

**MOONS'**

# **Intelligent Monitoring & Management Software User Manual**

## To the Users

Firstly, we really appreciate your trust and choosing our product. We will spare no efforts to provide reliable technical support and premium after-sales service to assure you get the most satisfied results and enterprise performance. We will continue to meet your needs with high standard.

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The names of products included in this manual are just for recognition, and maybe they have been registered by other companies, we will make a statement here:

Windows, WindowsNT and Microsoft were registered by Microsoft.

Other names referred maybe were registered by other companies.

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## Contact Us

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When you contact us by fax or email, please describe the running environment of the software specifically and express your questions and ideas clearly. We also hope you can give us your common contact, telephone number, fax or email is OK. So we can contact you in time.

## Warning

When you contact us by fax or email, please describe the running environment of the software specifically and express your questions and ideas clearly. We also hope you can give us your common contact, telephone number, fax or email is OK. So we can contact you in time.

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.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

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.

# Contents

|                                      |    |
|--------------------------------------|----|
| To the Users                         | 2  |
| Contact Us                           | 3  |
| Warning                              | 4  |
| One: How to Start                    | 8  |
| Overview of the manual               | 8  |
| System Environment                   | 9  |
| Requirement for Windows              | 9  |
| PC Server System Requirement         | 10 |
| Database software Requirement        | 10 |
| Network topology                     | 11 |
| Software-plug List                   | 12 |
| Fast installation and Access         | 12 |
| Fast Installation                    | 12 |
| The contents of installation package | 13 |
| Installation Steps                   | 13 |
| Fast Access                          | 20 |
| Introduction of Maps                 | 22 |
| PART 2: Software Configurations      | 31 |
| Add basic information                | 31 |
| Add Company                          | 31 |
| Add Area/Line(Street)/Section        | 32 |
| Add Datasampler Address              | 33 |
| Datasampler                          | 34 |

|   |    |
|---|----|
| Add Luminaire information-----                                | 35 |
| Add Gateway Info-----   | 35 |
| Add Luminaire Info-----                                       | 36 |
| Add Dimming level and Scene-----                              | 37 |
| Add Dimming Level-----  | 37 |
| Add Scene dimming Value-----                                  | 38 |
| Part 3: Hardware Configurations-----                          | 40 |
| Use Gateway Config Tool-----                                  | 40 |
| Get Firmware Info-----  | 41 |
| PART 4: Communication-----                                    | 42 |
| Initialization-----   | 42 |
| Time Sync-----  | 42 |
| Initialize Node Controller-----                               | 43 |
| Download Group Number to Node Controller-----                 | 44 |
| Download Scene Number and Scene Value to Node Controller----- | 45 |
| Reset Gateway-----  | 45 |
| Dimming-----  | 46 |
| Broadcast Dimming-----  | 46 |
| Multicast Dimming-----  | 46 |
| Scene Dimming-----  | 47 |
| Section Dimming-----  | 47 |
| Dimming task-----   | 48 |
| Inspection task-----  | 48 |
| Dimming Time Schedule-----                                    | 48 |
| Gateway Dimming Schedule-----                                 | 49 |
| Inspection-----   | 51 |

|  |    |
|--|----|
| Reset Working Time and Consumption ----- | 52 |
| Statistic Analyze -----                  | 53 |
| Power Consumption Statistic-----         | 53 |
| Historical Trend -----                   | 54 |
| Inspection Historical Data -----         | 54 |
| Meter Data-----                          | 55 |

# One: How to Start

## Overview of the manual

This manual includes 6 parts:

Part 1 introduces system requirements for our software and how to install software smoothly.

Part 2 introduces how to finish basic configurations on the software.

Part 3 introduces how to configure the gateway and how to use the gateway tools.

Part 4 introduces how to finish the communication between software and PC.

Tips:

We advise the system maintenance personnel to read this manual from the first part to get a comprehensive understanding about our product. If you just want to use the software, you can jump to the fourth part to know the specific operations directly.

This manual covers the installation of software, the configuration of gateway and the connection of the two and some instructions of debugging. If you are not familiar with our software, please spend about 30 minutes reading this manual which can help you understand the functions of the system quickly and master the key operations.



