) to help solve specific RF challenges
- Quick-turn modifications to standard products
- Design for fully engineered custom products and solutions
- Initial prototype support
- 12G-SDI analysis and launch optimization
- Component and/or system-level design, modeling, simulation and physical measurement verification

## CASE STUDY | Custom High-Performance RF Connectors

### **DESIGN CHALLENGE:** Custom Right-Angle BNC Jack Specification

Samtec's RF Technical Group specializes in identifying and creating the ideal RF solution for any application, no matter the detail required. Notice the following specification:

- 12G-SDI performance
- Cost-effective
- Utilize industry standard pick-and-place machines for assembly
- Mechanically balanced and lightweight
- Launch optimization

### **DESIGN SOLUTION:** Samtec-exclusive BNC7T-J-P-GN-RA-BM1D BNC Jack Options

- Collaborative solution-focused engineering approach to connector design
- A sleek combination of electrical and mechanical properties
- Adequate surface area for machine pick-and-place vacuum sealing
- Balanced mass distribution allows use of pick-and-place machine during assembly without fixturing
- Bulkhead mixed SMT/TH technology
- Connector and launch optimized for 12G-SDI performance



Please contact [RFTechnicalGroup@samtec.com](mailto:RFTechnicalGroup@samtec.com) for additional information

# 75 $\Omega$ , 12 Gbps TRANSPORT

The logo for 12GSDI, featuring the text "12GSDI" in white on a blue rectangular background. The "12" is significantly larger than the "GSDI".

Video has transformed from being an analog 6 MHz bandwidth signal to a 12 Gbps digital data stream. As signaling transitioned to 12 Gbps 4K UHD-SDI standards, the demand for meeting stringent return loss requirements up to 12 GHz emerged.

Samtec has the largest variety of 12G-SDI connectors, cables and cable assemblies available, including right-angle orientations used with Pick & Place Machines. Please visit [samtec.com/12gsdi](http://samtec.com/12gsdi) for more information.

## BNC 75 $\Omega$ RF CONNECTORS

- Miniature quick connect/disconnect interfaces
- Straight, through-hole
- Bulkhead jack, right-angle, through-hole & mixed technology
- Bulkhead, edge mount (.063" or .093" PCB)
- Machine or die cast options

## HDBNCTM 75 $\Omega$ RF CONNECTORS

- Designed to maximize panel density
- 4x the panel density of standard BNC solutions
- 20% lighter than standard BNC
- Quarter turn coupling design
- Straight, through-hole
- Bulkhead jack straight, right-angle and edge mount

## DIN 1.0/2.3 75 $\Omega$ RF CONNECTORS

- Push-pull mating system
- Designed for high-density applications
- Straight, through-hole
- Bulkhead jack, right-angle



## 75 Ω CABLING SOLUTIONS

- Enables full cable assembly support
- Mates with 12G-SDI PCB-mount products
- Flexible, mix-and-match end options
- 18, 23 or 30 AWG cables
- Wide variety of mix-and-match cable terminations
- Single-ended or double-ended cable assemblies
- Cable connector kits and cable adaptors available

### CABLE OPTIONS AVAILABLE

- BNC: RG 179, RG 6 or Belden 1694A cables available
- DIN: RG 179, RG 6, Belden 1694A or Belden 1855A cables available
- HDBNC: RG 6, Belden 1694A or Belden 1855A cables available

For specific 12G-SDI cable assembly support, please contact [RFTechnicalGroup@samtec.com](mailto:RFTechnicalGroup@samtec.com).



## LOWER-FREQUENCY, 75 Ω RF CONNECTORS

### SMB 75 Ω RF CONNECTORS AND COMPONENTS

- Performance up to 4 GHz
- Straight or right-angle cable plugs
- Edge mount or through-hole termination PCB Jacks
- RG 179 cable assemblies available

### MCX 75 Ω RF CONNECTORS AND COMPONENTS

- Performance up to 6 GHz
- Space-saving design (30% smaller than SMB)
- Straight surface mount jack or plug
- Straight through-hole jack
- RG 179 cable assemblies available

