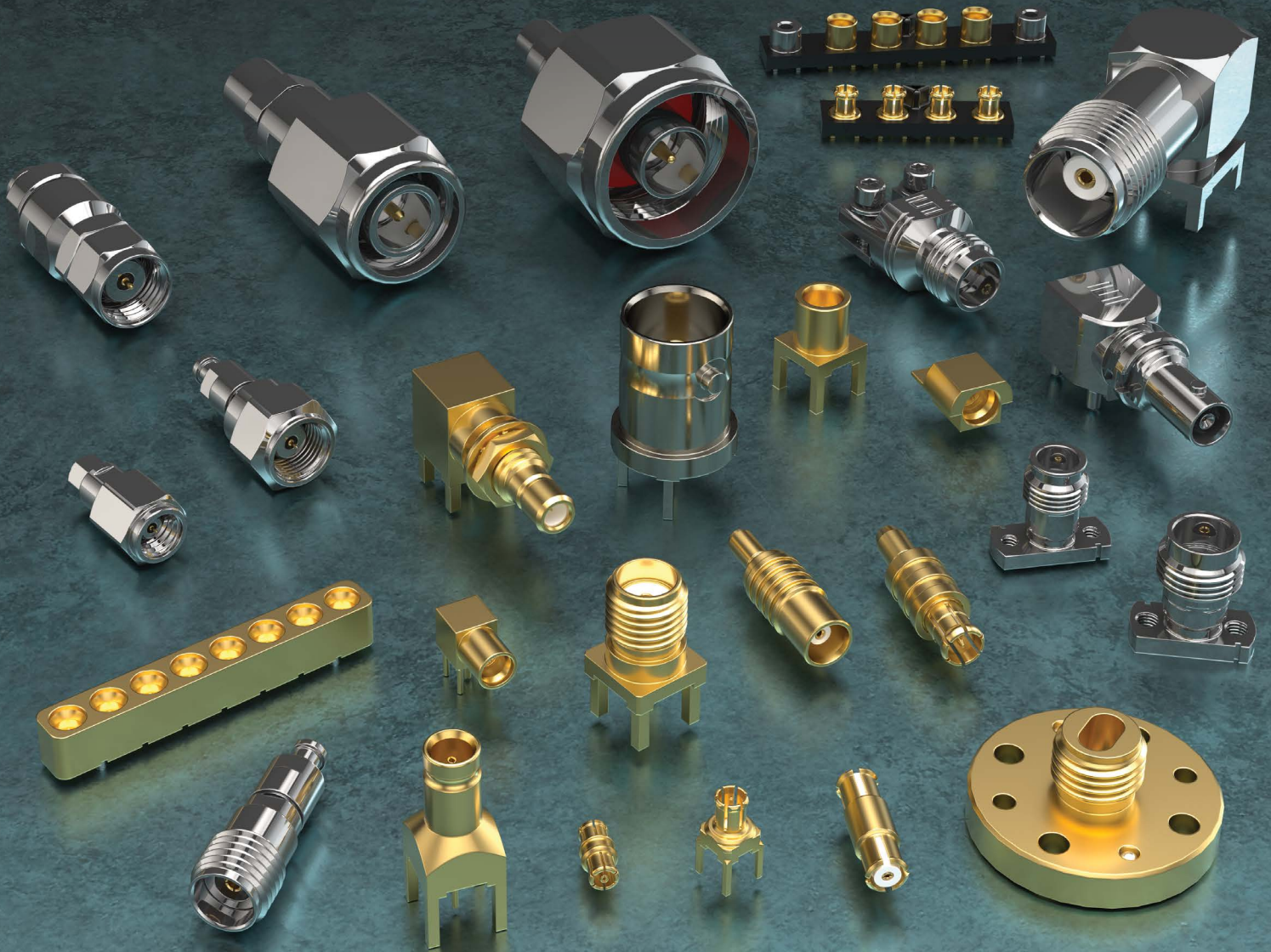
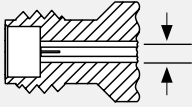

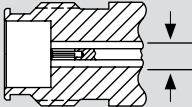

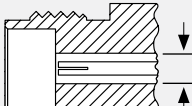

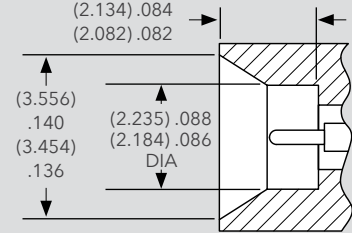

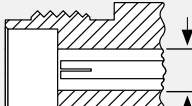

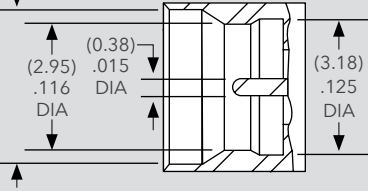





RF CONNECTORS



PRECISION RF STANDARD INTERFACE TYPES

Type	Standard	Mated Sets
110 GHz, 1.00 mm <ul style="list-style-type: none"> Robust threaded coupling PCB: compression mount 	 <p>(1.0051) .03957 (0.9949) .03917 DIA</p>	Cable: LL110, LL095, RF047-A Cable Connector: PRF10 Board Connector: 100-EL 
90 GHz, 1.35 mm <ul style="list-style-type: none"> Robust threaded coupling PCB: compression mount 	 <p>(1.356) .0534 (1.341) .0528 DIA</p>	Cable: RF047-A Cable Connector: PRF13 Board Connector: 135 (-CM, -CMM) 
65 GHz, 1.85 mm <ul style="list-style-type: none"> Robust threaded coupling PCB: compression mount Intermateable with 2.40 mm 	 <p>(1.857) .0731 (1.841) .0725 DIA</p>	Cables: LL071, RF047-A, RF086 Cable Connector: PRF18 Board Connectors: 185 (-CM, -CMM, -EL) 
65 GHz, SMPM <ul style="list-style-type: none"> Push-on coupling 30% smaller than SMP Detents: full, smooth bore or catcher's mitt PCB: solder termination 	 <p>(2.134) .084 (2.082) .082</p> <p>(3.556) .140 (3.454) .136</p> <p>(2.235) .088 (2.184) .086 DIA</p>	Cables: LL110, LL095, RF047-A, RF086, RF23C Cable Connector: PRFM0 Bullet Adaptor: PRFIA Board Connectors: SMPM (-SM, -MT, -STTH, -RA-TH, -EM) (Ganged, Magnum RF® solutions also available) 
50 GHz, 2.40 mm <ul style="list-style-type: none"> Robust threaded coupling PCB: compression mount Intermateable with 1.85 mm 	 <p>(2.4079) .0948 (2.3927) .0942 DIA</p>	Cables: LL043, RF047-A, RF086, RF23C, RF085 Cable Connector: PRF24 Board Connectors: 240 (-CM, -CMM, -EL) 
40 GHz, SMP <ul style="list-style-type: none"> Push-on coupling Compensates for misalignment Detent: full, limited, smooth bore, catcher's mitt PCB: solder termination 	 <p>(3.61) .142 DIA</p> <p>(2.95) .116 DIA (0.38) .015 DIA</p> <p>(3.18) .125 DIA</p>	Cables: RF047-A, RF086, RF23C, RF25S, RF405 Cable Connectors: PRF00 Bullet Adaptor: SMP-B Board Connectors: SMP (-SM, -TH, -MT, -EM) 