## System Environment

### Requirement for Windows

| No | Windows          | compatibility | Requirement for compatibility       |
|----|------------------|---------------|-------------------------------------|
| *1 | WinXP SP2        | False         | Update to WINXP SP3                 |
| 2  | WinXP SP3        | True          | Installer 4.5、PowerShell 1.0、IIS5.1 |
| *3 | Win2000          | False         | False                               |
| 4  | Win2003          | True          | Installer 4.5、IIS6.0、WIC            |
| *5 | Win2008 (X86)    | True          | IIS                                 |
| *6 | Win2008 (X64)    | True          | IIS                                 |
| *7 | Win2008 (ENG)    | True          | IIS                                 |
| 8  | Win7 ultra (X86) | True          |                                     |
| 9  | Win7 ultra (X64) | True          |                                     |
| 10 | Win7 ultra (ENG) | True          |                                     |
| 11 | Win8             | True          |                                     |

The red \* means incompatibility

The green \* means recommended

**The compatibility means software can be installed by one-click installation. If you want to install database separately, Framework3.5SP1 should be installed on the computer.**

## PC Server System Requirement

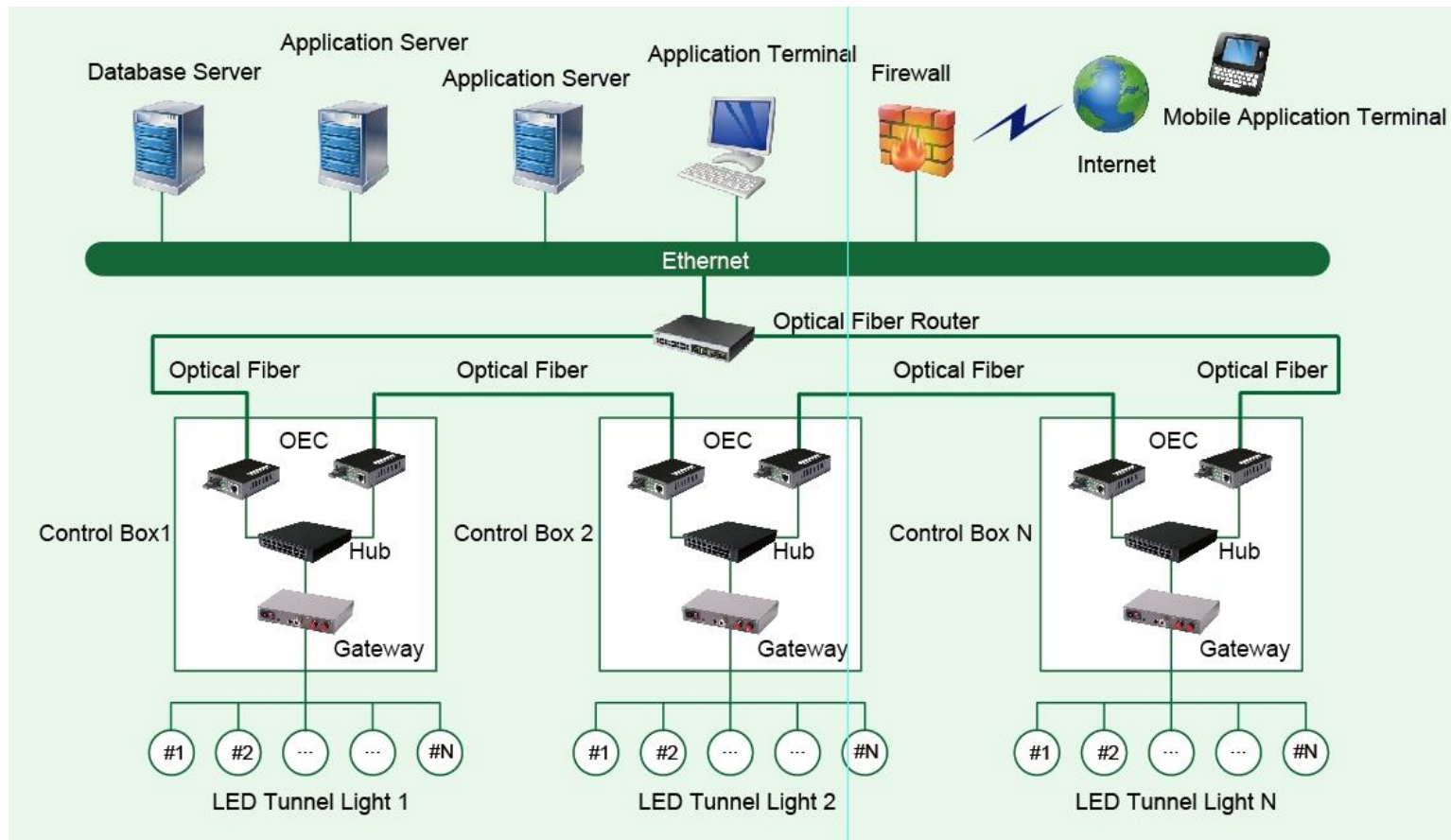
| No | Recommendation System | Recommendation PC Server                                       | Scene                                   |
|----|-----------------------|--|---|
| 1  | Win2008Std (X64)      | Option 1: PC, CPU: i5; memory: 4G;<br>hardcore: 500G;          | Small scene demo, about 50 lamps are ok |
| 2  | Win2008std (ENG X64)  |  |   |
| 3  | Win7ultra (X64)       | Option 2: branded servers, CPU: MEMORY<br>CAPACITY: hard disk: |   |
| 4  | Win7ultra (ENG X64)   |  |   |

