

Conference Sign-in System

Conference Sign-in System



Installation and Operating Manual

V 1.1

Remark:

- All rights reserved for translation, reprint or reproduction
- Contents may change without prior announcement
- All technical specifications are guideline data and no guaranteed features
- We are not responsible for any damage caused by improper use of this manual
- The equipment must be connected to earth!
- This product conforms to the rules of the European directive 2004/108/EC.
- If any detailed information needed, please contact your local agent or **TAIDEN** Service Center. Any feedback, advice and suggestion about the products is appreciated
- **TAIDEN** is the registered trademark of TAIDEN Co., Ltd.

Important Safety Instruction

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not place the equipment on any uneven or unstable stand; original product package or appropriate package should be used to avoid damage caused by strong impacts during transportation.
16. Power supply cords:
AC 110 V-120 V 60 Hz or AC 220 V-240 V 50 Hz
17. For service, please contact the nearest TAIDEN Service Center.
18. All TAIDEN products are guaranteed for definite time (see the WARRANTY CARD for details) excluding the following cases:
 - A. All damage or malfunction caused by human negligence;
 - B. Damage or malfunction caused by improper operating by operator;
 - C. Parts damage or loss caused by disassembling the product by non-authorized personnel.
19. Use ONLY specified connection cable to connect the system equipment.
20. Upon receipt of the product, please fill out the Warranty Card enclosed and post it to TAIDEN Service Center.



TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To reduce the risk of electric shock, DO NOT open covers, no user serviceable parts inside. Refer servicing to qualified service personnel only.

CAUTION: DO NOT use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the devices.



The lightning flash with an arrowhead symbol, with an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Important Safety Instruction



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: To reduce the risk of fire or electric shock, DO NOT expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON – OFF switch have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON – OFF switch is in the ON position. The power cord is the main power disconnect for all units

WARNING: The apparatus should be connected to a mains socket outlet with a protective earthing connection.

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Installation & User Guide

About this manual

This manual is a comprehensive guide for TAIDEN Conference Sign-in System, mainly includes functions and interface descriptions of Contactless Conference Sign-in Machine HCS-4393G2, Sign-in Information Display Screen HCS-4393G/D and Contactless IC-Card Encoder HCS-4345NTK, connection and installation of system devices, system setup and operation instructions.

The manual is divided into the following chapters:

Chapter 1: Contactless Conference Sign-in Machine

An overview of the composition, installation and matters need attention of Contactless Conference Sign-in Machine HCS-4393G2.

Chapter 2: Sign-in Information Display Screen

Detailed descriptions of features, operation and matters need attention of Sign-in Information Display Screen HCS-4393G/D.

Chapter 3: Contactless IC-Card Encoder and Long-distance Contactless IC-Card

Detailed descriptions of features, operation and matters need attention of Contactless IC-Card Encoder HCS-4345NTK and Long-distance Contactless IC-Card HCS-3924S.

This manual is applicable to:

■ Contactless Conference Sign-in Machine

HCS-4393G2 Contactless Conference Sign-in Machine

■ Sign-in Information Display Screen

HCS-4393G/D Sign-in Information Display Screen

■ Contactless IC-Card Encoder

HCS-4345NTK Contactless IC-Card Encoder

■ Long-distance Contactless IC-Card

HCS-3924S Long-distance Contactless IC-Card

Chapter 1: Contactless Conference Sign-in Machine

1.1 Overview

Contactless Conference Sign-in Machine HCS-4393G2 (hereinafter referred to as "sign-in machine") is a high performance electronic tag read/write device, it can read/write all popular electronic tags which support ISO/IEC15693 standard. By adopting high performance 32-bit processor and today's advanced anti-collision algorithm, powerful tag processing is realized with stable performance and strong capacity of resisting disturbance. It is mainly used for personal identification, conference sign-in, library management, access control, goods tracking and anti-fake, warehouse and logistics, and other areas.

