



# **CRT-603-9001 series CRT-603-9002 series Passport reader Product manual**



(CRT-603-900X-N001)



(CRT-603-900X-N002)

Proposed by: Ku Wenmin

Reviewed by: Li Tianming

Standardization: Hu Jing

Approved by: Feng Bin

**Creator (China) Tech Co., Ltd.**

**Address: 8/F, Block T3, Hualian City Business Center, No.1001 Nanshan Road, Nanshan District, Shenzhen, Guangdong, China.**

**Tel: +86-755-26710992**

**Fax: +86-755-26710105**

**[Http://www.china-creator.com](http://www.china-creator.com)**



## 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



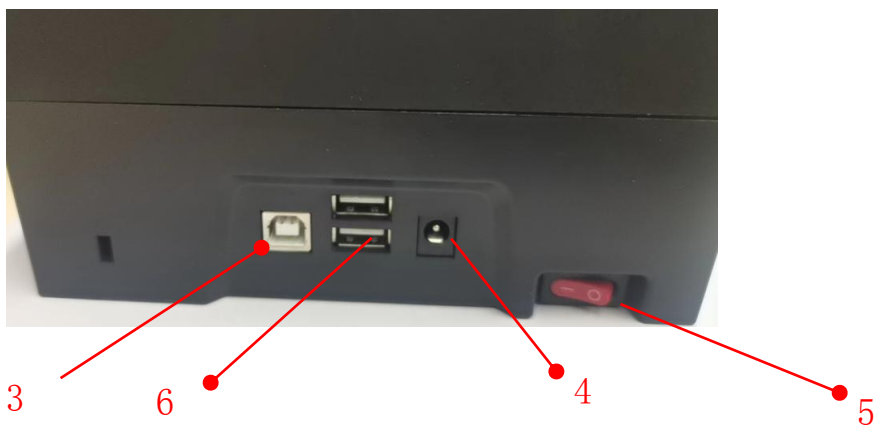
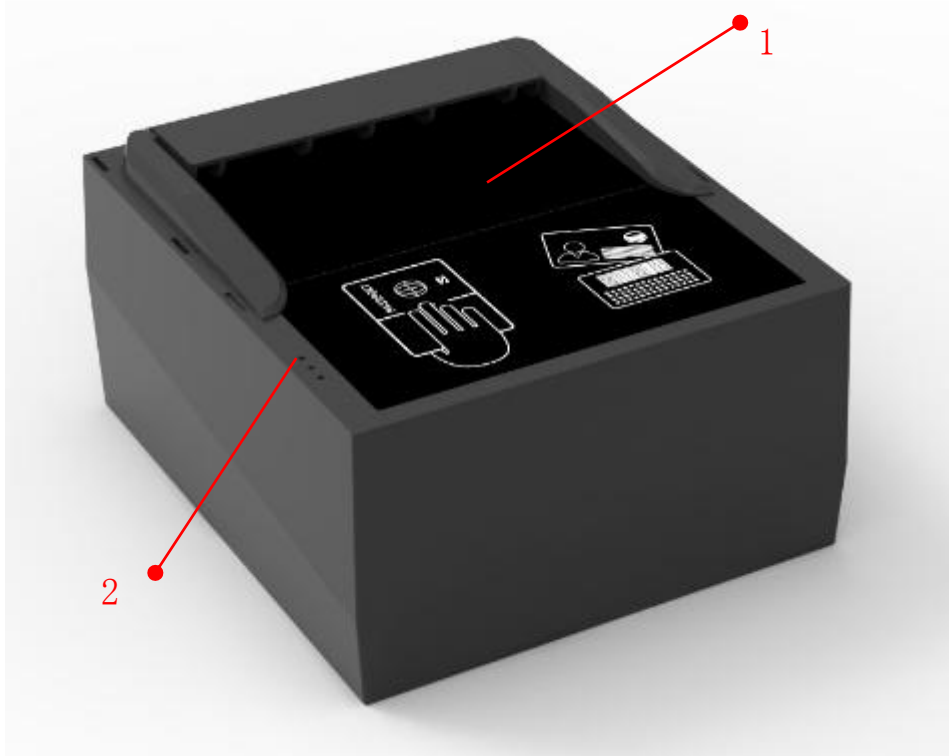
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# 1 Product Composition

