

# **IQBoard LT V7.5**

## **User Manual**



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## **Statement**

This manual is for IQBoard LT.

Use this product strictly according to detailed operation instruction in this manual so as to ensure proper use. Please read this manual carefully before you install this product.

Opening the package means you have agreed to purchase this product, Returnstar will not accept returns of opened packages.

The product specification may be subject to change without prior notice. The sample pictures in this User Manual may differ from the real product.

Returnstar reserves all rights to charge the fee at anytime for product replacement, revision and update. The information in this manual is subject to regular change without prior notice. Returnstar will make no warranties with respect to this product and disclaims any warranties, whether express or implied, of merchantability and fitness for a particular purpose.

## **Trademark Notice**

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## **Recycling**

Always return your used electronic products, batteries, and packaging materials to separate collection. This way you help prevent uncontrolled waste disposal and promote the recycling of materials.

## **Temperature and Humidity Requirements**

### *Storage*

Temperature: -40°C ~ 60 °C      Humidity: 0% ~ 95%

### *Operation*

Temperature: 0°C ~ 40 °C      Humidity: 15% ~ 85%

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# Chapter 1 Product Introduction

IQBoard LT is a portable virtual whiteboard adopting infrared technology. When connecting with computer, IQBoard LT can transform the projection area (curtain, whiteboard or wall) into an interactive presenting screen. User can use Light Pen or Electronic Wand to operate the computer directly on the projection area.

With IQBoard LT, marvelous interactive communicating effects can be achieved in live demonstration, teaching, product exhibition, business conference, video communication, news broadcast, securities evaluation, military command, entertainment, medical consultation, engineering design, competition tactics analysis, weather analysis, etc.

IQBoard LT is provided with powerful IQBoard Software, which makes your operation on interactive whiteboard more convenient. Through IQBoard Software, various interactive teaching and demonstrating functions can be achieved, such as write, erase, label (in character, line, dimension and angle), drag, zoom, reveal screen, spotlight, screen capture and save, screen record and playback, handwriting recognition, on-screen keyboard, text input, text to speech, hyperlink to video, sound and webpage, and remote conference by NetMeeting. IQBoard Software also has colorful object animation effects, page switching effects and interactive questions. Therefore, with IQBoard Software, users can make more interactive courseware by designing unique object animation, adding sound or hyper linking.

IQBoard Software also includes 500M IQBoard Resource Library covering more than 30 subjects, such as math, physics, chemistry, biology, gymnasium, etc. User can customize the installation by selecting subjects. The software also provides common line, shape, character, symbol, decoration graph, background template, Flash courseware, and other resources. Moreover, the software supports importing various picture files and DOC(X), PPT(X), XLS(X), PDF files. The page and file created by IQBoard Software can be saved as and freely converted to various picture files as well as DOC(X), PPT(X), XLS(X), PDF, html files, etc.

We provide continuous upgrading service for IQBoard Software. For more information and detailed operation about IQBoard Software, please refer to IQBoard Software User Manual in the installation CD.

# Chapter 2 Specifications

## 2.1 Performance:

Signal Receiver	
Digitalizing Technology	Infrared
Active Area (max projection size)	150 inch diagonal
Resolution	9600×9600
Refresh Rate	80 fps
Signal Tracking Rate	320 cm/s
Signal Processing Rate	360 dot/s
PC Connection	Connect PC to IQBoard with USB cable, then converts into RJ45 network cable (which can be extended to 40m by option) through USB adapter, external power is not needed.
Calibration	9 or 12 points
Power Consumption	Less than 1W
Retractable Electronic Wand	
Digitalizing Technology	Infrared
Control Buttons	1 button
Power	Battery AA x2
Working Current	40 - 50 MA
Length	78cm in total, with 63cm retractable wand body. 30-120cm wand body is optional
Light pen	
Digitalizing Technology	Infrared
Control Buttons	1 button
Power	Re-charge by USB port
Working Current	40 - 50 MA
Length	16.6 cm

## 2.2 System Requirement:

Windows XP/2003/Vista/7

Pentium166 CPU (Pentium II or higher recommended)

64 MB RAM (128 MB recommended)

1G free hard disk space (for full installation)

1 free USB port

1 projector (short focus or ultra-short focus projector recommended)

# Chapter 3 How to Install Hardware

## 3.1 How to Install Electronic Wand



1. Unscrew the battery cap by turning it counterclockwise.
2. Insert 2 AA batteries with the plus (+) side up.
3. Screw the battery cap back by turning it clockwise
4. Screw the retractable body clockwise into the holder.