Features:

- High performance 32-bit processor
- Tag processing speed: 40 ~ 50 pieces/second
- RF output power > 4 W
- Induction distance > 120 cm
- 4 channels infrared control to determine in and out
- SMA interface can be connect to 50 Ω standard RF ID antenna
- Support active/passive mode

Specifications:

| | | |
|-------------------------|---------------------|-----------------------------|
| Technical parameter | Working frequency | 13.56 MHz ± 7 KHz |
| | Standard | ISO/IEC15693, ISO18000-3 |
| | Induction distance | ≥120 cm (be related to tag) |
| | IR quantity | 4 pairs |
| | Communication | RS232/RS485 |
| | Antenna interface | SMA |
| | Output impedance | 50 Ω |
| | Working current | < 1.2 A |
| | Working voltage | 12 V |
| | Output power | > 4 W |
| Environmental parameter | Working temperature | -25°C ~ 60°C |
| | Storage temperature | -40°C ~ 85°C |
| | Humidity | 30% ~ 95% RH |
| Physical parameter | Dimension | 152×54×10 cm |
| | Weight | 29 kg |
| | Color | Light grey |

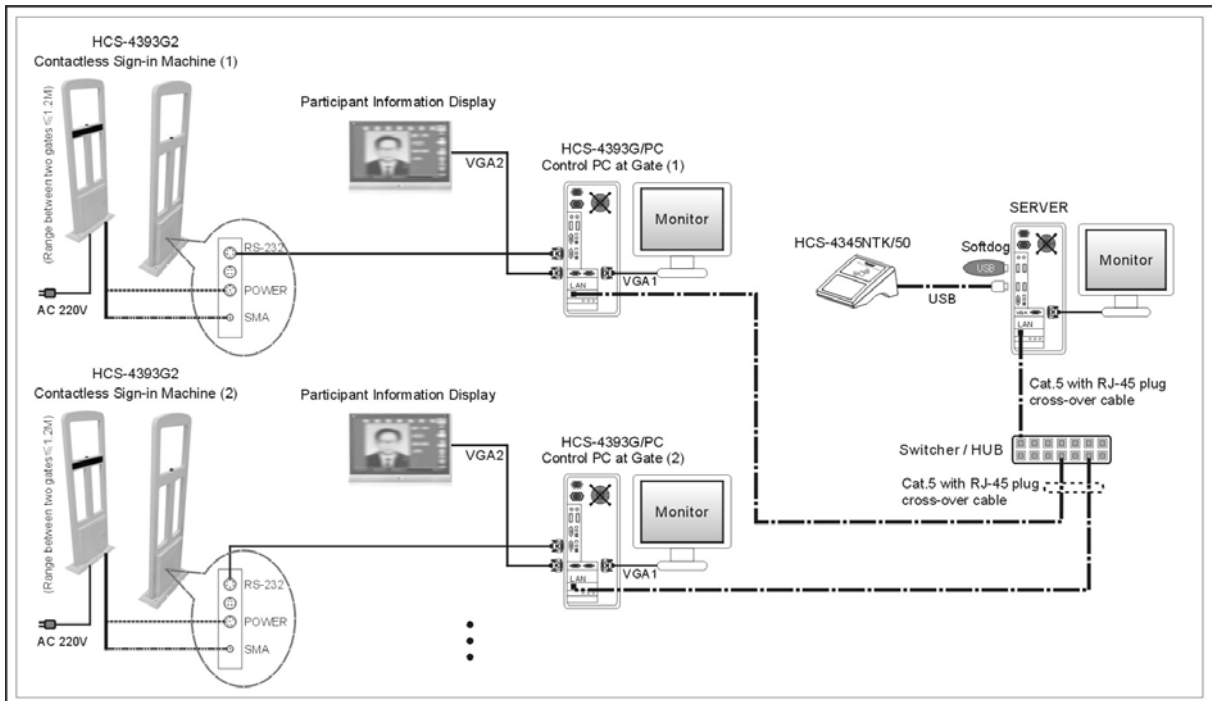


Figure 1.1 System overview

1.2 Installation and connection

1.2.1 Direction of the passage



Figure 1.2 Sign-in machine

Sign-in machine is composed of one major antenna and one minor antenna, the minor antenna connects to the major antenna with SMA connector. The IR bezel of both antennas should be placed towards the inside of passage. Antennas should keep distance from metal or other RF devices, so as not to affect reading effect and distance.