## Database software Requirement

| No | Database software                | Recommendation PC Server                        | 备注   |
|----|----------------------------------|---|--|
| 1  | Micro SQL Server 2005std         | Please view the PC server system<br>requirement | Please buy copyrighted software, to prevent copyright disputes |
| 2  | Micro SQL Server 2008 R2std      |   |  |
| 3  | Micro SQL Server 2008 R2 Express |   | It's free, but only for demonstration                          |

**We just offer the list, but no windows system software or database software will be provided, customers should buy them.**

## Network topology



Pic 1 Network Topology

## Software-plug List

Except windows software and database software, we also need the software below to finish installation.

| No | Software-plug               | memo |
|----|-----------------------------|------|
| 1  | Microsoft Silverlight       |      |
| 2  | Microsoft PowerShell V2.0   |      |
| 3  | Microsoft Framework 3.5 sp1 |      |
| 4  | Microsoft Framework 4.0     |      |
| 5  | Microsoft Wic               |      |
| 6  | HASP Pro                    |      |

## Fast installation and Access

### Fast Installation

Quick installation can make customers to install the software smoothly through one-click installation even though customers know little about database and software configurations. How long it takes to install this software depends on the configurations of the computer. For example, a computer with Windows 2003 and 4G memory, it will take half an hour to finish the installation.

## The contents of installation package

The package includes Net.Framework4.0, HASP and license file, IISExpress for non-server windows system, essential parts RiaServices, free database SQL Server 2008 R2 express, the Wic(Microsoft patches) for windows server 2003, the WindowsInstaller4.5 for windows XP. The last one is MoonsLED-Setup.exe. Double-click on it will help you finish all the installation and configurations.

