Amphenol® RF

Product Overview

www.amphenolrf.com

STANDARD PRODUCT SERIES

AFI

6 GHz

50 | 75 Ohm

High-float board-to-board solution for compact and blindmate applications.

AFI-DART

18 | 12 GHz

50 | 75 Ohm

High-isolation, high-density connector series designed to be modular and scalable, and can be color coded to eliminate mismating.

AMC

6 GHz

50 Ohm

Micro-miniature coaxial connector with a low profile (2.5mm) and a small footprint (3mm x 3mm).

AMC4

6 GHz

50 Ohm

Micro-miniature coaxial connector with an extremely low profile (1.3mm) and a small footprint (2mm x 2mm).

AMMC

6 GHz

50 Ohm

Micro-miniature coaxial connector with a super low profile (1.4mm) and an extremely small footprint (2mm x 2mm).

AUTOMATE™ TYPE A & TYPE B

15 GHz

50 Ohm

Compact next generation automotive interconnect solution supporting high-bandwidth applications.

BNC

3 GHz

50 | 75 Ohm

Features a bayonet coupling system for quick connect/disconnect in a full range of PCB and cable mount configurations.

FAKRA

6 GHz

50 Ohm

Designed for the automotive market, this series utilizes SMB connectors in color/key coded housings to prevent mismating.

F & G TYPE

1 GHz

75 Ohm

Durable interconnect series commonly used in CATV applications and featuring threaded or slide-on coupling respectively.

HD-AFI

3 | 12 GHz

75 Ohm

The HD-AFI interface utilizes a proprietary configuration that allows for a very stable RF signal over the full axial range of the connector system.

HD-BNC

12 GHz

50 | 75 Ohm

Familiar bayonet coupling and cable termination procedures as the traditional BNC with a footprint 4x smaller.

HD-EFI

6 GHz

50 Ohm

Micro-miniature interface design allowing for large board tolerance stack ups, blind mating and multiple RF lines.

HSD

2 GHz

100 Ohm

High speed data connectors used for digital applications in vehicles such as head units and infotainment modules.

MCX

6 | 12 GHz

50 | 75 Ohm

Secure and easy snap-on/snap-off coupling with low reflection and broadband capabilities.

MINI-SMB

2 GHz

75 Ohm

Quick connect/disconnect snap-on coupling design; commonly used in broadband applications.

MMCX

6 GHz

50 Ohm

Micro-miniature interconnect featuring secure snap-on/snap-off coupling system.

N TYPE

18 GHz

50 Ohm

Double medium-sized RF interconnect with threaded coupling mechanism used in high-power antenna applications.

PSMP

10 GHz

50 Ohm

Compact three-piece board-to-board connector for high-power wireless applications.

QMA

18 GHz

50 Ohm

Quick-disconnect version of the SMA interface; often used in antenna and base station applications.

QN

11 GHz

50 Ohm

Quick-disconnect version of the N Type interface, often used in base station and datacomm applications.

LEGEND

Max Frequency

Impedence

SOLUTIONS FOR ALL APPLICATIONS AND REQUIREMENTS:

- Waterproof IP-Rated
- Non-Magnetic
- QPL Military Approved
- 12G SDI
- Ruggedized
- Low-PIM
- High Frequency
- Extreme Exposure
- Quick Locking
- Tamper Resistant
- Ultraminiature Connectors

RF MICROSWITCH

6 GHz

50 Ohm

Used as test points or for external antennas and available in multiple interfaces such as MCX and MMCX.

SMA

26.5 GHz

50 Ohm

High-performance series featuring a threaded, compact design; ideal for antenna and base station applications.

SMB

4 GHz

50 Ohm

Snap-on coupling mechanism; ideal for GPS, LAN and broadband applications.

SMC

10 GHz

50 Ohm

High-performance, compact design; ideal for telecomm and instrumentaion applications.

SMP

40 GHz

50 Ohm

Dependable, high-frequency interconnect commonly used in board-to-board applications.

SMPM

65 GHz

50 Ohm

Micro-miniature, high-performance board-to-board and cable-to-board interconnect solution.