1.2.2 Cabinet interface

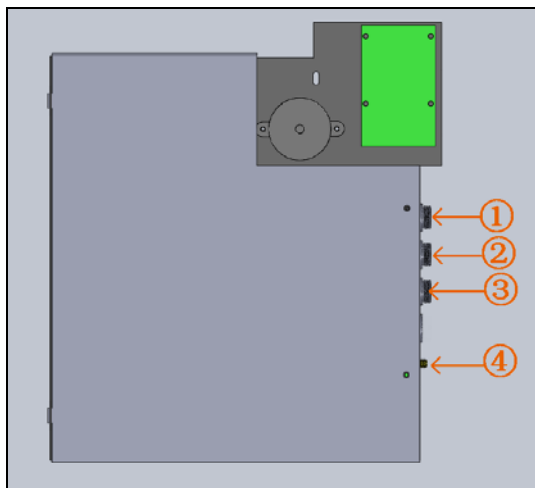


Figure 1.3 Cabinet interface of the major antenna

1. To RS-232 cable (5-cord aviation connector)
2. To synchro-control cable (4-cord aviation connector)
3. To power and indicator cable (6-cord aviation connector)
4. To the minor antenna (SMA connector)

1.2.3 Connection

1. RS-232 cable

Connect aviation plug of RS-232 cable to 5-cord aviation connector ① of the major antenna, and DB-9 connector of RS-232 cable to COM port of PC.

2. Synchro-control cable (optional)

Synchro-control cable is needed when more than one sign-in machines working together in a small area to avoid interference. One of the sign-in machines should be configured as master and the others as slave by software setup.

Synchro-control cable is Y type and has three connectors, connect one aviation plug of synchro-control cable to 4-cord aviation connector ② of the major antenna, the other two connectors connect to the previous and the next sign-in machine, and all sign-in machines can be connected in daisy-chain.

When connecting synchro-control cable, please use parallel connection, i.e. red line connecting to red line, and black line connecting to black line. After connecting synchro-control cable, please set sign-in machine to synchro mode by software.

Note:

☞ In synchro-control mode, the distance between two adjacent sign-in machines should be larger than 1 meter to avoid interference.

3. Power and indicator cable

Connect aviation plug of power and indicator cable to 6-cord aviation connector ③ of the major antenna.

4. To the minor antenna

Connect SMA plug of the minor antenna to SMA connector ④ of the major antenna.

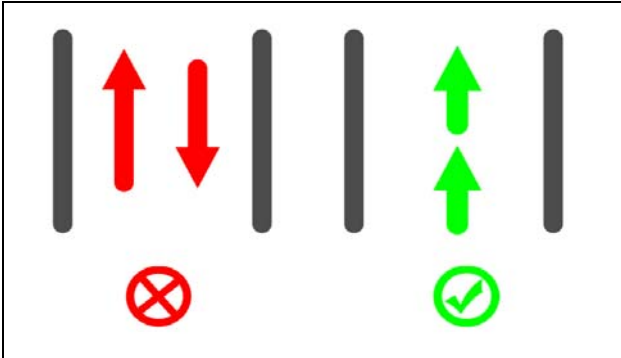
Warning:

☞ Please power off before connecting cables, hot-line work is prohibited.

