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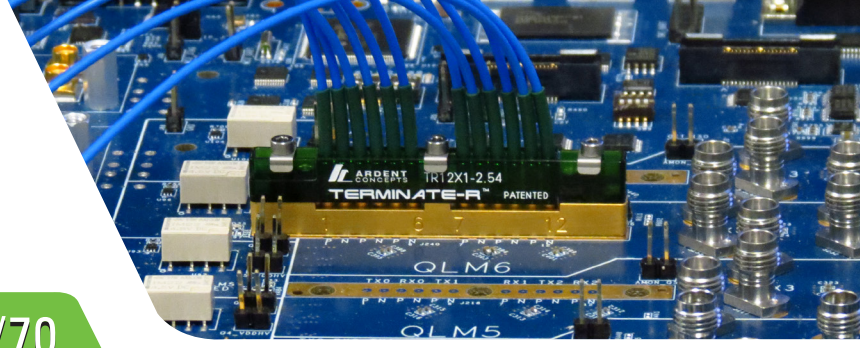
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ARDENT CONCEPTS
Signal Integrity is our Passion



TR Multicoax Series 20/40/70

Description

TR Multicoax delivers superior signal integrity from multiple high speed analog or digital channels. With a choice of 20 GHz, 40 GHz, or 70 GHz configurations, users can upgrade their connectors as bandwidth requirements on their applications increases. TR is the highest density high speed multicoax connector on the market. The interface is compression mount which drives lower total cost of testing by avoiding costly solder-down components that can't be recovered, and encouraging reuse across programs.

Key Benefits

- Superior signal integrity up to 70 GHz
- Better long term repeatability of connector performance
- Solderless system eliminates signal distortion for clean signal integrity
- Quick connection of multiple signals to PCB
- 80% space savings over SMPs
- High density gets TR closer to the DUT
- No more failing of snap-in connectors
- Reusable across programs promotes exponential cost savings

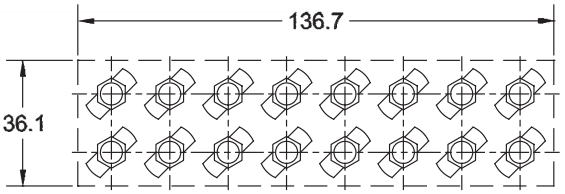
Applications

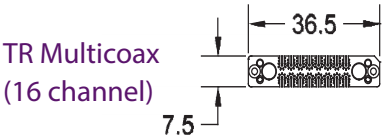
TR Multicoax connectors are ideal for use in:

- › Semiconductor Design & Test
  - Customer Evaluation Boards
  - PCIe
  - Pam4
  - High Speed SerDes
- › Automated Test & Measurement
- › Communications
  - Clock/Data Recovery (CDR)
  - Backplane Connector Characterization
- › Quantum Computing
  - Shielding Can Connector
  - Cryogenic Testing
- › Defense/Aerospace
- › Server/Data
- › Medical
- › Custom Applications

Unmatched Real Estate Savings

16 SMA Connectors (in millimeters)

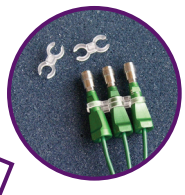


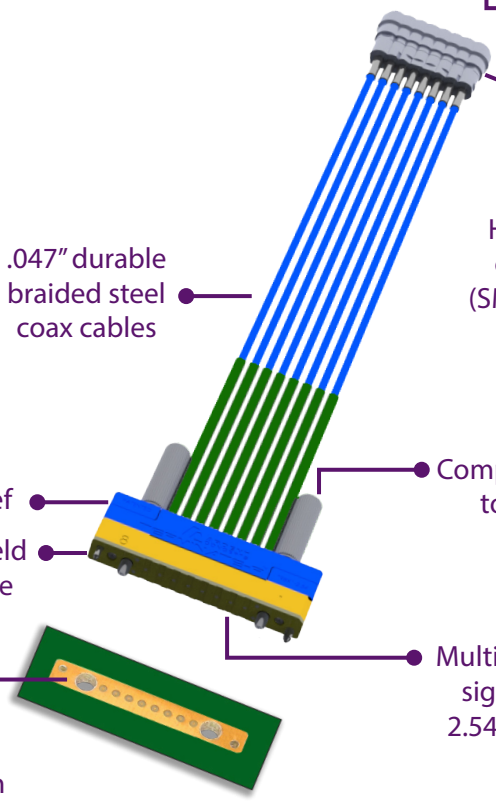


TR Multicoax (16 channel)

