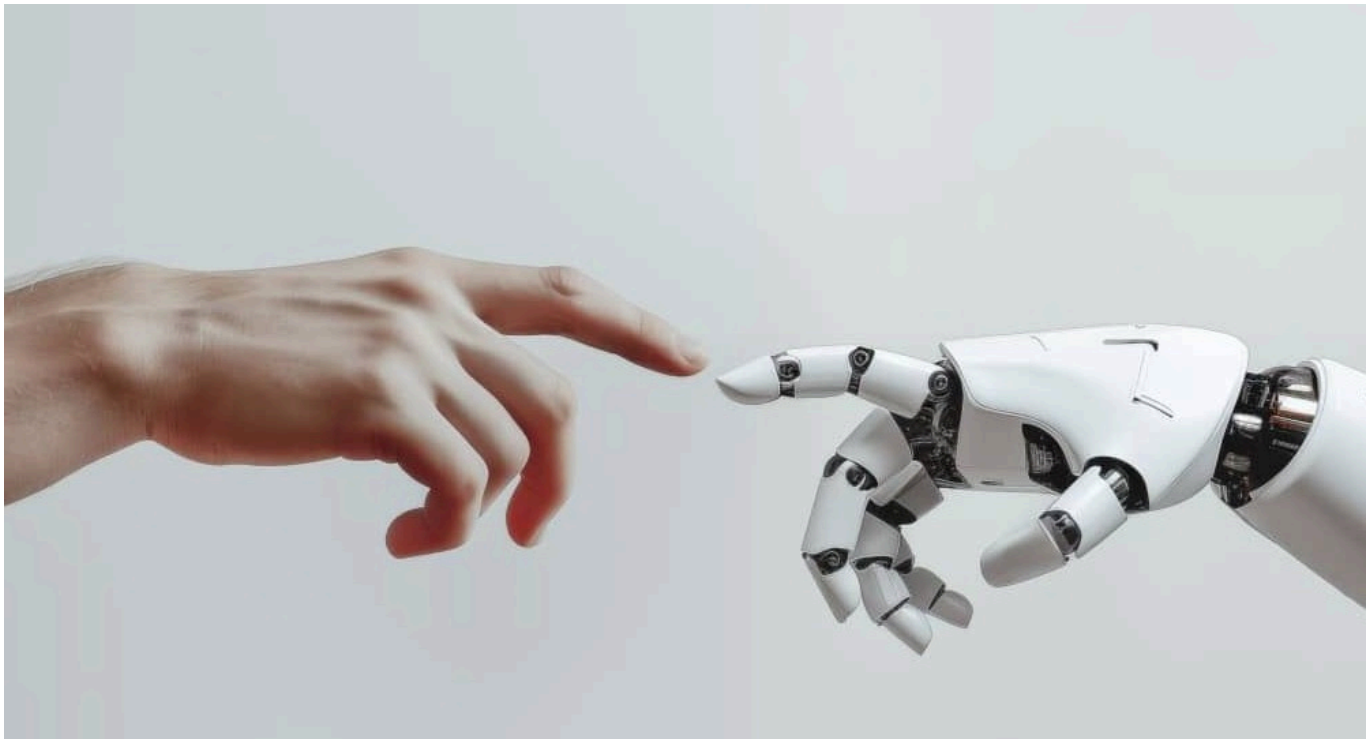
TECH OFFER

AI-Powered Autonomous Service Robot



KEY INFORMATION

TECHNOLOGY CATEGORY:
Infocomm - Robotics & Automation
Healthcare - Telehealth, Medical Software & Imaging
Logistics - Delivery & Distribution
Infocomm - Artificial Intelligence
Green Building - Sensor, Network, Building Control & Optimisation

TECHNOLOGY READINESS LEVEL (TRL): TRL8
COUNTRY: HONG KONG
ID NUMBER: TO175430

OVERVIEW

This autonomous service robot integrates AI-powered voice interaction, navigation, and third-party IoT integration to provide intelligent services in healthcare, education, and customer-facing environments. Designed with a compact footprint and robust mobility system, the robot can autonomously navigate through crowded spaces, deliver content, and interact with users via voice, touchscreen, and video calling.

It addresses the increasing demand for service automation in hospitals, nursing homes, educational institutions, and commercial venues. The robot enhances operational efficiency by automating repetitive tasks such as patient guidance, visitor reception, and

remote consultation. This technology is ideal for healthcare providers, event organizers, and smart facility operators seeking to reduce labor dependency while improving user experience.

The technology owner is seeking partners for pilot programmes with hospitals and eldercare institutions, curriculum integration with universities and polytechnics, test-bedding with smart building developers and event organizers, and joint module development with systems integrators and medtech companies.

TECHNOLOGY FEATURES & SPECIFICATIONS

The solution consists of an AI-enabled service robot with the following features:

- Proprietary autonomous navigation system with 360° LIDAR and SLAM, delivering highly accurate real-time path planning, enabling proactive human-robot engagement
- Modular design compatible with medical IoT sensors (fall detection, fall prevention, remote doctor consultation, bio-waste detection, health monitoring modules such as temperature, heart rate, and oxygen level sensors)
- Compact chassis with payload capacity up to 50 kg
- Voice assistant with multi-language support
- 13.3" touchscreen for interactive content display
- Integrated video call function
- Remote fleet management and cloud-based analytics
- Supports integration with Nvidia GPU, iFlyTek microphone array, and RFID inventory tracking

Ideal partners include hospitals and clinics, eldercare institutions, universities, exhibition organizers, and retail operators seeking smart automation solutions.

POTENTIAL APPLICATIONS

- **Healthcare:** patient navigation, remote consultation, medication delivery, elderly care
- **Education:** interactive teaching, programming curriculum for STEM education, campus guide
- **Smart Events & Retail:** guest greeting, booth navigation, contactless interaction, product showcasing
- **Hospitality & Real Estate:** visitor escorting, concierge services, showroom assistant

MARKET TRENDS & OPPORTUNITIES

The global service robotics market is projected to reach over USD 130 billion by 2030. With rapidly aging societies and rising labor costs, especially in healthcare and education, the demand for intelligent automation continues to grow. This robot's adaptability across industries and proven deployment in Asia-Pacific and EMEA enhances its global scalability.

UNIQUE VALUE PROPOSITION

- **Proprietary AI powered system:** AI interaction, autonomous navigation, and real-time data sharing to deliver dynamic, human-like service.
- **Compact chassis with high payload**: world's smallest chassis compact enough for home and clinic use, while supporting up to 50 kg payload.

- **RaaS (Robotics-as-a-Service):** provides a low-risk entry point for institutions looking to adopt automation without upfront capital investment.