HKC 香港通訊 SINGAPORE COMM

AI STOCK TAKE ROBOT

AI ROBOTS

We Connect Everything to improve the quality of life

INTRODUCTION

In the world of retail - AI image processing is bringing huge improvements in automating the tracking of merchandise throughout the whole retail supply chain. The cost of technology has fallen significantly in recent years, making it more accessible to retailers. Benefits of this technology in retail include the chance to virtually eliminate human error in stock tracking and enable higher inventory visibility.

AI Image processing in retail brings multiple plus points to stores overall, such as being able to provide customers with the products they are looking for

An increase in demand for AI image processing challenges the role of more traditional handheld inventory readers. More traditional inventory-taking typically involves using a handheld inventory reader, or counting items manually, which can be very time consuming.

AI STOCK TAKE ROBOTS GO A STEP FURTHER BY ENABLING STORES TO PROGRAMME REGULAR AUTOMATED INVENTORY TRACKING AND DATA COLLECTION, BRINGING NUMEROUS BENEFITS.

STORE AND INVENTORY CHALLENGES

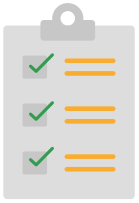
Challenges related to tracking products in-store and inventory management include:

Stock data accuracy

Without accurate inventory it's impossible to understand exactly what's in stock at any given moment.

Inconsistent tracking of items

Using manual inventory tracking procedures takes time and is prone to errors.



Inventory documentation

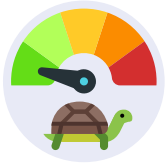
Using paperwork to document inventory does not scale easily across multiple stores.

Maximizing space in warehouses

Inventory management platforms help to understand free space in warehouses ready for deliveries of new stock.

Overstocking of products

Overstocking can lead to cash flow problems and storage problems such as stock damage.



Slow and inefficient processes

Inefficient, time-consuming and low-tech operating procedures may be difficult to maintain as operations expand.

HOW AI STOCK TAKE ROBOTS WORK

HKC Stock Take Robot works by camera scanning with image process algorithm store product information that's available for viewing through the back end, circulating close to products in order to scan the items. Also include features such as autonomous navigation, obstacle avoidance, autonomous docking and charging, and the ability to schedule inventories as regularly as desired by the customer, last but not least, bring customer to find their products needed in shop.

HOW THE ROBOT OPERATES

AI Image processing algorithm
Our robot contains cameras and antennas . When the robot is at a certain distance it is able to read the tags , image scanning and update its system on cloud.

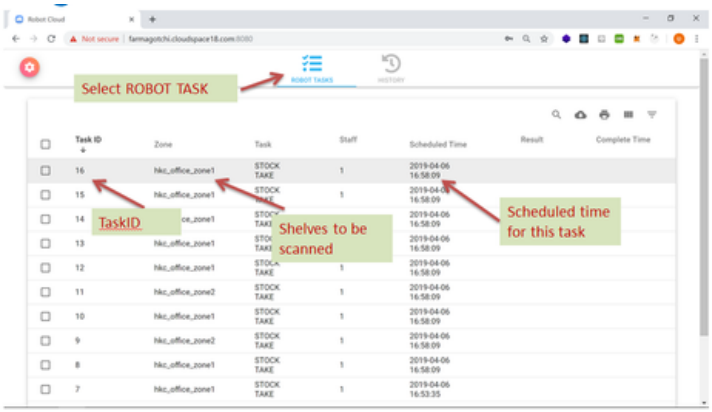
Perform SLAM
Our stock take robot include lidar and cameras, enabling them to perform SLAM - simultaneous localization (of their own location) and mapping of any area. This technology is able to avoid obstacles, including people and furniture.

The reader emits radio waves through different antennas
The signals are bounced back by the tags and received by the same antennas. The approximate location of each tag with respect to the robot is then be calculated by the reader by measuring the distances estimated from each antenna reception time. The use of vision cameras enable image recognition of stock items.