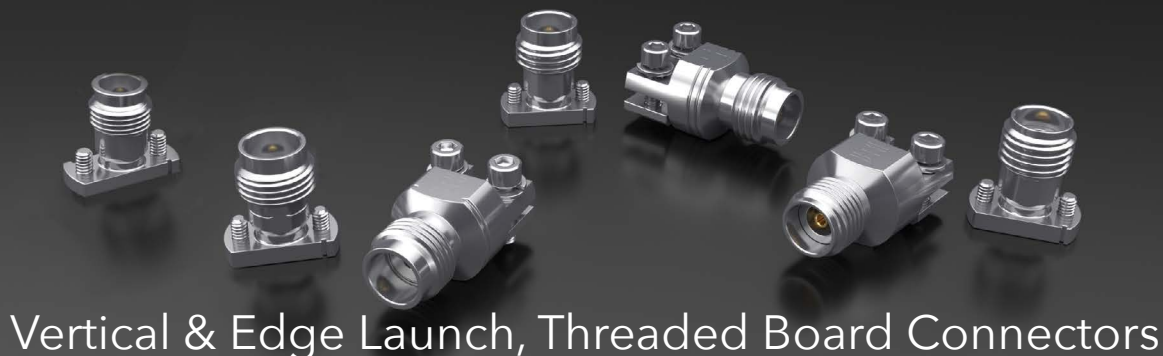
*Please note: images and drawings are representative and not to scale. For complete specifications, please visit samtec.com/RF.

Type	Standard	Mated Sets	
40 GHz, 2.92 mm <ul style="list-style-type: none"> Robust threaded coupling PCB: compression mount Intermateable with 3.50 mm and SMA 		Cables: LL043, LL032, RF047-A, RF086, RF23C, RF085 Cable Connector: PRF92 Board Connectors: 292 (-CM, -CMM, -EL)	
34 GHz, 3.50 mm & SSMA <ul style="list-style-type: none"> 3.50 mm is intermateable with 2.92 mm and SMA SSMA features a reduced size for high-density SSMA available as cable connector only (PRFS1) 		Cable: RF23S (3.50 mm) Cable Connectors: PRF35 (3.50 mm), PRFS1 (SSMA)	
18/26.5 GHz, SMA <ul style="list-style-type: none"> Robust threaded coupling PCB: solder termination Intermateable with 2.92 mm and 3.50 mm 		Cables: LL071, LL043, LL018, RF047-A, RF086, RF23C, RF180, RF280, RF25S, RF405, RF402 Cable Connector: PRF01 Board Connectors: SMA (-TH, -SM, -MT, -EM)	
18 GHz, N Type <ul style="list-style-type: none"> Robust threaded coupling Superior power handling 		Cables: RF180, RF280 Cable Connector: PRF06	
18 GHz, TNCA <ul style="list-style-type: none"> Robust interface with environmental seal and threaded coupling 		Cables: RF180, RF280 Cable Connector: PRF04	

PRECISION RF, 50 Ω

Interface	1.00 mm	1.35 mm	1.85 mm	2.40 mm	2.92 mm	3.50 mm	SSMA	SMA	Ganged SMPM	SMPM	SMP	N Type	TNCA
Frequency	110 GHz	90 GHz	65 GHz	50 GHz	40 GHz	34 GHz	34 GHz	18/26.5 GHz	65 GHz	65 GHz	40 GHz	18 GHz	18 GHz

COMPRESSION MOUNT BOARD CONNECTORS



DC TO
110
GHz

Vertical & Edge Launch, Threaded Board Connectors

VERTICAL CONNECTORS

- 90 GHz, 65 GHz, 50 GHz, 40 GHz
- Alignment features for peak connector performance
- Threaded coupling with high mechanical stability
- Field replaceable, cost-effective assembly
- Stripline or microstrip/CPW
- Applications: high-performance test & measurement
- Board thickness, torque spec & mating cable assemblies:

1.35 mm • 90 GHz, 50 Ohm • Solderless

135 Series

Vertical

Board Thickness	0.016" to 0.125"
Torque (board mount)	0.5 ~ 0.8 in-lbs

1.85 mm • 65 GHz, 50 Ohm • Solderless

185 Series

Vertical

Board Thickness	0.016" to 0.125"
Torque (board mount)	0.5 ~ 0.8 in-lbs

2.40 mm • 50 GHz, 50 Ohm • Solderless

240 Series

Vertical

Board Thickness	0.016" to 0.125"
Torque (board mount)	0.5 ~ 0.8 in-lbs

2.92 mm • 40 GHz, 50 Ohm • Solderless

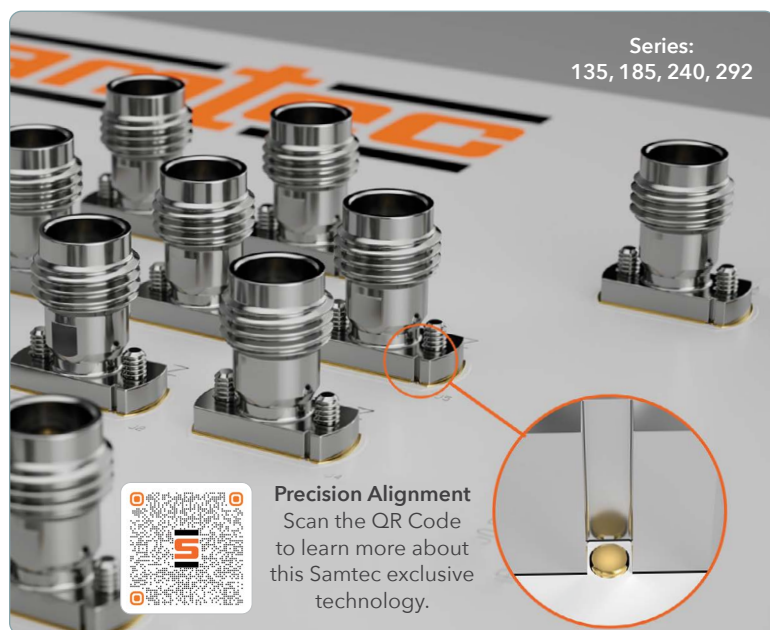
292 Series

Vertical

Board Thickness	0.016" to 0.125"
Torque (board mount)	0.5 ~ 0.8 in-lbs

Mating Cable Assemblies

RF047-A, RF086, RF23C, RF085,
LL110, LL095, LL071, LL043, LL032

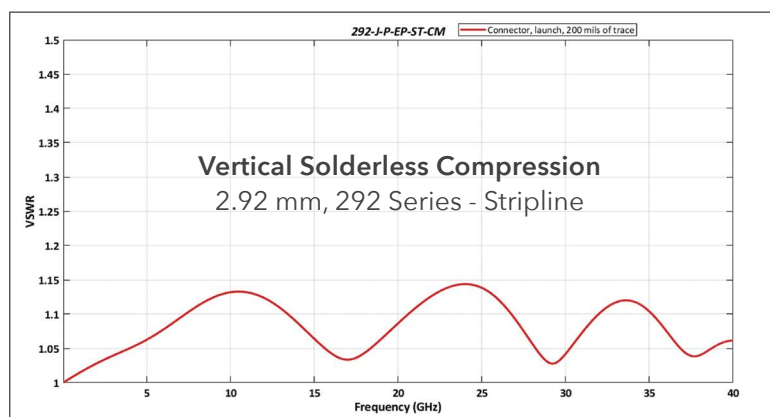


Series:
135, 185, 240, 292



Precision Alignment
Scan the QR Code to learn more about this Samtec exclusive technology.

Alignment grooves facilitate easy visual matching to fiducial markers on the PCB and ensure repeatable peak connector performance.



The VSWR used AFR on the measurement from the reference plane of the connector into 0.2" of board trace. Board construction was a straight stripline trace on a 6-layer Tachyon 100G board.

EDGE LAUNCH CONNECTORS

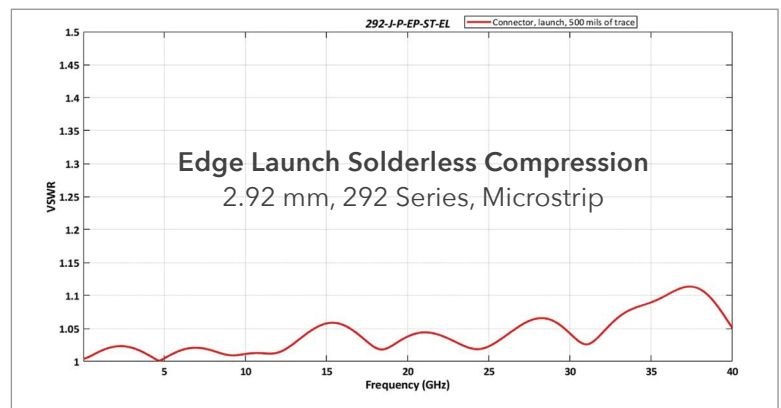
- 110 GHz, 65 GHz, 50 GHz, 40 GHz
- Small form factor improves density
- Threaded coupling with high mechanical stability
- Field replaceable, cost-effective assembly
- Applications: high-performance test & measurement
- Board thickness, torque spec & mating cable assemblies:

1.00 mm - 110 GHz, 50 Ohm • Solderless	
100 Series	Edge Launch
Board Thickness	0.040" to 0.100"
Torque (board mount)	0.5 ~ 0.8 in-lbs

1.85 mm • 65 GHz, 50 Ohm • Solderless	
185 Series	Edge Launch
Board Thickness	0.040" to 0.100"
Torque (board mount)	0.5 ~ 0.8 in-lbs

2.40 mm • 50 GHz, 50 Ohm • Solderless	
240 Series	Edge Launch
Board Thickness	0.040" to 0.100"
Torque (board mount)	0.5 ~ 0.8 in-lbs

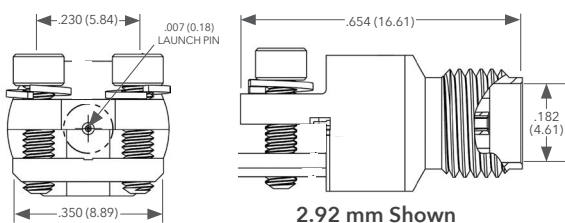
2.92 mm • 40 GHz, 50 Ohm • Solderless	
292 Series	Edge Launch
Board Thickness	0.040" to 0.100"
Torque (board mount)	0.5 ~ 0.8 in-lbs



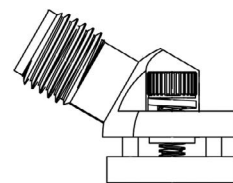
The VSWR used AFR on the measurement from the reference plane of the connector into 0.5" of board trace. Board construction was a straight microstrip trace on a 4 layer stackup with an outer 10 mil core of I-Tera MT40.

EDGE LAUNCH

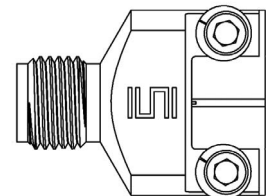
Narrow Body Design Improves Density



CUSTOM SOLUTIONS ALSO AVAILABLE: 1.85 mm, 2.40 mm, 2.92 mm



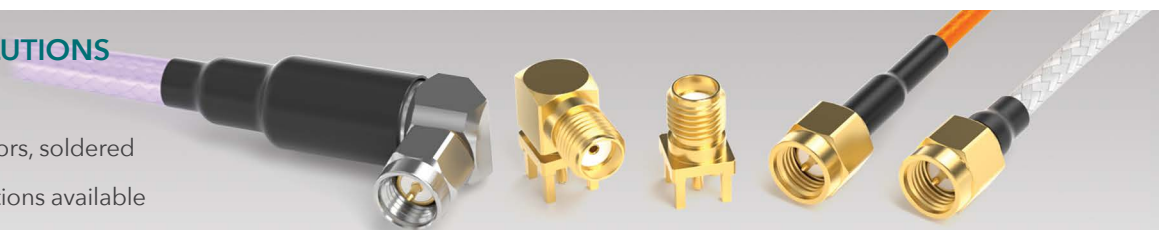
Angled Vertical Launch



Wide Body Edge Launch

SOLDERED, SMA SOLUTIONS

- Series: SMA
- Threaded board connectors, soldered
- 26.5 GHz and 18 GHz options available



