CRT-591-MR01-EBNJ SPECIFICATION

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REVISION HISTORY RECORD

Version	Date	Content
1.0	2013.07.02	First time release

● <u>Thanks for selecting products of Creator-China</u>

<u>Please read the manual carefully before using</u>

Main structure：

Stacker

Adjustment button

Reader component

Dispense component

Reader component

Main board

Push card motor

Transfer motor

Bezel
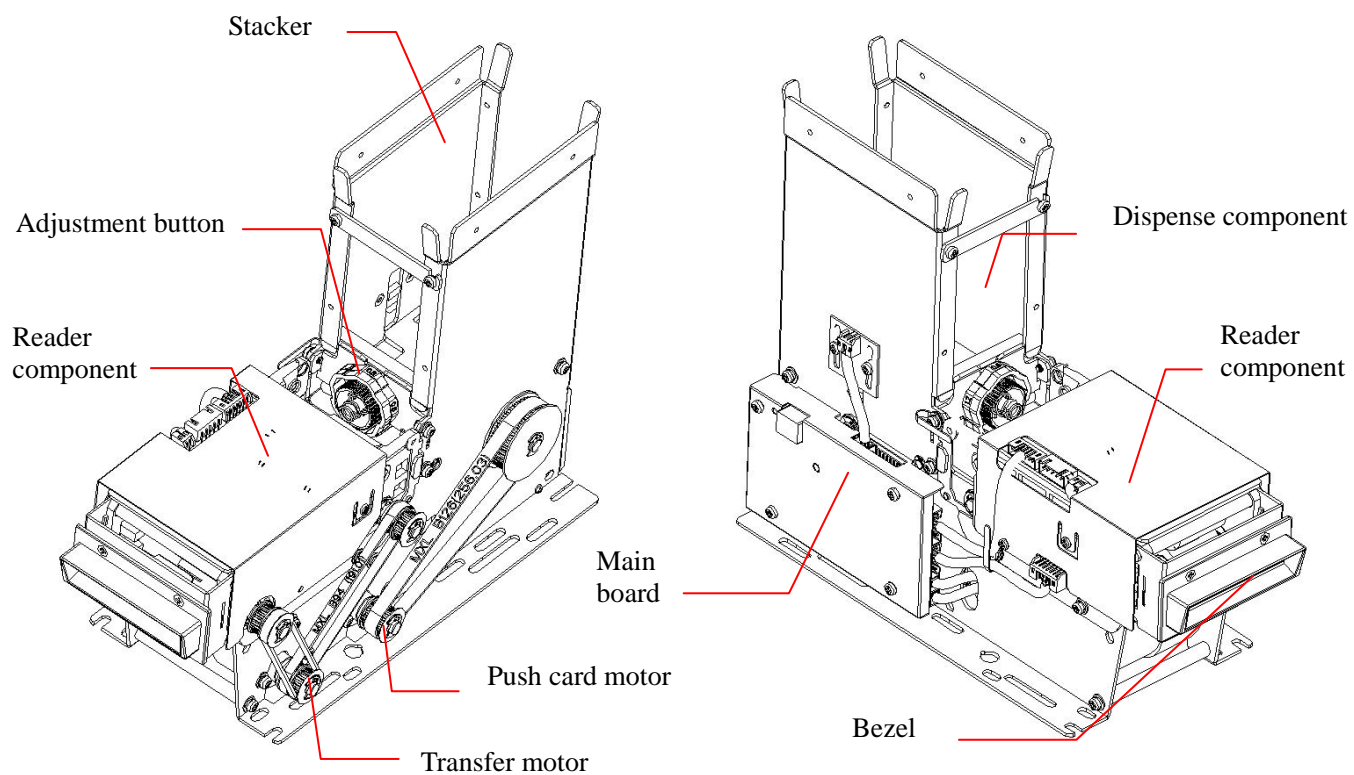
Warn：Over DC 30V is prohibited，it may cause device damage！！！

CONTENT

1. OVERVIEW

This product is a card issuing machine with IC/RF card reader，has the following features：

1）With the functions of card dispense, retract, accept from front, prohibit from front.

