



## DE-620L 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;

Tel: +82 31 213 0074

e-mail : [duali@duali.com](mailto:duali@duali.com)

## **Revision History**

- 2009.12.03(Ver. 1.0) : First Release
- 2010.12.27(Ver 1.01) : Introduction updated

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



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.

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## 1 Introduction

DE-620 is dual-interface Smartcard reader which supports 14443 TYPE-A/B, ISO 15693 and Felica RF protocol at the same type. It also supports Contact cards (1 X ID1 type contact slot, 2 X SIM type slots) which comply with ISO 7816. DE-620L is available as 2 versions by interface method (USB).

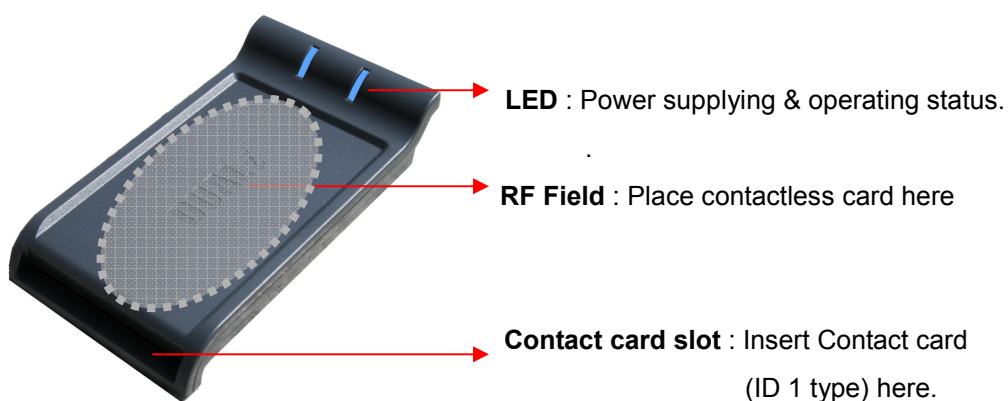
Following items are contents of DE-620L.



❶ DE-620L Device

❷ Mini USB Cable

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



SIM type SAM slots (2ea) are backside of the device when you open the case.

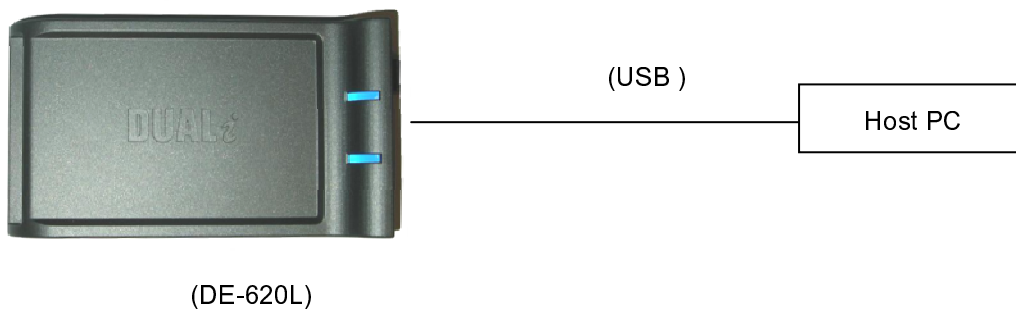
## 1.1 Hardware Specification

Smart Card Interface	Contactless Smart Card (ISO 14443 A/B), FeliCa ISO 15693 1 Contact Card and 2 SAM Card (ISO7816, T=0,T=1)
Host Interface	USB 2.0 Full Speed (12Mbps), also support USB 1.1
Host Communication	PC/SC or Proprietary(USB
CPU	ARM 32-bit Cortex-M3(48MHz), 64Kbytes Flash, 20Kbytes SRAM
Input Voltage	5V (USB Bus powered) 7.5V 200mA Adaptor (not use over 9V adaptor)
Current	MAX 300mA
Connection	Mini USB or 2mm * 4pin for USB
Size	70(W) * 45(L) * 8(H)mm
Antenna Matching	Direct matching
Operating Temperature	-20~55°C