1.3 FAQ

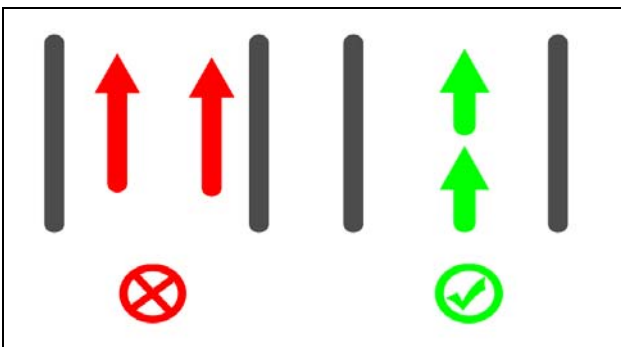
1. Direct judgement is not accurate in bi-directional access

When IR function is enabled, only one direction should be accessed at one time and avoid bi-directional access, as the following figure:



2. Tag detection is not accurate when more than one person pass through the passage side-by-side

When more than one person pass through the passage, they should pass through one by one and avoid side-by-side, as the following figure:



3. No reaction when pass through too slow

Maximum time limit is set when passing through. If walking too slow and exceed maximum time limit, direction judgement will be disclaimed.

Note:

☞ Normal walking speed is recommended, please do not stop inside the passage.

4. It will alarm when quickly reentry after pass through

Passage filters tags when detecting, how long does filtering take is decided by "tag filtering time". In the period of tag filtering time, the same tag is processed only one time. If the person passes through the passage and then quickly reentry within "tag filter time", reentry tag will be filtered, and causing alarm.

To ensure the accuracy of direction judgement, immediate reentry is prohibited. Please wait 5 to 10 seconds after pass through.

5. Other person's information is displayed

First-come-first-serve rule is applied in tag detection. When more than one person pass through the passage, the information of the first detected tag will be reported. If some one stands inside detection area, when other person passes through the passage, the tag information of whom stands inside detection area will be reported.

Note:

☞ Standing inside detection area for a long time should be avoided!!!

6. How to deal with the case that one person takes more than one card

"One person-one card, more cards-waiting time-out" rule is applied in tag detection, i.e., when one person passes through the passage, one tag information will be reported, and the rest tag information will be saved in cache and waiting for the next person or later reported as time-out information when reached "tag time-out".

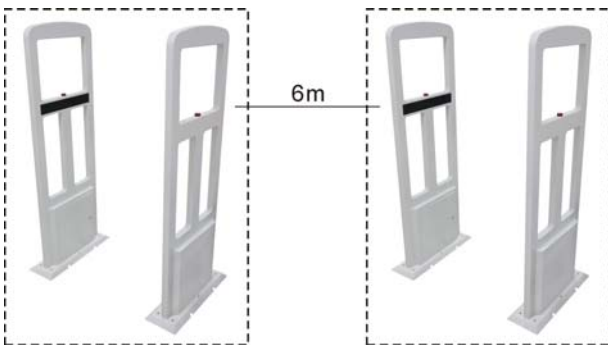
When one person takes more than one card, the first detected tag information will be reported, and the rest tag information will be reported as time-out information.

1.4 Matters need attention

- The distance between antenna and computer should be larger than 140 cm, otherwise he/she may miss his/her information when passes through the passage.



- If not using synchro-control cable, the distance between two passages should be larger than 6 m; when using synchro-control cable, the distance should be larger than 1 m.



- The width of the passage should be 90 cm and avoid two persons pass through the passage side-by-side.



- Prior to the start of the meeting, meeting manager should be informed to keep order, participants passing through the passage side-by-side is prohibited. If tag detection of the previous participant is not successful, then block the following participants. Ask this participant to pass through the passage again until his/her card is detected successfully.
- Prior to the start of the meeting, all participants should be informed to pass through the passage, otherwise he/she would be regarded as absent;
- Officers of the meeting should take cards without IC to avoid mis-detection of the officers of the meeting;
- Participants who has passed through the passage should not stay near the passage, otherwise he/she will be set as departure when the following participants pass through the passage;
- Prior the start of the meeting, participants should be informed that his/her card can be recognized by the system automatically when he/she pass through the passage;
- Immediate reentry after pass through is prohibited, please wait 5 to 10 seconds after pass through.

