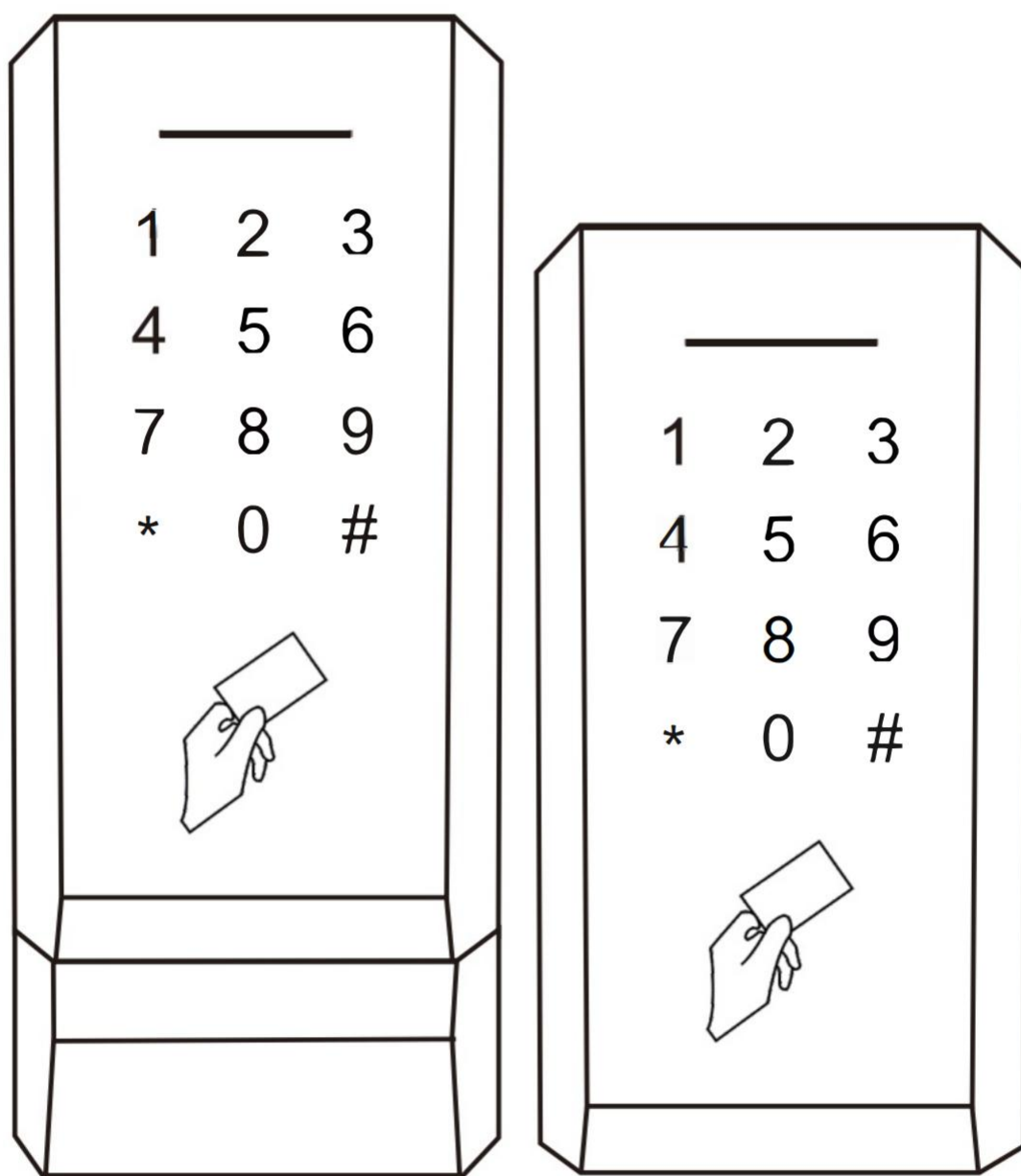


CRYSTAL TOUCH KEYPAD TERMINAL

User Manual

CT9E-HW-QP

V1.1.0



The table below contains the history of changes made to the present document.

Version	Date	Document Version History
V1.1.0	2024-09-24	Original Version

- * All rights reserved
- * Subjects changed without notice

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WARNING

- ★ This manual is a necessary part of this product, please read carefully.
- ★ Keep a record of this texts, it may be used for further repair.
- ★ This machine is only for recommended uses, do not use for others.
- ★ Damaged by improper uses or other uses, manufacturer is not responsible.

MATTERS NEED ATTENTION

- ★ Please supply the power to the CT9 E device with standard power adapter which provide by Civintec, the adapter's standard is 12V DC/2A.
- ★ If use other power adapter to supply the power, please pay attention that it should connect a wire or cable from the GND pin which on the back of CT9 E device to the Ground.
- ★ Not allowed by the manufacturer or failure to manufacturer's specifications, any changes to the machine parts and range of use may cause the damage in the direct or indirect.
- ★ Don't make machine at extreme temperature and humidity in the environment; avoid placing it in the heating equipment, faucet, a humidifier or the fireplace.
- ★ Should make the machine avoid contact with a large dust, ammonia, alcohol, diluents or spray type adhesives etc.
- ★ Should make machine avoid collisions, fall, etc., which may damage the machine to happen.
- ★ Please pay special attention to all labels pasted on the machine.
- ★ Should avoid changing the machine's parts, procedures and other abnormal operation.
- ★ Note static electricity protective.

