

RF INTERCONNECT SOLUTIONS FOR SMART CABINS

As autonomous driving and ADAS technology evolve, vehicles are transforming into connected, intelligent spaces designed for comfort and engagement. Automakers are shifting their focus to smart cabin technology, integrating advanced infotainment, and intuitive human-machine interfaces (HMI) to redefine the way passengers interact with their vehicles. Seamless wireless connectivity is key to this shift, enabling reliable data transmission and robust system integration. Amphenol RF's high-performance interconnect solutions power the next generation of intelligent mobility, delivering new levels of comfort, connectivity, and personalization.



APPLICATIONS

Intuitive HMI

- Augmented reality (AR) heads-up displays (HUDs)
- Gesture and eye-tracking-based controls for infotainment and navigation
- Haptic feedback steering wheels and touchscreens for safer interactions



Health & Wellness Monitoring

- AI-driven driver and passenger monitoring for fatigue detection and safety alerts
- Biometric authentication for personalized access and security
- Adaptive climate control and seating adjustments based on occupant profiles
- Intelligent ambient lighting and sound control for comfort and mood

Wireless Charging

- In-cabin wireless charging for multiple devices
- Vehicle-to-grid (V2G) and bi-directional charging

Next-Gen Infotainment

- Multi-screen entertainment with seamless device integration

Connected Mobility

- Integrated connected services for navigation, voice assistance, and remote access
- High-speed internet access for streaming, gaming, and work-from-car setups

PRODUCTS



MINI-FAKRA



FAKRA



AMC



SMP



SMPM



MCX



N-TYPE



SMA



HD-EFI

WE OFFER

- Adapters
- Cable Assemblies
- Smart Antenna Interconnect
- Custom Solutions

SMART CABIN TECHNOLOGIES

Series	Next-Gen Infotainment	Connected Mobility	Health & Wellness Monitoring	Intuitive HMI	Wireless Charging Solutions
Mini-FAKRA	•			•	
AMC		•	•		
SMP	•	•	•	•	
SMPM	•	•	•	•	
MCX	•	•		•	
N-TYPE		•	•		•
SMA	•		•	•	•
HD-EFI	•	•		•	

CORE COMPETENCIES

- Customized high-performance antennas
- Custom camera interconnect solutions available
- Waterproof IP67/68 sealed solutions
- High-frequency board-to-board solutions
- Customized hybrid solutions supporting RF, signal and power

DESIGN FEATURES



IP-Rated Waterproof

Waterproof sealed solutions are engineered to protect your application from outside elements and are fully tested to IP67 or higher specifications in the mated and unmated condition.



Vibration-Resistant

One-piece bodies and other design considerations are taken into account to provide a more robust option for applications where there are concerns for the security of the locking interface due to extreme conditions.