Benefits & Specification

※ Efficient workflow

All information is gathered and recorded on a real time basis. Internet connection enables efficient data synchronization between maintenance centers/ workshops and the headquarter facilitating fast and efficient operation and inventory management.

※ Easy application

Installation of active RFID readers and tags are convenient while daily operation flow is made easy with web-based application that can be accessed remotely.

※ Reliable equipment

All active RFID readers and tags adopted have FCC and CE qualifications guaranteeing safety and reliability. Performance of all equipment is also stable and reliable.

※ Errors reduced

Data integrity is ensured with automated recording of data. Efforts required for manual searching and recording is greatly reduced.

※ Cost reduced

Both time and effort involved in components and spare parts tracking have been reduced greatly and results in a reduction in overall operation cost.

Garrison ™ Rugged Tag HKRAT-RT02	
Dimension	78.8mm x 33.6mm x 9.7mm
Operation Temperature	-30℃ to +80℃
Weight	25g

Empress ™ Wi-Fi Reader HKRAR-EMWF	
Dimension	125mm x 108mm x 26mm
Operating Temperature	-40℃ to +60℃
Interface	Wireless connection Cable connection

Empress ™ Handheld Reader HKRAR-5080EM	
Dimension	175mm x 74mm x 23mm
Operating Temperature	-20℃ to +50℃
Interface	Wireless connection

* For detailed specification of each product, please refer to product catalogues.

For enquiries, please contact:
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Company Awards:

Grand Award 大獎 HONG KONG ICT AWARDS 2011 香港資訊及通訊科技獎

Gold Award 金獎 HONG KONG ICT AWARDS 2011 香港資訊及通訊科技獎

商界展關懷 caringcompany Awarded by The Hong Kong Council of Social Service 2010-12

機器及機械工具設計優異証書 2013 HONG KONG AWARDS FOR INDUSTRIES MACHINERY AND MACHINE TOOLS DESIGN CERTIFICATE OF MERIT

Case Study - Component & Spare Parts Tracking System

2.4GHz Active RFID Solution for a Railway Company

[Powered by Empress™ 2.4GHz Active RFID]

The railway system, both above and under ground is a very important transportation mean in Hong Kong. Maintaining proper operation of the trains is essential not only to the railway company but also for the sake of all Hong Kong residents. To look after the trains properly, several maintenance centers and workshops are located around Hong Kong for efficient and timely maintenance at the end of each day. As trains, components and spare parts travel between these centers and workshops all the time, a Component and Spare Parts Tracking System is thus designed to facilitate an automated and accurate inventory and location system.

Challenges for managing over millions of components and spare parts for railway company

◆ How to keep track of every component and spare part?

◆ How to achieve zero error during the tracking process?

◆ How to be efficient in tracking to save costs?

Active RFID Equipment used for the System:

Garrison™ Rugged Tag Model: HKRAT-RT02

- Durable plastic

- Convenient mounting design

- Replaceable battery

Empress™ Handheld Reader Model: HKRAR-5080EM

- Windows CE platform with Wi-Fi

- Convenient handheld design

Empress™ Handheld Reader Model: HKRAR-EMWF

- Wi-Fi network

- Long range identification

Operation Flow of CSTS

Maintenance Centre 1

Maintenance Centre 2

All readers at different maintenance centers/workshops are connected to the same network via secured Internet connection. Operators at the headquarter can control these readers remotely.

Operators at headquarter keeps track of all components and spare parts and monitor the status and inventory level of each type of component/spare parts at various maintenance centers and workshops.

Garrison™ Rugged Tag
Model: HKRAT-RT02

Empress™ Handheld Reader
Model: HKRAR-5080EM

Empress™ Wi-Fi Reader
Model: HKRAR-EMWF

1 Every component/spare part at different maintenance centers/workshops has a Garrison™ Tag which carries a unique ID representing the item it is attached to.

2 Staff uses Empress™ Handheld Reader to search for corresponding item and input remarks or update item status. All data is synchronized with the system's database when the Handheld Reader is put back to the docking station with secured Internet connection.

3 Readers are installed at entrances and exits of each maintenance center/workshop to read the tag IDs from the tags on each component/spare part passing through. The readers immediately send the tag ID to site's PC.

4 Information from both Empress™ Wi-Fi Reader and Handheld Reader are synchronized and recorded in the system's database. Operators and staff can check the status of all items via web-based application.