2）Card-Empty, Pre-card empty detection with audible alarm.

3）Two method of retract card: Error card bin and path (By removing the bars on the bottom)

4）RS-232C communication method，support multi-communication.

5）With RF/IC card read & write，one SIM socket，support SIM card read & write；

6）One of the most compact card issuing machines with IC/RF card module.

2. Technical Specification

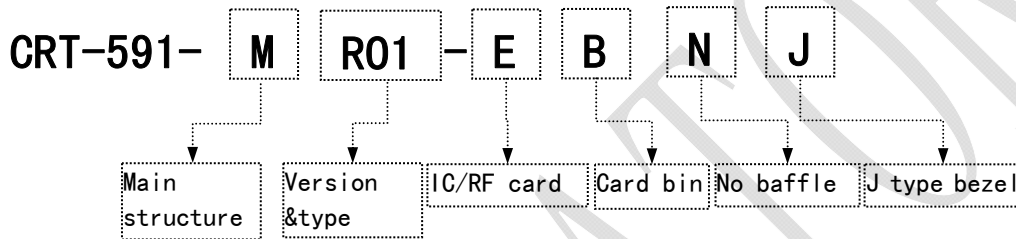| ITEM	Specification
Power Supply	DC 24V±5%
Current Consumption	Static current: 40mA Normal work current: 600mA Peak current: 2.0A
Communication Interface	RS-232C，support multi-communication
Card read&write Type	Serial port support IC &RF card Read & Write
Card Dimensions	Width:53.92～54.18 mm，Lenth:85.47～85.90 mm, Thickness:0.76±0.08mm（be available for Braille card）
Weight	About 2.0 Kg（without accessories and package）
Set Dimension	Refer to structure and dimension drawings
Card loading	Max Stacker capability 150 pcs（0.76mm card）(Extend is available) Error card bin: Max capability 25±4pcs（0.76mm card）
Card pre-empty detect	7-50±2pcs （Ex-work standard: 25±2pcs）
Environment	Operation: -10℃～60℃， 0～90 % RH （Without Condensing） Storage: -25℃～80℃， 0～95 % RH （Without Condensing）
MTBF	≥100,000 hr（only electric parts），note：250 times/day，25days/month，300hr/month
IC Card standard	Compliant ISO7816 standard （AT24C01、24C02、……、24C256；SLE4442、SLE4428；CPU T=0/T=1）
RF Card standars	Compliant ISO14443-3(Mifare one：S50、S70、UL etc) Compliant ISO14443-4（TYPE A CPU: Mifare plus，Mifare desfire etc） Compliant ISO14443-4 TYPE B CPU
SIM Card standard	Compliant ISO7816 standard CPU Card T=0/T=1
On-line download	Support On Line ISP Download
RoHS standard	Compliant RoHS standard

3. Main Function：

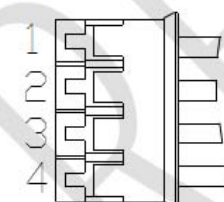| Faulty Ration in read & write	IC card：Card read&write 1,000 times，error is less than one time （except Q card）（note：IC card is standard card）
Faulty ratio in dispensing	Dispense standard card 1,000 times,，error is less than 1 time （note：standard card，except manipulating）
Dispense speed	About 14.8cm/s
Life cycle	IC contact and press device：500,000 cycles Min Transmission：1000,000 times Min（card from stacker to card holding position or card error bin equal one time）

4. Product Model Specification

CRT-591- M R01 - E B N J

Main structure | Version &type | IC/RF card | Card bin | No baffle | J type bezel

