

Tenway ESL System

# **User Manual**

Revision V0.9

Tenway (Shanghai) Co., Ltd

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Thank you for choosing Tenway (Shanghai) co.,ltd for the Electronic Shelf Label (ESL) System. Please refer to this User Manual for set up and proper use of the ESL System.

# 1 Hardware configuration

## 1.1 System components

Part Number	Description	Option	Picture
IVY-E-L20 (Price Tag)	Segment LCD tag which displays price and flags	mandatory	
IVY-E-E21 (Price Tag)	EPD tag which displays price and flags	mandatory	
TC100 (Access Point)	Access point which distributes price information to price tags.	mandatory	
TG100 (Wireless Barcode Scanner)	Wireless barcode scanner which is a handy tool that operates the ESL system.	mandatory	

TH100 (ESL Server)	System and database server which interfaces to POS/ERP and manages the ESL system.	Optional	
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ESL system hardware components can be selected according to budget and needs.

## 1.2 System installation

Tenway's ESL hardware system is a plug & play system, plug in power cords and it is up and running already.

Here are a few steps to setup the ESL system. Please see figure 1 for

1. Attach power cord to ESL server
2. Attach Ethernet cable between server and network switch
3. Attach Ethernet cable between AP and network switch
4. Attach power adapter to network switch
5. Attach antenna to the access point (AP)
6. Attach 5V DC power adapter to AP

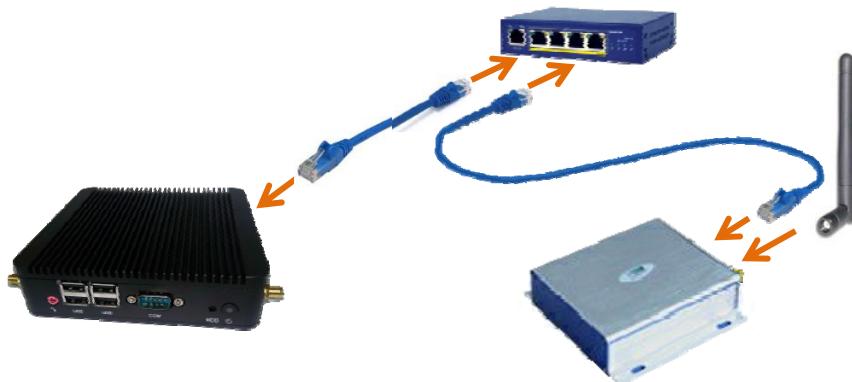


Figure 1 system setup

## 2 Software installation

Open file folder where “ESLControlSystem\_Setup.MSSQL.exe” located. Double click the filename to start installation. (Figure 2).

Name	Date modified	Type
ISetupPrerequisites	2013/11/25 17:24	File folder
ESLControlSystem_Setup.Demo.exe	2013/11/25 17:24	Application

Figure 2 Find the ESL Server software installation wizard

### 2.1 Choose language

You can choose English, simplified Chinese and Traditional Chinese as program language when you see a pop up window as below. Choose your language in the drop-down list, click "ok" button to continue.

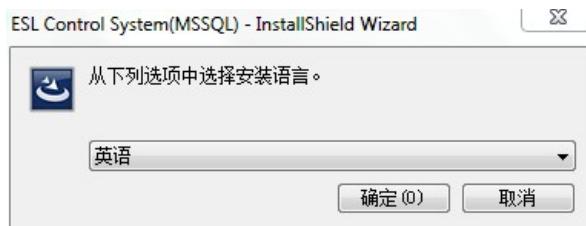


Figure 3 Choose language

### 2.2 Install database

Tenway ESL server uses Microsoft SQL Server 2005 Express SP4 as database server, click “install” when you see this:

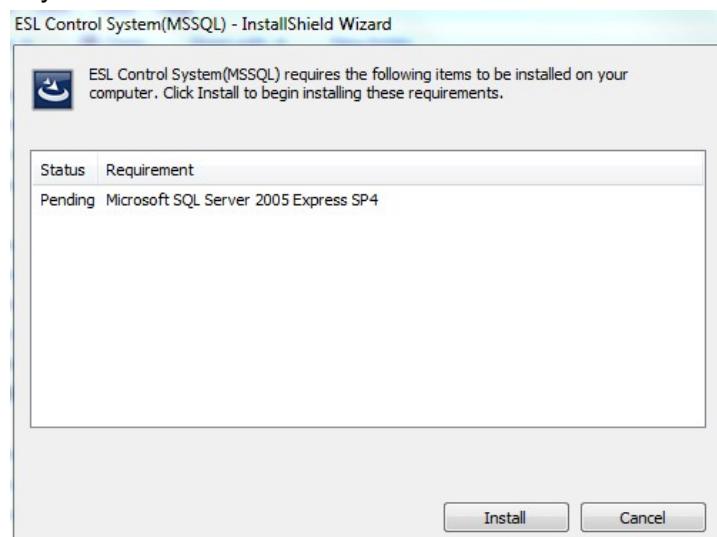


Figure 4 install database

Wait until this finish. Then click “next”...

