

FREQUENTLY ASKED QUESTIONS (FAQ) ON SERVICE ROBOT COMPONENT SELECTION

Every Connection. Every Move. Empowering the Future of Service Robot



Q&A

GENERAL FAQS:

Q1: WHAT IS A COMMERCIAL SERVICE ROBOT?

A commercial service robot refers to a service robot that is used for commercial tasks and is usually operated by properly trained operators.

Q2: WHAT ARE THE MAIN APPLICATIONS OF COMMERCIAL SERVICE ROBOTS?

There are six main categories of applications for commercial service robots, including: professional cleaning, logistics and transportation, hospitality, agriculture, healthcare, and maintenance visits.

FAQS ABOUT WIRELESS CONNECTIVITY SOLUTIONS:

Q1: IS THERE A GENERIC WIRELESS TECHNOLOGY FOR ALL ROBOT APPLICATIONS OR DOES EACH APPLICATION REQUIRE CUSTOMIZATION?

Each robotic application has its own set of requirements which need to be considered, as each needs to be adapted to different environments and conditions. Whether it's indoors, outdoors or in an industrial location, each environment has unique requirements for wireless connectivity. Therefore, a targeted selection of suitable wireless connectivity technologies is required for specific application scenarios.

Q2: WHAT ARE SOME OTHER KEY FACTORS TO CONSIDER WHEN SELECTING WIRELESS CONNECTIVITY TECHNOLOGY FOR ROBOTS?

Special attention should be paid to key factors such as interference immunity, coverage, stability and reliability of the connection, low power consumption during operation, and high bandwidth with low latency. These factors are essential in providing smooth operation and stable performance in various robotic applications.

Q3: WHAT ROBOTICS APPLICATION AREAS CAN BE FURTHER ADVANCED BY 5G WIRELESS CONNECTIVITY?

The 5G network provides good support for the application of augmented reality (AR) and virtual reality (VR) technology. 5G wireless connectivity technology with high speed and low latency can support robots in achieving faster data processing and decision-making. These technologies allow robots to provide a more immersive and visual user experience.



FAQS ABOUT CONNECTIVITY SOLUTIONS:

Q1: WHAT SHOULD I LOOK FOR WHEN SELECTING CONNECTORS DURING THE ROBOT DESIGN PHASE?

- Environmental and application adaptability: Determine the environmental conditions in which the robot will operate, as well as the application requirements, to ensure that the connector chosen meets those requirements.
- Durability and reliability: For applications where a robot will operate for long periods of time and move frequently, it's critical that the connector can withstand repeated plugging and unplugging and environmental changes.
- Ease of installation and maintenance: Choose connectors that are easy to install and maintain, which can reduce the integration and maintenance costs of the robotic system and enhances system reliability and efficiency.
- Size and interface compatibility: Ensure that the connector size and interface are compatible with other system components and external devices to meet the space constraints and interface requirements of the robot design.

In addition, early in the robot design phase, water and dust resistance, electrical performance, and future expandability also need to be considered to support a better robot design as well as their development in the future. TE Connectivity (TE) connectors utilize future-proof designs to help withstand harsh environments and deliver proper product operation.

Q2: HOW CAN CONNECTORS, AS ELECTRONIC COMPONENTS, EFFECTIVELY CONTRIBUTE TO THE DEVELOPMENT OF THE ROBOTICS INDUSTRY?

Connectors can help or accelerate the development of the robotics industry in the following aspects:

- Technological innovation: New connectors are developed to provide higher data transfer rates, stable electrical connections, and enhanced durability, bringing innovation to the robotics industry.
- Facilitation of system integration: Connectors enable different components and modules to connect and communicate with each other, which supports the modularity and integration of robotic systems and enhances system flexibility and scalability.
- Promotion of industry collaboration: Collaboration between connector manufacturers, robotics manufacturers and system integrators fosters technology exchange and innovation and supports the co-development of industry-standard solutions that drive the industry forward.

Connectors play a key role in the robotics industry, not only driving innovation on a technical level, but also contributing to the advancement of the industry as a whole in terms of system integration, efficiency improvements, safety enhancements, and industry collaboration. TE offers customized solutions to support our customers' product design, which can accelerate time-to-market..



VALUE PROPOSITION

WHAT ARE THE ADVANTAGES OF TE'S SERVICE ROBOT CONNECTIVITY SOLUTIONS?



DESIGNED FOR THE FUTURE

TE products are designed for future technology needs and are supported by global and regional engineers to meet specific needs.



STRONG GLOBAL BRAND RECOGNITION

TE is trusted by distributors and customers around the world as an outstanding supplier in the IoT antenna field.



HIGH QUALITY AND RELIABILITY

Our products are known in the industry for their high quality and reliability, which is the value of our products. We offer a one-stop shop for shorter time-to-market and provide customers with quick access to our latest solutions.



BROAD PORTFOLIO

We offer a wide portfolio of connectors, radio frequency and antenna products solutions with customizable options to fulfill the diverse needs of broad market customers.



ADDRESS DESIGN NEEDS

Our product feature designs such as space-saving, waterproofing, shock resistance, high-speed, and reliable connectivity, helping our customers meet the highest standards of performance and durability.

LEARN MORE ABOUT TE'S SERVICE ROBOT CONNECTIVITY SOLUTIONS

te.com

TE, TE Connectivity and TE connectivity (logo) are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2024 TE Connectivity. All Rights Reserved.

Published 04-24