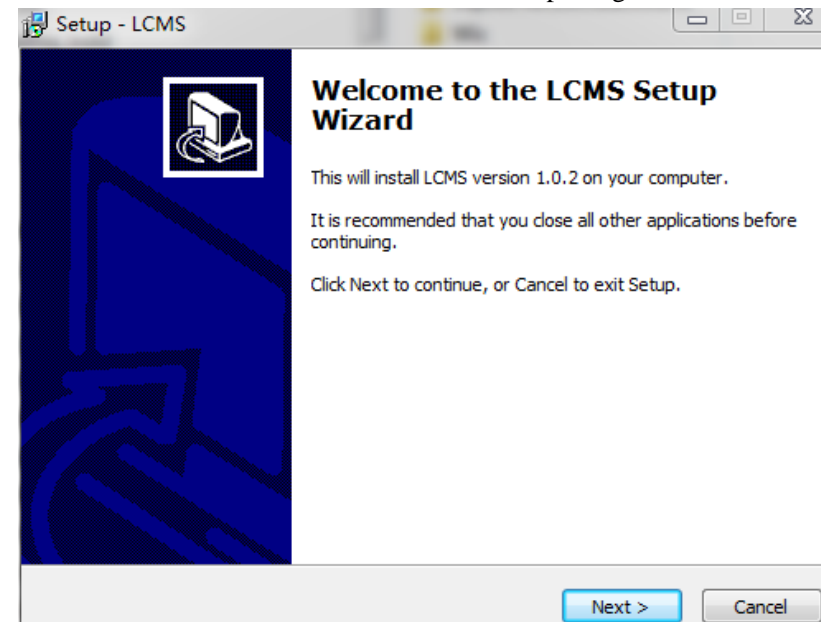
| Name                  | Date modified   | Type        | Size       |
|-----------------------|-----------------|-------------|------------|
| DataScript0727        | 2016/7/27 14:04 | File folder |            |
| DotnetFramework       | 2016/7/27 14:04 | File folder |            |
| Gateway_Config        | 2016/7/27 14:04 | File folder |            |
| Gateway_Firmware_2in1 | 2016/7/27 14:04 | File folder |            |
| IISExpress            | 2016/7/27 14:04 | File folder |            |
| RIAServices           | 2016/7/27 14:04 | File folder |            |
| Silverlight           | 2016/7/27 14:04 | File folder |            |
| SQLExpress            | 2016/7/27 14:05 | File folder |            |
| SQLServer2005Backward | 2016/7/27 14:05 | File folder |            |
| Wic                   | 2016/7/27 14:05 | File folder |            |
| WindowsInstaller4.5   | 2016/7/27 14:05 | File folder |            |
| LCMS-Setup            | 2016/7/27 13:50 | Application | 207,251 KB |

Pic 2 Contents of installation package

## Installation Steps

Installation environment: Windows XP SP3, please check the pictures on the right following the steps.

1. Double-click on MOONSLED-Setup.exe, and you can see the pop-up shown on the right in Pic 3.



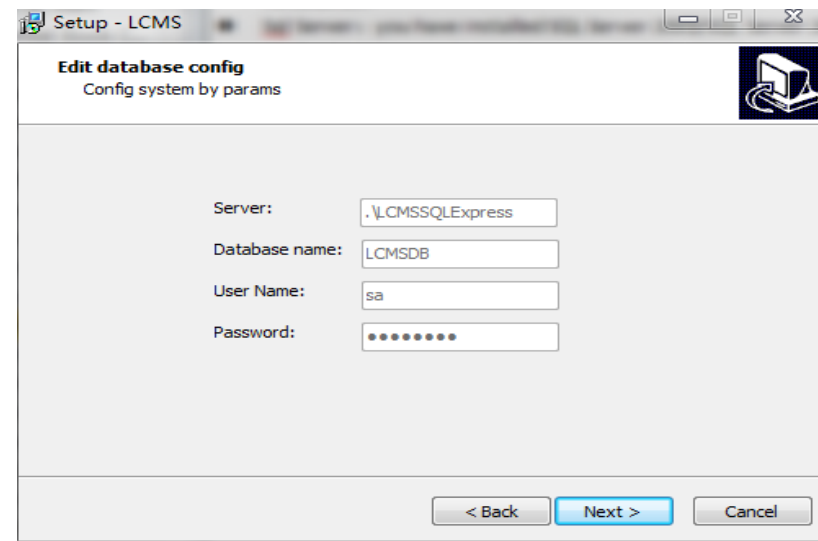
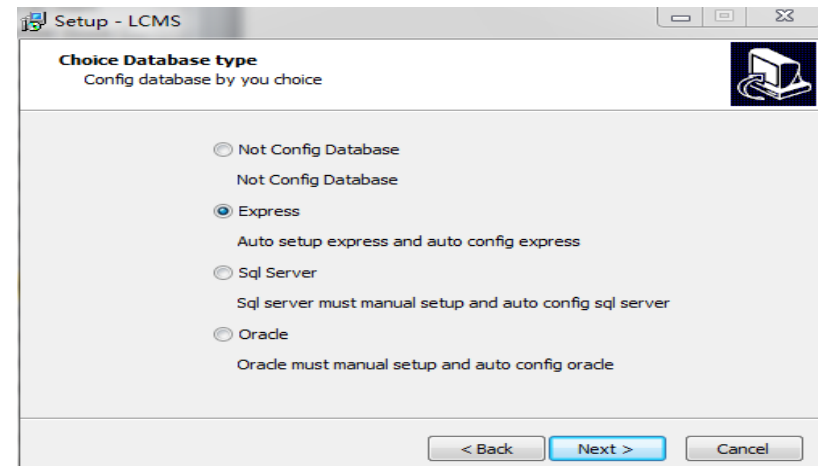
### Pic 3 LCMS Setup Wizard

