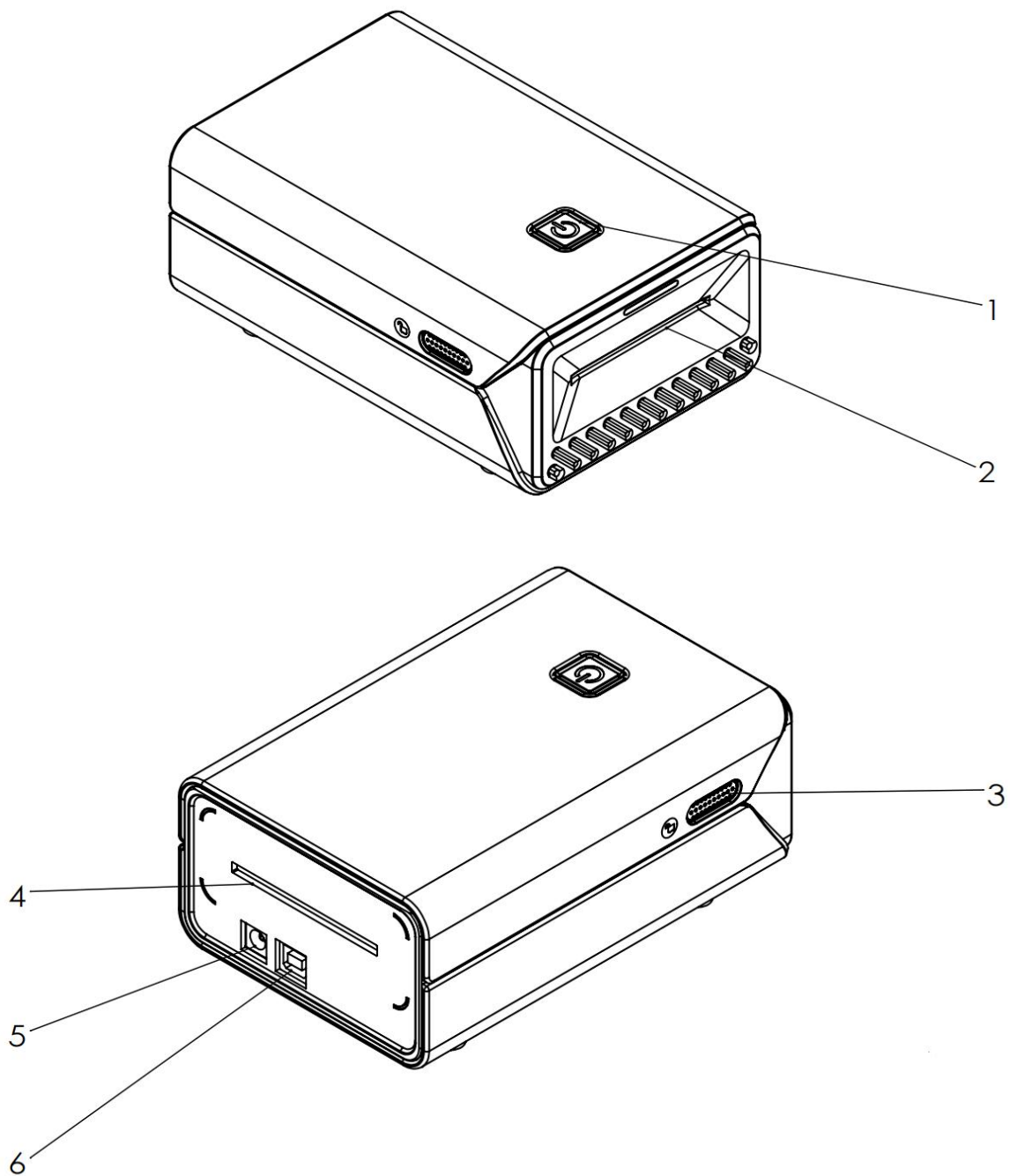# CRT-603-7200
ID Card Reader Specification

1 Product components

1－ scanning button

2－ card entrance

3－ top cover switch

4－ card exit

5－ DC24V

6－ USB

Warning: Prohibit the use of DC 14V or higher voltage to avoid damage to the device.

2 Product model

CRT-603-7200-X001

3 Main features of the product

The product is mainly for the card scanning and archiving as well as document reading, with the industry to carry out the work of identity verification needs to gradually improve, this equipment is widely used in finance, insurance, telecommunications, hotels, Internet cafes and other industry units.

1) Support thickness of 0.78mm ~ 1.2mm cards, front and back double-sided 600DPI scanning;

2) Support scanning picture type R G B color, infrared light and UV light picture can be optional;

3) Support front-end card in and card out, support back-end card out;

4) Support ISO/IEC 14443 A and ISO/IEC 14443 B protocol card reading and writing;

5) Can be customized to support compliance with ICAO-9303 specification card documents chip data reading;

6) Can be used as a stand-alone machine directly connected to a computer on the desktop;

7) The product supports Windows, Linux and Android system (need to be customized), through the SDK for secondary development;

8) The product is designed with upper and lower lids, which is convenient for regular cleaning of the card reader rubber wheel and CIS tube;

3.1 Card drive function

Motor drive mode: Support front-end card in and card out, support back-end card out;

Rubber wheel drive card method.