### MICRO-MINI (MMCX) 75 Ω RF CONNECTORS AND COMPONENTS

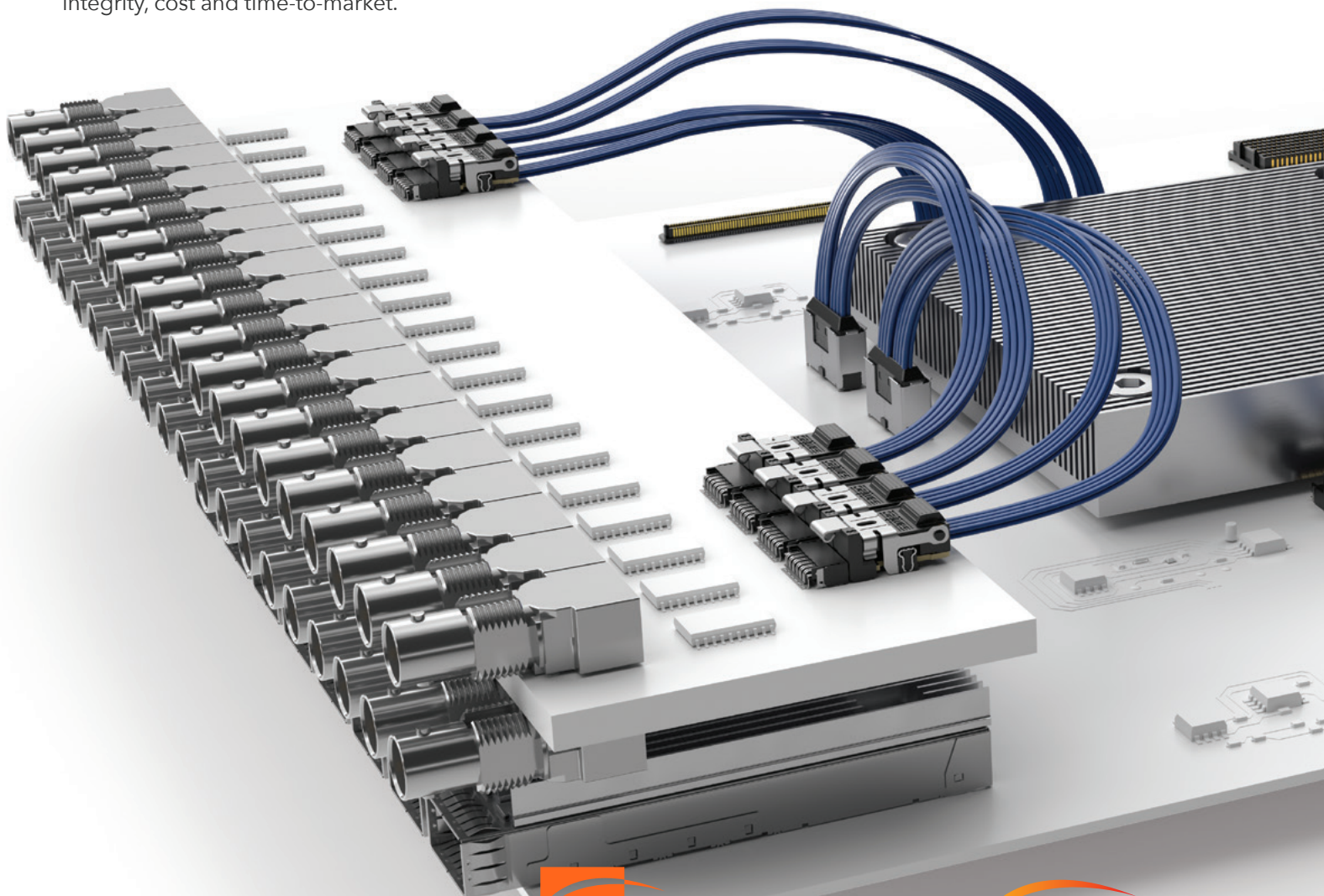
- Performance up to 6 GHz
- Simple snap-on coupling
- Straight plug or jack (through-hole PCB mount and cable termination)
- RG 179 cable assemblies available
- Ganged hybrid cable assembly (GRF7H-C Series)