2. Keep clicking the “next” button until you see the window shown on the right in Pic 4:

- Manual config: Just install intelligent monitor and management software.
- Express: It is the one-click installation without any need of manual configurations.
- Sql Server: Ensure SQL Server 2005/SQL Server 2008 has been installed before choosing it.
- Oracle: Ensure Oracle9i, Oracle10g or Oracle11g has been installed before choosing it.

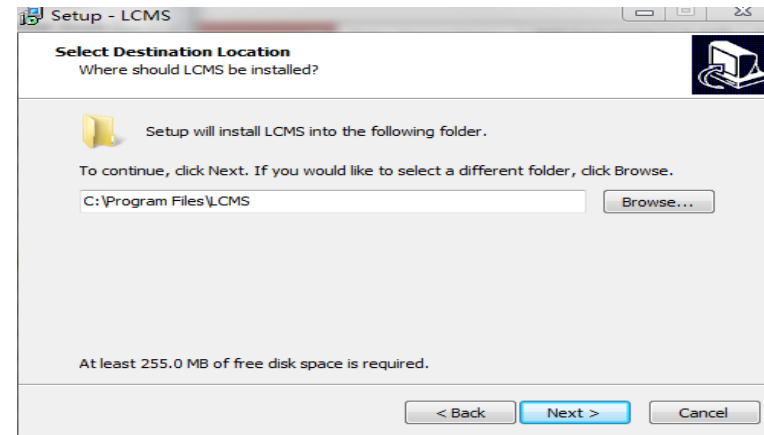
3. Edit database configuration. The default database, user and password will be shown on the window as shown in Pic 5. You can change the default user “sa” in order to ensure the security of account.

- Please remember the server name, database name, user name and password (db877350).