MULTI-CHANNEL BOARD CONNECTORS

DC TO
65
GHz

Ganged, SMPM Push-On Connectors

MAGNUMRF
GANGED RF ASSEMBLIES

3.56 mm (.140") Channel Pitch

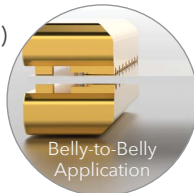
COMPRESSION MOUNT, TWO-PORT

- Differential pair test & measurement
- Two-port SMPM with a solderless compression mount design (-CMM)
- Saves board real estate (2x savings)
- Cable-to-board or board-to-board
- Board thickness: 0.016" to 0.125"
- Torque (board mount): 0.9~1.3 in-lbs
- Alignment features ensure peak connector performance



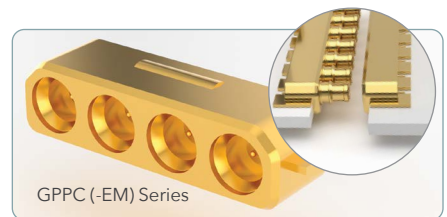
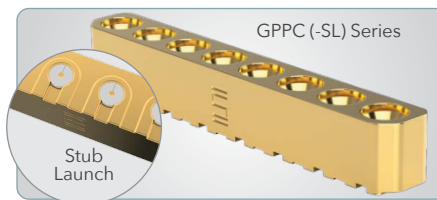
COMPRESSION MOUNT, RIGHT-ANGLE

- Extremely low profile, right-angle connector (-RA-SM)
- Belly-to-belly, surface mount PCB connection for maximum density
- Body height: 3.94 mm (.155")



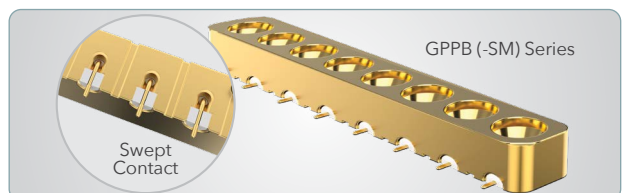
EDGE MOUNT OR STANDARD SURFACE MOUNT

- Single row; 2, 4, 6, 8, 10 positions
- Custom pitch and row counts available
- Edge mount (-EM) or standard surface mount (-SL Stub Launch) with alignment pins

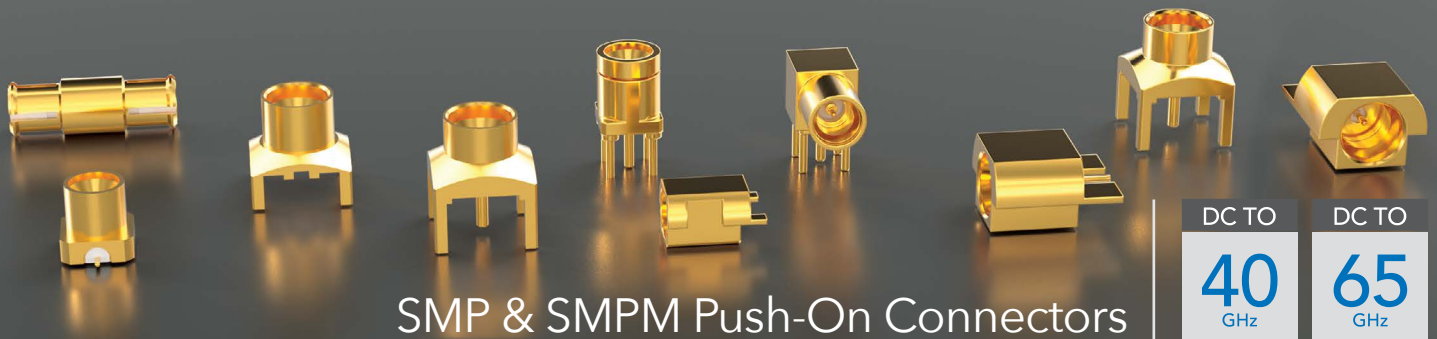


SURFACE MOUNT WITH SWEEP CONTACT

- Swept right-angle contact allows visible trace alignment with slight performance tradeoffs



SINGLE-CHANNEL BOARD CONNECTORS

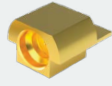
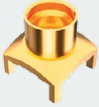






SMP & SMPM Push-On Connectors

DC TO **40** GHz
DC TO **65** GHz






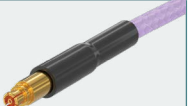
SMP SERIES

- Compensates for misalignment when paired with SMP-B bullet adaptors
- Push-on design for quick, easy mating and blind mate
- Board-to-board and cable-to-board mated sets
- Full detent, limited detent, catcher's mitt and smooth bore
- 20 GHz options: edge mount or through-hole
- 40 GHz options: edge mount, through-hole, surface mount or mixed-technology

SMP Series	Edge Mount	Through-Hole	Surface Mount	Mixed Technology	Bullet Adaptor	Mating Cable Assemblies
						
20 GHz	SMP-EM3	SMP-TH2	N/A	N/A	SMP-B	RF25S, RF405
40 GHz	SMP-EM	SMP-TH	SMP-SM, stub launch	SMP-MT, stub launch		RF23C, RF086, RF047-A

SMPM SERIES

- Miniature = 30% smaller than SMP
- Compensates for misalignment when paired with PRFIA bullet adaptors (standard and spring-loaded available)
- Push-on design for quick, easy mating and blind mate
- Board-to-board and cable-to-board mated sets
- Full detent, catcher's mitt and smooth bore
- 65 GHz options: edge mount, through-hole, surface mount or mixed technology
















SMPM Series	Edge Mount	Through-Hole	Surface Mount	Mixed Technology	Bullet Adaptor	Mating Cable Assemblies
						
65 GHz	SMPM-EM	SMPM-ST-TH (straight) SMPM-RA-TH (right-angle)	SMPM-SM, swept contact	SMPM-MT, swept contact	PRFIA, standard or spring-loaded	RF23C, RF086, RF047-A, LL110, LL095

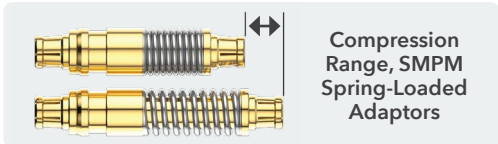
PRECISION RF ADAPTORS & BULLETS

DC TO
110
GHz

Samtec offers precision RF adaptors with well-performing VSWR and insertion loss. Plug-to-plug, jack-to-jack or plug-to-jack adaptors are available with threaded or push-on coupling. Interfaces support applications to 110 GHz. Spring-loaded bullet adaptors maintain consistent signal contact in high axial misalignment applications to ensure excellent performance through the system.