4.1 Accessory Description：

Name	Material number	Qty	Remark
571N block parts	C17-571-006	1	
571N card box	C30-571-045	1	With side wall
4PIN power cable	L14-333-153	1	4PIN head，length 1.5m
RS232 cable	L10-006-163	1	3PIN head，length 1.6m

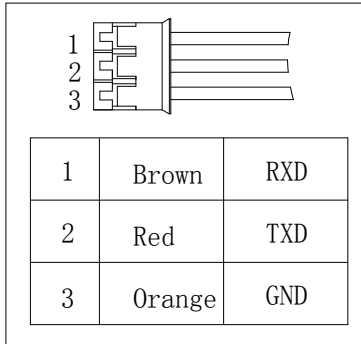4.2 4PIN power supply cable，shown as below figure:

1	红色 (red)	24V
2	黄色 (yellow)	24V
3	黑色 (black)	GND
4	黑色 (black)	GND

4.3 RS232 serial port cable

RS232 CABLE   PC DP9PIN Socket

1	Brown	RXD
2	Red	TXD
3	Orange	GND

2	TXD
3	RXD
5	GND
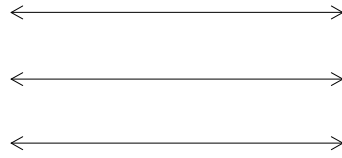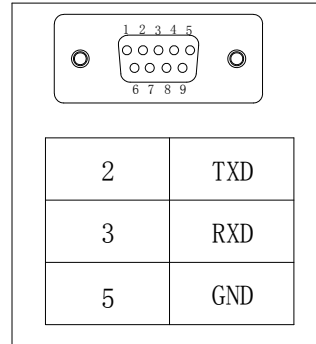
5. Interface instruction:
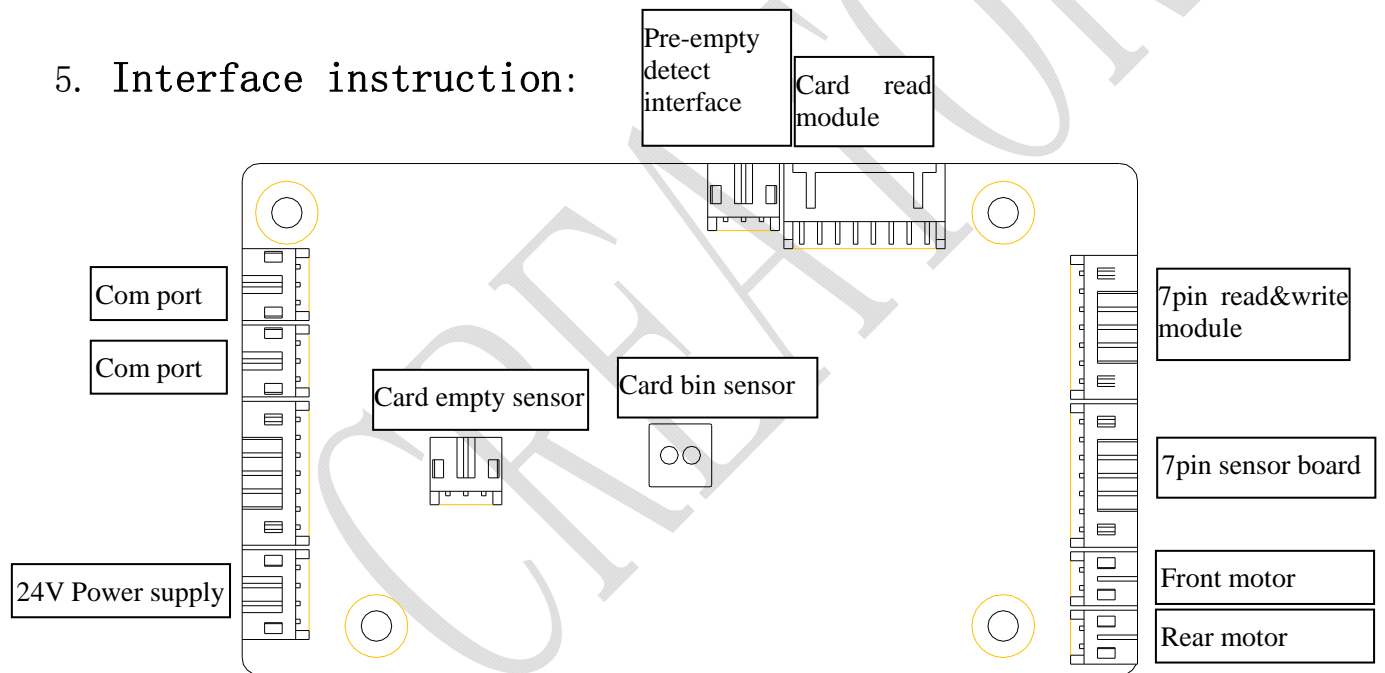
Figure 1 CRT-591-M main board interface