1. Introduction

1.1 Introduction

Thank you for choosing Civintec CRYSTAL TOUCH CT9 E terminal.

With 1.0 GHz processor and LINUX operating system, CRYSTAL TOUCH CT9 E is stylish and modern contactless smart card & mobile ID access control terminal with 3.5 inch capacitive touch screen for intuitive and comfortable user experience.

CT9 E is featured to work with full range RFID options 125KHz & 13.56MHz ISO18092 NFC, MIFARE®, MIFARE Plus®, MIFARE® DESFire® EV1/EV2, MIFARE Ultralight®, MIFARE Ultralight® C, ISO14443A/B compatible cards.

** Not all ISO14443 B cards have been implemented in the reader, please contact Civintec for more details on current status.*

CT9 E access control terminal support both online and offline modes

- Online Mode

Under network connection, CT9 E works as IP server central managed access control system. When user enter pincode or present access card on CT9 E, the pincode or smart card ID will post to server to be identified by server software. If the access ID is registered, server feedback a command to CT9 E relay output to control door lock. All the access credential are identified on server software in real time.

- Offline Mode

CT9 E can work as standalone access controller under offline mode, administrator can enter into settings with password to operate access credential for appointed user ID. All the user ID and access credential can be uploaded to server when CT9 E get network connection with server.

Standard network connections allow easy integration with existing 100Mbps networks and RS485 serial communication is supported.

The CT9 E does not have a battery-powered device. After each shutdown, the time information is maintained for 5-6 hours at most. It is best to reset the system time of the CT equipment after each power-on.

There are three ways to set the time for CT:

- 1) HTTP commands for the cloud server
- 2) Configcard software
- 3) BLE Mobile App

1.2 Models introduction



Housing Dimensions:
24mm(D) * 165mm(H) * 84mm(W)
Type: Touch Digital Keypad
Model Name: CT9 E-X-X
Case Model: S



Housing Dimensions:
45mm(D)*200mm(H)*84mm(W)
Type: Touch Digital Keypad
Model Name: CT9 E-X-X
Case Model: L

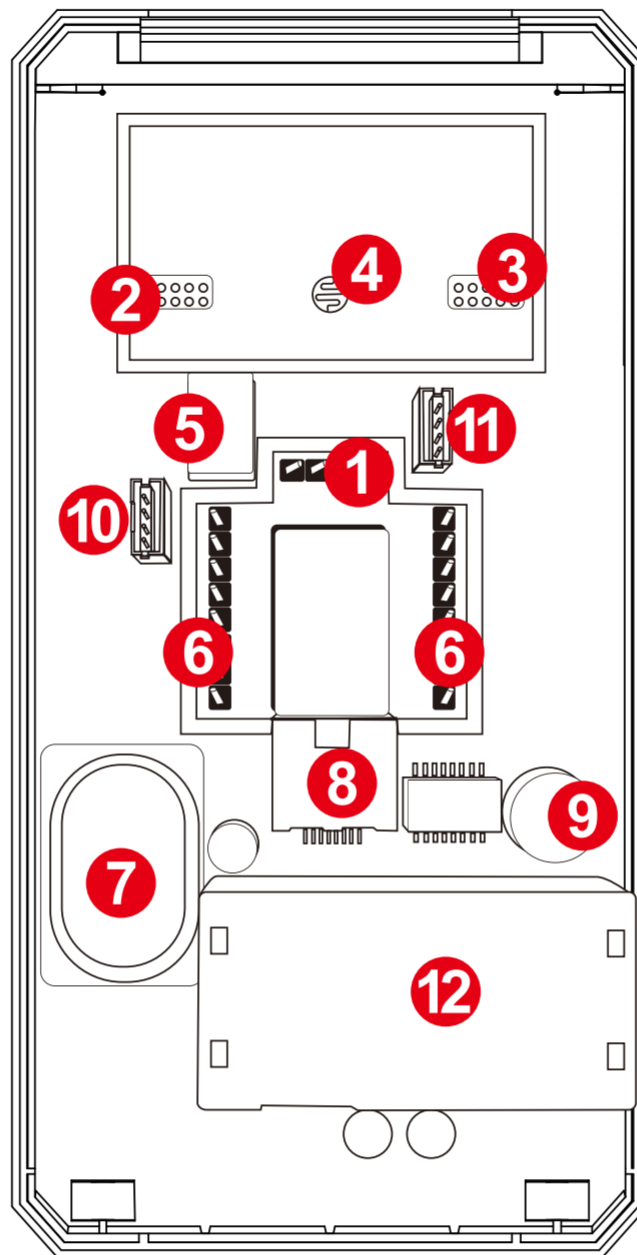
CT9 E Models	Case Model	RFID	NFC/BLE	QR CODE	POE	TCP/IP	4G	WiFi	RS485	Relay	Fire alarm
CT9 E-M-T	S	✓ No 125KHz	✓			✓			✓	1	✓
CT9 E-ME-T	S	✓	✓			✓			✓	1	✓
CT9 E-ME-T-2R	S	✓	✓			✓			✓	2	
CT9 E-W	S	✓	✓			✓		✓	✓	1	✓
CT9 E-W-2R	S	✓	✓			✓		✓	✓	2	
CT9 E-T-Q	L	✓	✓	✓		✓			✓	1	✓
CT9 E-T-Q-2R	L	✓	✓	✓		✓			✓	2	
CT9 E-T-P	L	✓	✓		✓	✓			✓	1	✓
CT9 E-T-P-2R	L	✓	✓		✓	✓			✓	2	
CT9 E-T-QP	L	✓	✓	✓	✓	✓			✓	1	✓
CT9 E-T-QP-2R	L	✓	✓	✓	✓	✓			✓	2	
CT9 E-H	L	✓	✓			✓	✓		✓	1	✓
CT9 E-H-2R	L	✓	✓			✓	✓		✓	2	
CT9 E-H-Q	L	✓	✓	✓		✓	✓		✓	1	✓
CT9 E-H-P	L	✓	✓		✓	✓	✓		✓	1	✓
CT9 E-H-P-2R	L	✓	✓		✓	✓	✓		✓	2	
CT9 E-H-QP	L	✓	✓	✓	✓	✓	✓		✓	1	✓
CT9 E-W-Q	L	✓	✓	✓		✓		✓	✓	1	✓
CT9 E-W-QP	L	✓	✓	✓	✓	✓		✓	✓	1	✓
CT9 E-W-Q-2R	L	✓	✓	✓		✓		✓	✓	2	
CT9 E-HW	L	✓	✓			✓	✓	✓	✓	1	✓
CT9 E-HW-2R	L	✓	✓			✓	✓	✓	✓	2	
CT9 E-HW-Q	L	✓	✓	✓		✓	✓	✓	✓	1	✓
CT9 E-HW-QP	L	✓	✓	✓	✓	✓	✓	✓	✓	1	✓
CT9 E Models	Case Model	RFID	NFC/BLE	QR CODE	POE	TCP/IP	4G	WiFi	RS485	Relay	Fire alarm