*Not actual size

New Cable Management Clips

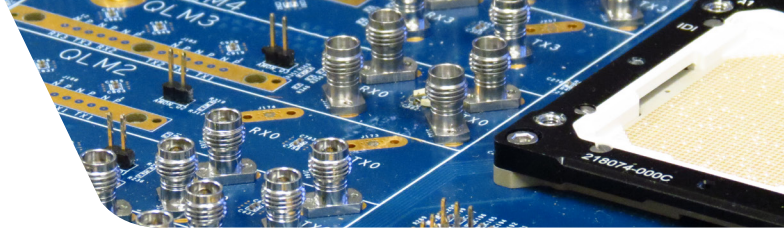




Specifications subject to change without notice
US Patent Numbers 6,787,709, 6,909,056, 7,126,062, 7,556,503, 8,926,342.
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TR Multicoax Series 20/40/70

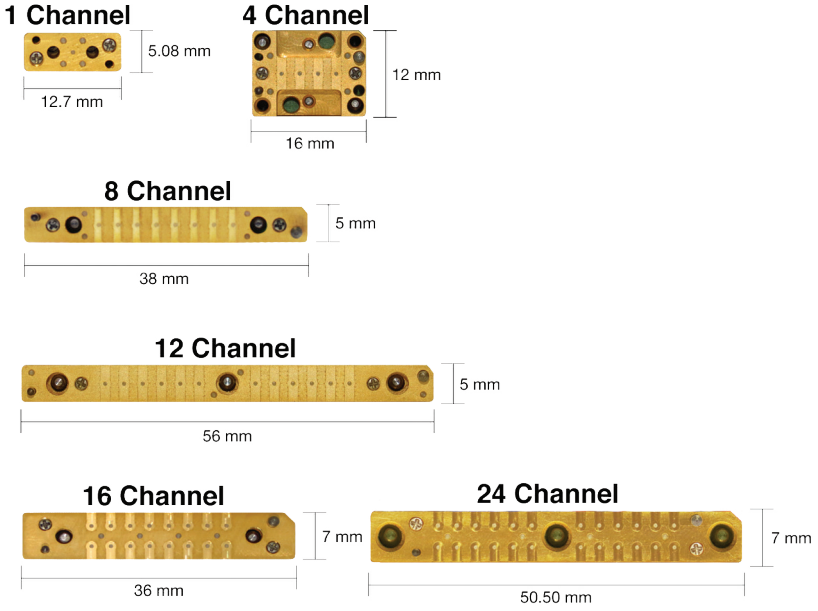
Specifications

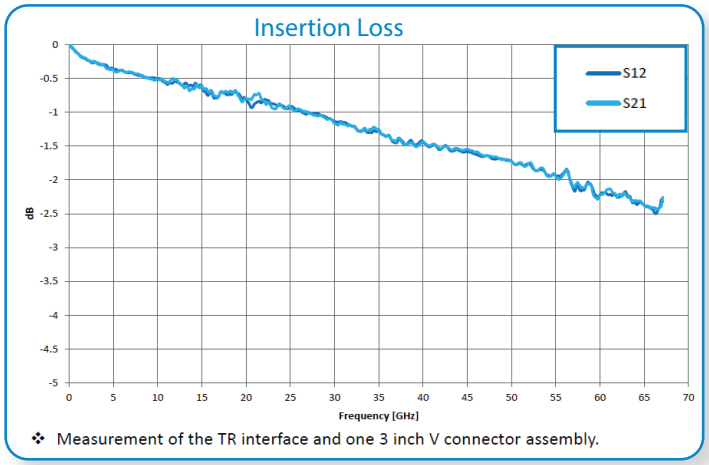
Electrical Specifications	
Frequency Range	DC to 70 GHz
Return Loss[1]	-18 dB through 70 GHz
Insertion Loss[2]	-1.5 dB through 40 GHz, -3 dB through 70 GHz
Crosstalk	-70 dB through 70 GHz
Impedance[1]	50 Ω +/- 2.5 Ω
Phase Matching	+/- 2 ps standard

