



# **CRT-603-9001 series**

# **CRT-603-9002 series**

## **Passport reader**

## **Product manual**



(CRT-603-900X-N001)



(CRT-603-900X-N002)

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	Creator Product Specification	Model No.	CRT-603-900x-Nxxx-S
		Ver.	1.2

## Version Profile

Version	Completed	Descriptions
1.2	2024.08.28	Unified model merging into one specification manual
1.1	2024.06.08	Supplementary 2D drawing of models 9001/9002-N002 with light shield
1.0	2024.06.05	Standardization of the first version format



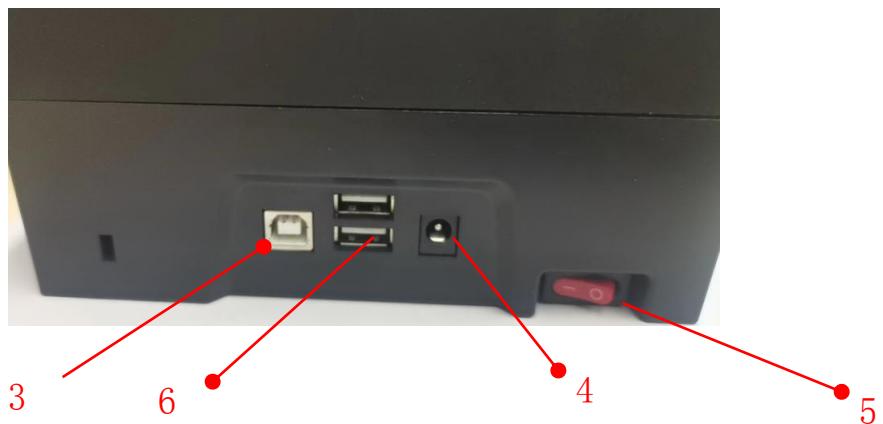
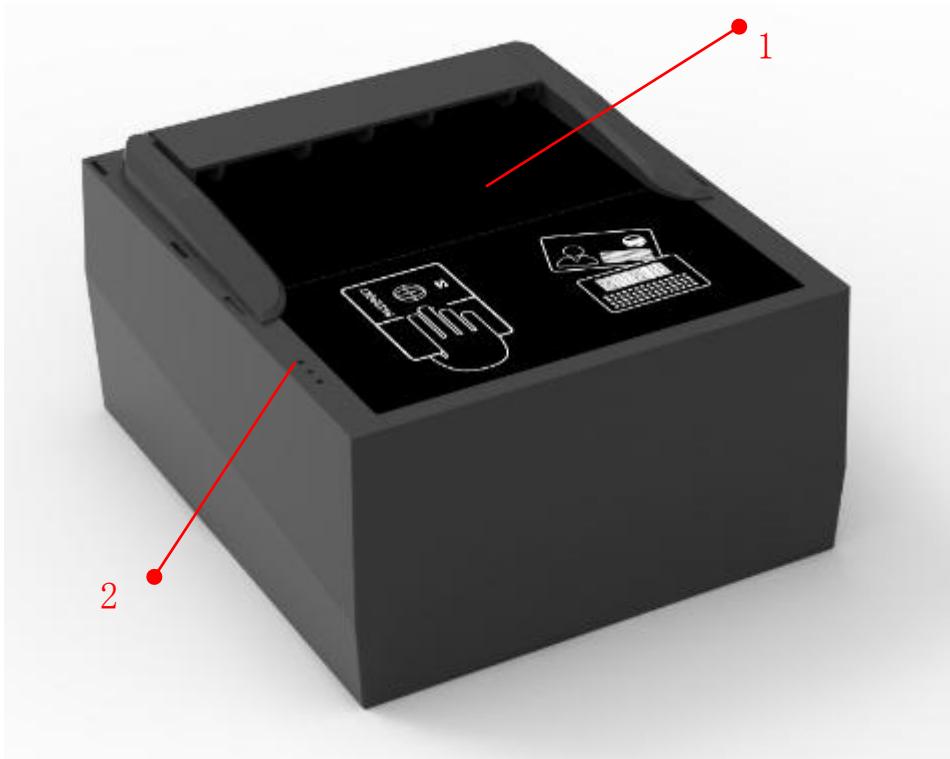
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## 1 Product Composition

Composition of CRT-603-900X-N001 Passport Reader:



1- Passport and document reading area

2- Indicator light

3- USB to host communication interface

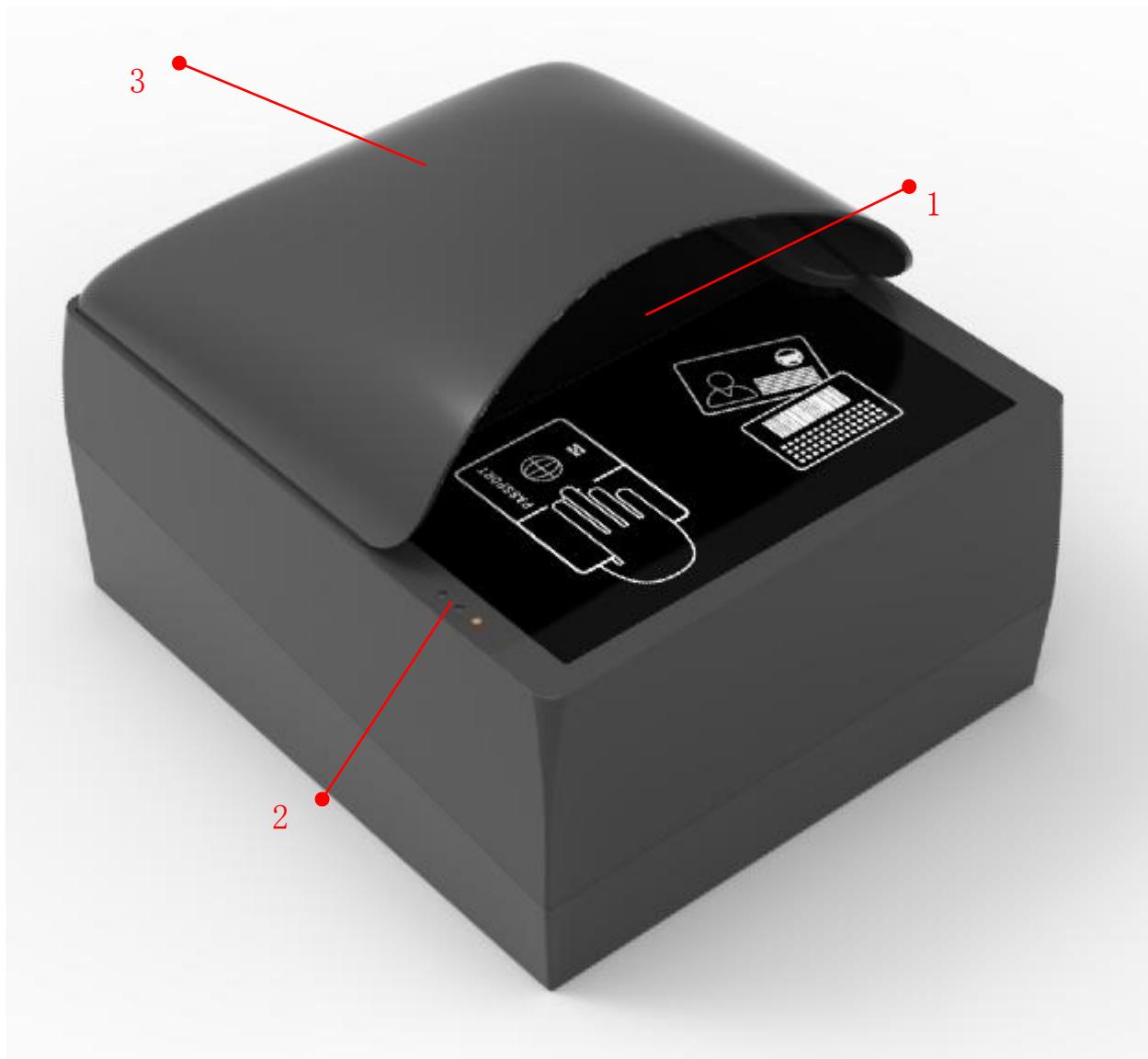
4- DC12V power supply interface

5- Power supply switch

6- Expand USB slave interface



Composition of CRT-603-900X-N002 Passport Reader:



1 - Passport and Document Reading Area

2 - Indicator light

3 - Light shield

**Attention: Do not use DC voltage above 16V to avoid damaging the equipment**

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## 2 Product model

1	CRT-603-9001-N001	The light source supports two types of light sources: visible light and infrared light
2	CRT-603-9002-N001	The light source supports three types of light sources: visible light, infrared light, and ultraviolet light
3	CRT-603-9001-N002	Equipped with a light shield, the light source supports two types of light sources: visible light and infrared light
4	CRT-603-9002-N002	Equipped with a light shield, the light source supports three types of light sources: visible light, infrared light, and ultraviolet light

## 3 Main features of the product

CRT-603-900x has a compact and beautiful appearance, equipped with a high-definition imaging system, and uses unique OCR technology to support detection of various travel documents both domestically and internationally, easily achieve instant recognition upon shooting; It can read electronic passports, visas, driver's licenses, ID cards and other travel documents that comply with the International Civil Aviation Organization (ICAO) 9303 standard. It supports automatic sensing and triggering of documents, and easy to operate. It is very suitable for application in border checkpoints, customs, airports, immigration management bureaus and other places.