1.3 Specification

CRYSTAL TOUCH	CT9 E
IDENTIFICATION TECHNOLOGIES	
RFID Contactless Cards	• 125KHz PROx, 125KHz EM • 13.56MHz Mifare® Classic, Ultralight®, Mifare® Plus, DESFire® EV1/ EV2/ EV3, NFC tags
Mobile Credential	BLE (2.4GHz), NFC
Barcode / QR scanner	• Decode range: 20mm-150mm(QR 20MIL) • Roll/Pitch/Yaw: 360°, +55°, +55° • Multiple formats supported (1D & 2D Codes): QR Code, Micro QR code, PDF417, Code 128, Code 39 and most mainstream 1D and 2D barcodes.
Keypad	12 digit Touch keypad in 4 rows of 3 keys in each row with white LED backlit controlled to ON/OFF and auto, intensely adjustable
INTERFACE	
Communication Interfaces	• TCP/IP(RJ45) • 4G • WiFi 2.4GHz IEEE802.11b/g/n • RS485, wiegand input • BLE 5.3 and has the ability(on request) to support thread and zigbee
I/O port	3* Inputs - Door contact, Door exit, Buzzer control 4* Outputs - Tamper alarm switch, Output Buzzer control, Access Granted, Access Denied
Relay	1 or 2 relay outputs
Fire alarm	1 input to connect fire alarm
GENERAL	
Operating System	LINUX
Access control mode	Mobile ID, QR Code, RFID Card, Pincode
Online Card Users /Event logs	Unlimited
Offline Card Users / Event logs	10,000 users / 50,000 logs (More on request)
Working Mode	Host mode or Local mode
APB access control	Yes, external wiegand reader
Indicators	• Controllable tri-color LEDs with red, green, blue and amber colour • Controllable Buzzer and speaker
Housing Dimensions	Basic Model: 24mm(D) * 165mm(H) * 84mm(W) QR/4G/ PoE Model: 45mm(D) * 200mm(H) * 84mm(W)
Power supply	• 12~24V DC • PoE IEEE 802.3af
Installation	Wall mount with terminal block connector
Protection Class	IP65 electric epoxy potted (request waterproof spacer) Resistant to UV ray
Operation Temperature	-20°C ~ 60°C
Operation Humidity	0-90% relative humidity non-condensing
Upgrade	Support software and firmware upgrade

* The specifications are subject to change without notice.

2. Terminal Introduction



① Fire Alarm

② BLE & firmware upgrade interface

③ Software upgrade interface

④ Tamper alarm

⑤ Relay

⑥ PIN interfaces

⑦ Speaker

⑧ RJ45 TCP/IP port

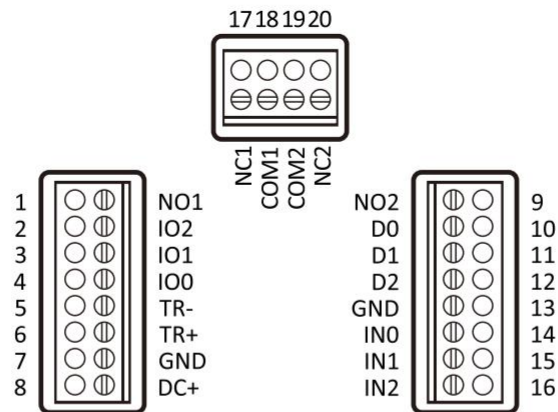
⑨ Buzzer

⑩ Connector for 4G

⑪ Connector for QR Code

⑫ PoE (Optional)