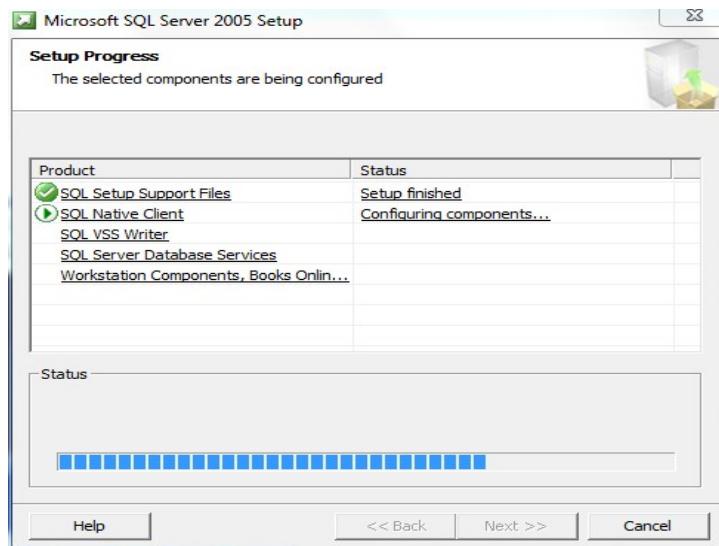


Figure 5 Installation of database

## 2.3 Install ESL server

The installation wizard will start the installation of ESL SYSTEM software after finish installation of SQL server. Click “next” when you see figure 6.



Figure 6 install ESL server

Fill in your user information, then click “next”



Figure 7 user information

Click "next" when you see figure 8.

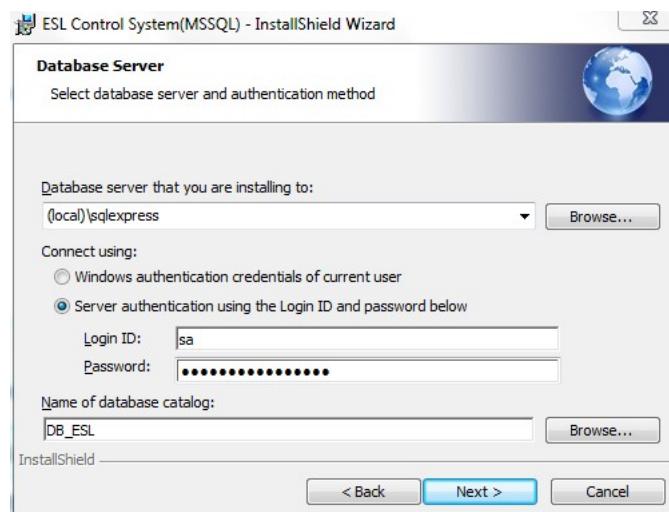


Figure 8 database server configuration

Choose "complete", then click "next" when you see figure 9

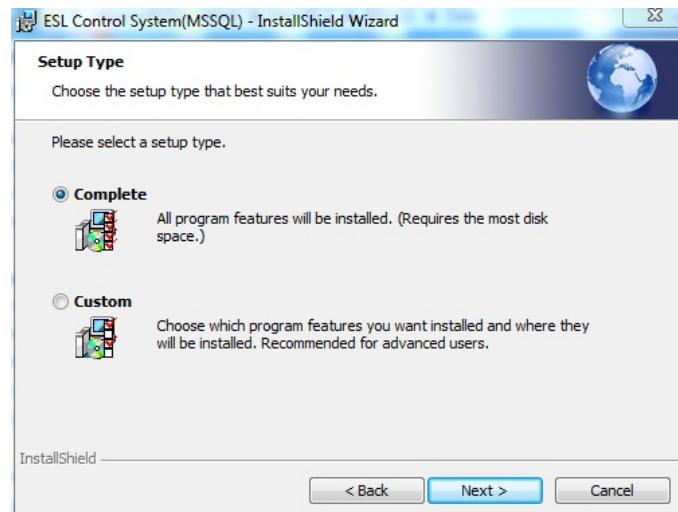


Figure 9 Installation type

Follow instructions on screen to finish installation.



