Amphenol® RF

ENABLING WAREHOUSE ROBOTICS WITH RF INTERCONNECT

Amphenol RF's broad portfolio of RF interconnect solutions support emerging autonomous warehouse technology. The rise in autonomy within the warehouse logistics ecosystem enables increased efficiency, reduced cost and helps to ensure safety. Autonomous mobile robots (AMRs) are able to improve productivity and decrease damage during cargo handling.

There is a significant amount of RF content including coaxial connectors, adapters and cable assemblies within these new technologies that enable key elements such as cameras, sensors and antennas. The high-bandwidth capabilities of traditional automotive connectors enable camera systems to communicate quickly with on-board computer systems to eliminate potential safety risks making them ideal for this environment. The versatility of these interconnects allows for substantial crossover and the ability to provide optimal solutions for warehouse robotics, a technology that is central to the next wave of industrial IoT.

AUTONOMOUS MOBILE ROBOTS (AMR)

Mobile robots that navigate independently using LiDAR, machine learning and vision-based technology. Typically used for repetitive tasks to increase efficiency and reduce labor costs.

Types of AMR

- Forklift
- Load Transfer
- Pallet Truck
- Assembly Line
- Light Load Transporters
- Heavy Load Transporters
- Pickers
- Tuggers

APPLICATIONS

- Collision Avoidance
- Camera & Vision Systems
- Cellular (4G, LTE, 5G)
- Wi-Fi, Wi-Fi 6/6E
- Bluetooth
- RFID
- Real Time Locating System (RTLS)
- GPS

CORE COMPETENCIES

- Waterproof IP67/68 sealed solutions ideal for wet environments
- Ruggedized products offering dust, vibration and corrosion resistance
- Quick mating and quick disconnect RF connectors
- Customized hybrid solutions supporting RF, signal and power
- Blindmate connector systems
- Custom cable assemblies and sub-systems

PRODUCTS

Connectors

| AUTOMATE MINI-FAKRA | FAKRA | SMA | TNC | BNC | MCX | SMB |

Fixed Length Cable Assemblies

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

Adapters

Designed for applications requiring two RF interfaces (between-series or in-series) to be connected together.

CUSTOM CAMERA INTERCONNECT

Sealed automotive camera interconnect are designed with overmolding of cable and connectors for a fully integrated, clean solution. Sealed interconnect prevent ingress of fluids and dust while high float solutions allow for blind mating of camera back.

Learn more at amphenolrf.com