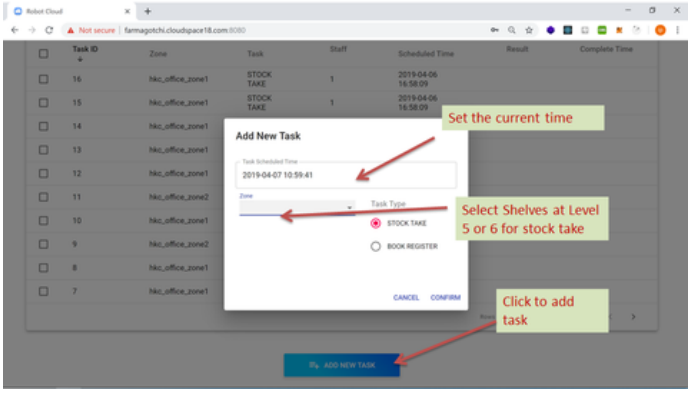
As the robot moves, it collects data and information from each tag. Our robot is able to locate itself inside a store or warehouse continuously.

ROBOT CONTROL PANEL USER UNTERFACE

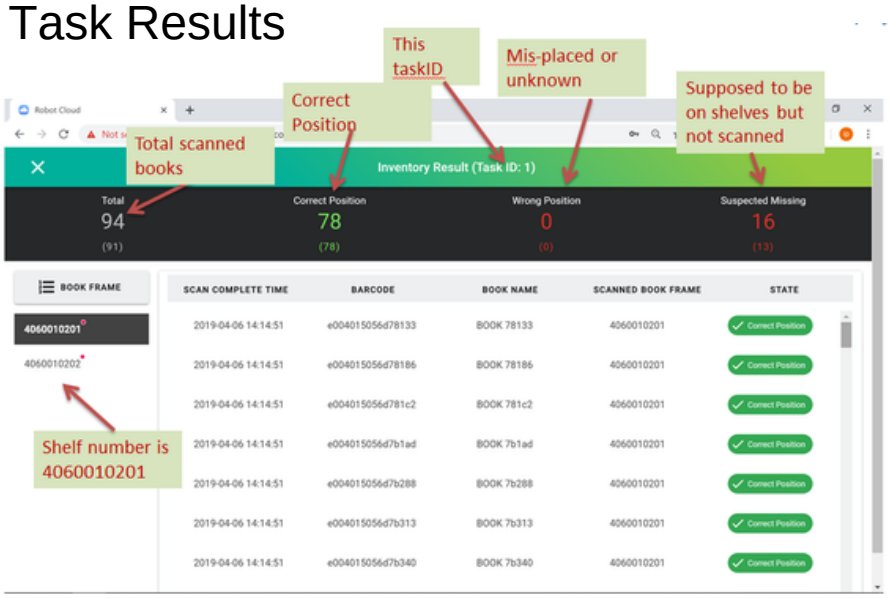
Login Server



Add new task to scan shelves

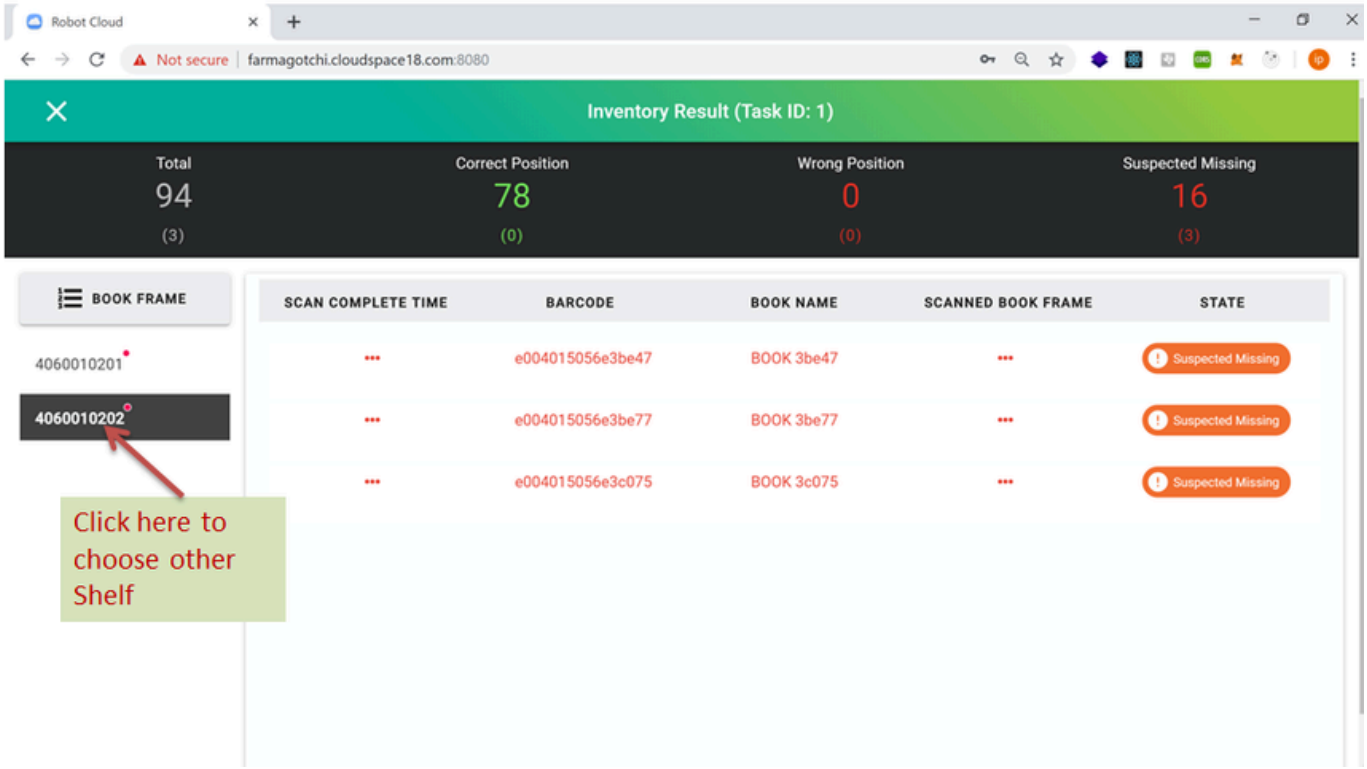


Task Results

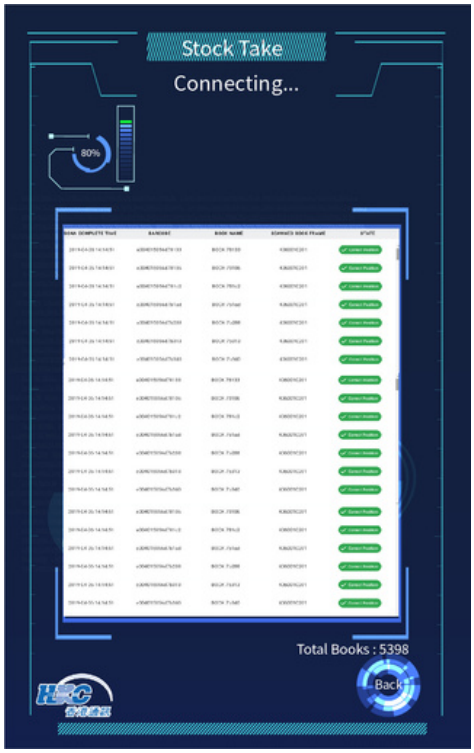


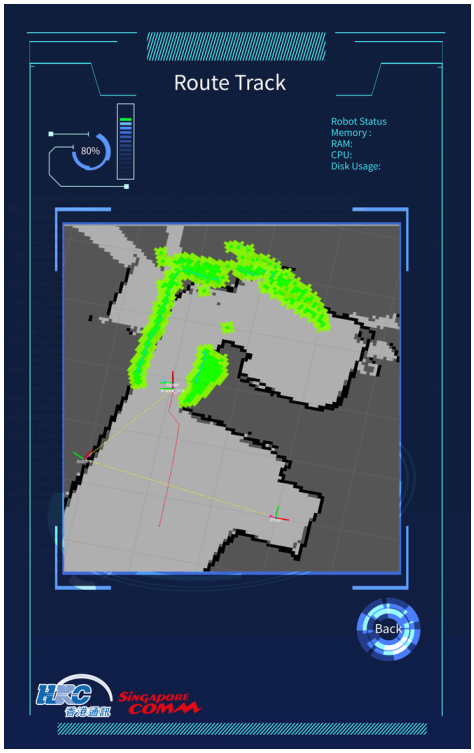
***More optional modules and customization are available**

STOCK TAKE REPORT



ROBOT TABLET USER INTERFACE





***More optional modules and customization are available**

BENEFITS OF STOCK TAKE ROBOTS

Being able to track stock regularly helps to avoid errors in inventory management, and makes it easier to understand what's in stock and then only order the right amount to meet customer demand. This also helps to ensure that products are not oversold, as well as helping to reduce overstocking.