6. **Photoelectric Sensor Specification**：

Pre-empty card detect sensor

Sensor 3

Sensor 2

Card empty sensor

Error bin sensor

Sensor 4

Sensor 1
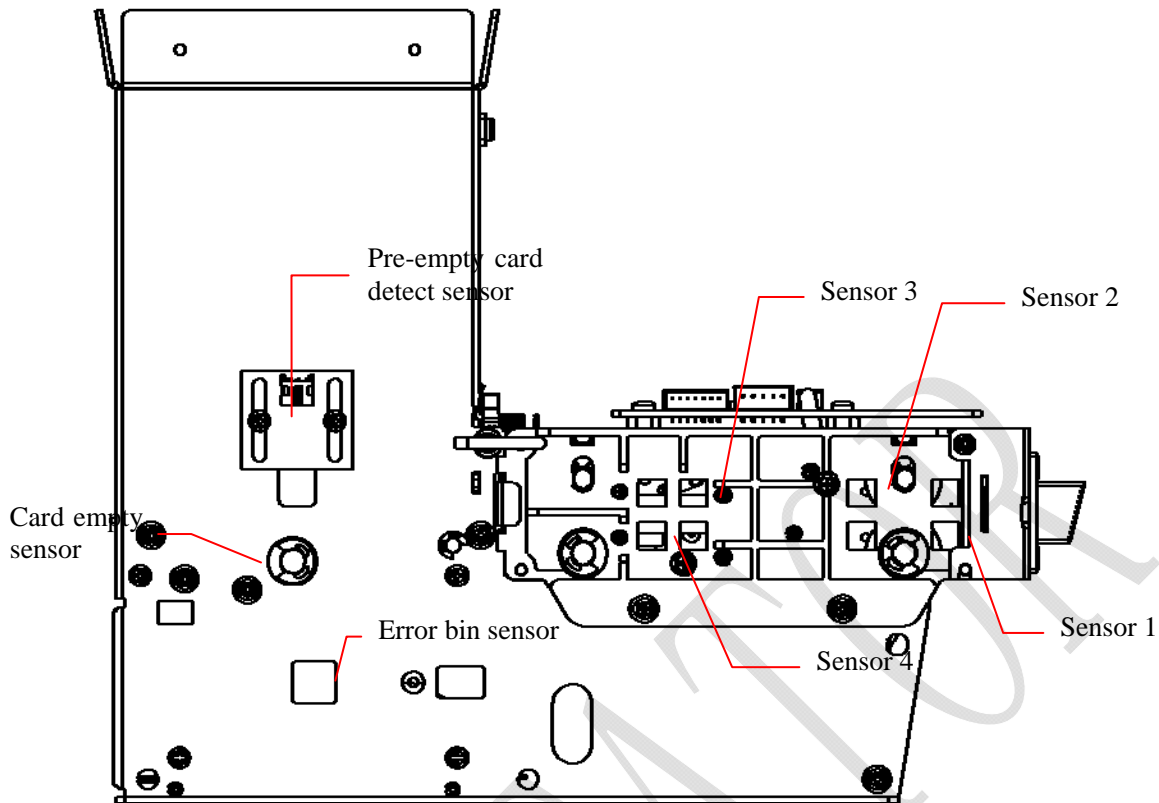
7. Card Stop Position Drawing：

Stacker

S4 S3 S2 S1

Front side with card holding

IC card operation position

RF card operation position

8. **DIP Setting of Unit Address**

The following table shows the Dip setting of Unit Address.

Serial	DIP switch				ADDR
	4	3	2	1	
0#	ON	ON	ON	ON	00H
1#	ON	ON	ON	OFF	01H
2#	ON	ON	OFF	ON	02H
3#	ON	ON	OFF	OFF	03H
4#	ON	OFF	ON	ON	04H
5#	ON	OFF	ON	OFF	05H
