SPECIFICATION

Description: SmartCard+NFC Reader Module

Model:AP-SCRNFCX-XX(X means 0-F, hexadecimal number)

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1. General Description

The 15KV_Smart Card_NFC module is a highly integrated transceiver module for contactless reader/writer communication at 13.56 MHz.

A dedicated Flash code is implemented to handle different RF protocols by an integrated microcontroller. The system host controller communicates with the 15KV_Smart Card_NFC module by using the USB link.

The protocol between the host controller and the 15KV_Smart Card_NFC module, on top of this physical link is the CCID protocol

2. Features

- High RF output power frontend IC for transfer speed up to 848 kbit/s
- NFC IP1 and NFC IP2 support
- Full NFC tag support (type 1, type 2, type 3, type 4A and type 4B, type 5)
- P2P active and passive, target and initiator
- Card emulation ISO14443 type A
- ISO/IEC 14443 type A and type B
- MIFARE classic card
- ISO/IEC 15693, and ISO/IEC 18000-3 mode 3
- Low power card detection
- Dynamic Power Control (DPC) support
- Compliance with EMV contactless protocol specification
- Compliance with NFC standards

3. Support the following operating modes:

- ISO/IEC 14443-A and B, MIFARE
- JIS X 6319-4 (comparable with FeliCa scheme)
- ISO/IEC 15693, ICODE, ISO/IEC 18000-3 mode 3
- NFC protocols - tag reader/writer, P2P
- ISO/IEC 14443- type A card emulation
- EMVCo compliance

4. System Requirements

- Desktop or notebook computer with a working USB port

- One of the following Operating Systems：
  - Windows® 2000
  - Windows® 2003 Server x32/x64
  - Windows® 2008 Server x32/x64
  - Windows Vista™ x32/x64
  - Windows® 7 x32/x64
  - Windows® 10 x32/x64

- Support by the following OS through the PCSC-Lite driver：
  - GNU/Linux using libusb 1.0.x and later
  - Mac OS Leopard (1.5.6 and newer)
  - Mac OS Snow Leopard (1.6.X)
  - Solaris
  - FreeBSD

5. General Specifications

- Bus-powered - +5V +/- 5%, 500mA

- Average Power Consumption
  - Standby Mode: 0.12Watt
  - Active/Read Card Mode: 0.24 Watt

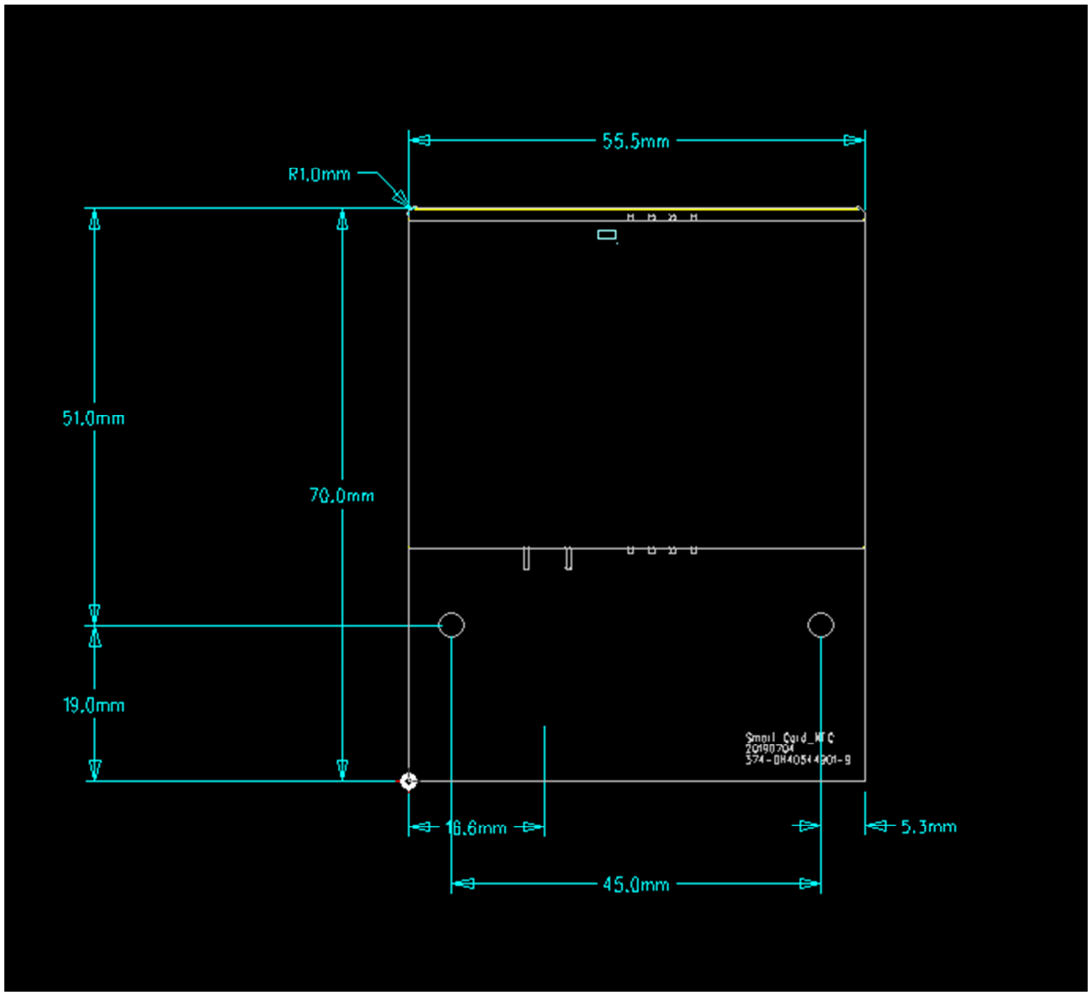
- Operational environment
  - Operating Temperature: -10°~60°
  - Operating Humidity: 10%~90%
  - Storage Temperature: -20°~70°
  - Storage Humidity: 10%~90%