Sales Trends Identification

Programming regularly inventories also helps to identify sales trends, including data such as volumes of products sold.

Reduce Labor Cost

As the robot is able to move around the area - to have robotic stock taking technology in the area can reduce stock take labor cost.

Free up staff to work on higher value tasks

Doing inventories by robots help to free up staff to work on higher value tasks and to have more time to spend with customers.

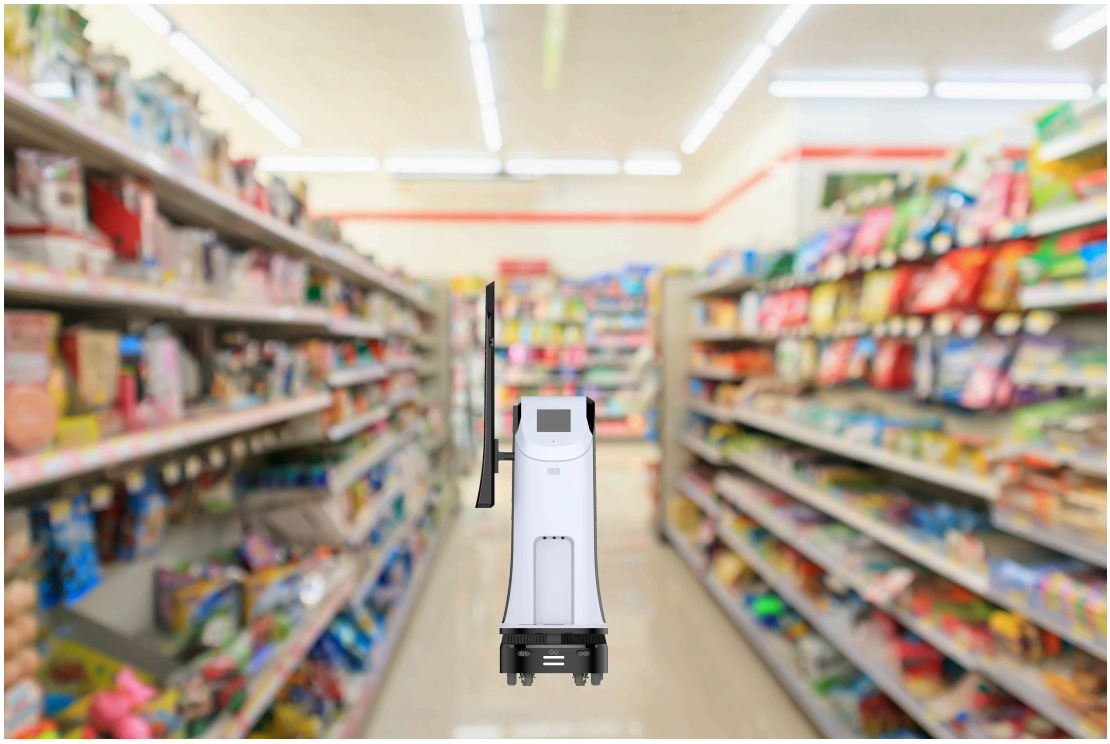
APPLICATIONS

LIBRARY

WAREHOUSE

APPLICATIONS

SUPERMARKET



RETAIL STORES

Hong Kong

Hong Kong Communications Co., Ltd.
Address: 14/F., Block B, Vita Tower, 29 Wong Chuk Hang Road, Hong Kong
Tel: +852 2527 8822
Email: contact_hkcgroup@hkc.net
Website: https://www.hkc.com.hk

Singapore

Singapore Communications Co Pte. Ltd.
Address: 8 Jalan Kilang Timor #03-09 Kewalram House Singapore 159305
Tel: +65 6880 0800(General), +65 6880 0811(Customer Service)
Fax: +65 6880 0899
Email: sales@singcomm.com.sg
Website :http://www.singcomm.com.sg