- 1) Electronic passport chip recognition, capable of reading travel documents such as passports, visas, etc. that comply with the International Civil Aviation Organization ICAO 9303 electronic passport international standard;
- 2) Multiple document recognition (OCR), recognizing MRZ codes that comply with ICAO 9303 document standards;
- 3) 5-megapixel high-definition imaging with a physical resolution of 400dpi, meeting users' image archiving needs;
- 4) The electronic passport reader supports multiple light sources, including visible light image acquisition, infrared light recognition, and UV light;

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- 5) The product supports SDK for secondary development,
- 6) Automatic triggering, convenient for user operation, suitable for automatic and self-service fields,
- 7) Compact body, can be used as an internal module embedded in terminal devices,
- 8) Optional models with light shields

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### 3.1 CRT-603-9001 product specification

Items	Description
Image acquisition	Data acquisition area 130 * 100 mm Sensor CMOS 5-megapixel (2048 * 1536), resolution 400 DPI
light source	2 types of light sources: visible light, infrared 850nm
Electronic passport / card reading	Supports ISO 14443 Type A/B cards Supports ICAO9303 standard electronic passport/card reading, communication speed support, 424/848kbit/s Support Basic Access Control (BAC) for electronic passports Support passive authentication of electronic passports to verify the authenticity of document information Support active authentication of electronic passports to verify the authenticity of the document chip Reading time ≤ 3 seconds (depending on ID type, Host)
Support ID types	Support ICAO 9303 standard electronic ID documents Reading time ≤ 3 seconds (depending on ID type, Host)
Automatic triggering	Support automatic sensing of identification documents to trigger document recognition
Operating system support	Support Windows 7/Windows 8/Windows 10 /Windows 11 Support Linux
SDK	SDK secondary development package support
Communication interface	USB 2.0 HS, USB cable length ≤ 3m Built in USB-HUB expanding 2 interfaces, allowing for the connection of other USB devices
Body size/weight	(1) 194mm×170mm×93 mm, weighing approximately 800g (2) 194mm×170mm×143 mm (equipped with a light shield), weight approximately 900g
Power supply	Use external standard power adapter, power adapter specifications:



	<p>Input AC 100~240V 50-60Hz 0.8A</p> <p>Output DC 12V 2A</p>
Operation environment	<p>Humidity: 20% to 95% (no condensation at relative humidity)</p> <p>Temperature: -10 ° to 50 ° C for operation, storage from -20 ° C to 50 ° C</p>

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### 3.2 CRT-603-9002 product specification

Items	Description
Image acquisition	Data acquisition area 130 * 100 mm Sensor CMOS 5-megapixel (2048 * 1536), resolution 400 DPI
light source	Multi band light source: visible light, infrared 850nm, ultraviolet UV 365nm
Electronic passport / card reading	Supports ISO 14443 Type A/B cards Supports ICAO9303 standard electronic passport/card reading, communication speed support, 424/848kbit/s Support Basic Access Control (BAC) for electronic passports Support passive authentication of electronic passports to verify the authenticity of document information Support active authentication of electronic passports to verify the authenticity of the document chip Reading time ≤ 3 seconds (depending on ID type, Host)
Support types of travel documents	Support ICAO 9303 standard electronic ID documents Reading time ≤ 3 seconds (depending on ID type, Host)
Automatic triggering	Support automatic sensing of identification documents to trigger document recognition
Operating system support	Support Windows 7/Windows 8/Windows 10 /Windows 11 Support Linux
SDK	SDK secondary development package support
Communication interface	USB 2.0 HS, USB cable length ≤ 3m Built in USB-HUB expanding 2 interfaces, allowing for the connection of other USB devices
Body size/weight	(1) 194mm×170mm×92~103mm, weighing approximately 800g (2) 194mm×170mm×106.5mm (equipped with a light shield), weight approximately 900g
Power supply	Use external standard power adapter, power adapter specifications:

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	<p>Input AC 100~240V 50-60Hz 0.8A</p> <p>Output DC 12V 2A</p>
Operation environment	<p>Humidity: 20% to 95% (no condensation at relative humidity)</p> <p>Temperature: -10 ° to 50 ° C for operation, storage from -20 ° C to 50 ° C</p>

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## 4 Overall specifications

### 4.1 Product appearance (see 2D diagram for details)

Product dimensions: 194mm×170mm×92~103mm (Length \* Width \* Height)

194mm×170mm×143mm (N002 model equipped with light shield)

### 4.2 Product weight

N001 : Net weight 800g (excluding accessories and packaging)