6. Connector Pin List

J2 - Mainly USB Signals		
Pin No.	Pin Name	Input/Output
1	+5V	POWER
2	USB DM	USB SIGNAL
3	USB DP	USB SIGNAL
4	GND	POWER
5	GND	POWER

7. PCBA Dimension

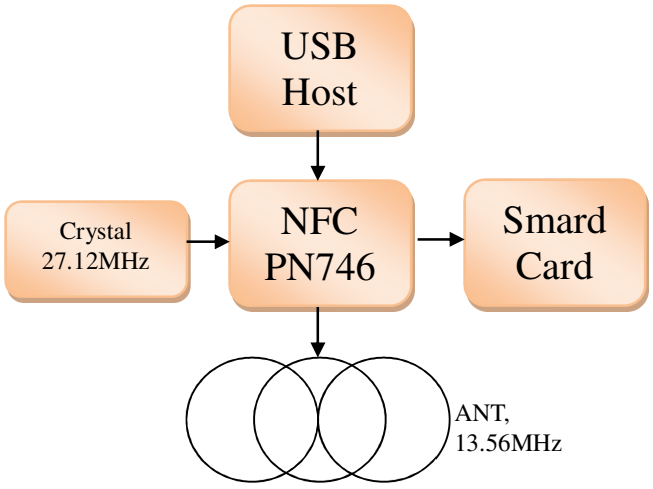
Main PCBA: 55 x 70 x 8 mm



8. USB Device VID/PID and Firmware Version

VID/PID: 0x1FC9/0x0102
F/W Ver: 0110

9. Block Diagram



10. V110G4 NFC module Photograph

Main PCBA

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.However, there is no guarantee that interference will not occur in a particular installation. If this equipment does

cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

The SmartCard + NFC Reader Module is designed to comply with the FCC statement. FCC ID is 2AWLWAP-SCRNFCX-XX. The host system using SmartCard + NFC Reader Module should have label indicated it contain modular’s FCC ID :2AWLWAP-SCRNFCX-XX . This radio module must not installed to colocate and operating simultaneously with other radios in host system additional testing and equipment authorization may be required to operating simultaneously with other radio.

The SmartCard + NFC Reader Module has integrated antenna on the PCB, users do not need to install additional antenna.

The SmartCard + NFC Reader Module and its antenna must not be co-located or operating in conjunction with any other transmitter or antenna within a host device.

Notice to OEM integrator

The SmartCard + NFC Reader Module is deaigned for a compact PCB design .It should be installed and operated with laptop.

OEM can install the module into the host through the module's USB port, but it should be noted that the module's swipe port needs to be correctly installed on the surface to ensure the normal operation of the NFC function.

The end user manual shall include all required regulatory information/warning as show in this manual. The OEM integrator is responsible for testing their end-product for any additional compliance requirements required with this module installed.

The device must be professionally installed

The intended use is generally not for the general public.lt is generally for industry/commercial use. The connector is within the transmitter enclosure and can only be accessed by disassembly of the transmitter that is not nomally required, the user has no access to the connector.Installation must be controlled. Installation requires special training

This device complies with Part 15, Subpart C, Section 15.225 of the FCC Rules.