Note:

- ☞ The IC card should be kept 50 cm - 160cm high from the ground;
- ☞ The IC card should NOT be kept parallel to the ground;
- ☞ The IC card should NOT be fully placed together with metal items, such as key, cigarette case, mobile phone, mobile hard disk, etc.
- ☞ The IC card should NOT be placed together with monthly ticket, membership card, identification card, etc.
- ☞ The IC card should be protected by hard card jacket and avoid buckling, otherwise it may shorten detection distance or even detection failure.
- ☞ Sign-in machine should be placed far from large metal objects and reinforced concrete wall;
- ☞ Sign-in machine is a RF device, and may be jammed by other RF devices with similar frequency or low frequency and high power. Therefore, it should be kept away from interfering resources.
- ☞ When direction judgement function is enabled, to ensure the accuracy of direction judgement, two persons pass through the passage in opposite direction or side-by-side should be avoided. When several persons pass through the passage one by one, they should keep a space larger than 30 cm.

1.5 Troubleshooting

| Fault symptom | Fault cause |
|---|---|
| 1. Communication is abnormal. | <ol style="list-style-type: none"> 1. Using non-cross serial cable; 2. Error serial port bit rate or error parameters, default value is 38400 bps with 8 data bits, 1 stop bit, and no parity check; 3. Serial port has not opened; 4. Serial port is occupied by other applications. |
| 2. After modifying system parameters, it works normally. But the modifications are lost when power off. | The modifications of system parameters are saved in RAM, after modification, corresponding command should be executed to save modifications into FLASH. |
| 3. It does not detect tag. | <ol style="list-style-type: none"> 1. Check working mode. In passive mode, detection command should be executed to detecting. 2. Tag is still; 3. There are metal objects around tag or antenna. |
| 4. Return value does not meet the requirement. | <ol style="list-style-type: none"> 1. Flag bit of the command is error, please configure correct command according to protocol; 2. Tag is still; 3. There are more than one tags in detection area and no UID is appointed; 4. Not enough command parameter; 5. Tag type does not match. |
| 5. Detection distance is too short. | <ol style="list-style-type: none"> 1. There are metal objects around tag or antenna; 2. The working frequency of tag deviate too much from 13.56MHz; 3. Tags overlap each other causing interference; 4. Environmental electromagnetic interference; 5. Mutual interference between two pair of antenna. |

If above troubleshootings do not work, please contact our dealers or after-sales service staff.

Chapter 2: Sign-in Information Display Screen

2.1 Overview

TAIDEN sign-in information display screen adopts integrated cabinet, based on touch devices for ease of use and intuitive, abandoned complicated operation of traditional mouse and keyboard, the user does not need a complicated operation, simply click on the touch screen, and it can display sign-in information. Display content can be setup by meeting sign-in system software, specific setting method please refer to software instruction.

The sign-in information display screen is composed of a LCD module, a touch screen, a cabinet, and a computer, where the computer will be provided by users themselves.