N002 : (model equipped with light shield), weight approximately 900g

### 4.3 Power supply specifications

1) Working voltage: DC12V ±5%

2) Power ripple: < 200mV

3) Working current: Idle current : < 150mA

Working current : <1500mA

### 4.4 Communication mode

USB 2.0 HS

USB B-type socket

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## 5 Product adaptability

### 5.1 Working temperature and humidity

5~45°C, 20% ~ 80%RH

### 5.2 Storage temperature and humidity

-20°~ +60°, 5% ~ 95%RH In storage state, the reader does not work

-20° Storage time <24 hours

60° Storage time <96 hours

## 6 Reliability

### 6.1 Contactless card reading error rate

Error rate: <1/1000

Test conditions: Suitable for normal temperature (15~25°C, 35~60%RH)

Testing method: 1 work cycle /10s

### 6.2 MTBF

>100,000 hours

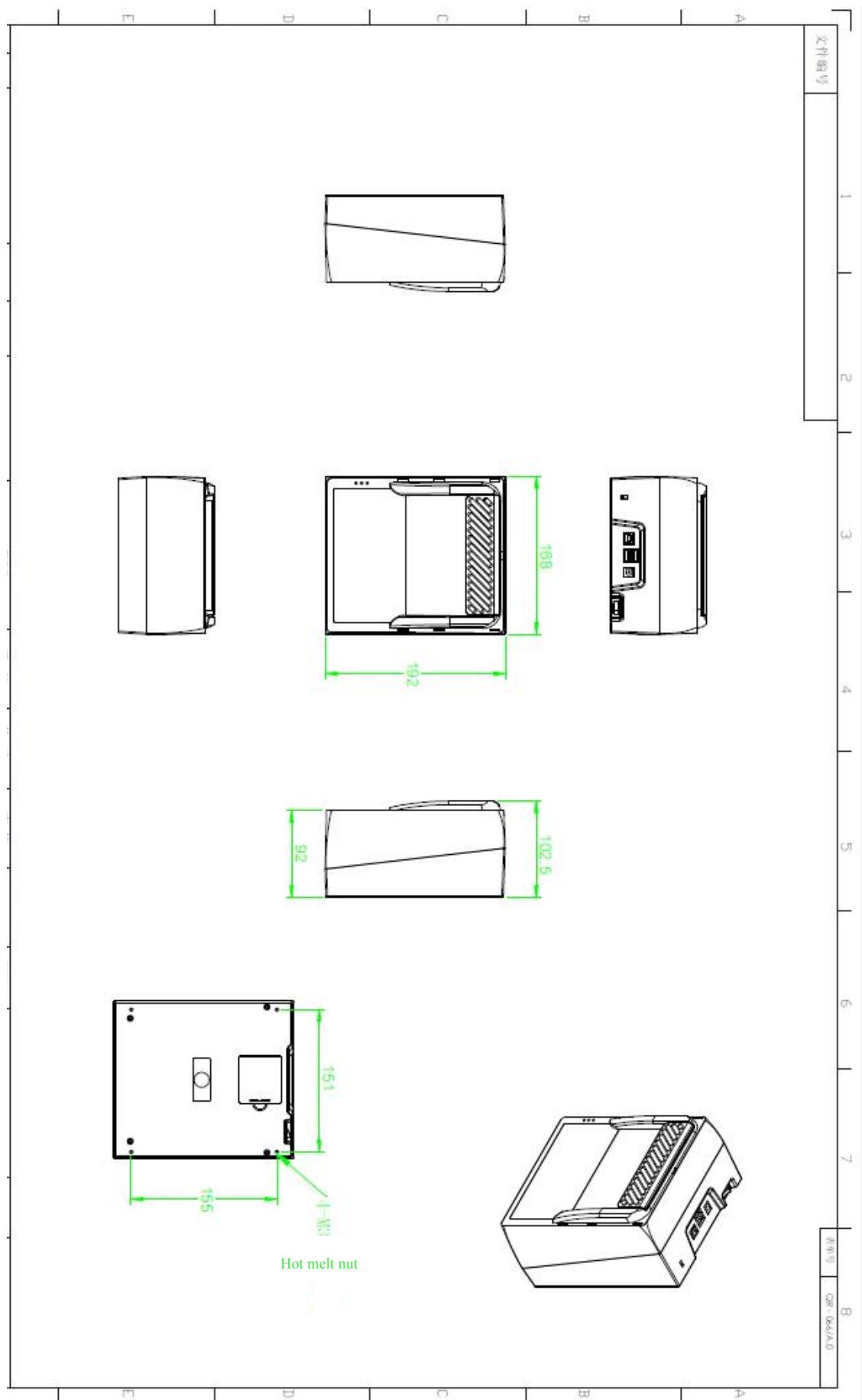
### 6.3 Maintenance requirements

- 1) Clean the glass surface during the card reading operation
- 2) Clean appearance



## 7 Product structure dimension diagram

CRT-603-900X-N001





CRT-603-900X-N002