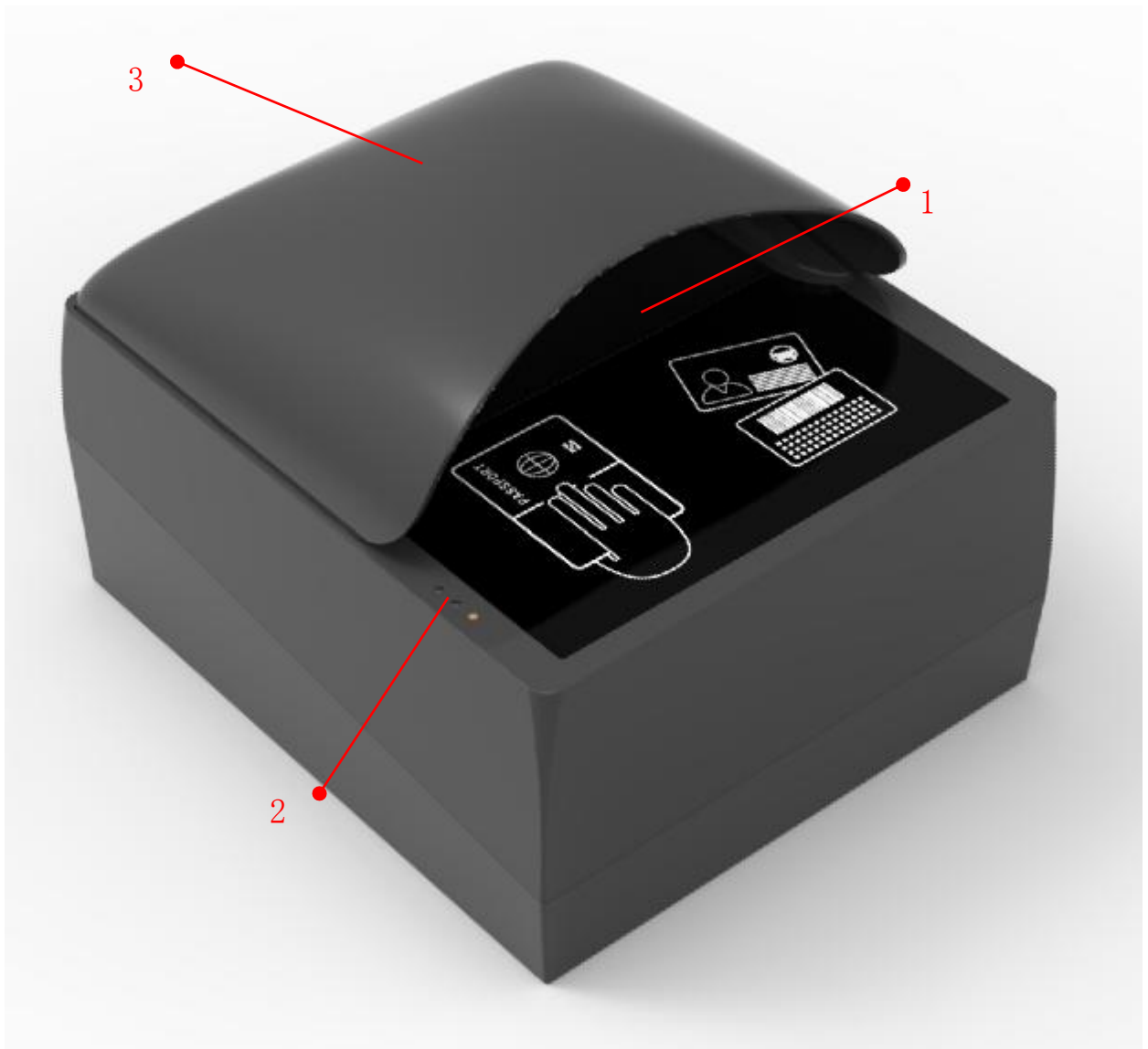
Composition of CRT-603-900X-N001 Passport Reader:



- 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**



## 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;



- 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



### 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:



# Creator Product Specification

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

	Input AC 100~240V 50-60Hz 0.8A Output DC 12V 3A
Operation environment	Humidity: 20% to 95% (no condensation at relative humidity) Temperature: -10 ° to 50 ° C for operation, storage from -20 ° C to 50 ° C





### 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:



# Creator Product Specification

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

	Input AC 100~240V 50-60Hz 0.8A Output DC 12V 3A
Operation environment	Humidity: 20% to 95% (no condensation at relative humidity) Temperature: -10 ° to 50 ° C for operation, storage from -20 ° C to 50 ° C