SMZ

4 GHz

75 Ohm

75 ohm version of the SMB with a slightly larger form factor; ideal for instrumentation applications.

TNC

11 GHz

50 Ohm

Versatile miniature, threaded and waterproof interconnect available in standard and reverse polarity.

TRIAX

0.5 GHz

50 | 75 Ohm

Threaded or bayonet coupling mechanisms; often used in applications where maximum RF shielding is required.

TWINAX

0.5 GHz

78 | 95 Ohm

Threaded or bayonet coupling mechanisms with dual center contacts; ideal for applications such as computer networking.

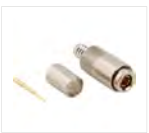
UHF & MINI-UHF

300 MHz & 2.5 GHz

50 Ohm

Low cost, threaded interface ideal for low-frequency applications such as PA and ham radio.

1.0-2.3



10 | 4 GHz

50 | 75 Ohm

Push-pull coupling system for quick installation and positive locking.

2.2-5

20 GHz

50 Ohm

Compact version of the 4.3-10 interface with a smaller footprint and lightweight, robust design; ideal for low PIM applications.

4.3-10

6 GHz

50 Ohm

Same excellent electrical and mechanical performance as the 7-16 interface with a smaller footprint and lighter design.

7-16

7.5 GHz

50 Ohm

Robust, stable and weather resistant interconnect solution engineered for low PIM wireless applications.

BETWEEN SERIES ADAPTERS

50 | 75 Ohm

Commonly used in applications requiring two dissimilar RF interfaces to be connected together.

IN SERIES ADAPTERS

50 | 75 Ohm

Designed for applications requiring two of the same RF interfaces to be connected together.

TEE ADAPTERS

50 | 75 Ohm

Engineered to allow for three RF interfaces to be connected together.

FIXED LENGTH CABLE ASSEMBLIES

50 | 75 Ohm

Pre-configured cable assemblies featuring common connector and cable configurations available in standard lengths.

PHASE STABLE TEST CABLES

20 GHz

50 Ohm

High-performance RF test cables designed for bench top lab and production level testing.

ATTENUATORS

6 GHz

50 Ohm

N Type and SMA fixed attenuators are available in straight plug to jack configurations and offer flat attenuation.

ANTENNAS

External Antennas

Internal Antennas

Embedded Antennas

External, internal and embedded antennas for IoT applications. Supporting all popular wireless protocols; Wi-Fi, Bluetooth, BLE, UWB, Cellular, GNSS and more.

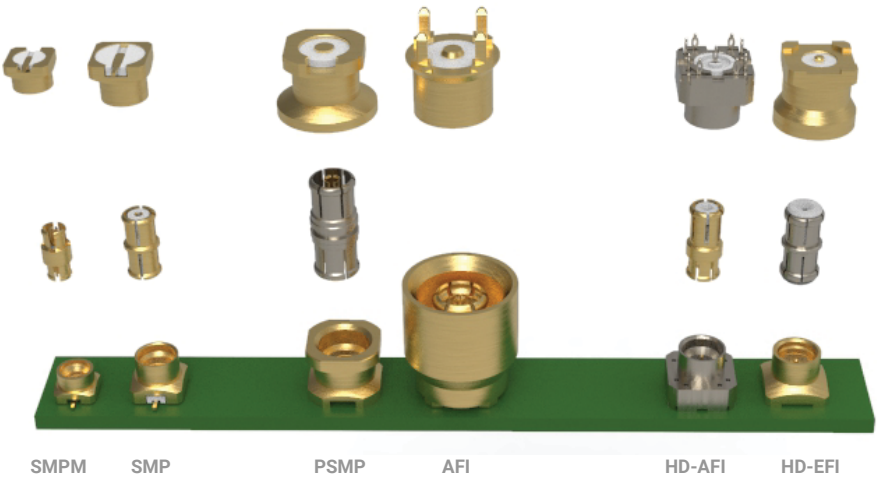
BOARD-TO-BOARD SOLUTIONS

Amphenol RF offers a variety of board-to-board solutions engineered to maximize radial and axial float, eliminating the need for cables between boards and simplifying designs to eliminate assembly errors. These RF connector designs typically include three pieces, utilizing a bullet adapter mated between smooth bore and detent PCB jacks. Application needs can be met based on the special features of each series: AFI Plugs contain an embedded bullet. PSMP products are designed for high-power and HD-EFI products are exceptionally suited for blindmating. Proprietary interfaces like the HD-EFI and HD-AFI are designed with closed-entry contacts, reducing the risk of mismating or crashing interfaces.

