Wistron Corporation
How Did Wistron and ADLINK Collaborate to Create the Perfect Shopping Mall Helper?
AMRs Leading the Way to the Checkout and Automatically Placing Orders!
Chen Si Yin, Director of Wistron’s Smart Products Business Group, pointed out, “Although Wistron started out as an OEM, we have built up a number of core technologies and strong integration capabilities over the years. We will use the Group’s resources and strategic alliances to create robots for different application scenarios and enter the service robot market.”

Wistron Corporation is a major ODM (original design manufacturer) focusing on ICT (information and communication technology) products, including notebook PCs, desktop PCs, servers, storage, LCD TVs, handheld devices, and devices and equipment for medical applications. Wistron has officially launched a service robot named Wisbot in May this year, which provides a range of service functions for different environments, such as shopping malls, hospitals, schools, and hotels, therefore opening up new application opportunities.
In terms of the robot’s design, it is divided into two parts: the top and bottom. The bottom half is equipped with movement, navigation, and obstacle avoidance functions. The upper half provides different value added applications depending on the usage context. Wistron’s shopping mall robots are equipped with four cameras. In addition to facial recognition, it can perform a number of AI inference calculations, including the ability to identify goods on the shelves, estimate restocking time, and notify backend personnel to correct misplaced goods.

This robot requires powerful computing capabilities to perform multiple tasks such as path decision making, visual recognition, and communication with the backend all at the same time.

Wisbot is equipped with up to four sets of 3D cameras on the sides, which can accurately and quickly scan and sense the goods on the shelves and display various information on the screen.
Adopting ROS 2 and Intel’s technologies to speed time to market

Deputy Director Huang Chi Ta said that the bottom platform is the part that requires the most computing power, and it needs to be equipped with a variety of sensors such as lidar and radar in order to plan the correct path and avoid obstacles. This is why Wistron chose to partner with ADLINK. By using the Turnkey solution that combines Intel processors and ROS2, not only does this speed time to market, it also enables the R&D team to focus on the development of AI applications on the upper half of the robot.

Compared to some designs that use two computers to support the upper and lower halves’ computing needs, ADLINK is able to satisfy all the functional requirements with a single platform. In the future, ACRN Hypervisor can be used to support applications running in different operating systems through virtualization technology, making the design more scalable and flexible.
Huang Chi Ta pointed out that Wistron will strive to provide complete robotic solutions to meet the needs of different applications. For example, if multiple robots are required to work together in a shopping mall or school setting, we will provide a fleet management solution with a backend dashboard to control each robot for optimal operation.

In Anticipation of Accelerated AMR Applications Due to the Pandemic, Wistron Deploys Business Opportunities in Advance

Under the impact of the pandemic, development of the AMR market has been accelerated in order to reduce staff exposure and fill the labor gap. For example, the shopping mall robot is like a kiosk that can move around on its own, but with more intelligent and diversified system functions. It can provide various functions such as inquiry, shelf inspection, shopping guide, precision marketing, and checkout to effectively reduce the burden of staff dealing with routine work and enhance service value.

When there are a large number of robots, the point-to-point communication provided by ROS2 will be even more effective. The combination of 5G and AMR will provide a huge variety of practical robot applications.
Partnering with ADLINK to Greatly Increase the Flexibility of Robotic Applications

Based on this common bottom structure, Wistron will launch a range of service robots with different functions in the future. For example, for medical institutions, robots can be used to deliver blood or contaminated samples with identity verification functions to ensure error-free delivery. In addition, robots can be combined with 5G real-time transmission to assist doctors in remote consultation or ward rounds. Similarly, the robots can be used to perform different tasks such as food delivery and sterilization in different sites such as school campuses, hotels, and factories, with many application possibilities.

Service robots are brand new products that require the integration of multiple technologies. With the fast-growing market, if companies can work together to build an ecosystem, they will be able to gain a foothold in this emerging market, rather than just playing the role of a follower. The collaboration between Wistron and ADLINK is a good example of accelerating product development and leveraging the synergy of alliances. It is the hope that this trend will bring new development opportunities to the industries.