Figure 10 finish of installation of ESL server software

## 3 Software user's guide

After installation of Tenway's ESL system software, a program shortcut will be generated on your desktop. Double click this icon to launch ESL system management program.



Figure 11 "ESL system management" icon



Figure 12 Login interface

Default login name is: "admin" with no password.

Homepage is divided into three areas: the function list area, interactive area and information area.

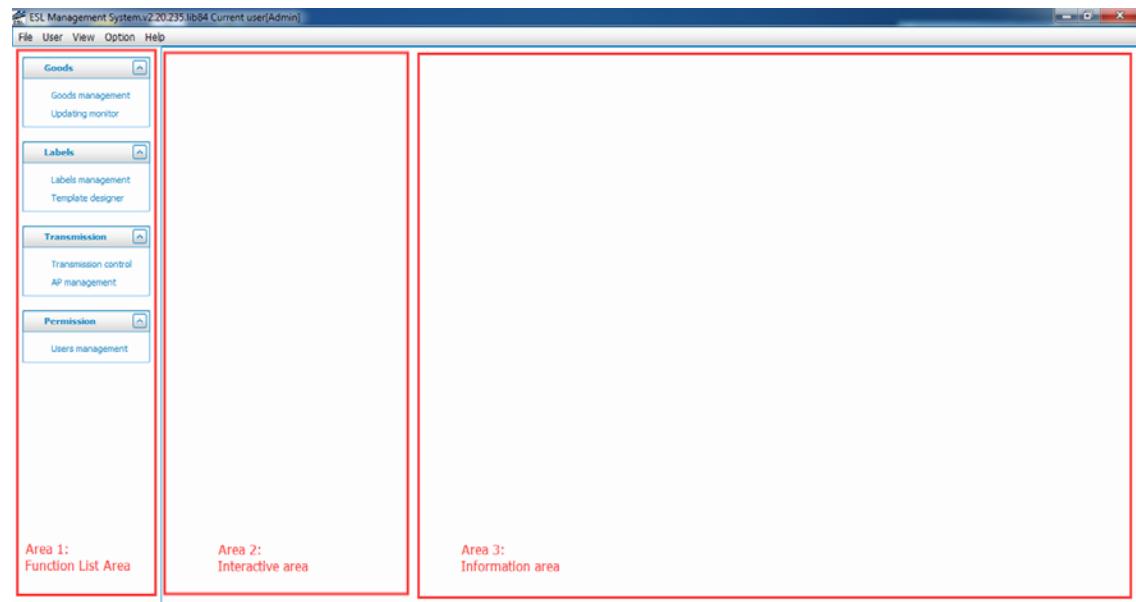


Figure 13 Opening page

### 3.1 AP management

Click "AP management" entry which is located at lower part of area 1, a tab will be shown as in figure 14.

