



Dragon

User Manual

DUALi Inc.

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We have our development center in South Korea to provide technical support. For any technical assistance can contact our technical support team as below;

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Revision History

- 2012.05.03(Ver. 1.0) : First Distribution(JMN, HTY)

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1 Introduction

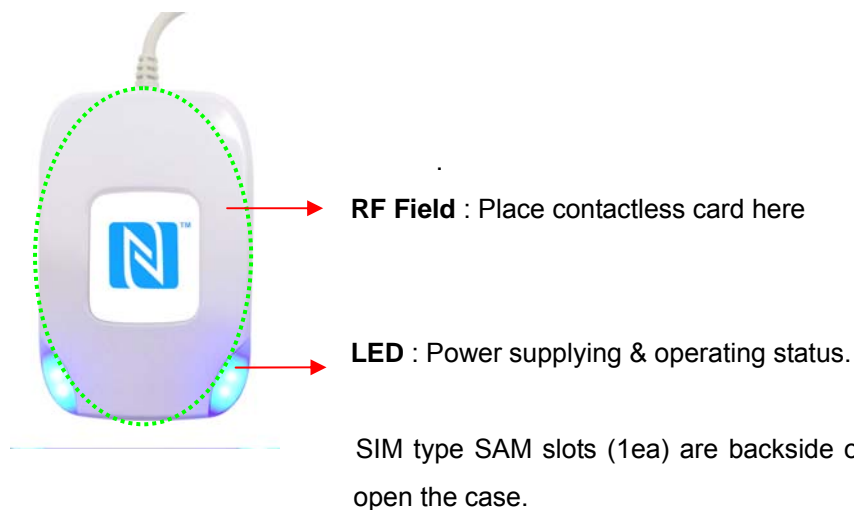
Dragon is contact-less Smartcard reader which supports 14443 TYPE-A/B, Mifare series, Felica and NFC (ISO18092) protocol at the same type. It also supports Contact cards (1 X SIM type slots) which comply with ISO 7816 for secured data transmission. Dragon is available as USB interface.

Following items are contents of Dragon



Dragon Device

Serial cable is available as option, plz contact to the sales person of DUALi.



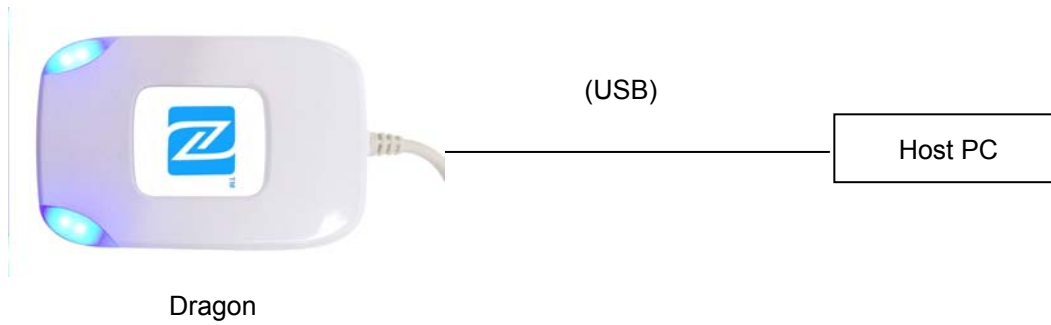
1.1 Hardware Specification

Smart Card Interface	Contactless Smart Card (ISO 14443 A/B), MIFARE, FeliCa, NFC Tag type 1,2,3,4 1 SIM slot for SAM Card (ISO7816, T=0,T=1)
Host Interface	USB 2.0 Full Speed (12Mbps) as default / RS232 (Optional, contact to DUALi for more information)
Host Communication	PC/SC or Vendor Protocol (must be decided with order)
CPU	ARM 32-bit Cortex-M3(48MHz) 128Kbytes Flash, 20Kbytes SRAM
Baud rate	106/212/424/848kbps Up to 424kbps for NFC P2P mode
Reading Distance	Max 5cm (depends on tag size and performance)
Input Voltage	5V (USB Bus powered)
Current	MAX 250mA
Connection	Direct USB Cable
Size	62(W) * 95(L) * 13(H)mm
Indicator	4 LEDES
Case	ABS
Antenna Matching	Direct matching
Operating Temperature	-10~60°C