Amphenol RF has all the available resources to help you choose the right series: 3D and HFSS component models are conveniently located on our website, as well as technical support to answer questions about PCB launch optimization.

	High-Frequency		High-Power		High-Float	
	SMPS	**MP**	**PSMPA**	**FI**	**HD-AFI**	**HD-EFI**
Impedance	50 Ohm	50 Ohm	50 Ohm	50 | 75 Ohm	75 Ohm	50 Ohm
Max Frequency	65 GHz	40 GHz	10 GHz	6 | 3 GHz	18 GHz	6 GHz
Min PCB Spacing	6.6 mm	9.1 mm	12.6 mm	12.7 mm	11.5 mm	18.9 mm
Power Handling	50 W @ 2.2 GHz @ 25¼ C	30 W @ 2.2 GHz @ 25¼ C	200 W @ 2.2 GHz	200 W @ 2.2 GHz @ 8.8¼ C	10 W @ 2 GHz @ 25¼ C	40 W @ 2.5 GHz @ 85¼ C
Axial Misalignment	0.25 mm	0.25 mm	2.00 mm	1.00 mm	2.00 mm	1.40 mm
Radial Misalignment	0.51 mm	0.51 mm	1.32 mm	0.80 mm	0.80 mm	0.7 mm

**applies to 50 ohm AFI products only*
Note: Technical specifications are typical and may vary by specific part number

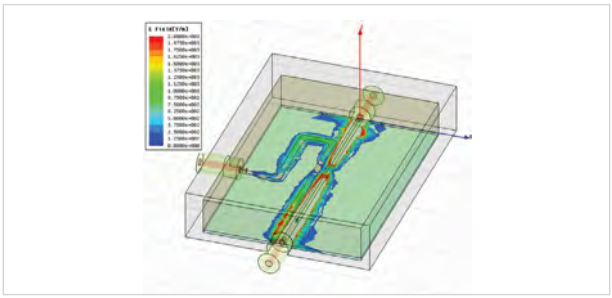


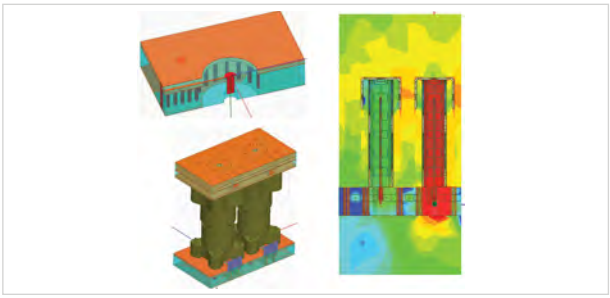
Space-Saving, Cable-Free Designs for Compact Applications

CUSTOM SOLUTIONS

As a leader in the design and manufacturing of RF interconnect products, Amphenol RF offers a robust and ever expanding portfolio of standard radio frequency connectors, coaxial adapters and RF cable assemblies. When standard products don't match your needs, our dedicated team of engineers can develop the ideal solution for any application, in any industry.

With a global presence, Amphenol RF has experienced engineers in North America, Europe and Asia, and production capabilities in China, Vietnam, Mexico and the United States. Our quality team oversees the entire process from initial design through delivery, to ensure your satisfaction.





OUR ENGINEERING SERVICES INCLUDE:

- Ganged Connector Solutions
- Custom Cable Assemblies
- Mixed Signal Applications
- Modifications of Existing Designs
- Application Specific Optimized Return Loss
- PCB Launch Optimization

OUR ENGINEERING TOOLBOX INCLUDES:

- Pro/Engineer 3D Mechanical Design
- ANSOFT HFSS 3D RF Analysis
- ANSYS 3D Mechanical Analysis
- Agilent Vector Network Analyzers

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