## RF SOLUTIONS

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## APPLICATIONS

- GPS
- Cellular
- Satellite Radio
- AM/FM Radio
- Bluetooth
- Wireless Vehicle Controls
Automotive

The automotive industry has been revolutionized with the increased adoption of telematics in vehicles including GPS, Cellular, Bluetooth and Satellite Radio. No longer are satellite navigation systems and sophisticated in-vehicle entertainment confined solely to the luxury end of the market. As telematic advancements become more reliable, available and inexpensive, vehicles are transforming into an intelligent platform for enabling mobile life. With these recent advancements in communications technology and increased consumer demand for a diverse array of on-board telematics services, RF communications systems have become integral components of today’s automobile, trucking, watercraft, motorcycle and off-road agriculture markets.

To keep RF interconnection costs low, and to ensure high levels of electrical and mechanical performance for telematics applications, such as Global Positioning Satellite, Satellite Radio, Vehicular Internet Access, Remote vehicle diagnostics and Bluetooth, the German and American automotive industries have standardized a high-performing, cost-effective RF connector based on the FAKRA and USCAR standards. Utilizing a standard metal SMB connector embedded within a plastic housing that can be designed with multiple colored codes for easy identification, FAKRA connectors are designed to perform up to 4 GHz and meet the particular mechanical and environmental requirements of the automotive industry. Amphenol RF also offers a variety of connectors for board-to-board, PCB interfaces, and traditional antenna interfaces.

Technologies Supported:

AM/FM Radio
Antenna technology that supports GPS and Satellite Radio is the same antenna that will support AM/FM radio. This combined antenna capability not only reduces the number of external antenna on the vehicles, but offers standardization among the interconnects.

Satellite Radio
Originating at a broadcast center, the broadcast signal is beamed from earth-station antennas to broadcast satellites. These satellites don't move and are positioned more than 22,000 miles above the earth in geo-stationary orbit. Their beams combine to span the entire contiguous U.S. while remaining stationary with respect to the land below.

GPS
Short for Global Positioning System. A worldwide MEO satellite navigational system formed by 24 satellites orbiting the earth and their corresponding receivers on the earth. The GPS satellites continuously transmit digital radio signals that contain data on the satellites location and the exact time to the earth-bound receivers.

Cellular / PCS
Short for personal communications service, the U.S. Federal Communications Commission (FCC) term used to describe a set of digital cellular technologies being deployed in the U.S. It is also referred to as digital cellular.

SMR
SMR, short for Specialized Mobile Radio, is a dispatch radio and interconnect service for businesses. It covers frequencies in the 220 MHz, 800 MHz and 900 MHz bands.

Broadband
A type of data transmission in which a single medium (wire) can carry several channels at once. Cable TV, for example, uses broadband transmission.

Bluetooth
A short-range radio technology aimed at simplifying communications among Internet devices, between devices and the Internet. It also aims to simplify data synchronization between Internet devices and other computers.

Wireless Vehicle Controls
Remote starting, remote keyless entry and door/window controls.