

# SELECTED TOPICS IN ADVANCED ELECTRONICS

Edited by  
Khalid A. S. Al-Khateeb



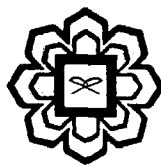
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**ADVANCED ELECTRONICS**

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## CHAPTER 28

# ADVANCED RFID SECURITY FRAMEWORK FOR DYNAMIC TRAFFIC MANAGEMENT

By

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### Synopsis

It is generally assumed that all RFID tags use default static RFID security in RFID based dynamic traffic management systems. The static security framework however, is prone to violation of data privacy and information security. Such violation can cause devastating effects. This has raised a growing concern amongst the RFID community. Efforts are directed at developing techniques and methods to overcome these problems. Investigations are carried out and proposals are made for a feasible security framework. A solution is then suggested for the problems of Dynamic Traffic Management and Control.

In this chapter a framework for security and privacy of RFID systems is introduced. It covers physical interfacing and RFID data integration security based on IEEE 802.1x authentication framework. The proposal involves the implementation of an efficient management scheme. It is anticipated that secure RFID networks together with open Internet technologies will revolutionize traffic control and management systems throughout the world.

### 1. Introduction

The security and privacy of Radio Frequency Identification (RFID) systems are critical issues in Ubiquitous RFID Networks. RFID tags are assumed to use simple default security settings in the dynamic traffic management. It can be referred to as static RFID security. The static security protocol is prone to violations of information and data privacy that may cause major public concerns [1][2].