

# Trustworthy RFID Technologies: Methodology and Practice

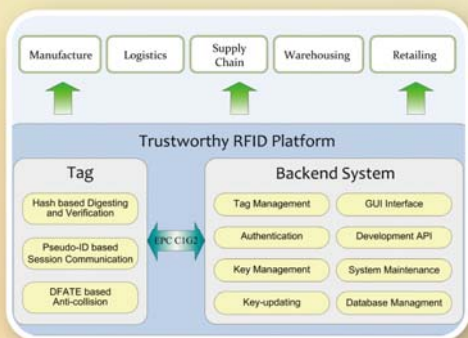
Deployment of large-scale RFID technology in the area of logistics and supply chain management is yet more promising with the introduction of RFID systems that address security and privacy. The secure and privacy-preserving RFID system and protocol designs developed from this project can enhance the security and privacy for RFID enabled applications. In addition, the uniform solution being introduced for RFID trustworthy computing offers a fundamental RFID platform to support trustworthy computing and facilitates cooperation among logistics and supply chain enterprises.

Developing secure and privacy-preserving schemes is extremely challenging for source limited RFID tags. Nevertheless, through the sophisticated composition of a number of significant components, including the prompt identification, non-interrupted authentication as well as dynamic key-updating, efficient privacy-preserving usage accompanied with trustworthy computing services are guaranteed.

Taking advantage of this set of technologies, core security and trust functionalities, such as keyed hash function based digesting and verification, privacy-preserving authentication, key updating, key management, and related equipment managements can be achieved for RFID systems. By employing the secure and privacy-preserving protocols and trustworthy uniform platform in RFID oriented applications, the security and privacy can be improved for both individual customers and enterprises, with high efficiency and distinguished performance.



Reference Tag Design



System Architecture

## Licensable Deliverables

Secure and Privacy-preserving RFID active tag with reference design and uniform platform

## NETWORKING AND INFRASTRUCTURE TECHNOLOGIES

Hong Kong R&D Centre for Logistics and Supply Chain Management Enabling Technologies

Room 202, Level 2, Block B, Cyberport 4, 100 Cyberport Road, Hong Kong

Tel: (852) 2299 0551

Fax: (852) 2299 0552

Email: info@lscm.hk

Website: www.lscm.hk



Hong Kong R&D Centre for Logistics and  
Supply Chain Management Enabling Technologies  
香港物流及供應鏈管理應用技術研發中心