IN-SERIES ADAPTORS

1.85 mm	2.40 mm	2.92 mm	SMPM	
			Standard	Spring-Loaded
 PRFIA-185-J-J-S Jack-to-Jack	 PRFIA-240-J-J-S Jack-to-Jack	 PRFIA-292-J-J-S-1 Jack-to-Jack	 PRFIA-SMPM-J-J-S-1 Jack, 5.33 mm Length	 PRFIA-SMPM-J-J-SP-1, Jack 0.45 mm Length Compression Range .032" (see diagram)
 PRFIA-185-P-P-S Plug-to-Plug	 PRFIA-240-P-P-S Plug-to-Plug	 PRFIA-292-P-P-S Plug-to-Plug	 PRFIA-SMPM-J-J-S-2 Jack, 8.31 mm Length	
 PRFIA-185-P-J-S Plug-to-Jack	 PRFIA-240-P-J-S Plug-to-Jack	 PRFIA-292-P-J-S Plug-to-Jack	 PRFIA-SMPM-J-J-S-3 Jack, 12.7 mm Length	 PRFIA-SMPM-J-J-SP-2, Jack 16.5 mm Length Compression Range .100" (see diagram)
			 PRFIA-SMPM-J-J-S-4 Jack, 4.22 mm Length	



BETWEEN-SERIES ADAPTORS

1.00 mm to 1.85 mm	2.92 mm to SMPM
 PRFBA-100-J-185-J-S Jack-to-Jack	 PRFBA-292-J-SMPM-J-S-1 Jack-to-Jack
 PRFBA-100-J-185-P-S 1 mm Jack-to-1.85 mm Plug	 PRFBA-292-P-SMPM-J-S 2.92 mm Plug-to-SMPM Jack
 PRFBA-100-P-185-J-S 1 mm Plug-to-1.85 mm Jack	 PRFBA-292-J-SMPM-PX-S 2.92 mm Jack-to-SMPM Plug
 PRFBA-100-P-185-P-S 1 mm Plug-to-1.85 mm Plug	 PRFBA-292-P-SMPM-PX-S 2.92 mm Plug-to-SMPM Plug

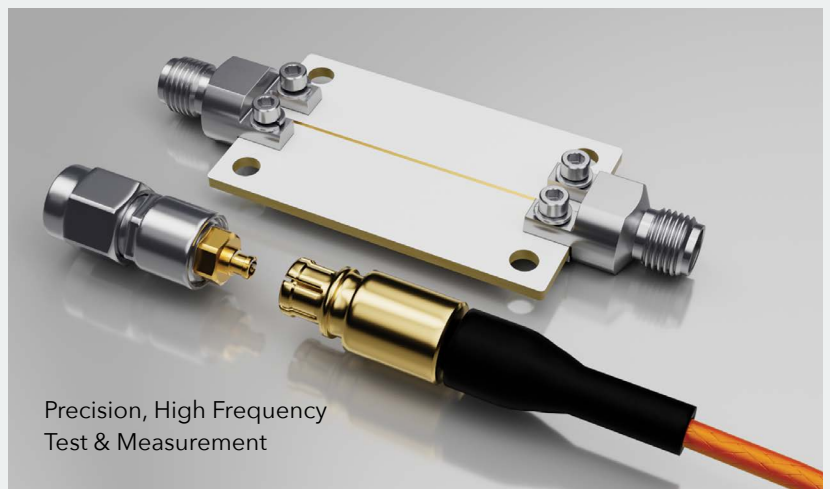
APPLICATIONS

Mezzanine Board-to-Board

- High density
- Blind mate, push-on coupling
- Compensates for axial and radial misalignment

Precision Test & Measurement

- High frequency precision test
- Used in a lab setting



PRECISION RF CABLE CONNECTORS

DC TO

110
GHz

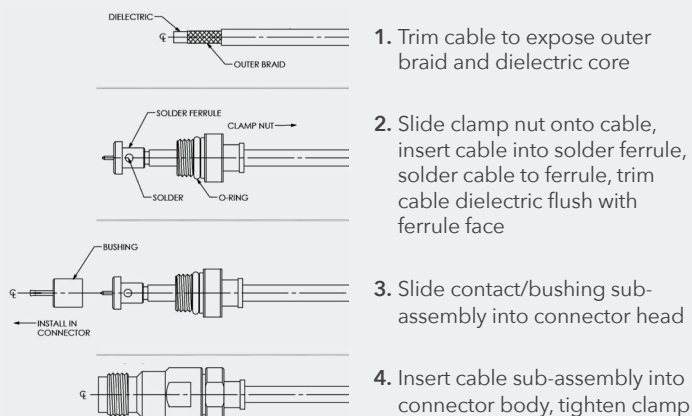
Samtec offers a variety of precision, high frequency cable connectors that are specifically designed to terminate to cables commonly used within the RF microwave/millimeter wave industry. Samtec's cable connectors are manufactured with a precise tolerance interface to ensure superior repeatability and high mechanical stability. Visit the Series page on samtec.com for access to prints with termination instructions, and view the [Cable Connector Compatibility Guide](#) to reference compatibility with industry standard cables.

CABLE CONNECTORS

FREQUENCY / TYPE / SERIES			
 110 GHz, 1.00 mm, PRF10 Series	 50 GHz, 2.40 mm, PRF24 Series	 34 GHz, SSMA, PRFS1 Series	 40 GHz, SMP, PRF00 Series
 90 GHz, 1.35 mm, PRF13 Series	 40 GHz, 2.92 mm, PRF92 Series	 18 GHz & 26.5 GHz, SMA, PRF01 Series	 18 GHz, N Type, PRF06 Series
 65 GHz, 1.85 mm, PRF18 Series	 34 GHz, 3.50 mm, PRF35 Series	 65 GHz, SMPM, PRFM0 Series	 18 GHz, TNCA, PRF04 Series

Series	PRF10	PRF13	PRF18	PRF24	PRF92	PRF35	PRFS1	PRF01	PRFM0	PRF00	PRF06	PRF04
Type	1.00 mm	1.35 mm	1.85 mm	2.40 mm	2.92 mm	3.50 mm	SSMA	SMA	SMPM	SMP	N Type	TNCA

TERMINATE TO ANY INDUSTRY STANDARD CABLE



Note: Assembly instructions vary. See print for details.