6#	ON	OFF	OFF	ON	06H
7#	ON	OFF	OFF	OFF	07H
8#	OFF	ON	ON	ON	08H
9#	OFF	ON	ON	OFF	09H
10#	OFF	ON	OFF	ON	0AH
11#	OFF	ON	OFF	OFF	0BH
12#	OFF	OFF	ON	ON	0CH
13#	OFF	OFF	ON	OFF	0DH
14#	OFF	OFF	OFF	ON	0EH
15#	OFF	OFF	OFF	OFF	0FH

Ex-work setting default address for single unit mode: 00H

Please set unique address to each device in multi communication, controlling each device by using corresponding address text from communication package.
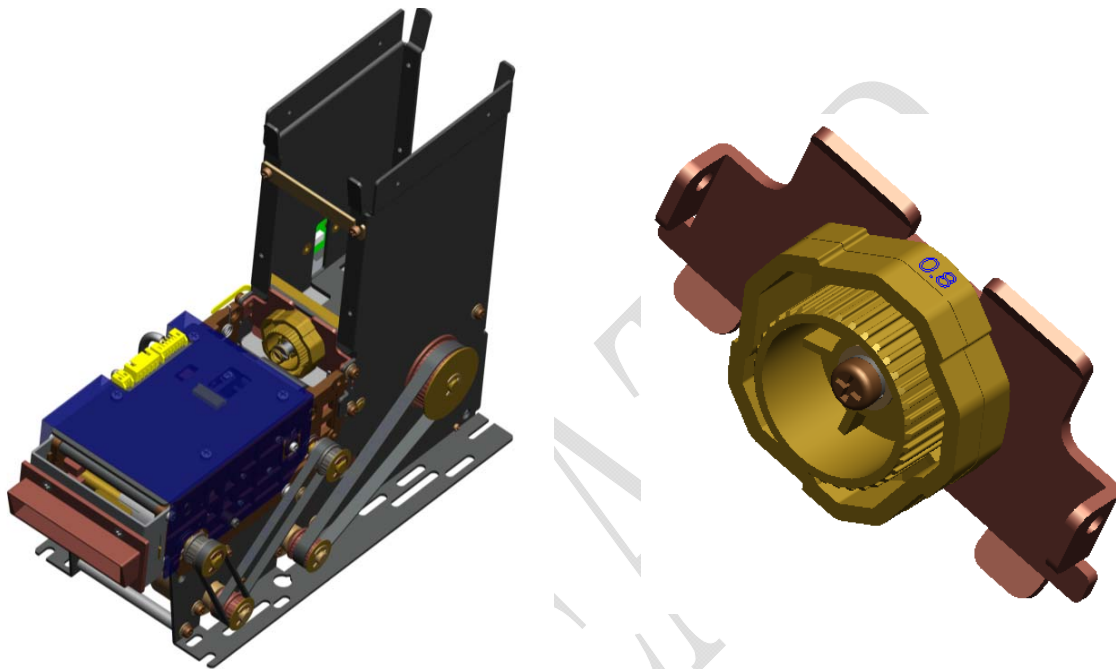
9. Card instruction

Default card thickness set in Ex-work is 0.8mm, range is：0.71～1.0.

