

Medical

RF SOLUTIONS

AMC
MCX
MMCX
SMB
SMA
BNC

TNC
Type N
7/16
Non-Magnetic Connectors
Cable Assemblies

APPLICATIONS

Magnetic Resonance Imaging (MRI)
Wireless Patient Monitoring
Implantable Medical Devices
Ultrasound
Hospital Equipment RFID



Amphenol[®] RF

Global RF Solutions for the Medical Market

Medical

Amphenol RF has a complete portfolio of coaxial connectors to meet the rigorous demands of the medical market.

Key Products Include:

SMB



The 50Ω SMB coaxial connector series has a snap-on interface which allows for easy mating and un-mating while providing 360° of rotation. This feature enables flexibility within dense layouts.

MCX/MMCX



Available in 50 Ω and 75 Ω versions, the MCX coaxial connector series provides RF interconnect options where weight and physical space are limited. While the MCX uses identical contact and insulator dimensions as the SMB, the outer diameter of the plug is 30% smaller than the SMB. When space is at a premium, the MMCX series allows for an even smaller footprint with a plug outer diameter that is 45% smaller than the SMB.

AMC



Amphenol RF's 50 Ω AMC cable assemblies are ideal for space-constrained board-to-board connections in small devices. Their snap-on interface performs superbly under shock and vibration conditions, making them ideal for wireless handheld devices. The AMC series has a low profile (2.5 mm off the board) and offers an extremely small board footprint (3 mm x 3 mm).

Non-Magnetic



Non-magnetic coaxial connectors are used for carrying 50 Ω RF signals within the magnetic field of MRI equipment where a high signal-to-noise ratio (SNR) is required. These connectors are manufactured under strict quality procedures throughout the entire production process to ensure that each connector will not produce image artifacts during MRI scans. All products are 100% tested for magnetism prior to shipping and are available in the following interfaces: SMB, MCX and MMCX.

Technologies Supported:

MRI

Short for Magnetic Resonance Imaging, MRI is a diagnostic imaging tool which transmits an RF signal to a patient under a powerful magnetic field. The magnetic field causes the hydrogen atoms in the patient's body to spin in the same direction, while the RF signal excites the hydrogen atoms in the patient's body relative to the magnetic field, which produces an image. The RF signal is typically received by an MRI coil that is in direct contact with the patient on the area to be imaged.

Wireless Patient Monitoring

Monitoring a patient's vital signs has historically required longer hospital stays. With hospital costs continuing to rise, wireless RF technology helps minimize this cost by allowing the patient to be monitored by a remote location, either at an outpatient facility or even in the comfort of their own home, without being tethered to a hospital bed. Wireless patient monitoring devices typically operate within the industrial, scientific and medical (ISM) radio bands of 900 MHz, 2.4 GHz and 5.8 GHz.

IMD's

Short for Implantable Medical Devices, IMD's are controlled by an external transmitter that sends RF signals through the skin to an implanted receiver, which is surgically placed under the skin. Examples of IMD's include glucose meters, pacemakers and neurostimulators.

Hospital Equipment RFID

Hospitals contain many pieces of equipment to care for its patients. From wheelchairs to heart defibrillators to infusion pumps, this equipment can be needed at a moment's notice. Wireless RF technology allows hospitals to track their equipment throughout their facility at all times so they can know where the equipment is and whether it's being used. This allows hospitals to use their equipment more efficiently and at a lower cost.