1. Introduction

1.1 Description

AU9540 is a highly integrated single chip USB Smart Card reader controller. Highly integration enables the lowest BOM cost of smart card reader. The AU9540 supports multiple international standards including ISO7816 for IC card standard, PC/SC 2.0 for windows smart card standard, Microsoft WHQL, EMV for Europay MasterCard Visa standard and USB-IF CCID standard. The application of AU9540 can be generally applied to Smart Card read/write terminal device, such as ATM, POS terminal, Public telephone, E-Commerce, personal consumption on Internet, personal certification, prepay system, loyalty system…etc.

1.4 Features

- Package
  - 28 SSOP

- Standard Compliance
  - Support EMV Level 1 specification
  - Support USB 2.0 full speed
  - Based on ISO7816 implementation
  - Support PC Smart Card industry standard – PC/SC 2.0
  - Support Microsoft Smart Card for Windows
  - Meet Microsoft WHQL USB Smart Card Reader requirements
  - Meet US Federal Information Processing Standards (FIPS) Publication 201 requirements on smart card reader interoperability

- Features
  - Support single slot
  - Support T0, T1 protocol
  - Support I2C memory card, SLE4418, SLE4428, SLE4432, SLE4442, SLE4436, SLE5536, SLE6636, AT88SC1608, AT45D041 card and AT45DB041 card via external EEPROM
  - Support ISO7816 Class A, B and C (5V/3V/1.8V) card
  - Implemented as an USB full speed device with bulk transfer endpoint, Mass Storage endpoint
  - Built-in PLL for USB and Smart Card clocks requirement
  - Support EEPROM for USB descriptors customization (PID/VID/ iManufacturer/ iProduct/Serial Number), Direct Web Page Link, and accessing memory card module.
  - EEPROM programmable via USB interface
  - Support software update for memory card module
  - Support Direct Web Page Link via configuration in external EEPROM
  - Support short APDU and extended APDU
  - Compatible with Microsoft USB-CCID driver
  - Support remote wake up through inserting card/removing card
  - Support USB selective suspend
  - Support Power Saving Mode (Using one pin to select between Normal/PWR Saving Mode)