RF APPLICATION TOOLING • samtec.com/tooling

Samtec offers a variety of tooling for the assembly and installation/extraction of our interconnect systems. Products for RF include Crimp Hand Tools, Torque Wrenches and Hand Torque Tools.

Visit samtec.com/tooling, or contact the Application Tooling Group at ATG@samtec.com for specifications and ordering information.



STANDARD LOW FREQUENCY SUB-6 GHz SOLUTIONS

50 Ω SOLUTIONS

Type		Micro High-Frequency	SMA	MCX	MMCX	TNC	BNC	SMB	
Max Frequency (GHz)		6					4		
Series	Cable Assemblies	MH081 & MH113	RF174, RF316, RS316, RF178, RF058, GRF1H-C	RF174, RF178, RF316, RS316, GRF1H-C	RF174, RF316, RF316, RF178, GRF1H-C	RF174, RF316, RF316, RF178, RF058, GRF1H-C	RF174, RF178, RF316, RS316, GRF1H-C	RF174, RF316, RF178, GRF1H-C	
	Cable Connectors	Right Angle Plug (-MH1RP, -MH3RP, -MH4RP)	SMA-CA Jack & Plug	MCX-CA Jack & Plug	MMCX-CA Plug; MMCXV-CA High-Vibration Jack or Plug	TNC-CA Plug & Jack	BNC5-CA Jack or Plug	SMB5-CA Jack or Plug	
	Board Connectors	RSP-122811 (-01, -02, -03)	SMA Jack (-TH, -SM, -MT, -EM)	MCX Jack & Plug (-TH, -SM, -EM, -MT)	MMCX Jack & Plug (-TH, -SM, -MT, -EM); Switchable Jack (-SW); High-Vibration Plug (-TH); High-Vibration Jack (-TH, -EM)	TNC Jack (-TH)	N/A	SMB5 Jack (-TH)	
Features & Benefits		Space-saving, high-performance design	Non-magnetic options for medical and aerospace applications	30% smaller than SMBs; non-magnetic options for medical and aerospace applications	Simple snap-on coupling; non-magnetic options for medical and aerospace applications	Reverse polarity straight plug available; non-magnetic options for medical and aerospace applications	Quick connect & disconnect with bayonet coupling	Simple snap-on coupling; non-magnetic options for medical and aerospace applications	

APPLICATION-SPECIFIC RF SOLUTIONS

Samtec has the flexibility to quickly and efficiently identify and/or develop innovative, application-specific interconnect solutions to meet a variety of demands in digital/analog systems.

Contact the RFGroup@samtec.com to discuss your application needs.



Environmentally Sealed SMA



Pick & Place Machine Designs (-BMXD options)



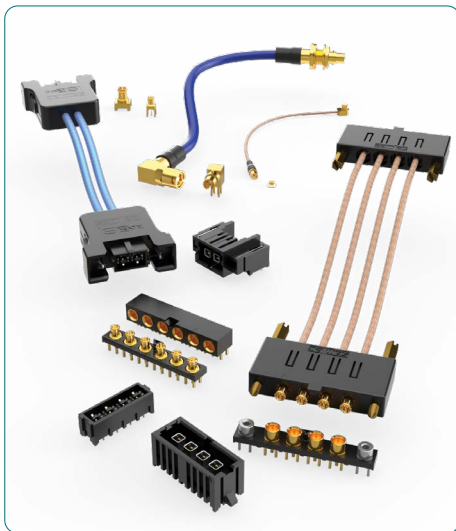
Counterweights for Automated Assembly

75 Ω SOLUTIONS

Type		BNC	DIN 1.0/2.3	HD-BNC	MCX	MMCX	SMB
Max Frequency (GHz)		12			6		4
Series	Cable Assemblies	RFC6T, RF179, RFA6T, RFB6T, GRF7H-C	RFC6T, RFC8T, RF179, RFA6T, RFB6T, RFB8T, GRF7H-C	RFC6T, RFC8T, RFA6T, RFB6T, RFB8T	RF179, GRF7H-C	RF179, GRF7H-C	RF179, GRF7H-C
	Cable Connectors	BNC7T-CA Jack & Plug	DIN7A-CA Plug	HDBNC-CA Plug	MCX7-CA Plug	MMCX7-CA Jack & Plug	SMB7H-CA Plug
	Board Connectors	BNC7T Jack (-TH, -BH, -BM, -EM) Diecast & Machined	DIN7A Jack (-TH); Bulkhead Jack (-BH)	HDBNC Jack (-TH, -EM); Bulkhead Jack (-BM, -BH)	MCX Jack & Plug (-TH, -SM)	MMCX Jack & Plug (-TH)	SMB Jack (-TH, -EM)
Features & Benefits		Optimized for 12G-SDI Broadcast Video solutions		4x the panel density and 20% lighter compared to standard BNC; 12G-SDI solution	30% smaller than SMBs	Simple snap-on coupling	Simple snap-on coupling

SAMTEC LOW FREQUENCY ORIGINAL SOLUTIONS • DC to 10 GHz

Visit samtec.com/OriginalRF for specifications, and to explore Samtec's full line of Original RF Solutions.



Shielded Twisted Pair System

- 100 Ω differential pair system
- 28 AWG shielded twisted pair cable
- High reliability BeCu contacts
- 1/4-turn bayonet lock

Ganged Micro-Mini System

- 50 Ω & 75 Ω board stacking and cable assemblies
- High performance rugged contacts
- Variety of End 2 connectors

IsoRate® High Isolation System

- 50 Ω board stacking & cable assemblies
- Half the cost of traditional RF at virtually the same performance

Mini & Micro-Mini Interconnects

- 75 Ω impedance MCX & MMCX
- 50 Ω high-vibration MMCX

High Cycle U.FL Cable Plug

- 500 cycle U.FL compatible plug
- .047" DIA flexible cable

APPLICATION-SPECIFIC INDUSTRY STANDARDS

DC TO
110
GHz

Standardized Solutions for Mil/Aero Applications

VITA™ 90 VNX+™ SOLUTIONS

- The next generation of open-systems small-form-factor embedded computing
- RF backplane system to support 110 GHz with high-density size 20 contacts; size 16 contacts in development
- Rugged blind mate solution
- SWaP-C reductions make this ideal for military and aerospace applications
- Configured with Samtec's SEARAY™ right-angle array and rugged optics
- Standard COTS solutions (versus customs) offer the flexibility to quickly upgrade or modernize hardware for keeping up with evolving threats
- Please visit samtec.com/VNX-plus, or contact our standards experts at VITA@samtec.com for additional information



38999 compatible Size 16 & 20 high frequency coax contacts for 50 Ω and 75 Ω applications.