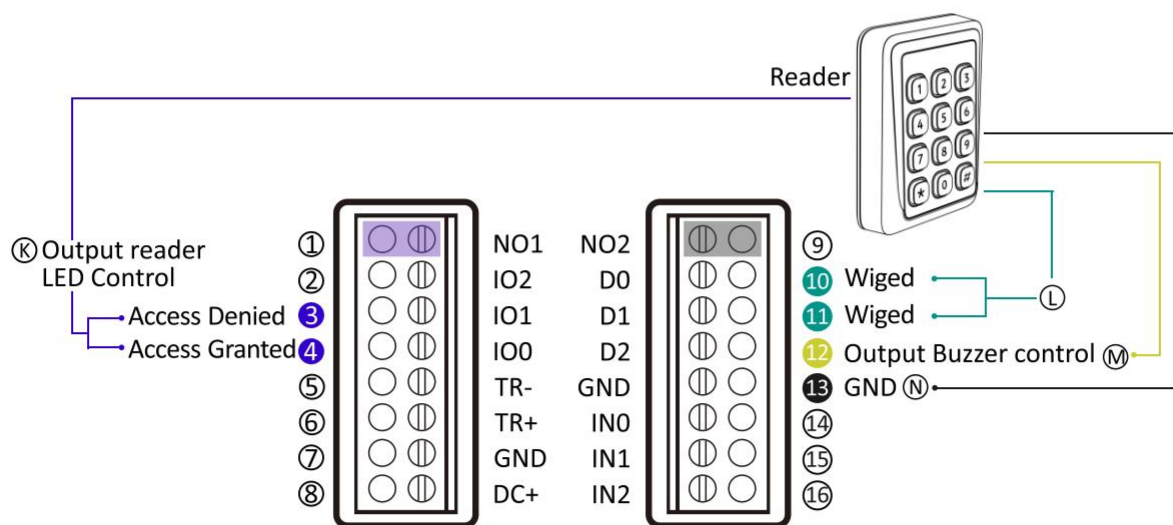
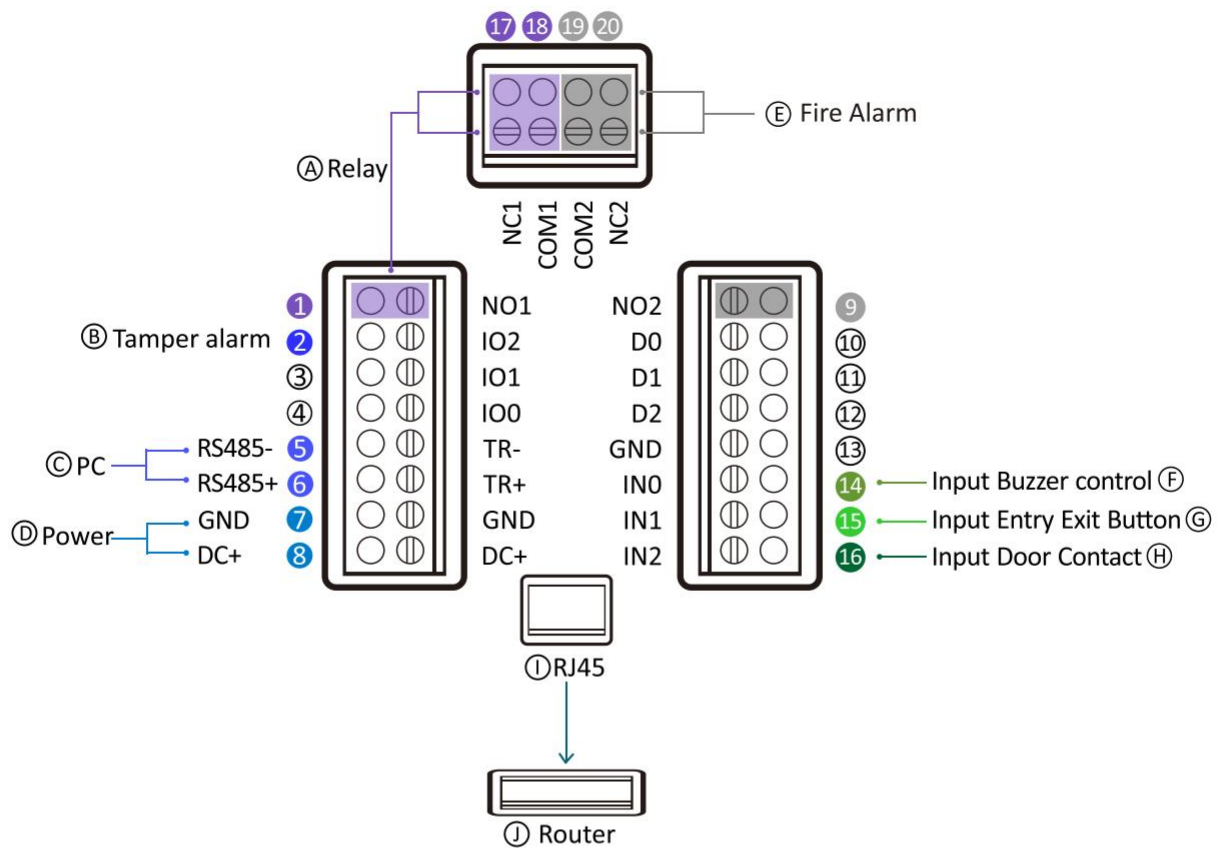
3. PIN Definition & Connection