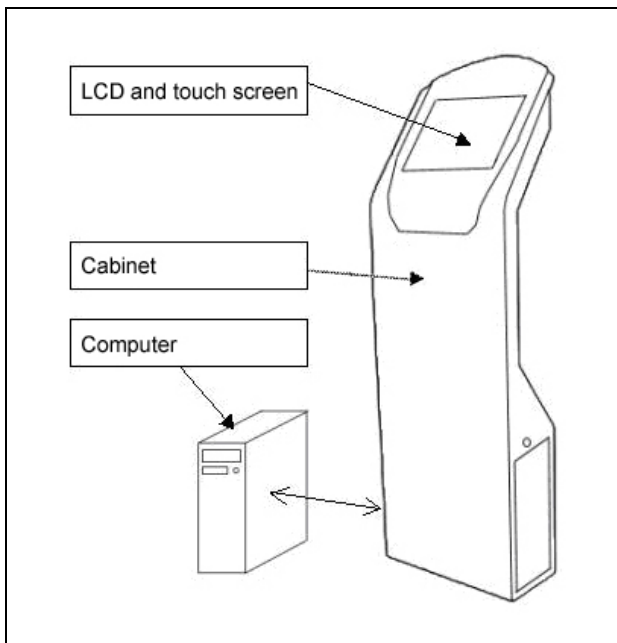


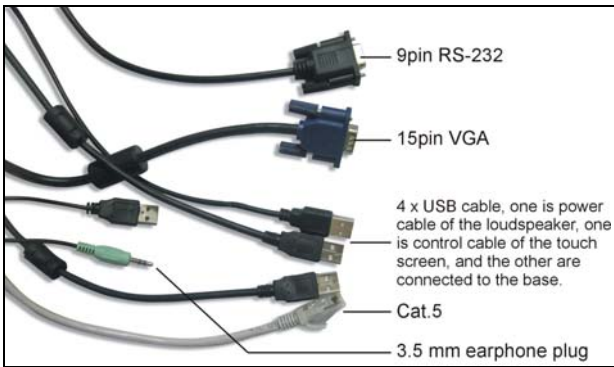
Figure 2.1 Sign-in information display screen

Specifications:

| | | |
|-------------|-------------------|-----------------------|
| Touch panel | Type | Resistance screen |
| | Resolution | 4096×4096 |
| | Power consumption | 1 W |
| LCD | Dimension | 19 inch |
| | Brightness | 250 cd/m ² |
| | Power consumption | 49 W |
| | Contrast | 1000:1 |
| | Resolution | 4096×4096 |
| | Visual angle | 150° /140° |
| Dimension | | 50×44×143 cm |
| Weight | | 34 kg |

2.2 Connection

There are 8 cables inside the cabinet:



Connect all cables to computer and put the computer into cabinet.



2.3 Operation

1. Power on

Power on by pressing the red switch on the right side.



Press the green button on the left side to start-up sign-in information display screen.



2. Mouse and keyboard

Connect mouse and keyboard to USB port and use them when needed.



2.4 Touch Screen Driver Installation and Calibration Instruction

2.4.1 Touch Screen Driver Installation

Connected host, plug in the power, press the switch, double-click the touch screen driver installation program “setup.exe” to install.

The drivers for the following operating systems:

- Windows XP
- Windows 2000
- Windows Me
- Windows 98
- Windows 95
- Windows NT 4.0
- Windows VISTA
- Windows 7

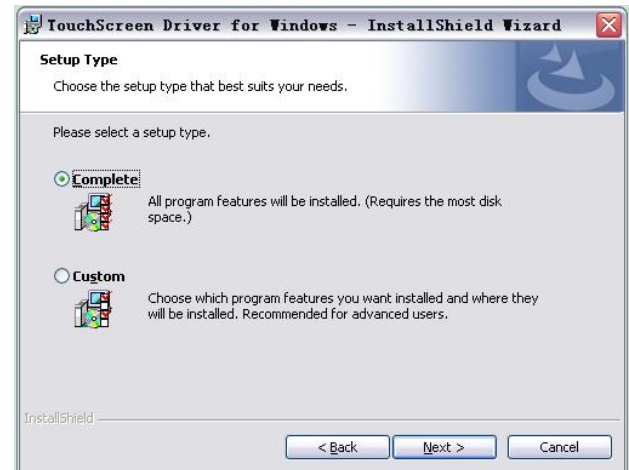
Installation:



1. Driver installation location without the user changes the default installation in C: \ Program Files \ TouchScreen;



2. Click "next" to install to local folder or you can change to install to a different folder. Then, choose the setup type that best suits your needs;



3. Click "Install" to continue;



4. Please wait for install completed, all process may take several minutes;



5. After installation, it will create the desktop and start menu shortcuts.



2.4.2 Touch Screen Calibration

Start touch screen driver "TouchScreenSetup" to calibrate.

1. Setup operation language: English or Chinese;
2. Select serial port in serial device manager;
3. Set up calibration in setup menu, default is ok for general user;
4. Select calibration type (4 points / 9 points / 25 points), and then click "Calibration" to start;
5. Click the screen to calibrate the touch screen;
6. After calibration, click "Line Test" to check dead zone.
7. Calibration is complete, double-click the screen or press the <Enter> key to save the calibration data.

