

Connectors are used in a vast array of applications, ranging from the toughest requirements of space and undersea, to high speed application using fiber optics and shielded connectors, to the lowest cost application only needing pin to pin connectivity. Connectors can be found in almost every piece of electronics, whether it's an IoT application or a communication system in a Humvee, connectors are everywhere.

As the leading partner and authorized source for the world leaders in supplying interconnect technology, Avnet has deep connections with the product lines at each company. We'll bring you the latest innovations first and make sure your specific needs are a priority at the factory.

Our expertise goes beyond the technical side. We'll work closely with your production planners and schedulers to have the order pipelines in place to support your delivery requirements. Our product management team has decades of experience positioning the inventory you need to hit your market objectives.

COMMERCIAL CONNECTORS

Connectors are used to connect two or more electrical circuits and typically feature a plastic or metal housing and metal contacts/terminals, with the exception of fiber optics, which use fiber to transmit signals. For general reference, interconnect products can be divided into six levels of packaging.

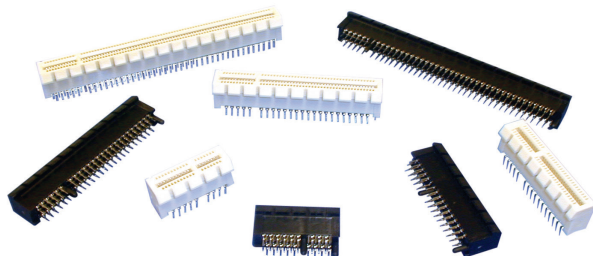
- Many interconnect products conform to industry standards developed by committees comprised of, among others, representatives from a number of Avnet's connector suppliers. Avnet routinely aggregates information on products that are specifically designed to meet these standards.
- Look for the connectivity points based on the level of packaging (i.e., socketing a high value IC, connecting two boards, etc.).
- In most systems, the main PCB (motherboard, backplane, etc.) will need to connect to smaller boards, system I/O, etc.
- Avnet also stocks and distributes custom and off-the-shelf cable assemblies from most of the connector suppliers listed on our line card.

CONNECTOR CATEGORIES

- Primary connection (IC chip to package)
- Circuit to circuit (board to board)
- Sub-assembly to I/O (panel mount)
- Components to circuits (device to board)
- Sub-assembly to sub-assembly (wire to board)
- System to system (box to box, cable assemblies)

COMPONENT SOURCING CONSIDERATIONS

- Type (backplane, card edge, I/O, PCB, power, etc.)
- Configuration (board to board, wire to board (cable to board), wire to wire (cable to cable), panel mount (I/O) and box to box (cable assemblies))
- Contact count and spacing
- Gender
- Contact plating
- Termination style (crimp, IDC, through hole, surface mount, wire wrap and press fit)
- Design options (keying, shielding and accessories)
- Industry standards (IEEE1394, USB 2.0)
- Control input and output requirements



COMMERCIAL INTERCONNECT PRODUCTS	3M	ALPS	Amphenol	Bel/Stewart	Eaton	Glenair	HALO Electronics	ITT Interconnect Solutions	Molex	ODU	Omron	Panduit	Pulse	Samtec	TE Connectivity	Vishay	Weidmuller
Backplane	•		•					•	•		•			•	•		
Cable	•		•			•	•		•		•				•		
Card Edge	•		•					•	•						•	•	•
Circular			•			•		•	•	•	•				•	•	
D-Sub	•		•			•		•	•		•				•	•	
Electrical Products	•		•						•			•			•		•
Fiber Optic	•		•			•		•	•				•		•		
I/O	•		•	•		•	•	•	•		•		•	•	•	•	•
PCB	•	•	•		•	•	•		•		•			•	•		•
Power	•		•			•		•	•					•	•		
Rack & Panel			•					•							•	•	
Rectangular Power			•						•	•				•	•		
Sockets	•		•						•		•			•	•		•
Terminal Blocks			•	•					•		•				•		•

RF INTERCONNECT

Avnet's RF and wireless solutions combine complementary technologies to create leading edge standard and custom products for the RF, microwave and millimeter wave markets. Avnet's solutions range from under 1 MHz to over 18 GHz, and from 1 milliwatt to over 80 Watts. Discrete diodes, transistors, FETs, RF ICs, MMICs, ASICs, modules, RF interconnect and passive products and other highly integrated designs comprise our RF and wireless solutions.