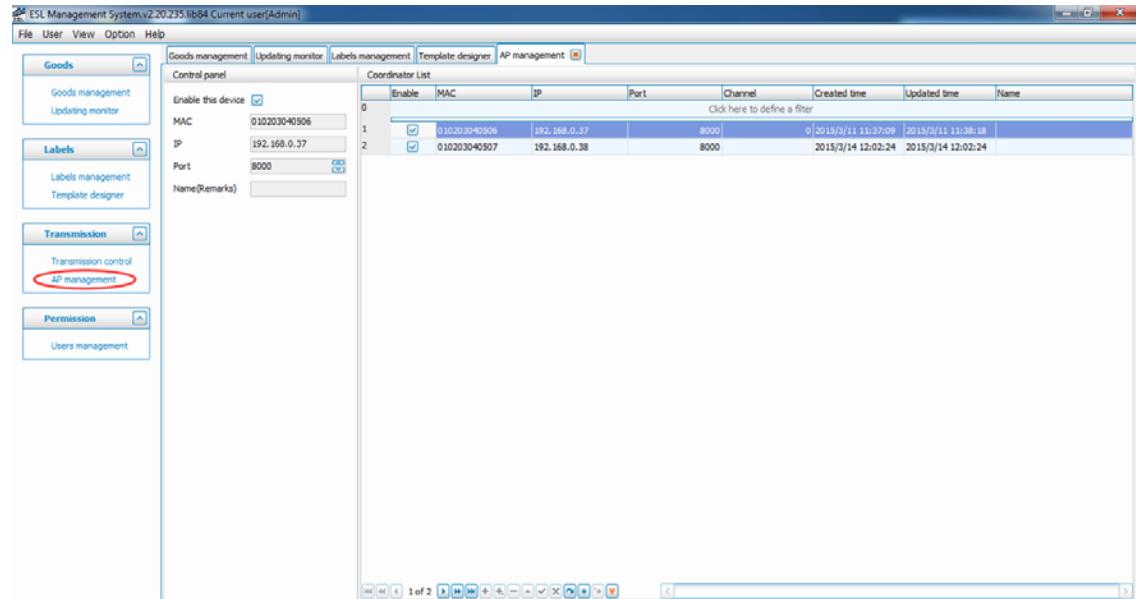


Figure 14 AP management

Move mouse cursor to "Information area", right-click to pop a dropdown list. Choose "New" to add new AP to the system. Fill in information in the "control Panel" window(Area 2), then click "save". An AP record will be generated. Information you need to fill in include: "MAC address" (Provided by vendor), IP address (Provided by user IT administrator) and Port number (This number should be fixed to 8000 though).

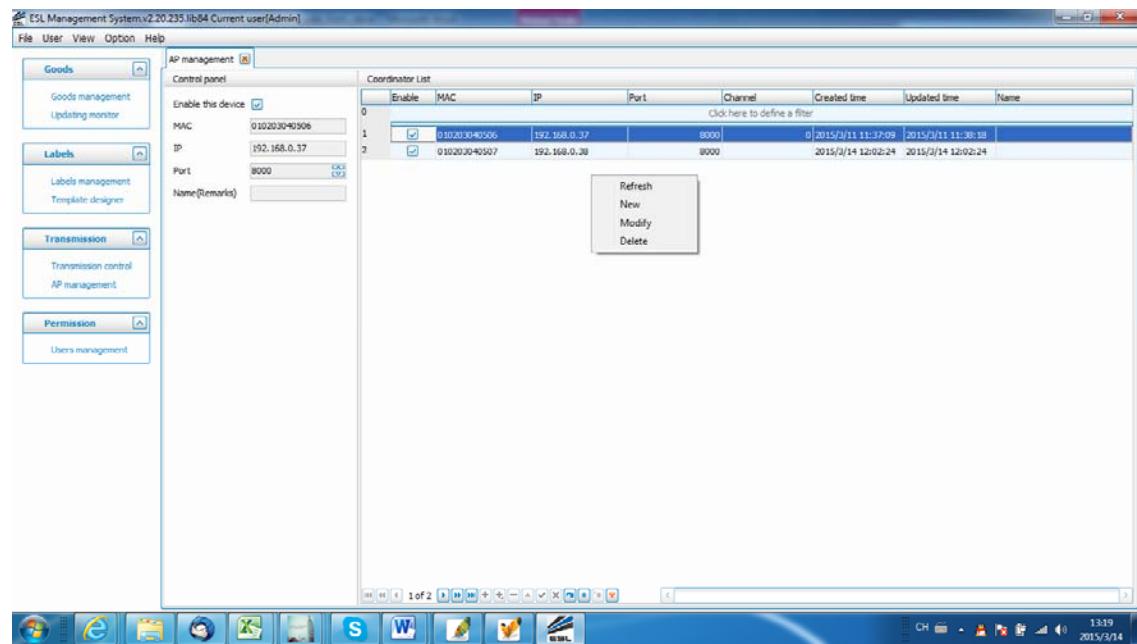


Figure 15 AP management

Once AP and other system hardware properly connected, you can check AP connection status by click "Transmission Control". Figure 16 will show up.

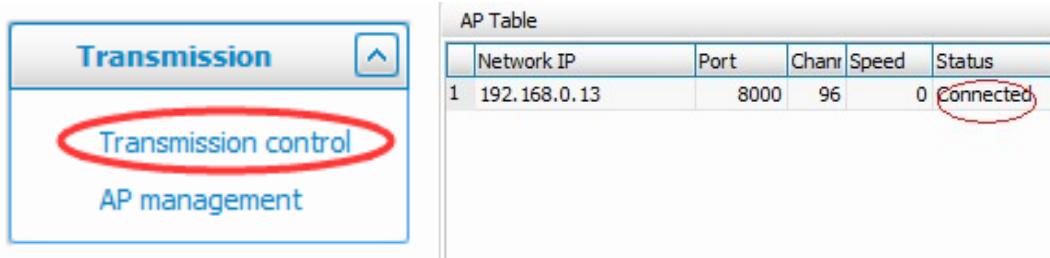


Figure 16 AP connection status

**Caution:** status must be **“Connected”** for the system to work properly

## 3.2 Goods management

Click "Goods management" entry to open up a table shown in figure 17. Move cursor to area 4 (Information area), right click, User has 3 choices: "Refresh", "Modify" and "Delete":