### Note:

1. You can press the interactive button in the holder to achieve single click, double click and right click functions.
2. .Please do not bend Electronic Wand since it has precise electronic components inside.
3. Please don't tweak the button on the wand; otherwise its performance may be affected.

## 3.2 How to Install Light Pen



**USB charging port:** Re-charge light pen by connecting pen with computer through USB cable. Charging for 2 minutes can support about 3 hours' using and 72 hours' stand-by. (Input voltage: DC4.5V~5.5V. Maximum input current: 450mA)

**Button:** Press the button once to achieve double click function.

**Indicator:** When pen tip or button is pressed, indicator will light up. Please re-charge the pen if indicator is dim or off.

**Pen tip:** Made of wear resistant material, it's durable. Press the pen tip on surface for writing or operation.



**Note:** Single and double click functions can be achieved by pressing button on pen body or pressing pen tip on surface.

### 3.3 USB Adapter

With USB adapter, the transfer mode can be converted from USB to RJ45. This transfer mode has such advantages as long-distance transmission, high transmission speed and strong extendibility.



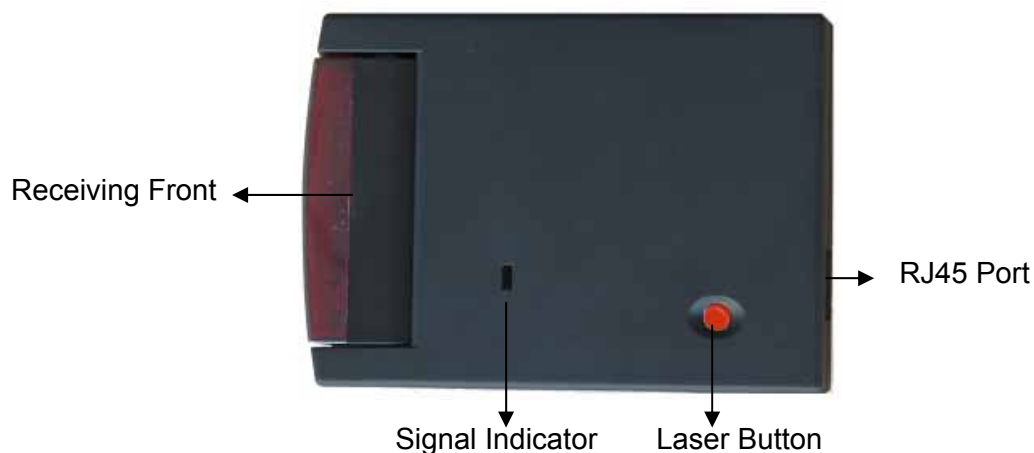
**RJ45 port:** connect USB adapter to receiver with extended network cable.

**Mini USB port:** connect USB adapter to PC with USB cable.

**Power indicator:** after connecting the USB adapter to PC, the power indicator will light up.

### 3.4 Signal Receiver

Signal Receiver can receive infrared signal emitted by Electronic Wand or Light Pen, thus determine its position, and sent the information to PC through the cable.



**Signal Indicator:** When receiving infrared signal emitted by Electronic Wand or Light Pen (or other devices), this indicator will turn green.


**Receiving Front:** Receive infrared signal emitted by Electronic Wand or Light Pen. The receiving angle can be adjusted from 0-30 ° .