2.5 Troubleshooting and notes

1. Touch monitor touch calibration

Install the driver after the computer restarts, click on the desktop "TouchScreenSetup" icon or click "Start" - "program" - "TouchScreen" - "TouchSetup" button in turn, click "Calibration" and follow the four points that appear on the screen in order to be corrected.

2. How to remove the touch driver?

Click the "Start" - "Settings" - "Control Panel" - "Add / Remove Programs" - "Install / Uninstall" tab select the box point "TouchScreen Driver for Windows" - Single click the "Add / Remove" follow the prompts to restart your computer or uninstall.

3. When to re-calibrate the touch screen?

- ◆ Change the display resolution;
- ◆ Replace the computer host or display;
- ◆ After clearance.

4. Why is mouse move automatically without clicking?

- ◆ Touch screen may be oppressed by external;
- ◆ Ground signal interference caused by bad.

5. No Signal on Screen

- ◆ Check the power light is lit or not, if not, may be the monitor has no power;
- ◆ Please check the monitor VGA is connected. If the data cable is not connected then the power, the display will show no signal, please connect the data cable from the new.

6. No response after touching

- ◆ Driver is installed, install the correct driver;
- ◆ Computer serial port is operating properly, check the serial port serial port and driver settings are correctly;
- ◆ Main power supply is normal, check the host power supply. Replace the main test;
- ◆ Protective film does not tear up, tear up the protective film after the test.

7. Click is not the same position of your fingers touching

- ◆ Whether the incorrect calibration, re-calibration, if not enough, please do 25 points calibration;
- ◆ After changing the display resolution is not calibrated correctly re-positioning;
- ◆ If you use 3 to 4 years, resistance screen may be damaged. Need to replace the new.

Chapter 3: Contactless IC-Card Encoder and Long-distance

Contactless IC-Card

3.1 Overview

Contactless IC-Card Encoder HCS-4345NTK is based on ISO 15693 standard, working at 13.56 MHz with short detection distance. This card writer is cooperated with computer.

This Encoder has all functions defined in ISO 15693 standard, such as moving recognition, multiple tag recognition, with collision prevention function, it can recognize three cards at one time, it can read/write three data blocks at one time. As a standard table-top high-frequency card writer, it is suitable for various applications.



Figure 3.1 Contactless IC-Card Encoder HCS-4345NTK

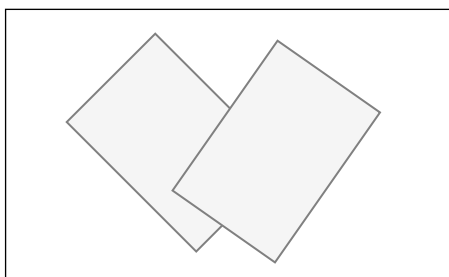


Figure 3.2 Contactless IC-Card

3.2 Performance

- Working frequency: 13.56MHz
- Standard: ISO 15693
- Supported card type: Tag-it HF-I, TI256 card or other ISO15693 standard compatible cards
- All functions defined in ISO15693 standard
- Read/write/lock multiple data block function
- Collision prevention function, it can read three cards at one time
- Detection distance: 10 cm
- Communication port: USB

3.3 Installation

1. Put Contactless IC-Card Encoder HCS-4345NTK on the table, its appearance is shown as figure3.1;
2. This Encoder is equipped with USB cable and can be connected with computer;
3. Install TAIDEN conference application in the computer and run it. All ISO 15693 standard defined functions can be realized.

For the detail of software operation, please refer to software user's manual.

Note:

- ☞ When using Contactless IC-card Encoder HCS-4345NTK, please keep it away from strong magnetizing field;
- ☞ When using Contactless IC-card Encoder HCS-4345NTK, please do not place it on metal table or put metal objects on it, it is recommended that no metal objects should be placed within 5 cm around it.

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