Mechanical Specifications	
Pitch	2.54 mm
Cables	.047" diameter cables[3]
Connectors	SMA, SMK (2.92 mm), or V (1.85 mm)
Cable Length	6"/152 mm, 12"/304 mm, 24"/608 mm
Insertion Life	1,000+ mating cycles
Field Replaceable Interface	Yes
Footprint	Microstrip & Stripline compatible

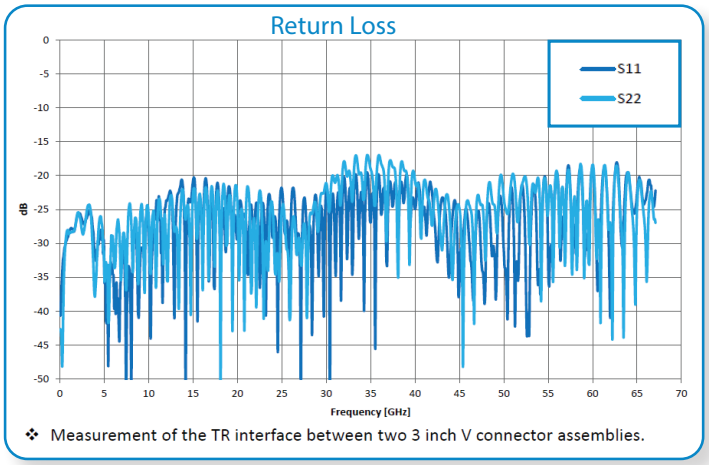
Notes: [1]Largely a function of PCB design. [2]Measurement includes 3" of cable.
[3]Consult factory for additional cable options.

Footprints

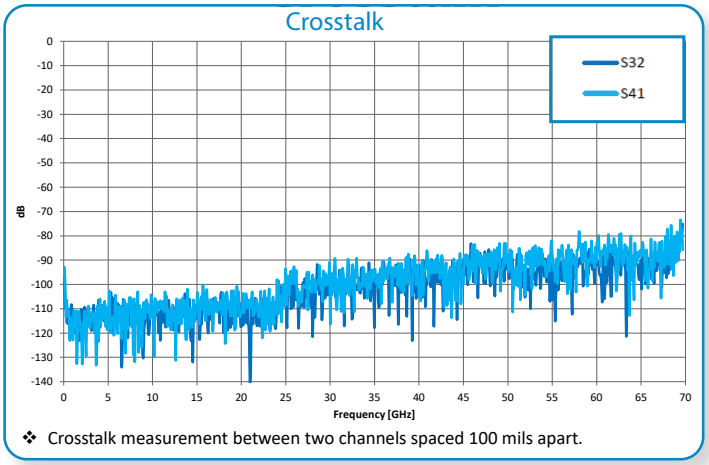




❖ Measurement of the TR interface and one 3 inch V connector assembly.



❖ Measurement of the TR interface between two 3 inch V connector assemblies.

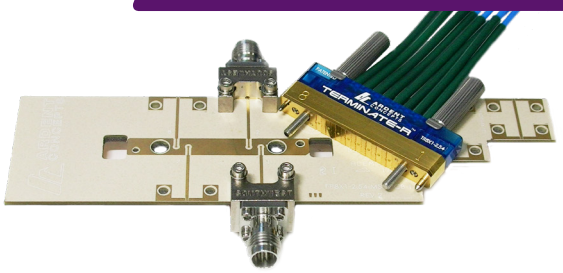


❖ Crosstalk measurement between two channels spaced 100 mils apart.