**Laser Button:** Emit a laser beam for calibration.

**RJ45 Port:** Connect USB Adapter to Signal Receiver with the extended network cable.

### 3.5 How to Connect Signal Receiver with PC:



1. Connect USB Adapter to receiver with the extended network cable, both ends plugging into RJ45 ports on adapter and receiver respectively.



**Note :**

1. Connect one end of the extended network cable to RJ45 port on USB adapter, and the other end to the RJ45 port on receiver.
2. The extended network cable with RJ45 ports is optional, can be extended to 40M at the longest.

2. Connect USB Adapter to PC with USB cable.

	
USB Standard-A Plug for connecting computer	Mini USB port for connecting the relevant port on one end of the adapter

### 3.6 How to Install Projector

IQBoard LT can work with whiteboard, projector and computer, or work with computer and LCD TV, as the figure as follow. In case you want to use projector, open the projector after connection, and adjust it to make its projection image within the projection area and centered. Then use the trapezoid rectification function of the projector to make the projection image quadrate.



# Chapter 4 Install and Uninstall Drivers

## 4.1 Install Drivers

Run “IQBoard LT Drivers V7.5” in the installation CD, and install the drivers according to the prompt. The computer will automatically find a new hardware and install the drivers.



**Note :** The driver is also applicable to IQBoard LT V6.0 , but you need run “CP210xVCPInstaller.exe” in the “USB Drivers” folder in the installation CD.

## 4.2 Uninstall Drivers

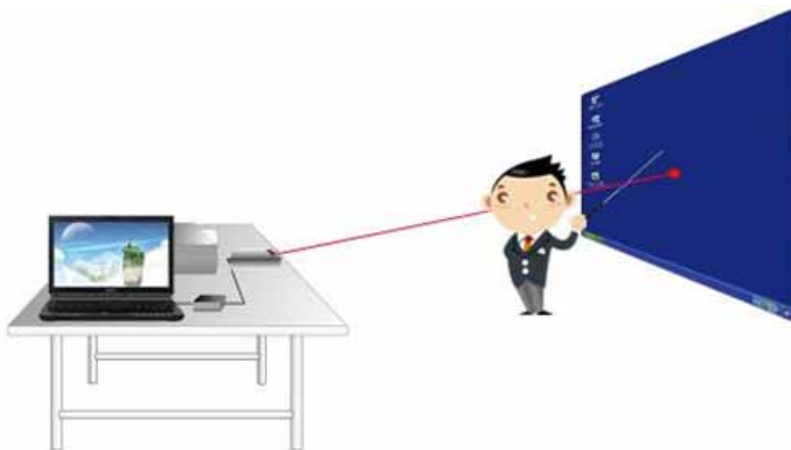
Select “Start > Programs > IQBoard LT Drivers V7.5 > Uninstall” to uninstall. You can also open Control Panel, select “Add/Remove Programs”, and in the list of currently installed Programs, select “IQBoard LT Drivers V7.5”, then press the “Remove” button to remove the drivers.

# Chapter 5 Mount Signal Receiver

## 5.1 Desktop Mounting

For mobile use of the IQBoard LT, you can simply mount the signal receiver on the desktop.

1. Place the signal receiver on the desktop at a distance of approximately 1.5 times of the width of the projection image, or on top of or next to the projector.
2. Connect one end of the extended network cable to RJ45 port on the receiver, the other end to RJ45 port on USB adapter.
3. With USB cable, connect one end of Mini USB to USB adapter, the other flat end to PC.
4. Adjust the position of receiver and the angle of the receiver's receiving front to direct positioning laser beam onto the centre of the projection screen.