3.2 Scanning function

Sensor type: CIS (Contact Image Sensor)

Supporting R G B color

Support for IR light (optional)

Supports UV light (optional)

Scanning speed:　　　Image scanning speed >120mm/s

Image scanning time <2.5s

3.3 Communication

USB 2.0　　　　　High-speed USB communication;

Interface　　　　　USB-B interface;

3.4 Applicable cards

Support scanning type:　　　 Front and back double-sided scanning;

Support card specifications:　　Thickness: 0.76mm~1.2mm.

Length: 84mm~86mm;

Width:53.6mm~54.2mm.;

3.5 Image scanning

Output image format:　　　Support BMP, JPG format image output.

Image Output Processing:　　 Support output image cropping; specific images automatically rotate positive;

Output Image Resolution:　　Support 600dpi image output.

Output picture color:　　　Support RGB color picture output;

Support infrared light output (optional).

Support UV light output (optional).

3.6 Card position description

Card driving position:　　　Front-end card holding position, RF card reading operation position; rear-end card holding position

Card Scanning Action Description:　　From the RF operating position to the back-end card-carrying position.

3.7 Standard of Identity and read/write card

Read/write card: Support ISO/IEC 14443 A type card reading and writing

Supports ISO/IEC 14443 B type card reading and writing.

Other national IDs: Can be customized to support the reading of ICAO-9303 compliant IDs.

3.8 Support system

Windows: Windows 7/Windows 8/Windows 10

Test DEMO and secondary development via SDK are available

Linux: Test DEMO and secondary development via SDK are available.

4 General specifications

4.1 Size

Dimensions:148mm×98mm×62mm (L*W*H) For details, please refer to the product structure dimension drawing.

4.2 Weight

Net weight approx. 640g (excluding accessories and packaging)

4.3 Power supply

1) Operating Voltage: DC12V ±5%

2) Power ripple: < 200mV

3) Operating Current: Static Current:<150mA

   Operating current:<400mA

   Peak current:<600mA

4.4 Communication

1) Communication standard: High-speed USB 2.0

2) Communication cable length: USB cable length < 2m

5 Environmental conditions

5.1 Operating temperature and humidity

5～45 ℃, 20% ～ 80%RH

5.2 Storage temperature and humidity

-20 ℃ ~ +60 ℃, 20% ~ 80%RH

Note: The card machine is not in working condition during storage.

-20 ℃ storage time less than 24 hours ℃

60 ℃ storage time less than 96 hours

5.3 Anti-vibration

Frequency range: 5～50Hz;

Acceleration: 2m/s2 (0.2G).

Vibration direction and vibration time: 15 minutes in each direction of X, Y and Z.

Amplitude: 2mm.

All functions are not affected after vibration.

5.4 Impact resistance

Acceleration:294m/s2(30G),11ms.

X,Y,Z three directions once in each direction.

All functions are not affected after impact. (Reader without packaging)

6   Lifetime

6.1 Whole machine lifetime

30,000 card drives

(card travelling from front to back and back to front in the reader counts as one drive)

6.2 Main components lifetime

CIS scanning tube:	500,000 times
Drive motor:	500,000 times
Drive gear :	300,000 times
Rubber wheel friction drive :	300,000 times
Contactless IC card :	500,000 times

7 Reliability

7.1 Contactless card reading error rate

Error rate: <1/100

Test condition: Normal temperature (15~25℃, 35~60%RH)

Test Method: 1 working cycle/10s

7.2 MTBF

Greater than 200,000 hours (electronics only)

7.3 Maintenance requirements

1) Channel and optical sensor maintenance

2) CIS tube cleaning maintenance

3) Drive mechanism maintenance

8 Bending card passability

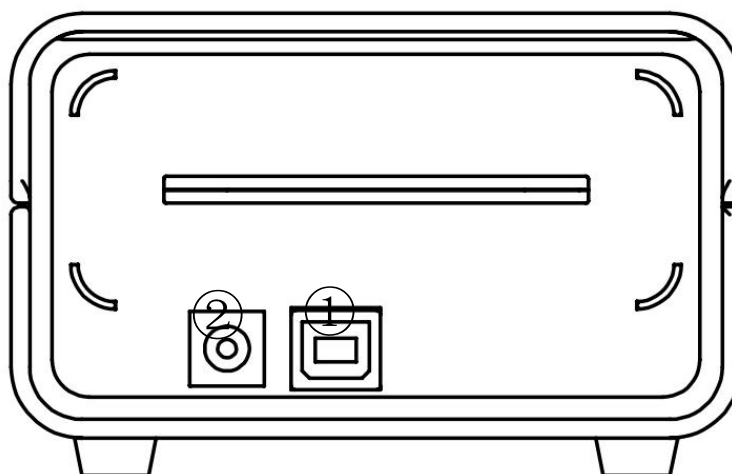Uniform deformation height of bending card H less than 2mm

1) Deformation height H less than 1.0mm Cards can go in and out of the card machine normally.

2) The deformation height H is less than 2.5mm, affecting scanning or clogging the drive.

9 Electrical interface

USB communication interface and power supply interface, external interface

9.1 USB communication port

1) Standard A to B USB data communication cable

Pin	Signal	Input/Output	Function
1	Vbus	--	USB Power
2	D-	I/O	USB Data(-)
3	D+	I/O	USB Data(+)
4	SGND	--	Singal ground
5	PGND	--	Cover ground

9.2 **Power connection**

Power adaptor 12V 2A 24W   5.5*2.5

10 Product outline drawing

GRG Intelligent Technology Solution Co.,Ltd.
www.GRGintech.com