Specifications subject to change without notice
US Patent Numbers 6,787,709, 6,909,056, 7,126,062, 7,556,503, 8,926,342.
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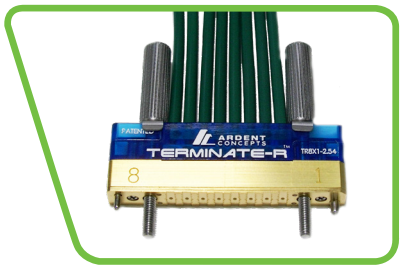
Evaluation Kit Available

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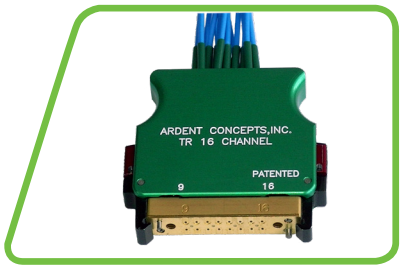


TR Multicoax Series 20/40/70

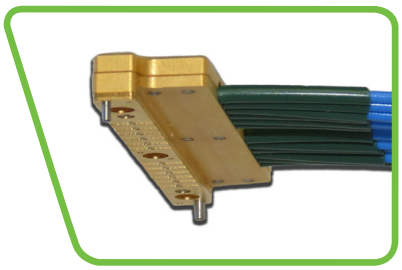
Mounting Configurations



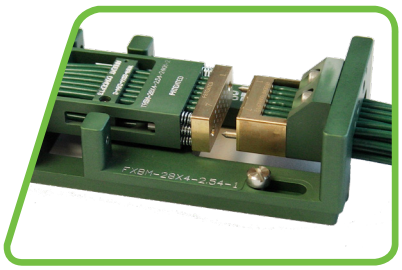
Straight Mount allows users to mount to a solderless footprint on your PCB with two or three thumb screws, ensuring a quick and reliable/repeatable connection up to 70 GHz for over 1000 mates and demates.



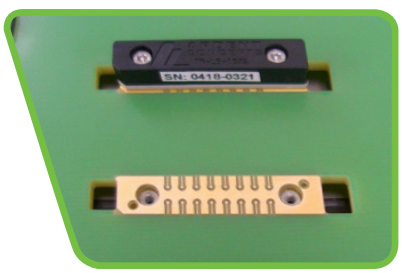
Quick Latch provides the same high standard of electrical performance as our Straight Mount configuration but adds the ability to mate and de-mate the TR quickly from the board by activating the red latches on either side. In a test & measurement environment, this makes the product much more user-friendly.



Right Angle adds the ability to get high speed signals off the board in situations where you are Z-height limited. For example, to take signals from underneath the board, to go from board to board, or to get the cables out under a thermal shroud.



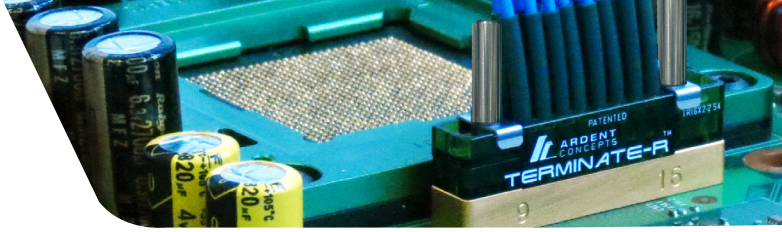
Blind Mate Test Head Interface solutions are ideal for applications where engineers need superior signal integrity with multiple reliable and repeatable connections up to 70 GHz. With precision designed interconnect solutions from Ardent, these connections can be designed into an automated mate/de-mate process capable of thousands of insertions with no degradation. Connectors can be cable to cable or cable to PCB.