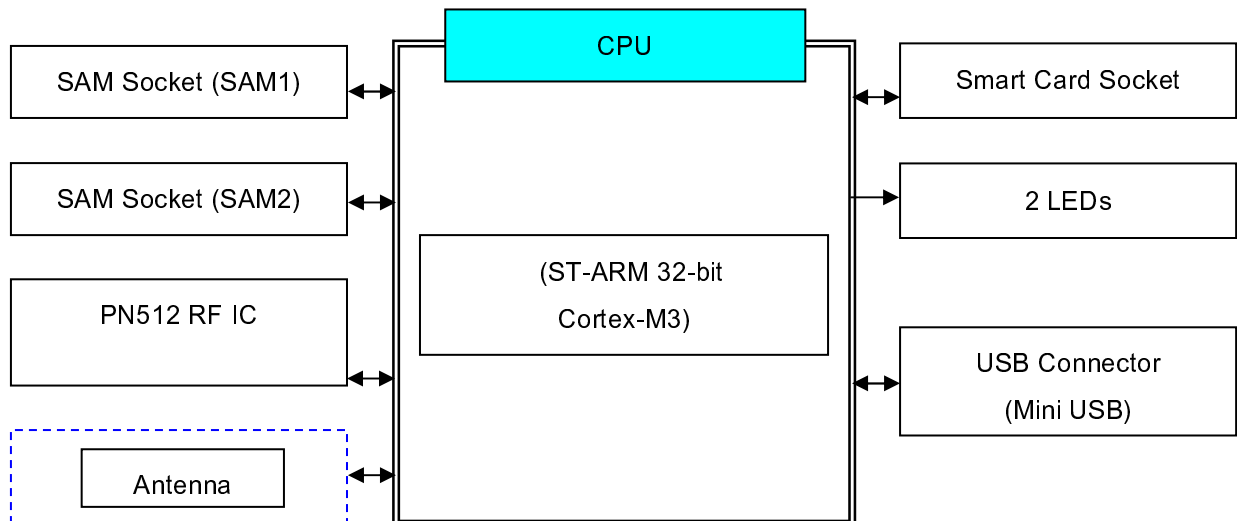
## 2 Structure

### 2.1 The Structure of equipment

- DE-620L itself contains all circuits include antenna, 2 SAMs and connectors.
- User can order USB



### 2.2 The block diagram of DE-620L





### 3 Description of Surface

#### 3.1 The picture of device surface



#### 3.2 Communication Cable

- USB Version : USB cable
  - Default – 5 line without connector (temporarily 4 line[2009 version])
  - Option1 (DB9 and USB A type for 5V power) – **extra cost**
  - Option2 (DB9 and DC jack for 7.5 Voltage Adaptor) – **extra cost**

#### 3.3 The size of terminal

- DE-620L :68(W) \* 120(L) \* 30(H)mm

## 4 Connector Pin Assignment

### 4.1 USB Connector

[J4] (4Pin mini USB) -> PC USB Port

Pin No.	Description
1	VCC(DC5V)
2	USB D-
3	USB D+
4	GND

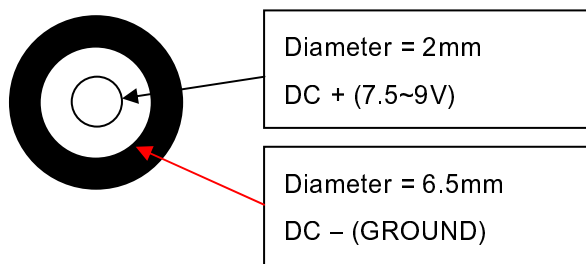
- One uses USB 5V power of Computer and the other uses Adaptor.



<USB Powered>



<Adaptor Powered>



<Adopter jack specification>

## 5 Description of Electricity

### 5.1 The Description of power

- Input power1 : 5V (USB Bus Powered, not support at 2009 version)
- Input power2 : 7.5V Adaptor (higher than 200mA)

### 5.2 The using electric current

- Normal 5V, 150mA under
- MAX 5V, 200mA under

### 5.3 The Description of USB communication

- USB V2.0 FULL SPEED (12Mbps)

## 6 Description of Function

### 6.1 Protocol Specification

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

### 6.2 Control Code Specification (for USB PCSC version only)

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

### 6.3 Firmware Download

Refer download manual. (provide on request)

## 7 Property

### 7.1 Environment to use

- Temperature to use : -20 ~ 55 °C
- Humidity to use : 30 ~ 90 % (relative humidity)

### 7.2 Environment to keep

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

## 8 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.

\* Please see "Install driver" document and follow the steps once you first install DE-620L with your PC.

## **Warranty & Service**

▸ Warranty and Repair service

- DUALi Inc. warrants to the original consumer or other end user that this product, DE-620L, is free from defects in materials and workmanship for a period of 1 year from the date of purchase.

※ **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.**

**DUALi Inc.**

**1-308/310 Innoplex, 552 Wonchoen-dong, Youngtong-gu,  
Suwon, Gyeonggi-do, Korea (zip: 443-380)**

**Tel : +82 31-213-0074**

**Fax : +82 31-213-0078**

**E-mail : duali@duali.com**

**Web-site : <http://www.duali.com>**