## 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



## 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

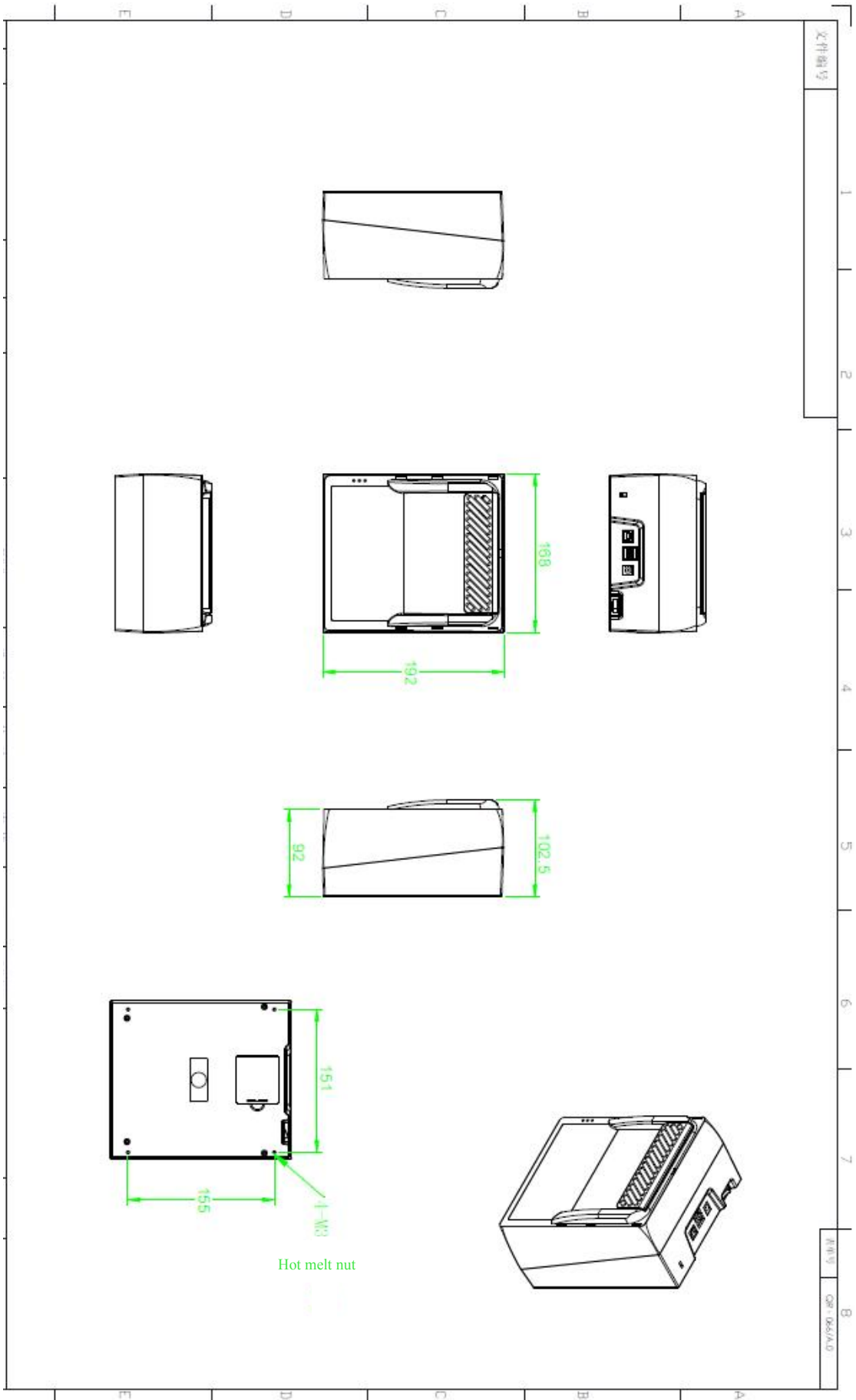
- 1) Clean the glass surface during the card reading operation
- 2) Clean appearance