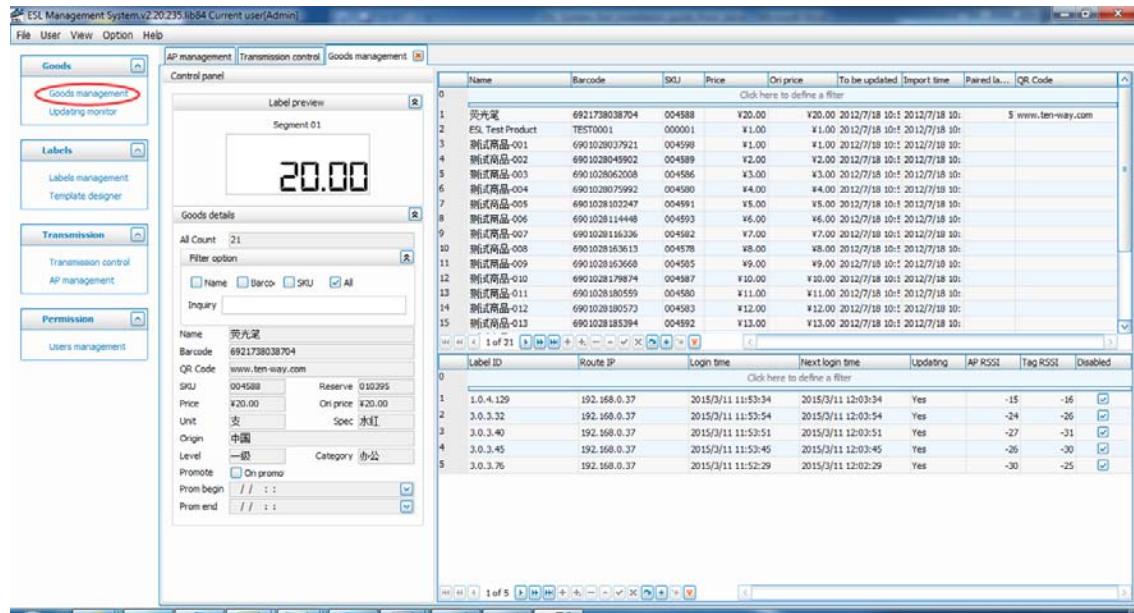


Figure 17 Goods management

Click “**Refresh**” will update information to the latest time point;

Click “**Modify**” will put area 3 into editing mode. Back ground of some area will change from gray to white. Two more buttons will show up at bottom.

Click “**Delete**” will erase the item highlighted.

There is one more function “**Add**” which needs special privilege to active. Use this function to create new goods record. (Not recommended usually)

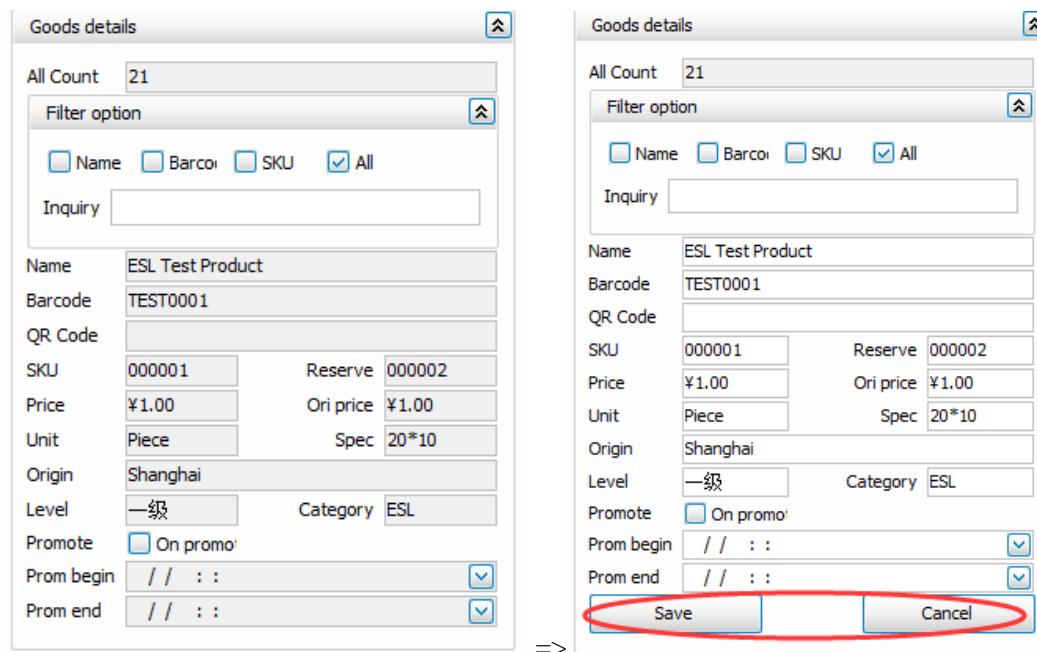


Figure 18 Modify goods information

On the upper part of the area 2, there is a real time label preview window that shows what will label looks like on the tag.