WHAT IS VITA™ 90 VNX+™

The SOSA™ Technical Standards Group and VITA™ collaborate to bring standardization to the defense and space communities with a goal of integrating sensors into everything. VNX+™ (VITA™ 90) is an evolution of the existing VITA™ architecture where SWaP-C attributes make it a natural fit for weapons, communications and surveillance systems.

The form factor of an entire VNX+™ embedded module can fit within a 5-inch tube. It enables high-performance sensor interfaces to be in close proximity to signal processors, computers and radios. VNX+™ modules are designed with standard COTS interfaces supported by Samtec and use a variety of predefined combinations of high-speed digital (56 Gbps), rugged optical and coaxial RF (110 GHz) solutions.



VITA, VNX, VNX+, FMC, FMC+, XMC and XMC+ are all respective trademarks of VITA.
SOSA is a trademark of The Open Group Limited.

SAMTEC INDUSTRY STANDARDS & SPACE HERITAGE

For 25+ years, Samtec has been engaged in developing products and supporting standards for systems that launch into space. The first stage of Samtec's space heritage began when one of Samtec's earliest products, the Sam Array® High-Density Open-Pin-Field Array, was selected as part of the VITA™ 42 XMC™ standard in 2002.

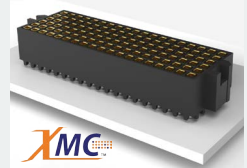
Since then, Samtec engineers have continued to engage with numerous standards bodies to develop the standards and interconnects that make leading-edge space-qualified designs possible and continue to expand on Samtec's space heritage.



2002

VITA™ 42 XMC™
Sam Array® High-Density
Open-Pin-Field Arrays

Mil/Aero Embedded
Computing, Image Processing,
Signals Intelligence (SIGINT)



2004

Samtec Releases
SEARAY™ High-Density
Open-Pin-Field Arrays



2007

SEARAY™ High-Speed Arrays Specified for VITA™
57.1 FMC™ & 57.4 FMC+™ Standards

Avionics/Payload Subsystems, Signal Processing, Vision,
AI & Small Chassis Radar, Data Acquisition



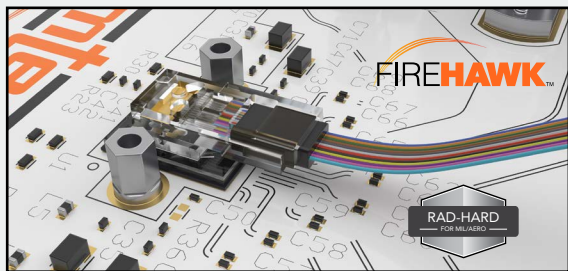
2009

Samtec Earns ITAR Registration



2010

Rad-Hard Optics are Launched

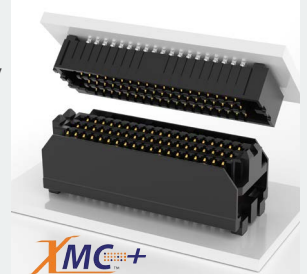


2019

VITA™ 88 XMC+™

SEARAY™ High-Density
Open-Pin-Field Arrays

Small Chassis Radar
Systems, Data Acquisition,
SpaceCube™ v2.0 Mini



2022

VITA™ 90 VNX+™

SEARAY™ High-Density
Arrays

Space Suits, UAV /
Space-Constrained
Deployments,
Compute Modules,
Ethernet Switches,
Software-Defined Radio (SDR) Modules, Tactical Grade
MEMS Inertial Measurement Sensors



APPLICATION-SPECIFIC ANALOG OVER ARRAY™

SIMULTANEOUSLY RUN ANALOG, DIGITAL AND POWER SIGNALS

DC TO

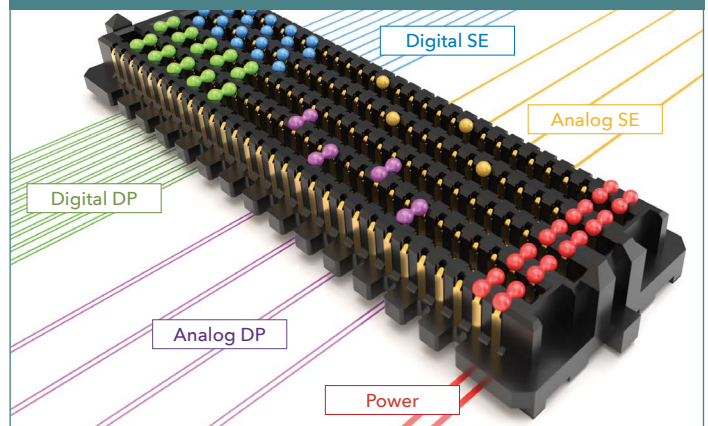
15
GHz

High-density RF applications typically require up to hundreds of individual RF connectors. Samtec's Analog Over Array™ Connectors can replace dozens of precision RF connectors offering a smaller footprint, less weight and cost optimization. Samtec's Analog Over Array™ connectors are dense, high frequency, open-pin-field solutions supporting digital and analog differential or single-ended signaling.

- Samtec high-density array connectors are already proven in high-speed, high-performance digital applications
- Analog Over Array™ Reference Designs achieve industry-leading differential crosstalk and return loss performance beyond 8 GHz
- Connectors feature an open-pin-field design with maximum routing and grounding flexibility
- Analog and digital signals (differential pairs and/or single-ended) plus power through the same interconnect
- Differential ground pattern supports RF SOCs
- Single-ended ground pattern

**ANALOG
OVER
ARRAY™**

Enhanced Open-Pin-Field Design: Samtec's Analog Over Array™ technology adds analog differential pairs and single-ended signals

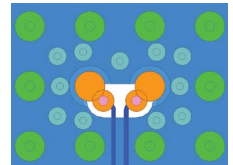


SEARAY™ HIGH-DENSITY OPEN-PIN-FIELD ARRAYS

- 560-pin single array connector can support up to 26 differential RF signals
- 560-pin single array connector can support six differential RF signals plus digital I/O and power
- Reference Design & Evaluation Kits for additional Samtec open-pin-field arrays are in development for SEAX8, NVAX, APX6, LPAX, and GMI Series



Initial Differential Via Design



Final Optimized BOR

PRECISION RF & ANALOG OVER ARRAY™ EVALUATION KITS

Samtec offers easy-to-use platforms for the evaluation of our high-performance RF products and Analog Over Array™ technology. Please contact our technical experts at KitsAndBoards@samtec.com or RFGroup@samtec.com for details.