Note：

  （1）MTBF in above table is based on standard card testing;

  （2）Ignore the thickness of embossed card if emboss is complied with ISO standard. And embossment is always on the top and keeps to right of stacker (the shutter is on the forth) when issuing embossed cards.

10. **Maintenance**

   After a long time usage, factors such as the machine's transportation mechanism wear and tear, dust on sensor, magnetic head, IC card contact will influence the performance of the machine, and hence it should be maintained on a constant basis.

   Detail maintenance instruction is as following:

   ① Use a cleaning card or a cloth with alcohol to clean the card dispensing mechanism and card read/write mechanism. (To open the card read/write components please refer to chapter 12"Cautious")

   ② Pick out greasy card and deformed card, and clean the greasy card with soft cloth tapped cleaning alcohol. If the deformed card is unable to restore, it is necessary to replace this deformed card with normal one.

   ③ Keep card pre-empty sensor clean by soft cloth with cleaning alcohol.

   ④ Sensor maintenance: Use the sensor status inquiry command to examine sensors' status. When the reader is running under good condition, all its 10 sensor groups' status are 'OFF'; If any

sensor group's status is 'ON', it is possible to be covered by dust; You can try to clean the sensor, especially this sensor group.

⑤ IC card contact maintenance: Clean the IC card contact if there is any dirty on them.

⑥ Transportation roll maintenance: Transportation roll should be check regularly and clean by cleaning alcohol if there is any dirty.

11. **Cautions**

1) Before maintenances, make sure the power connection is cut off in order to avoid machine damage.

2) Pay attention to DIP specification, wrong DIP number will bring about no work and unknown status.

3) Prohibit warm plug in and out of connector. Warm plug will cause circuit damage.

4) Keep machine non-greasy, oily cohesive will deadly influence the performance of machine.

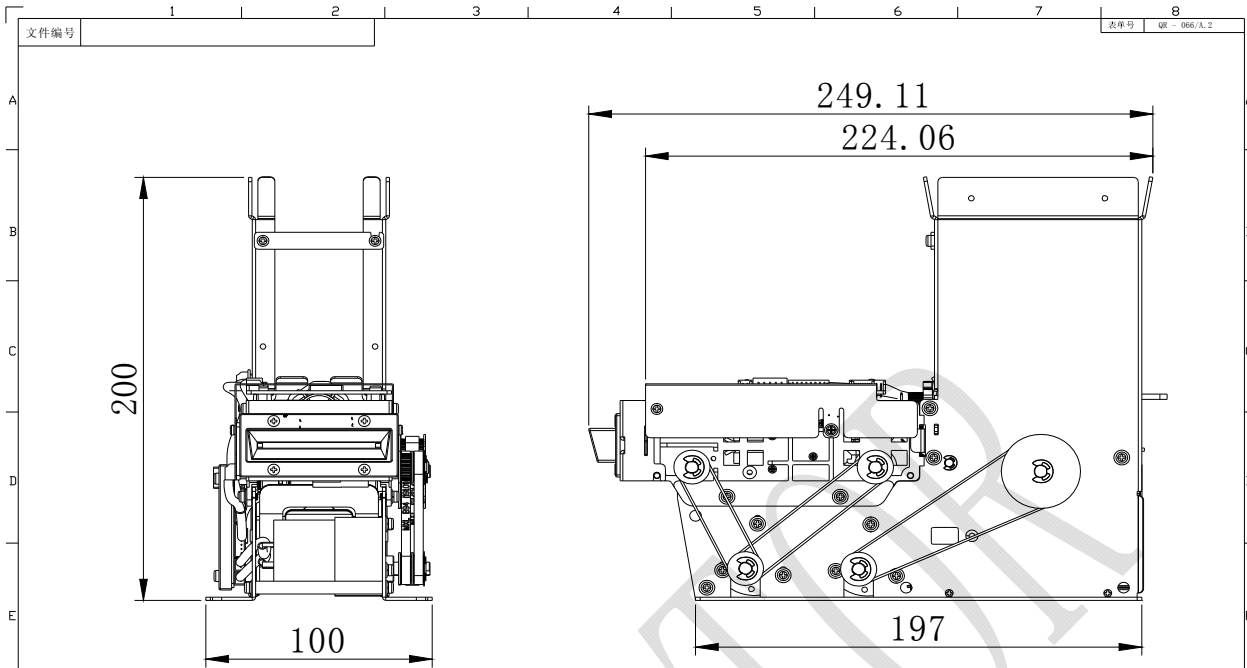5) Pay attention to the IC card direction in stack. (See following picture)