### 3.3 Template Designer

Click the “Template Designer” entry brings out a template tool to change the display on price tag (EINK tag only).

TBD

### 3.4 Labels Management

Click the "Labels Management" entry will bring out information shown in figure 19.

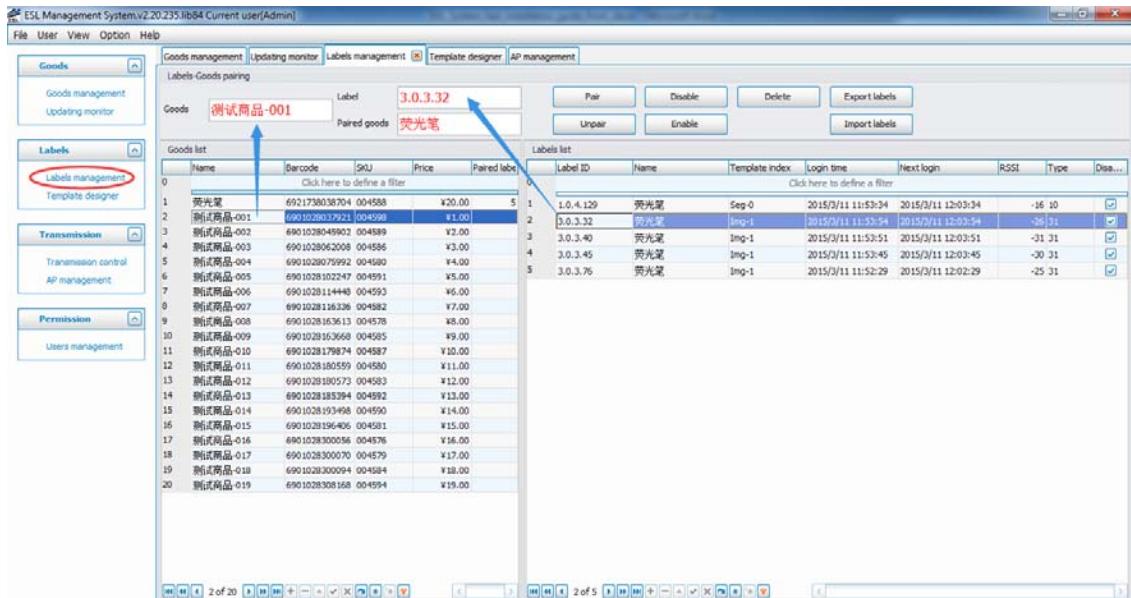


Figure 19 Labels Management

There are two areas in this page: “Goods list” and “Label list”. Goods list area will show all goods in database, label list will show all labels which are activated.

Click an item in goods list will bring that item to highlight mode, its name will be shown in upper window. Click an item in label list will bring that item to highlight mode, its name will be shown in upper window too.



Figure 20 Label management

Buttons shown in figure 20 have the following definitions:

**Pair:** bind highlighted goods with highlighted label. Price of corresponding goods will be displayed on selected label after this button pressed.