50 GHz Bulls Eye® SI Evaluation Kit
(REF-213497-01)



70 GHz Bulls Eye® SI Evaluation Kit
(REF-213864-01)

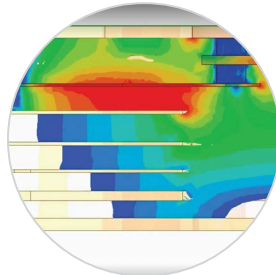


Vertical Compression Mount
SI Evaluation Kit (REF-228591-XX)

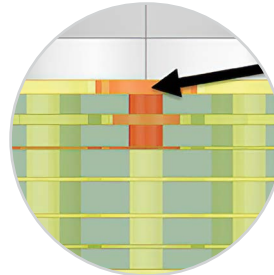
RF DESIGN, DEVELOPMENT & TECHNICAL SUPPORT

SIGNAL INTEGRITY & RF DESIGN EXPERTISE & SUPPORT

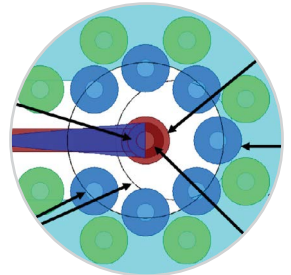
- Launch optimization & design services
- Simulation
- Prototyping
- Physical test and measurement verification
- Full channel analysis, system support
- Application specific design and development assistance



E-field Simulation



3D Modeling



Launch Optimization

TECHNICAL RESOURCES

Samtec's Technical Library contains white papers, application/technical notes, published papers, webinars and presentations on high-performance system design. These resources underscore how Samtec supports interconnectivity needs across multiple industries, applications, performance requirements and operating environments.

WHITE PAPERS

- Wideband RF Launches
- Impacts of Solder Reflow on RF Connectors
- Millimeter Wave Design
- Visit [samtec.com/tech-library](https://www.samtec.com/tech-library)

TECHNICAL REPORTS

- Precision Alignment in Test and Measurement Applications: [samtec.com/alignment](https://www.samtec.com/alignment)

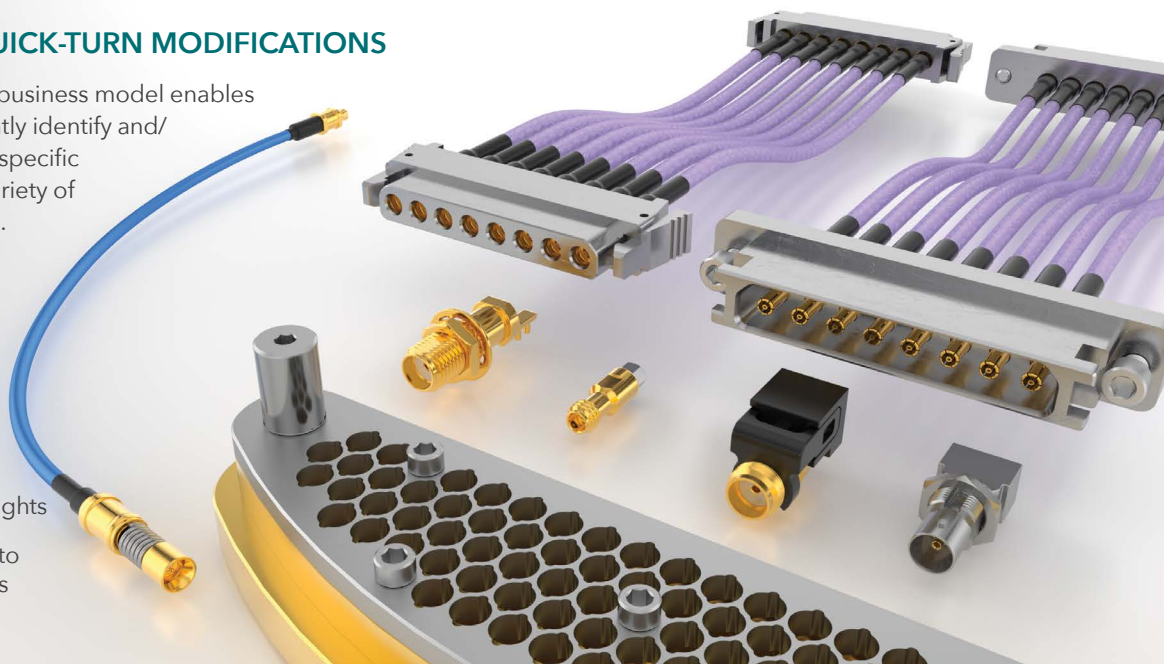
PRESENTATIONS & WEBINARS

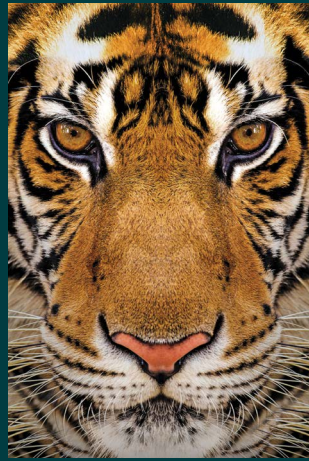
- Understanding Transmission Line Discontinuities: [samtec.com/system-impedance](https://www.samtec.com/system-impedance)
- Precision RF Connector PCB Launches for 224 Gbps Devices: [samtec.com/rf-launches-224](https://www.samtec.com/rf-launches-224)

CUSTOM SOLUTIONS & QUICK-TURN MODIFICATIONS

Samtec's fully vertically integrated business model enables the flexibility to quickly and efficiently identify and/or develop innovative, application-specific interconnect solutions to meet a variety of demands in digital/analog systems.

- Board termination types
- Tin dipping capabilities
- Heat-shrink tubing
- Alternate platings
- Pick & place machine designs
- Automated assembly counterweights
- Contact RFGroup@samtec.com to discuss your system requirements





samtec
SUDDEN SERVICE®

UNITED STATES • NORTHERN CALIFORNIA • SOUTHERN CALIFORNIA • SOUTH AMERICA • UNITED KINGDOM
GERMANY • FRANCE • ITALY • NORDIC/BALTIC • BENELUX • ISRAEL • INDIA • AUSTRALIA / NEW ZEALAND
SINGAPORE • JAPAN • CHINA • TAIWAN • HONG KONG • KOREA

[samtec.com/rf](https://www.samtec.com/rf)