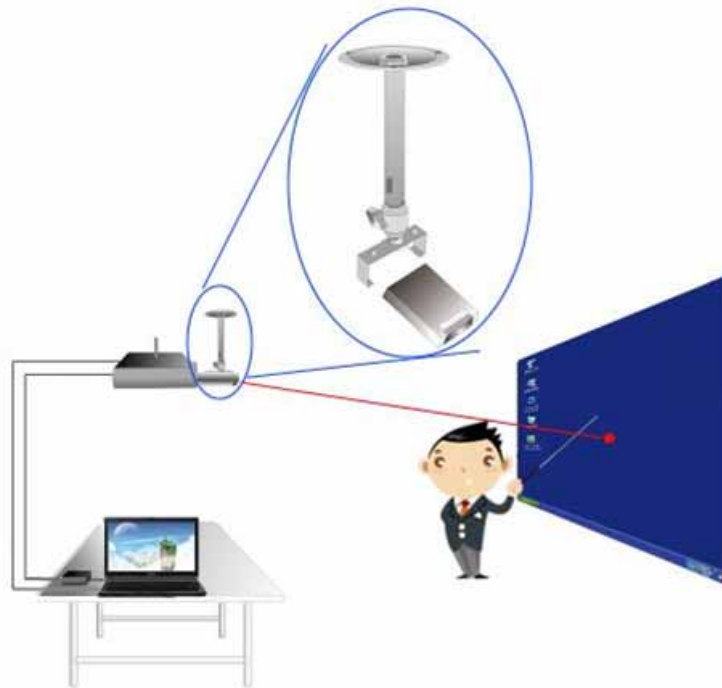
## 5.2 Ceiling Mounting

In case the position of projector and receiver is not changed frequently, you could use hanging bracket to mount the receiver on the ceiling

1. Connect the hanging bracket with receiver, and tighten the screw.
2. According to the position of 3 fixing holes in hanging bracket, drill 3 holes in the ceiling, and insert 3 anchor bolts.
3. Use 3 screws to fix the hanging bracket on the ceiling.

4. Connect one end of the extended network cable to RJ45 port on the receiver, the other end to RJ45 port on USB adapter.

5. With USB cable, connect one end of Mini USB to USB adapter, the other flat end to PC.



**Note:** If the ceiling is too high, you can use the extension pole to prolong the hanging bracket.

### 5.3 Recommended Signal Receiver Distance

Recommended Signal Receiver distance	
Screen Size	Distance between Receiver and Screen
70"	2.0-2.5 m
100"	2.5-3.0 m
120"	3.0-3.5 m
150"	4.0-4.5 m

# Chapter 6 How to Start and Orient IQBoard LT

In order to make the IQBoard LT work normally, you need to orient at the first time you use it. So the moving track of Electronic Wand and Light Pen can match the cursor, and you don't need to re-orient at the same environment.

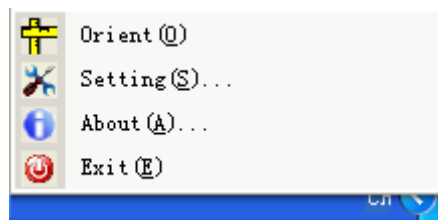
To orient IQBoard LT drivers:

1. Do one of the followings:

Select "Start > Programs > IQBoard LT Drivers > Start",

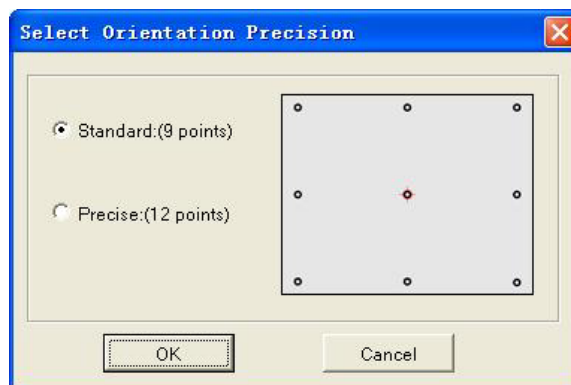
Click the desktop shortcut of "IQBoard LT Drivers".

A taskbar icon appears at the lower right corner of the screen.



**Note:** The "Orient" taskbar icon appears only after connecting the receiver correctly.

2. Click the taskbar icon and select "Orient", the Select Orientation Precision window appears.



3. Select orientation precision and click "OK".



4. Following the on-screen instruction, click the red button on the receiver, aim the laser beam at the red point on screen center, and click “OK”. 12 seconds later, a green dot appears on the top left corner of the projection screen.