Pin No.	Pin Name	Label	Description	Direction	Voltage	REMARK
1	NO1	Relay NO	Relay Normally Open	----	Max.30V DC	
2	IO2	Tamper	Tamper Alarm	OUT	5V	
3	IO1	Access Denied	Access Denied	OUT	5V	
4	IO0	Access Granted	Access Granted	OUT	5V	
5	TR-	B/RX	RS485 Send/Receive Date-	IN/OUT	5V	
6	TR+	A/TX	RS485 Send/Receive Date+	IN/OUT	5V	
7	GND	GND	Ground	Ground	0V	
8	DC+	DC+	12-24V DC Power	Power	12-24V	

Pin No.	Pin Name	Label	Description	Direction	Voltage	REMARK
9	NO2	N/A	No Available	----	----	*
10	D0	I/D0	Wiegand D0	IN	5V	
11	D1	I/D1	Wiegand D1	IN	5V	
12	D2	O/BZ	Output Buzzer Control	OUT	5V	
13	GND	GND	Ground	Ground	0V	
14	IN0	I/BZ	Input Buzzer control	IN	5V	
15	IN1	Exit Button	Input Entry Exit Button	IN	5V	
16	IN2	Door Contact	Input Door Contact	IN	5V	

Pin No.	Pin Name	Label	Description	Direction	Voltage	REMARK
17	NC1	Relay NC	Relay Normally Closed	----	Max.30V DC	
18	COM1	Relay C	Relay Common	----	Max.30V DC	
19	COM2	N/A	Fire Alarm 1	----	----	*
20	NC2	N/A	Fire Alarm 2	----	----	*



Connect External Access Control Reader

Ⓐ Relay

PIN 1, PIN 17 and PIN 18 are CT9 E relay output.

PIN 1 – Relay normally open.

PIN 17 – Relay normally closed.

PIN 18 – COM1, Relay common.

Ⓑ Tamper Alarm

Built-in mechanical tamper switch which allows for indication both break off protection and opening of the reader.

Ⓒ PC

RS485 interface for PC communication to configure CT9 E terminal only.

Ⓓ Power

Connect to DC power under power voltage 12-30V.

Ⓔ Fire Alarm

PIN 19 and PIN 20 are Fire Alarm.

Ⓕ Buzzer

Input Buzzer control.

Ⓖ Exit Button

Input Entry Exit Button.

Ⓗ Door Contact

Input Door Contact.

Ⓚ Output reader LED Control

PIN 3 and PIN 4 is to control slave access control reader's LED. PIN 3 is RED to indicate access denied. PIN 4 is Green to indicate access granted.

Ⓜ Output Buzzer Control

PIN 12 is to control slave access control reader's buzzer.

Ⓛ Ⓝ Slave access control reader

Connect Pin 10 & 11 to external data slave reader. GND (Pin 13) must be connected. The data output format slave reader must be same with CT9 E card reading format. APB reader function can be set on Host Demo software.

1) Power: VCC connect to VCC(+) of controller, and GND connect to GND(-) of controller;

2) Communication: D0 of CT9 E is connected to D0 of the card reader, D1 of CT9 E is connected to D1 of the reader.

Data format

Data26 bits Input format

26 bits Data input

Left even parity bit (MSB) + 24 bits card serial number + right odd parity bit(LSB)

Data34 bits Input format

34 bits Data input

Left even parity bit (MSB) +32 bits card serial number + right odd parity bit(LSB)

Data42 bits Input format

42 bits Data input

Left even parity bit (MSB) +40 bits card serial number + right odd parity bit(LSB)

Data50 bits Input format

50 bits Data input

Left even parity bit (MSB) +48 bits card serial number + right odd parity bit(LSB)

Data58 bits Input format

58 bits Data input

Left even parity bit (MSB) +56 bits card serial number + right odd parity bit(LSB)

Data256 bits Input format

256 bits Data input

Left even parity bit (MSB) +256 bits card serial number + right odd parity bit(LSB)

Data1024 bits Input format

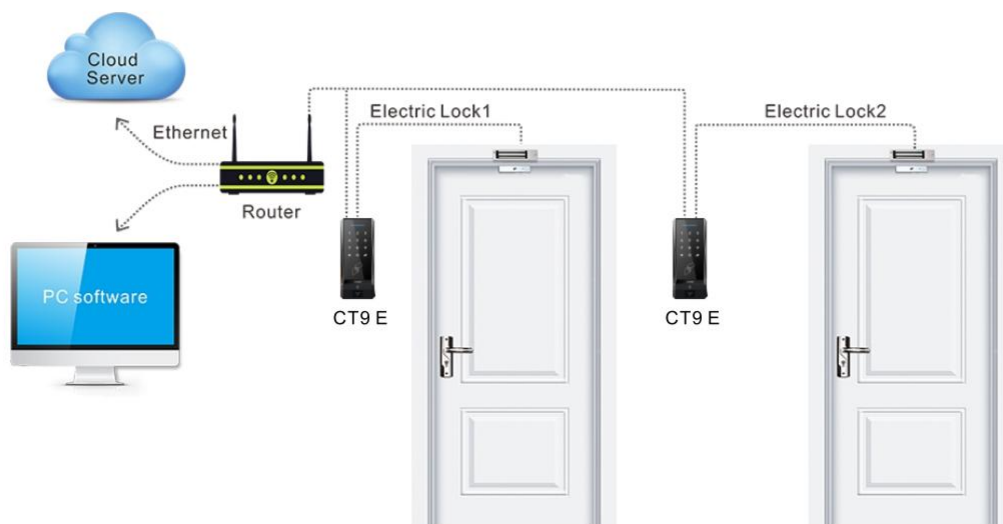
1024 bits Data input

Left even parity bit (MSB) +1024 bits card serial number + right odd parity bit(LSB)