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

## 7 Product structure dimension diagram

CRT-603-900X-N001



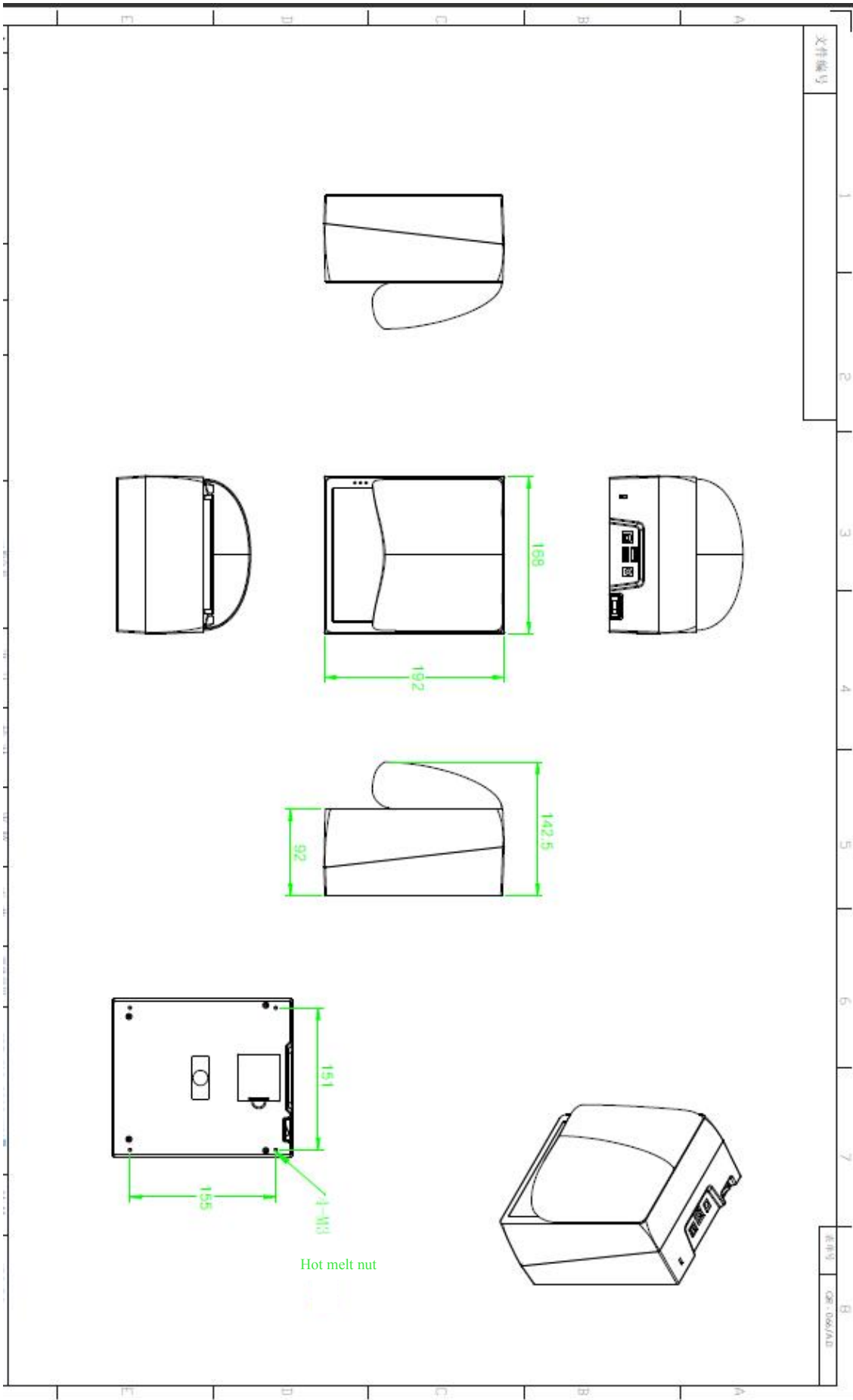


# Creator Product Specification

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

CRT-603-900X-N002





## Warning

- 1) The product shall only be connected to a USB interface of version USB2.0
- 2) Please use common USB Cable or original charger, Otherwise, It may result to danger. When you use a charger for charging, adapter shall be installed near the equipment and shall be easily accessible.
- 3) This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 20cm must be maintained between the user's body and the handset, including the antenna.
  
- 4) This product can be used across EU member states.
  
- 1) NFC frequency range: 13.56MHz, Maximum H-field: 25.28dBuA/m for 10m

RED 2014/53/EU

Declaration Of Conformity

This product can be used across EU member states .

Hereby, **CREATOR (CHINA) Tech co.,ltd** declares that this **Passport Reader** is in compliance with the essential requirements and other relevant provisions of directive 2014/53/EU.

#### FCC Warning

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.

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.

#### Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.