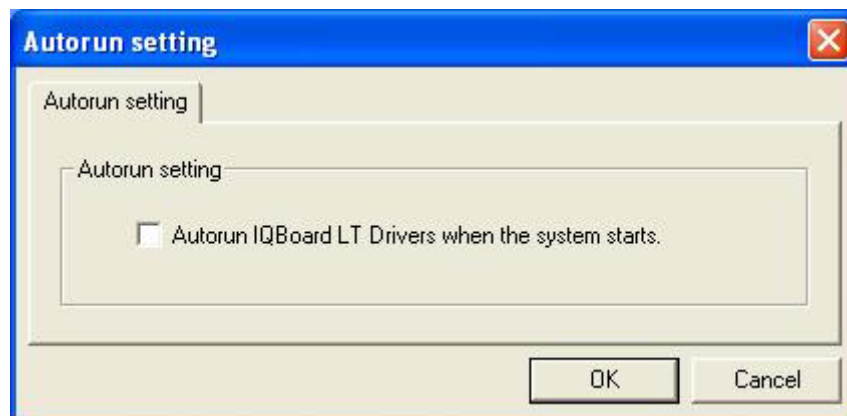
5. Do one of the followings:




If you use Light Pen, follow the on-screen instructions, press the center of each dot accurately with pen tip.

If you use Electronic Wand, follow the on-screen instructions, press the center of each dot accurately with the wand tip and press the button on the wand holder.

The functions of other items on the taskbar icon menu are as follows:

**Auto-run Setting:** You can decide whether to run IQBoard LT Drivers automatically when the system is started.



 **Note:** After IQBoard LT Drivers installed, if the icon at the lower right corner of the taskbar appears as , it means IQBoard LT hardware is not detected. If the icon appears as , it means IQBoard LT hardware has been successfully detected.

**About:** Click “About” to popup the information window of IQBoard LT.

**Exit:** Click “Exit” to quit IQBoard LT Drivers.

# Chapter 7 How to Use Light Pen and Electronic Wand

Action	Tool	Operation
Single Click	Light Pen	Raise the pen tip about 1-2mm from the surface, then press the surface once.
	Electronic Wand	Aim the wand tip to the surface, then press the button on the wand once and release.
Double Click	Light Pen	Raise the pen tip about 1-2mm from the surface, then press the surface twice, or press the button on the pen body once. The time interval should not be too long.
	Electronic Wand	Aim the wand tip to the surface, then press the button on the wand twice.
Right Click	Light Pen	Press the pen on the surface and hold for 2 seconds, right-key menu will appear.
	Electronic Wand	Press the button on the wand and hold for 2 seconds, right-key menu will appear.
Drag	Light Pen	Use the pen to press on an item and drag it to the appointed position (during which the pen tip should not leave the surface).
	Electronic Wand	Aim the wand tip to an item, press the button on the wand and hold, drag the item to the appointed position, then release the button.
Write	Light Pen	If you use IQBoard Software, switch into “Board” mode, select a writing tool, then you can use the pen to directly write on the surface.
	Electronic Wand	If you use IQBoard Software, switch into “Board” mode, select a writing tool, then you can use the electronic wand to directly write on the surface (press the button on the wand and hold when writing).
Remote Control	Electronic Wand	When you use Electronic Wand, the wand tip needn’t touch the surface, you can operate in a certain distance. Operations are the same as above.

## Chapter 8 FAQ

### **1. I can't use Light Pen or Electronic Wand to operate or write on the operating surface.**

- 1) IQBoard LT Drivers has not been correctly installed. Please uninstall the driver and re-install.
- 2) IQBoard LT Drivers has not been started, or IQBoard LT has not been oriented. Please start the drivers and orient IQBoard LT.
- 3) The light signal emitted by Light Pen or Electronic Wand is blocked from being received by receiver. Please do not block the light. Generally it will be fine so as the light from projector is not blocked.
- 4) The power of Light Pen or Electronic Wand are low. Please replace the batteries for Electronic Wand, or re-charge Light Pen.
- 5) IQBoard Software hasn't been started, please start IQBoard Software.
- 6) The receiver and computer is not well connected. Please check and re-connect.