① ② RJ45 and Router

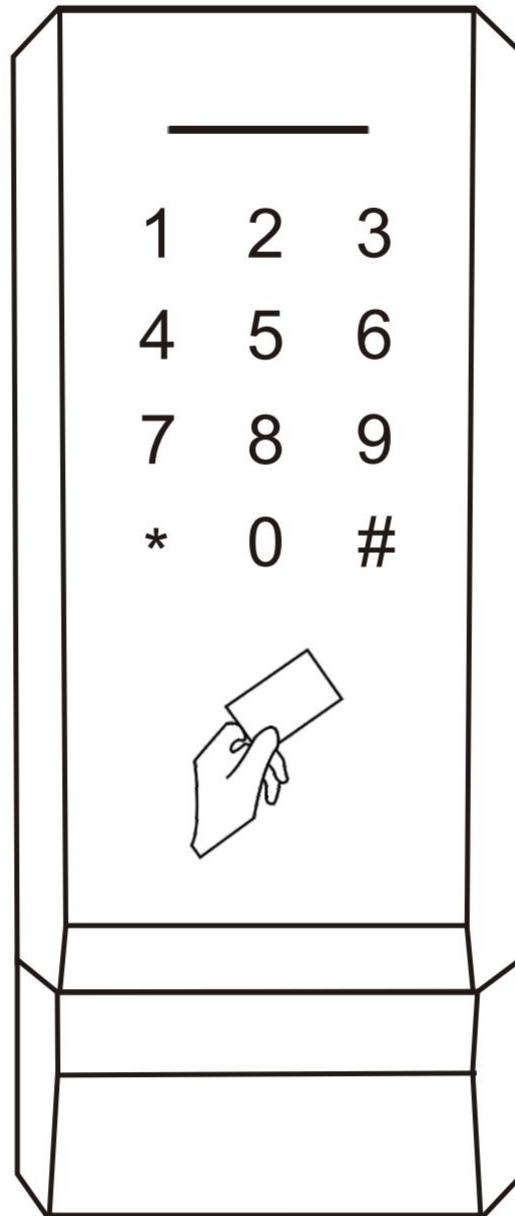
CT9 E is with RJ45 port to connect with PC or server to configure, remotely control and data synchronize via TCP/IP.

CT9 E default IP address is "192.168.1.140"



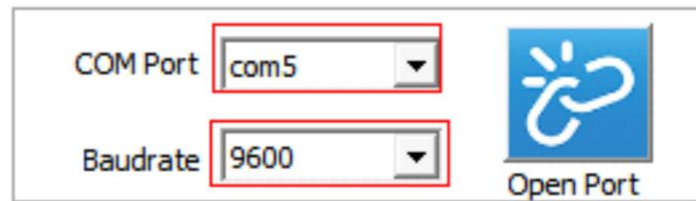
3.1 Power on

01



Give power to CT9 E terminal.
Hear the start up music and buzzer sound “beep”.
Reader start success.

02



Open the CT9 E ConfigCard software on PC computer. Select Communication RS485 communication serial port. Set as follows.

Open the CT9 E ConfigCard, select the serial port to connect to CT9 E reader and set the baud rate. You can reset it after you 're managed to communicate.

- a. Select the COM Port.
- b. Set the baud rate (default 9600).
- c. Click the Open Port button.

03



Click the Write to Reader button to write settings in to the CT9 E reader .

Click the Write to Card button to write settings in to a configuration card.

04

The DID length is 4 bytes.		
DID	12345678	
		Register

Write new DID number in to the CT9 E reader. DID number needs to match with used authentication card.

05

The screenshot shows the 'Config' tab of the CT9 E ConfigCard web interface. The 'Firmware Version' field is highlighted with a red box. The interface includes several sections for configuration:

- Version:** Fields for Firmware Version, Software Version, BLE Version, and Reader Serial Number, each with a 'Get' button.
- Reader Device Address:** A field for Device Address with a 'Get' button.
- Time:** Fields for Year, Month, Day, Hour, Minute, and Second, with a 'Set' button.
- Http Server:** A field for the server address with a 'Set' button.
- Update Firmware Version:** A field for the update URL with 'Open' and 'Update' buttons.
- Send Picture:** A field for the picture path with a 'Select' button and a 'Send' button.

Enter the page of “Config” on the CT9 E ConfigCard. Click the “Get” button to get the CT9 E reader firmware version to get connection success. If you fail to get the firmware version, back to 3.1.2 to check if the cable is connected correctly.