Loopback Allows engineers to test SERDES interfaces for at-speed defects in the analog transmission (TX) and reception (RX) buffers.

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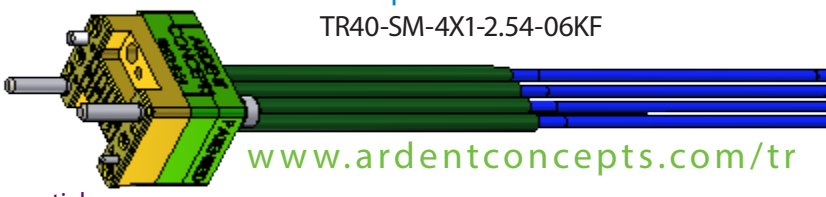
TR Multicoax Series 20/40/70

Ordering Information

TR 20	Mounting Option	# of channels (Form Factor)	Pitch (mm)	Cable Length & Connector Type	
	Straight Mount (SM)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16X2), 24 (24X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMA Female (AF), SMA Male (AM)
	Quick Latch (QL)	8 (8X1), 16 (16X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMA Female (AF), SMA Male (AM)
	Leap Frog (LF)	8 (8x1), 12 (12x1)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMA Female (AF), SMA Male (AM)
	Right Angle (RA)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16x2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMA Female (AF), SMA Male (AM)
TR 40	Mounting Option	# of channels (Form Factor)	Pitch (mm)	Cable Length	Connector Type
	Straight Mount (SM)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16X2), 24 (24X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMK 2.92 mm Female (KF), SMK 2.92 mm Male (KM)
	Quick Latch (QL)	8 (8X1), 16 (16X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMK 2.92 mm Female (KF), SMK 2.92 mm Male (KM)
	Leap Frog (LF)	8 (8x1), 12 (12x1)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMK 2.92 mm Female (KF), SMK 2.92 mm Male (KM)
	Right Angle (RA)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16x2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	SMK 2.92 mm Female (KF), SMK 2.92 mm Male (KM)
TR 70	Mounting Option	# of channels (Form Factor)	Pitch (mm)	Cable Length	Connector Type
	Straight Mount (SM)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16X2), 24 (24X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	V 1.85 mm Female (VF), V 1.85 mm Male (VM)
	Quick Latch (QL)	8 (8X1), 16 (16X2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	V 1.85 mm Female (VF), V 1.85 mm Male (VM)
	Leap Frog (LF)	8 (8x1), 12 (12x1)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	V 1.85 mm Female (VF), V 1.85 mm Male (VM)
	Right Angle (RA)	4 (4X1), 8 (8X1), 12 (12X1), 16 (16x2)	2.54 mm	03" (03), 6" (06), 12" (12), 24" (24)	V 1.85 mm Female (VF), V 1.85 mm Male (VM)
TR Equal Trace	Mounting Option	# of channels (Form Factor)	Pitch (mm)	Cable Length	Connector Type
	Straight Mount (SM)	16 (16x1)	3.6 mm	6" (06), 12" (12), 24" (24)	V 1.85 mm Female (VF), V 1.85 mm Male (VM)

For custom applications please consult factory

Example Part Number:
TR40-SM-4X1-2.54-06KF



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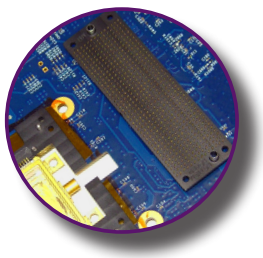
Related Products

QUICKLINK Coaxial Connector



- Superior signal integrity DC to 70 GHz+
- Reusable across programs promotes exponential cost savings
- Board component reduction while increasing reliability and density
- Rapid connection to PCB - No threading or tools required

CA Series™ - Connectors & Interposers



- 32 Gbps+
- Area array to 0.4mm pitch
- Compression mount & solderless
- Pure vertical interface – no offset required
- Ideal for high shock and vibration/extreme temperatures applications

More Information

For questions please contact us:

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