**Unpair:** remove binding relationship of paired goods and label.

**Disable:** Put a price tag into sleep mode.

**Enable:** Bring a disabled price tag into working mode.

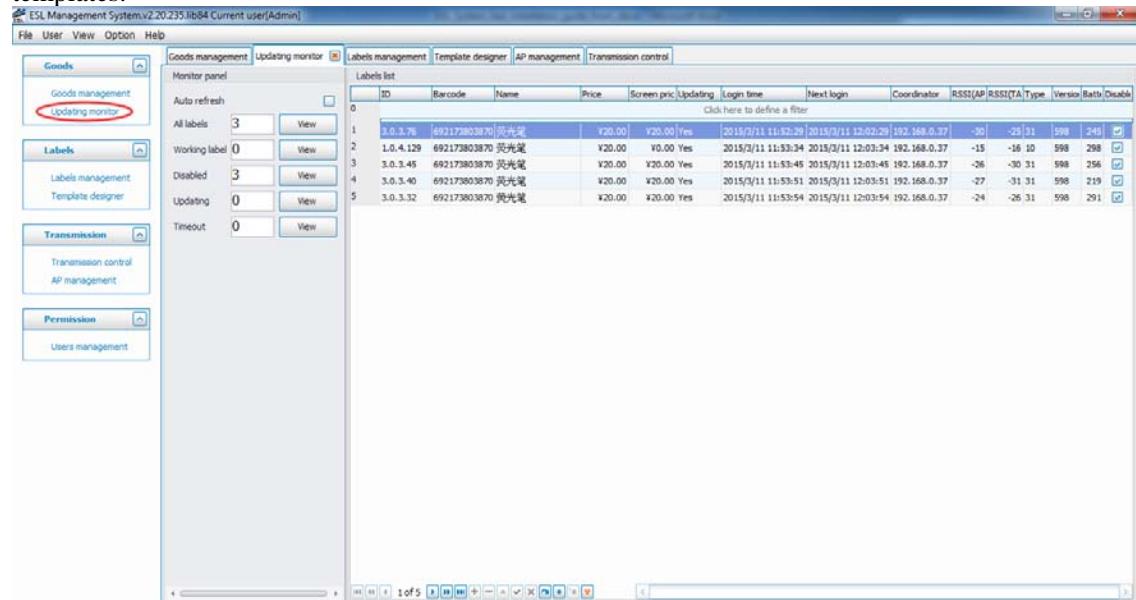
**Delete:** Delete a price tag from list.

**Export:** TBD

**Import:** TBD

## 3.5 Updating monitor

Click the “Updating monitor” entry brings out a window which shows data transmission information of price tags. Please prefer to Figure 21 for detail. The 5 “view” button are used as filter templates.

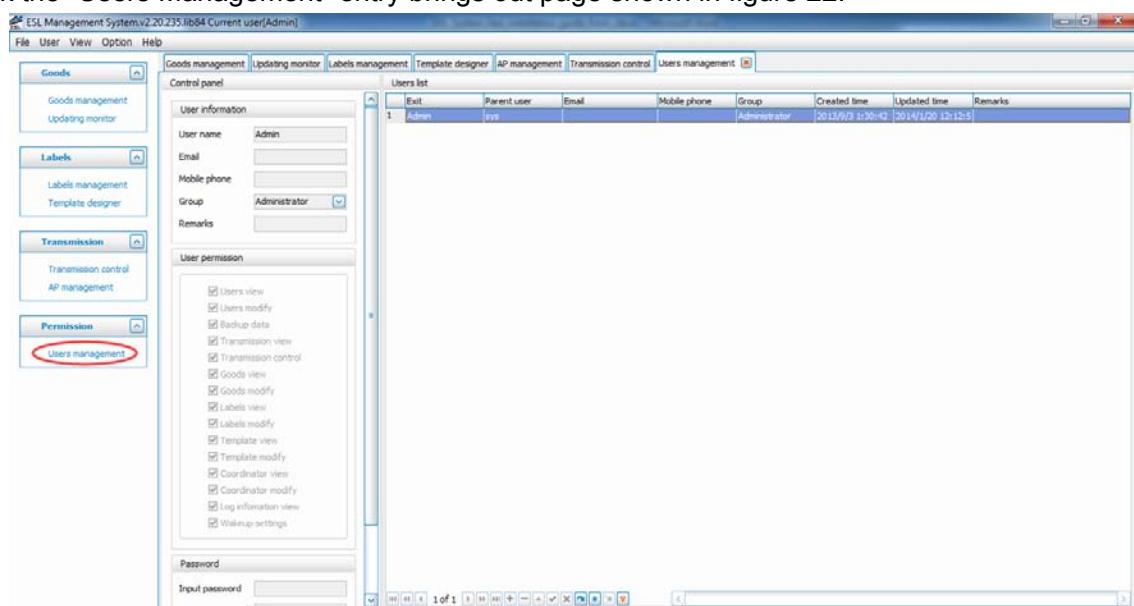


ID	Barcode	Name	Price	Screen pric	Updating	Login time	Next login	Coordinator	RSSI(AP)	RSSI(TA)	Type	Version	Batts/Disable
Click here to define a filter													
1	3.0.3.76	692173803870	荧光笔	¥20.00	¥20.00 Yes	2015/3/11 11:53:29	2015/3/11 12:02:29	192.168.0.37	-30	-29.31	598	246	<input checked="" type="checkbox"/>
2	1.0.4.129	692173803870	荧光笔	¥20.00	¥0.00 Yes	2015/3/11 11:53:34	2015/3/11 12:03:34	192.168.0.37	-15	-16.10	598	298	<input checked="" type="checkbox"/>
3	3.0.3.45	692173803870	荧光笔	¥20.00	¥20.00 Yes	2015/3/11 11:53:45	2015/3/11 12:03:45	192.168.0.37	-26	-30.31	598	256	<input checked="" type="checkbox"/>
4	3.0.3.40	692173803870	荧光笔	¥20.00	¥20.00 Yes	2015/3/11 11:53:51	2015/3/11 12:03:51	192.168.0.37	-27	-31.31	598	219	<input checked="" type="checkbox"/>
5	3.0.3.32	692173803870	荧光笔	¥20.00	¥20.00 Yes	2015/3/11 11:53:54	2015/3/11 12:03:54	192.168.0.37	-24	-26.31	598	291	<input checked="" type="checkbox"/>