COMPONENT SOURCING CONSIDERATIONS

- Product and commodity specifics
- Application type
- Power output requirement
- System voltage and current requirements
- Special issues
- Technology preferences (bipolar, MOSFET, LDMOS, GaAs, etc.)
- Device packaging (surface mount, through hole, ceramic, plastic, etc.)
- Temperature rating
- Special testing or selection

RF Type	Amphenol RF	Bell/Cinch	Molex	RADJALL	SV Microwave an Amphenol Co.	TE Connectivity
1.0-2.3	•		•			•
1.6-5.6	•					•
1.85mm		•		•	•	
2.2-5	•		•			
2.4mm		•		•	•	•
2.92 mm		•	•		•	•
3.0 mm					•	
3.5 mm		•			•	
4.1-9.5	•			•		
4.3-10	•		•	•		•
7MM					•	
AFI	•					
AMC	•					
AMC4	•					
AMMC	•					
BMA		•	•		•	•
BMMA					•	•
BMZ					•	
BNC	•	•	•	•	•	•
BSA			•			
BZ					•	
C-Type	•			•		•
FAKRA	X		X			
FME	X					
F-Type	X		X			X
G-Type	X					

RF Type	Amphenol RF	Bell/Cinch	Molex	RADJALL	SV Microwave an Amphenol Co.	TE Connectivity
HD-BNC	•					
HD-EFI	•					
HN-Type	•			•		•
HSD	•					
M39012	•				•	•
M39030					•	
M3933					•	
M55339	•				•	•
M83517					•	•
ZMA					•	
MCRF			•			
MCX	•	•	•	•		•
MHV	•					
Mini-BNC	•		•			•
Mini-D RF					•	
Mini-SMB	•					
Mini-UHF	•					
MMBX				•		
MCCX	•	•	•	•		•
MML				•		
MMS				•		
MMT				•		
MPRF			•			
N-Type	•	•	•	•	•	•
PN					•	
PSMP	•		X			
PTNC					•	•

RF Type	Amphenol RF	Bell/Cinch	Molex	RADJALL	SV Microwave an Amphenol Co.	TE Connectivity
QMA	•	•	•	•		•
QN	•			•		
SBMA				•		
SC-Type	•				•	
SHV				•		
SMA	•	•	•	•	•	•
SMB	•	•	•	•		•
SMC	•	•		•		•
SMP	•	•	•	•	•	•
SMPM	•	•	•	•	•	•
SMPs					•	
SMPW				•		
SMZ	•			•		
SSMA	•			•	•	•
SSMB	•		•	•		
SSMC	•			•		
SSMCX			•			
Switch	•					
TNC	•	•	•	•	•	•
Triax	•		•		•	•
Twinax	•					•
UHF	•			•		•
UMC / u.FL		•				•
UMP				•		
VITA 67			•		•	•
ZMA					•	

HIGH-RELIABILITY AND MILITARY CONNECTORS

Military and aerospace products are built to specifications based on product drawings and testing criteria established by the United States Government. High-reliability components are either COTS (Commercial off the Shelf) products, which are equivalent to Mil-Spec parts but without the testing certifications, or simply ruggedized components specifically engineered to survive in industrial applications/ environments. Avnet has a full team of dedicated Hi-Rel/ Mil-Aero/industrial product and inventory experts, a comprehensive bill of material and drawing database and the industry's largest value-add ISO-9002, MIL-I-45208, UL and CSA certified assembly operation. Avnet also offers a comprehensive portfolio of space and RadHard products.

COMPONENT SOURCING CONSIDERATIONS

- Avnet can meet Mil-Spec and commodity-specific sourcing requirements.
- In many cases, environmental or industry-specific guidelines or product certification is required.
- These products can be called out by MIL and/or commercial part numbers.
- Many products can be sourced with accessories such as end bells, back shells and covers.

INTERCONNECT PRODUCTS	Amphenol/FCI	AVX/ELCO	Conesys	Glenair	ITT Interconnect Solutions	Molex	ODU	Radiall	TE Connectivity	Tri-Star	Weidmuller
Arinc 404/600	•			•	•				•		
D-Sub & I/O	•				•	•			•		
Hi-Rel Circular	•			•	•	•	•		•		
MIL-C-21097									•		
MIL-C-22292	•			•							
MIL-C-26482	•		•	•	•				•		
MIL-C-26500			•	•							
MIL-C-28840				•	•						
MIL-C-39012	•			•	•			•	•		
MIL-C-39029	•			•	•				•	•	
MIL-C-5015	•		•	•	•						
MIL-C-55074		•									
MIL-C-55302	•			•					•		
MIL-C-81511	•								•		
MIL-C-81659				•	•				•		
MIL-C-83723	•		•	•	•				•		
MIL-C-85049	•			•	•						
MIL-DTL-24308	•			•	•				•		
MIL-DTL-38999	•		•	•	•				•		
MIL-DTL-83733				•	•						
MIL-PRF-83513	•			•	•				•		
MIL-T-81714	•								•		
Power/Industrial	•			•	•	•	•		•		•
Tubing/Molded Shapes				•					•		