



# RFM811

13.56MHz NFC Module

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## Introduction

Near Field Communication (NFC) is a popular technology in recent years, and is becoming a set of standards for smart phones and similar devices to establish radio with each other by touching them together or bringing them into close proximity, usually no more than a few centimeters.

RFM811 is a tiny NFC card reader module, which is designed for the applications for handy terminals or custom-built for system integrators. We offer technology documents and SDK to help customers to make their own things easier.

Users can easily connect it with either UART or USB interface by through FPC connector.

## Features

- Supports Near Field Communication (NFC) Standards
- Completely Integrated Protocol Handling for ISO 15693, ISO 14443A/B, MIFARE and FeliCa.
- Operation Voltage 5 Vdc.
- Module supports UID reading function, Mifare (APDU command) read/write or ISO 15693 read/write (NDEF format) in diVerent models
- Standard 50 Ohm Antenna Output Port
- UART or USB Interface, easy to change between those modes
- Antenna is option

# RFM811

## Applications

- Mobile Devices (Tablets, Handsets)
- Secure Pairing (Bluetooth, WiFi, Other Paired Wireless Networks)
- Public Transport or Event Ticketing
- Passport or Payment (POS) Reader Systems
- Product Identification or Authentication
- Medical Equipment or Consumables
- Access Control, Digital Door Locks
- Sharing of Electronic Business Cards

### • Physical Characteristics

|           |                                |
|-----------|--------------------------------|
| Dimension | 20 mm W x 3.0 mm H x 23.5 mm L |
|-----------|--------------------------------|

### • Electrical Characteristics

|                  |            |
|------------------|------------|
| Supply Voltage   | DC +5V ±5% |
| Power On (Max.)  | 90mA       |
| Operation (Max.) | 85mA       |

### • Performance

|                     |                                       |
|---------------------|---------------------------------------|
| Operating Frequency | 13.56 MHz                             |
| Compliance          | ISO14443 Type A & B                   |
|                     | ISO 15693                             |
|                     | Mifare                                |
|                     | Felica                                |
| Operating Distance  | Up to 50 mm (depends on the tag type) |

### • Model

| Model    | Function                    | 13.56 MHz                                    |
|----------|-----------------------------|--|
| RFM811   | Read Card UID only          | ISO14443 Type A & B /MIFARE, ISO15693/Felica |
| RFM811M  | Mifare read/write (APDU)    | MIFARE                                       |
| RFM811 I | ISO 15693 read/write (NDEF) | ISO15693                                     |

### • Environmental

|                       |                               |
|-----------------------|-------------------------------|
| Operating Temperature | 0°C to 50°C (32°F to 122°F)   |
| Storage Temperature   | -20°C to 70°C (-4°F to 158°F) |
| Relative Humidity     | 20% to 95% (Non-condensing)   |

### • Optional Support Kit

#### Antenna, with Various Size

Flat FPC (flexible printed circuitry) cable, to connect RFM811 and interface board

Interface Board (50 mm W x 5.7 mm H x 35 mm L) with output connector

USB or RS-232 Interface Cable, to connect interface board and host

Note: an adaptor to supply power to RS-232 interface cable is also available

Due to Champtek's continuing product improvement programs, specifications and features are subjected to change without prior notices.