Figure 21 realtime information of labels

## 3.6 Users management

Click the “Users Management” entry brings out page shown in figure 22.



Exit	Parent user	Email	Mobile phone	Group	Created time	Updated time	Remarks
1	Admin	1111		Administrator	2013/9/3 11:30:42	2014/1/20 12:12:5	

Figure 22 Users management

Move cursor into area 3, right click, a list is shown as figure 23. User is able to “Add”, “Modify”, “Delete” users of ESL system.

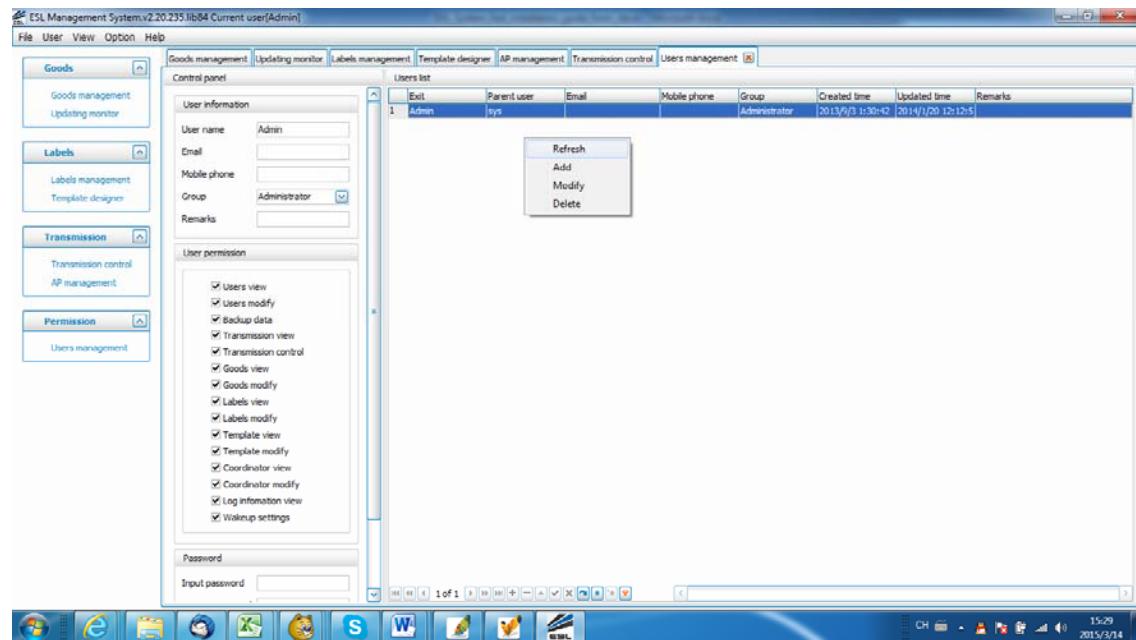


Figure 23 manage user

User privileges could be chosen by check/uncheck permissions in area 2. Password could be changed in password area.

## 4 Operate system using barcode scanner

Tenway ESL system is easy to operate just by a wireless barcode scanner. Below are several important functions this system can do:

### 4.1 Wake up price tag

**Operate:** hold the barcode scanner, touch the middle bottom area of price tag needs to be waked up, as shown in figure. Price tag will be registered to ESL system after been waked up.



Figure 24 wake up price tag

### 4.2 Bind price tag to goods

**Operate:** Two actions:

- Scan barcode on goods package
- Touch tag middle bottom area

Beep sound indicates operation status. Two beeps from the barcode scanner means succeed, one long beep means failure of binding, three beeps means goods is not in database.

Price will show on tag in a few seconds once operate succeed.



Figure 25 binding

## 4.3 Check stock of goods



Figure 26 Check stock using barcode scanner

## 4.4 Disable tag



Figure 27 Disable tag using barcode scanner

### FCC Notice to Users

**The following statement applies to all products that have received FCC approval.**

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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.