

## NRM 723

Multi Protocol Reader/Writer Module   マルチプロトコルリーダー   ライタモジュール

- Operation mode        : PCD mode, P2P mode
- Protocol                : NFC-A/B/F, ISO/IEC 15693
- NDEF                    : Parser / Generator
- Highly Secured        : Embedded Secure Element and optionally SIM slot for Secure Element
- Application CPU        : ARM Cortex-M3
- Sub CPU for NFC        : EAL 4+ certified
- System I/F             : UART, USB [ power supplied by USB ]
- Antenna                : Built in / External
- Advantage              : Compact, thin, low-price

### Outline 概要

NRM 723 conforms to PICC / VICC / NFC related all ISO/standards and NFC Forum specifications and regulations.

And it also supports higher layer functions such as NFC handler NDEF handler and Cryptographic functions.

Our NFC handler provides simple API set, i.e. DETECT, READ, WRITE and AUTHENTICATE, independent from protocol and APDU/ TPDU.

So you can easily develop NFC based system on application CPU.

### Feature 特徴

#### **Compact design**

Following 2 types are available;

- 62mm x 45mm with SIM socket
- 30mm x 45mm

### **Highly Secured**

Embedded Secure Element SIM-formed Secure Element enabling cryptographic process applied to PICC authentication.

And SIM based Secure Element enabling customized security feature such as FeliCa.

### **Conforming to NFC related standards**

NFC-A : ISO/IEC 14443/18092, ISO/IEC 14443-4 and ISO/IEC 7816-4  
NFC-B : ISO/IEC 14443/21481 and ISO/IEC 14443-4 and ISO/IEC 7816-4  
NFC-F : ISO/IEC18092  
NFC Forum : NDEF, LLCP, SNEP, Tag related  
Android : NPP  
ISO/IEC 15693

### **Large data transfer**

NDEF generator and P2P handler enabling WiFi / Bluetooth handover.

### **Interface**

User system can be easily connected by USB or UART and peripheral can be controlled by SPI, I2C, GPIO, ADC and DAC.

### **Supply voltage5V**

### **PC/SC approved**

Conforming to CCID [ T = 0 ]

### **Product specification 製品仕様**

**NRM723**

**The radio law division:** authorized by Ministry of International Affairs and Communications.

**Carrier frequency:** 13.56MHz

**Operating temperature:** 0°C~+60°C

**Storage temperature:** -20°C~+70°C

**Main CPU:** ARM (STM32F1)

**Sub CPU:** EAL 4+ certified

**External interface:** USB 2.0 Full speed /UART(3.3V)

**SIM :** mini-SIM(class A) (class B will be available soon)

User Interface: Red and green LED

**Programmable I/F:** GPIO, ADC, DAC, SPI, I2C, UART

**Communication speed:** 9.6kbps.19.2kbps. 115.2kbps. 230.4kbps.460.8kbps

**Weight:** Standard:8g. Compact: 4g.

**Dimensions:** Standard 62x45x5mm, compact 30x45x5mm

**Voltage:** DC+5V

### **Application**    用途

- Micropayment terminal
- Personal Identification unit for MFP [ Multi Function Printer]
- Point-card terminal
- Gate system
- eID terminal
- Smart poster