# HIGH-PERFORMANCE SYSTEM SOLUTIONS

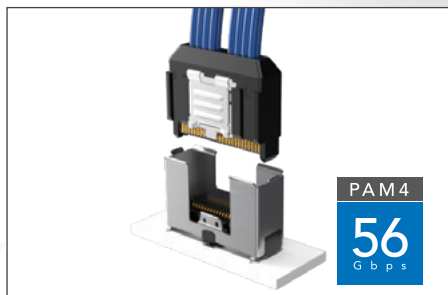
As broadcast video requirements surpass 4K and beyond, developers are challenged with balancing increasing throughput, scalability and density demands with concerns such as power consumption, signal integrity, cost and time-to-market.

Samtec offers a full-line of high-performance solutions to meet 4K and beyond digital transmission and video-over-IP demands throughout the broadcast video infrastructure.



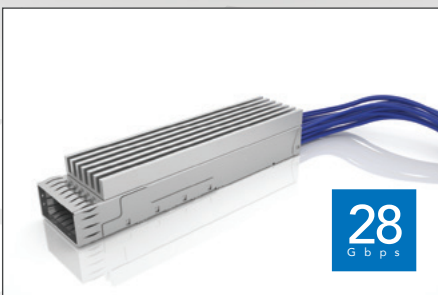
## ACCELERATE®

SLIM BODY DIRECT ATTACH  
CABLE ASSEMBLIES



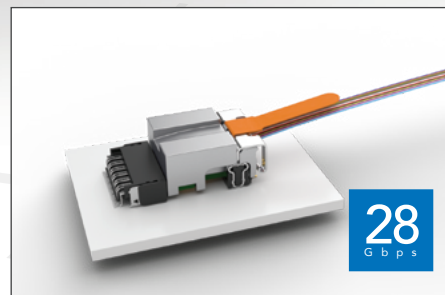
## FLY OVER®

QSFP28 CABLE SYSTEM



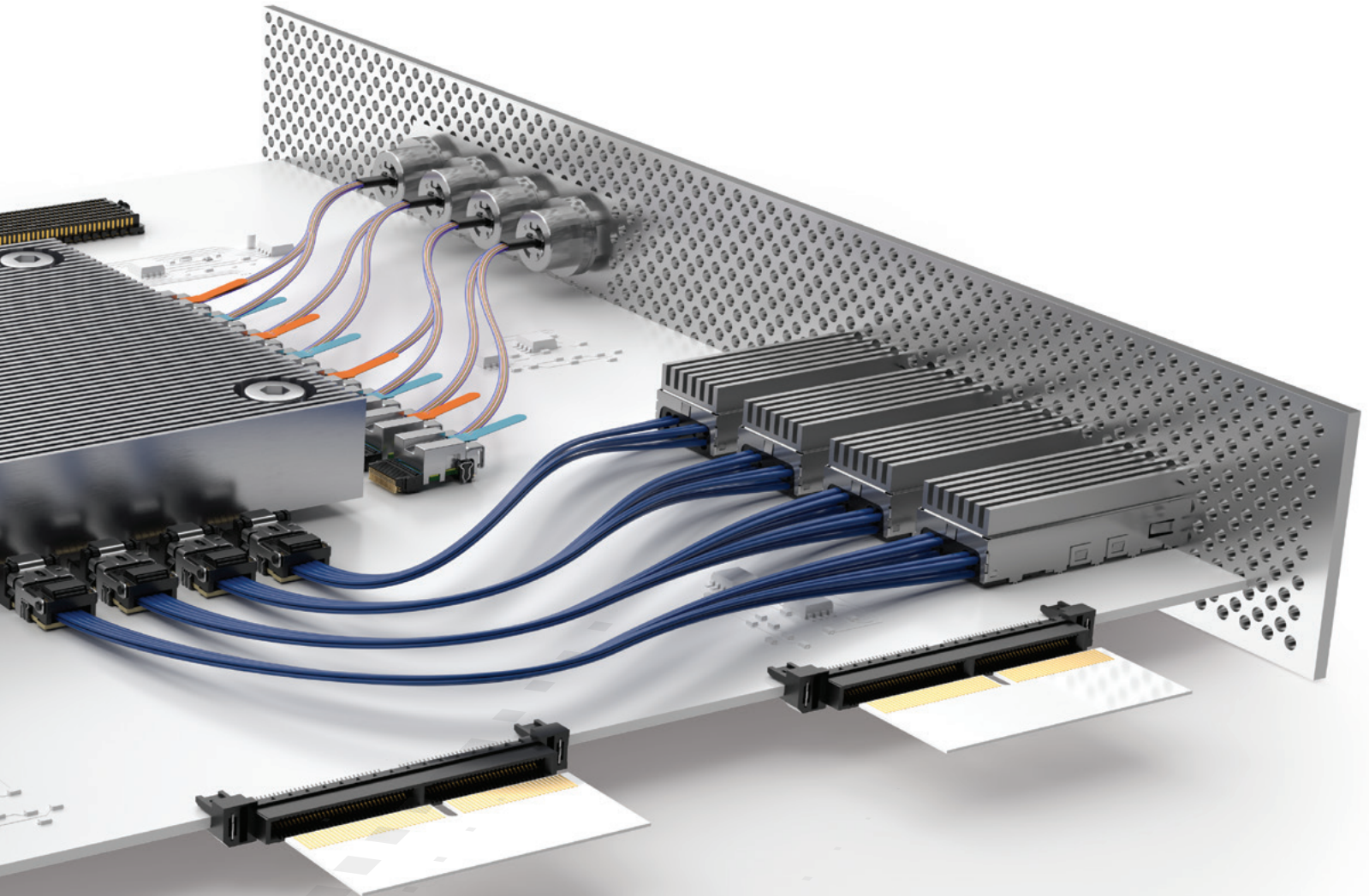