06

The screenshot shows the 'Buzzer' configuration page of the CT9 E ConfigCard. The interface includes several sections for configuring different features:

- Door IR Alarm:** Alarm is set to OFF, Time out is 10, and Door opening timeout is 15 seconds.
- Tamper Alarm:** This section is highlighted with a red box. The 'Tamper Alarm' dropdown is set to ON. Other options include Tamper Alarm Output (OFF), Tamper Alarm Occur (OFF), and QRCode Tamper (OFF).
- Buzzer Settings:** Read Card (ON), Valid Card (ON), and Invalid Card (ON).
- Toggle:** Toggle is set to OFF.
- Heater Setting:** Switch is OFF, ON(1s) is 40, OFF(1s) is 20, and Consumption Level is 6.
- RandomUID:** Includes fields for RandomUID Switch, CID (1), AID(DEC:0~16777215) (0), KeyNo (0), and Key(Hex) (00000000000000000000000000000000). The Crypto Method is set to AES.

Enter the page of “Buzzer” on the CT9 E ConfigCard. If buzzer keep beep are powering reader, that's caused by tamper alarm. Make sure that the Tamper Alarm buzzer is set to OFF (Tamper Alarm Occur), or you can close the tamper alarm to uncheck the “Tamper Alarm”. For the first, you should check the “tamper alarm ” and uncheck it to close tamper success.

07

Config | Buzzer | Wire | Reader | RS485 | Wiegand | CT | Block1 | Block2 | Block3

Reader ID: 0 Interface: RS485

Reader Mode: ☐ CSN Only ☐ Card Data or CSN(When card error) ☒ Card Data Only

☒ Multiple Object Mode ☐ Single Objects Mode

13.56MHz RFID: ON

SAM UNLOCK KEY

Unlock Key Version: 00 Unlock Key: 00112233445566778899AABBCCDDEEFF

Unlock Key Number: 00

Enter the page of “Reader” on the CT9 E ConfigCard. Select the “Card Data Only” of the Reader Mode, and add user demo card. It takes Mifare user card as example.

Config | Buzzer | Wire | Reader | RS485 | Wiegand | CT | Block1 | Block2 | Block3

Card Type: ☒ Mifare ☐ Desfire EV1 ☐ Mifare Plus ☐ T2T ☐ T4T ☐ UlightC ☐ Desfire EV2

Mifare: Sector: 0 Block: 1

Key Type: ☒ Key A ☐ Key B

Key: FFFFFFFF

offset: 0

length: 16

1. Enter the page of “Block1”, “Block2” or “Block3” on the CT9 E ConfigCard.
2. Choose Mifare on the “Card Type” .
3. Set Mifare block, key and length on “Mifare” (follow the settings of above picture or the setting as you request).
4. Click the Write to Reader button to write to the CT9 E reader.

08

☒ Multiple Object Mode ☐ Single Objects Mode

Select the mode of automatic card reading below: Select Multiple Object Mode here.

Reader Mode ☐ CSN Only ☐ Card Data or CSN(When card error) ☒ Card Data Only

Select the type of card reader: CSN Only, Card Data or CSN (When card error), Card Data Only, here is the Card Data Only.

Card Type ☒ Mifare ☐ Desfire EV1 ☐ Mifare Plus ☐ T2T ☐ T4T ☐ UlightC ☐ Desfire EV2

Next, choose the type of card. In Block1, choose Mifare. Block2 and Block3 could choose Desfire EV1, Mifare Plus, NFC T2T, NFC T4T, Ultralight C and Desfire EV2. Click the Write to Reader to complete the settings. (You can also set different blocks for the same card.)

Mifare
Sector Block
Key Type ☒ Key A ☐ Key B
Key
offset
length

The Block1 is Mifare's settings, click the Write to Reader button to complete the settings.

09

The screenshot shows the 'Block2' tab selected in the top navigation bar. The 'Card Type' section has 'Desfire EV1' selected. The 'Desfire EV1' configuration panel is expanded, showing the following settings:

- File Setup:**
 - AID: 1
 - FileID: 0
 - Offset(Data File): 0
 - Length(Data File): 16
 - Communication Setting: EncryPtion
 - RecSize: 0
- File Type:** Standard Data (selected), Backup Data, Value, Linear Record, Cyclic Record
- Key Setup:**
 - Key Type: Reader, SAM (selected), Use Unlock Key
 - EV1 Crypto Type: AES
 - EV1 Key No: 0
- SAM Application KEY:**
 - Key Number: 00
 - Key Version: 00
 - Diversified: Yes (selected), No
- Diversified On:** UID(7 bytes) || 0011223344556677889900112233445566778899AABCCDD

Next Block2 is the settings for Desfire EV1. Click the Write to Reader button to complete the settings.

The screenshot shows the 'Block3' tab selected in the top navigation bar. The 'Card Type' section has 'Mifare Plus' selected. The 'Mifare Plus' configuration panel is expanded, showing the following settings:

- Block:** 0
- Card Type:** Plus S (selected), Plus X
- Options:**
 - MAC On Command: checked
 - Plain text: checked
 - MAC On Response: checked
 - Need Follow Authentication: unchecked
- Key:** 000102030405060708090A0B0C0D0E0F
- length:** 16
- offset:** 0
- Key Type:** 0

Block3 above is the Plus settings, click the Write to Reader button to complete the settings.

Note: that if Block chooses 0, the data read is the UID of the card.