### **2. I can use Light Pen or Electronic Wand to operate or write only on part of the operating surface..**

The orientation is not precise. Please re-orient.

### **3. When writing or operating by Light Pen or Electronic Wand, the response is slow or inconsecutive.**

- 1) The computer is not under normal running or the memory is occupied too much. Close some running applications or restart the computer.
- 2) The power of Light Pen or Electronic Wand are low. Please replace the batteries for Electronic Wand, or re-charge the Light Pen.
- 3) The posture of holding Light Pen is not correct. Please keep the angle between light pen and operating surface 50 degrees, in order not to block the light signal from light pen.

### **4. The orientation point or cursor moves weirdly.**

- 1) The projection area has trapezoid distortion, please use the trapezoid correction function of projector, or replace the projector.
- 2) There is sunlight or other strong light in the room. Please pull down the curtain, and adjust the light intensity or just shut down the strong light. Avoid direct exposure to sunlight or other strong light in the room, especially for projector screen.

### **5. How to determine whether there is light interference?**

- 1) When not operating with Light Pen or Electronic Wand, if the signal indicator on the receiver is still red, it means there is light interference.
- 2) When orientating, if the red cross moves automatically, and after you cover the receiving area with your hand, the cross tops moving, it means there is light interference.

**6. When orientating, some orientating points do not respond.**

- 1) When selecting coordinate sampling points, the lasers emitted by receiver didn't emit at the correct place. Adjust the elevation of receiving head and the position of receiving box, to ensure that the 2 lasers would be emitted on middle-left corner and middle-right corner of the screen separately (3-5cm outside the 2 indicating arrows).
- 2) If the projection area is within 120-150 inch, please use Exposure Time Setting Tool to reset the exposure time of receiver above 300 (see Chapter 10), and re-orient.
- 3) The receiver and computer are not well connected. Please check and re-connect.

**For other questions, please consult our service center or local dealer.**

# **Chapter 9 Cautions and Maintenance**

## **9.1 Signal Receiver**

1. Please do not use sharp or pointed objects to touch the signal receiving area in front of the receiver.
2. Please do not use wet cloth to clean the receiver or controller to avoid short circuit and other problems.
3. Please do not use and install IQBoard LT in dusty, foggy, wet and inclement environment. Keep it away from sharp object, heat source, corrosive chemicals, fire, and water.

## **9.2 USB Cable and Extended Network Cable**

Do not put the USB cable and Extended Network Cable on the floor where people might stumble over them. If you have to do so, straighten them and use insulated adhesive tape or cable with contrast color to tie them up. Please handle carefully and avoid over-bending. Exposing the USB cable and Extended Network Cable outside for a long time may shorten their life-span and cause other unnecessary damages, so please keep them carefully. If you use the whiteboard in the meeting room or class room, please fix the cables along the cable alley.

## **9.3 Projection**

Face the whiteboard when operating and writing on the projected image, stand aside when you turn back to face the students. Please do not look at the projector directly to avoid its strong light damaging your eyesight. Instruct students how to use the whiteboard, tell them do not to face the projector directly.

## **9.4 Transport**

Please handle with care, and do not put any weight on the receiver and adapter so as not to damage the parts. In long distance transportation, it is suggested to repack the whiteboard with the original packing. If the original packing is unavailable, insert some protective padding between the components to protect them from intense vibration or crash. Avoid vibration, dampness, electricity, water and pressure in transportation.

## **9.5 Part Replacement**

Please do not disassemble the device or modify its inner structure so as to prevent accident or trouble. For maintenance or part replacement, please resort to our authorized technician. Make sure that you use our designated part or the one with same specification when replacing.