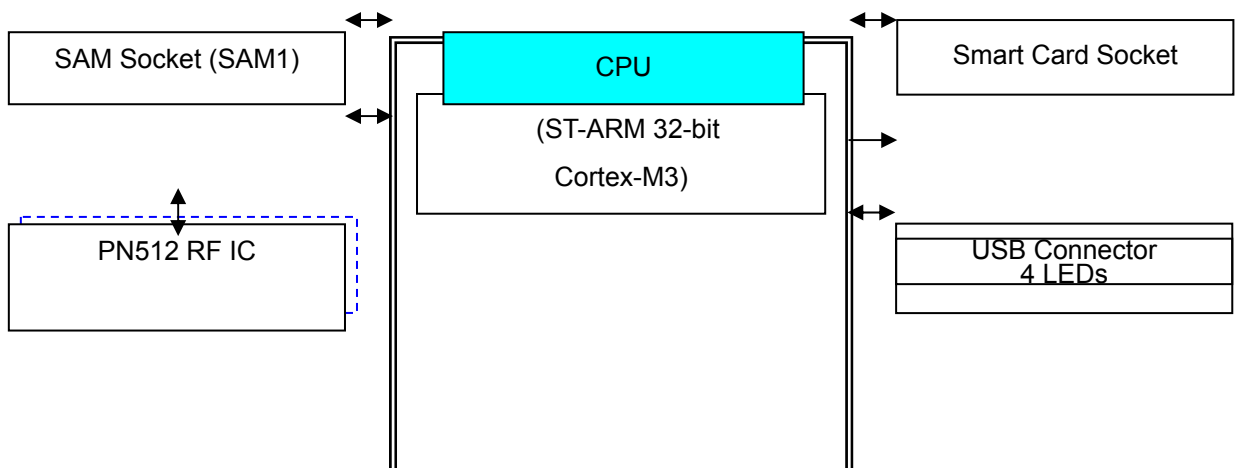
2 Structure

2.1 The Structure of equipment

- Dragon itself contains all circuits include antenna, 1 SAMs and connectors.



2.2 The block diagram of Dragon



3 Description of Surface

3.1 The picture of device surface

- N mark on top of the surface could be removed or replaced to requested logo for OEM.



3.2 Communication Cable

- Direct USB cable

3.3 The size of terminal

- Dragon :62(W) * 95(L) * 13(H)mm

4 Description of Electricity

4.1 The Description of power

- Input power : 5V (USB Bus Powered)

4.2 The using electric current

- Normal 5V, 120mA under
- MAX 5V, 250mA under

4.3 The Description of USB communication

- USB V2.0 FULL SPEED (12Mbps)

5 Description of Function

5.1 Protocol Specification

Refer to protocol specification for detail function. (provide on request)

5.2 Control Code Specification (for USB PCSC version only)

Refer to control code specification for detail function. (provide on request)

5.3 Firmware Download

Refer download manual. (provide on request)

6 Property

6.1 Operating Condition

- Temperature to use : -10 ~ 60 °C
- Humidity to use : 30 ~ 90 % (relative humidity)

6.2 Storage Condition

- Temperature to keep : -20 ~ 80 °C
- Humidity to use : 30 ~ 90 % (relative humidity)

7 Warning and Notice

- For indoor use only.
- This product is affected by an element like metal or Magnetism. So one has to take precautions.
- This device is not waterproof.

EU

This product is CE marked according to the provision of the R&TTE Directive (99/5/EC).

Here by DUALi Inc. declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

CE 1177

FCC STATEMENT

CAUTION: 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.

Warranty & Service

▸ Warranty and Repair service

- DUALi Inc. warrants to the original consumer or other end user that this product, Dragon, is free from defects in materials and workmanship for a period of 1 year from the date of purchase (shipment date).

※ **Note** Warranty/non-warranty repair fees do not include any shipping charges.

▸ The damages (defaults) prescribed below are NOT to be covered by warranty.

- User's misuse of part/component.
- Fault by the unqualified user's own intention of repairs.
- Product's inspection requirement.
- Adding certain functions or extension of system.
- Fault by User's misuse against the product's manual.

***Please contact our service team for the technical/ sales supports.**

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