## FIREFLY™

INTERCHANGEABLE COPPER & OPTICAL  
CABLE USING THE SAME CONNECTORS



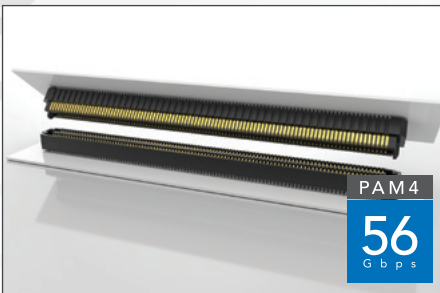


Visit [samtec.com/s2s](http://samtec.com/s2s) for more information.



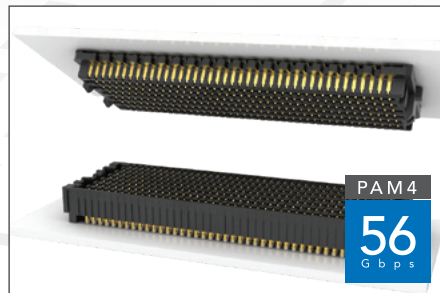
## ACCELERATE<sup>®</sup>HD

ULTRA-DENSE MULTI-ROW  
MEZZANINE STRIPS



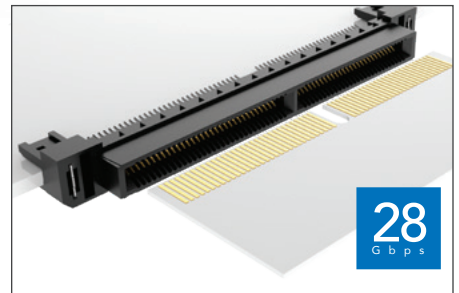
## SEARAY<sup>™</sup>

HIGH-DENSITY  
OPEN-PIN-FIELD ARRAYS



## EDGE RATE<sup>®</sup> CONTACT

0.80 mm HIGH-SPEED  
EDGE CARD CONNECTOR



# GLOBAL MANUFACTURING & SUPPORT



**FREE SAMPLES**  
IN 24 HOURS



**2-DAY SHIPPING**  
TO ALL MAJOR MARKETS



**3-DAY SHIPPING**  
OF MOST PRODUCTS



**#1 CONNECTOR MANUFACTURER**  
BISHOP & ASSOCIATES



**samtec**  
SUDDEN SERVICE®