Robotic RFID Stocktaking System
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**Moveable RFID Antenna**

Embedded with high precise Encoder, the RFID Antenna can be move upward/downward and with 270 degree freedom in the horizontal movement.

**Wireless Communication**

With our own design of electronics, Different types of wireless communication and wireless to LAN / USB can be achieved.

**Anti-Damping Design**

With the help of three dampers, the machine can cope with different environment and give the strongest protection to the hardware.

**Vision System**

With the help of the Wireless System, wireless vision system has been implemented in this machine and responsible for the Security Function.

**Modulate Design**

Modulate Design has been adopted in this machine and parts can be changed or added easily in order to cope with different situation.

**Embedded Computation Power**

32bit high computation power MCU has been embedded in the machine and with the OO Programming Concept, Sensors can be easily added or removal.
Through the specially designed wireless system, cloud computer—robot system has been achieved. Only one computer would be needed to control all robots all over the world via the internet and all the high-level calculation and computation power would be left in this computer.

With the help of precise encoder, PID control algorithm has been adopted in this robot to help controlling precise motion and movements in both manual and automatic operations.
By using Visual Studio C++, a control program with full API function has been achieved. Auto Save and Log system has been embedded in the design and 100% Error handling and Safe function has been achieved.

Evaluation of the system efficiency and the Code speed has been done. Also, Debug tools for the machine has also developed. Several Testing for the machine of working in different environment has also tried out.