6) Pay attention to the power off sequence, cut off power first and then cut off communication cable
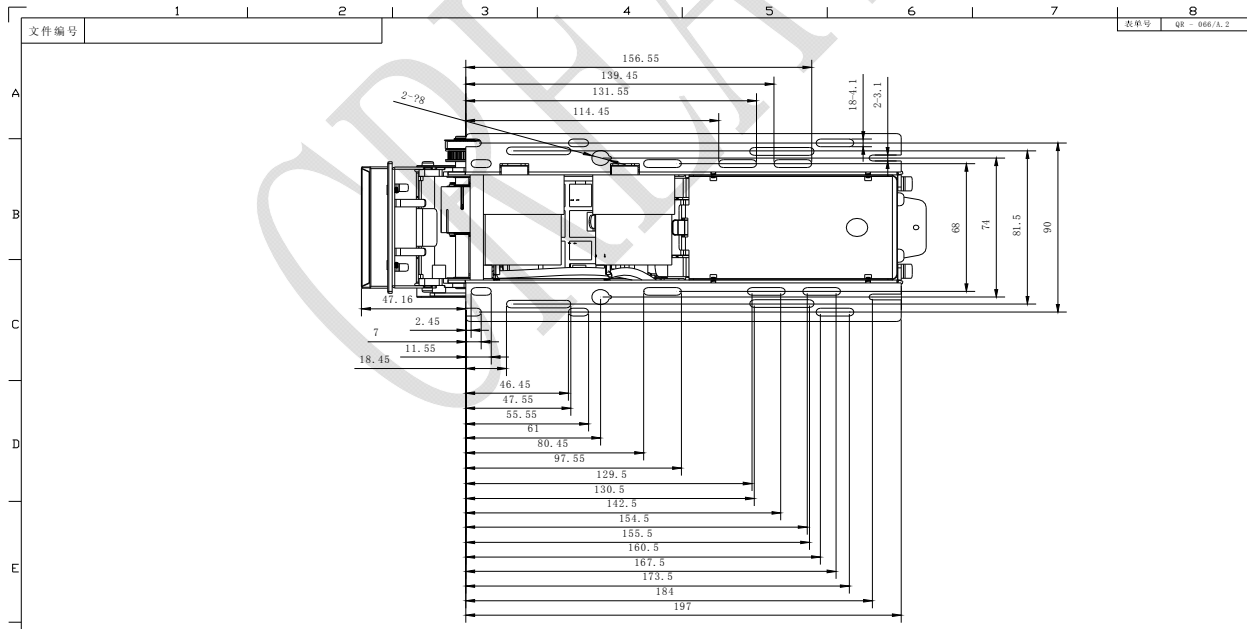
12. **Reference Document**

① DLL

② DLL Specification and example

③ Communication protocol：：CRT-591-M001

13. **Structure and Dimension Drawing**