3.2 Configcard setting

The screenshot displays the 'Reader' configuration page within the CT9 E ConfigCard software. The top navigation bar includes tabs for Config, Buzzer, Wire, Reader, RS485, Wiegand, CT, Block1, Block2, and Block3. The 'Reader' tab is active. The main configuration area contains the following elements:

- Reader ID:** A dropdown menu set to '0'.
- Interface:** A dropdown menu set to 'RS485', which is highlighted with an orange border.
- Reader Mode:** Three radio button options: 'CSN Only', 'Card Data or CSN(When card error)', and 'Card Data Only' (which is selected).
- Object Mode:** Two radio button options: 'Multiple Object Mode' (selected) and 'Single Objects Mode'.
- 13.56MHz RFID:** A dropdown menu set to 'ON'.
- SAM UNLOCK KEY:** A section containing:
 - Unlock Key Version:** A dropdown menu set to '00'.
 - Unlock Key Number:** A dropdown menu set to '00'.
 - Unlock Key:** A text field containing the hexadecimal value '00112233445566778899AABBCCDDEEFF'.

1. Use the CT9 E ConfigCard software to set the interface in accordance with controller.
2. Set user card. Enter the page of "Reader" on the CT9 E ConfigCard software. Choose Read Type (CSN Only, Card Data Or CSN, Card Data only) and card types (Mifare, DESFire EV1, Mifare Plus, NFCT2T, NFCT4T, Ultralight C, DESFire Ev2).
3. Go to Block1, Block2 and Block3 to choose block, set key, length and offset.

3.3 HTTP Server setting

The screenshot shows the 'Config' tab of the ConfigCard software. The 'Server' section is highlighted with a red box. It contains a 'Server address' field with the value 'http://192.168.1.66:5000' and a 'Set' button. Other sections visible include 'Version' (Firmware, Software, BLE, Reader Serial Number), 'RS485 Address', 'Time' (Year, Month, Day, Hour, Minute, Second), 'Https Certificate', 'Update Firmware Version', and 'Send Picture'.

The "Software Version" of CT9 E has been compatible with both HTTP and HTTPS protocols since "CrystalTouch9-V3.0.1.19". The encryption level of CT9 E can support TLS1.1 and TLS1.2.

The communication protocol between CT9 E and server depends on the "server address" parameter set by the ConfigCard software.

This is a close-up of the 'Server' section. The 'Server address' field is highlighted with a red box, showing the value 'https://192.168.1.66:5000'. The 'Set' button is also visible.

Enter the page of "Config" to set "HTTP", input the URL of HTTP(HTTPS) Server and click the "Set" button.

If this step is set successfully, CT9 E terminal will automatically actively connect to the specified HTTP(HTTPS) server.

Refer to document "CT9 SDK Vx.X.X\Document\CT9 Terminal Server Demo Guidance.pdf" for the use of HTTP(HTTPS) Server.

3.4 Add/delete/edit User

The screenshot displays the configuration interface for the CT9 E device. At the top, there is a navigation bar with tabs: Config, Buzzer, Wire, Reader, RS485, Wiegand, and CT. The 'CT' tab is currently selected. The main configuration area is divided into several sections:

- Screen Brightness:** A dropdown menu set to 40%.
- Authentication Mode:** A dropdown menu set to Card or Pin.
- PIN length:** A dropdown menu set to 6.
- APB Mode:** A dropdown menu set to OFF.
- Speaker Volum:** A dropdown menu set to 70%.
- Time:** Time Display is set to ON, and Time Mode is set to 12h.
- Font:** Font is set to Arial, and Size is set to 35.
- Heartbeat interval:** A dropdown menu set to 5 seconds.
- IP:** IP is set to 192.168.1.140, MASK is 255.255.255.0, GATE is 192.168.1.1, and DHCP is set to OFF.
- 4G:** Switch is set to off, VPN is 3gnet, UserName is user, and Password is passwd.

CT9 E can work as standalone access controller under offline mode, administrator can enter into settings with password to operate access credential for appointed user ID. All the user ID and access credential can be uploaded to server when CT9 E get network connection with server. Under online model, administrator can add, delete or edit user and access credential. All the data are kept on CT9 E terminal for both online and offline use.

In CT9 E SDK, we provide BLE/NFC smart phone APP demo for your reference. The door opening request sent through the smartphone APP will be called Mobile ID or PIN.

When using CT9 E, the Mobile ID is stored in the CT9 E local database in the form of a "user card". Therefore, when using Mobile ID to control CT9 E to open the door, you must first register the Mobile ID as a user's card in CT9 E. In other words, you can use Mobile ID as a "user card".

3.4.1 Add new user & user card & Pin code

There are two ways to register user card/mobile ID:

3.4.1.1 Online mode:

Register to the server and CT9 E local database through the server demo. For detailed operation steps, please refer to "CT9 Terminal Server Demo GuidanceVx.x.x.pdf".

```
*****DEMO*****
|   configure server now:   |
|   Select your configure option:   |
|   1. Add new user & PIN code   |
|   2. Add new user & user card   |
|   3. Add new user & user card & PIN code   |
|   4. Get registered user information   |
|   5. Delete user   |
|   6. Clear registered user information   |
|   7. Timing   |
|   8. Modify CT9 IP address   |
|   9. Get log records   |
```

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.

Any 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.

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 & your body.