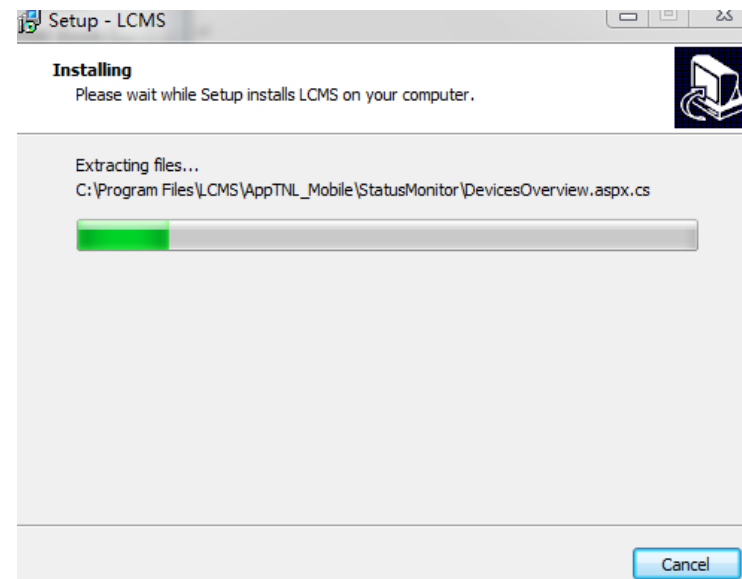


Pic 4&5 Choice database type and Edit database

4. Select destination location as shown in Pic 6, we recommend the default folder.



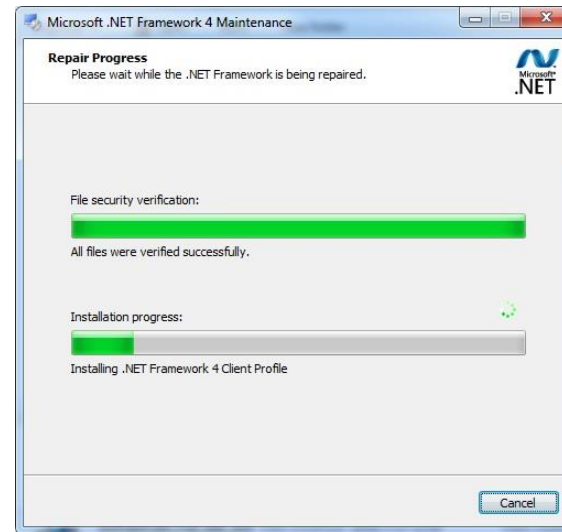
5. Installation starts
- The installation will be proceeded in this order:  
FrameWork4.0; Software; SQLServer2008; Execute Script; HASP; IIS  
Registration authority; Silverlight; RiaServices



Pic 6&7 Select location and installation starts

6. Install FrameWork4.0

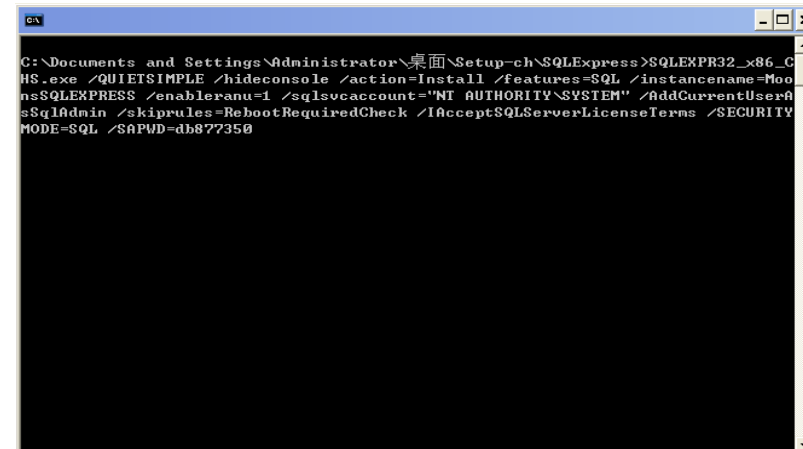
- Choose “I agreed the TERMS”, then click the “install” button.



Pic 8 Install FrameWork 4.0

7. Install database software

- The installation will be finished in 15 minutes, during this time please wait with patience and do not close any window related to installation, including the DOS window.

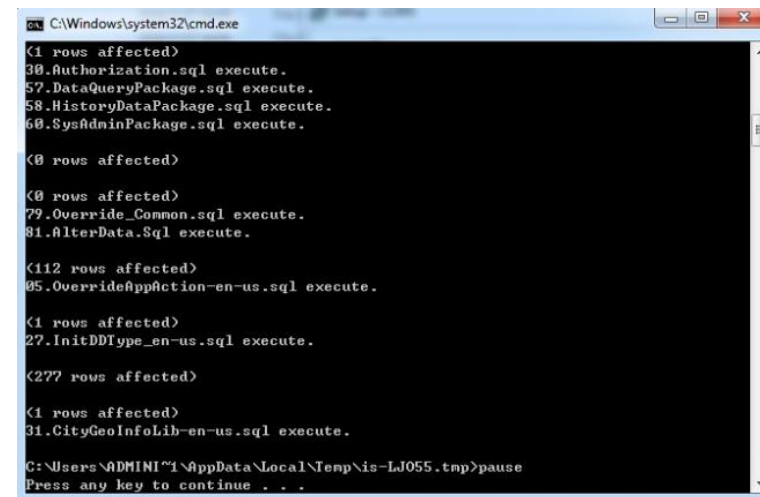


Pic 9 The Dos window of installing database



### 8. Execute Script

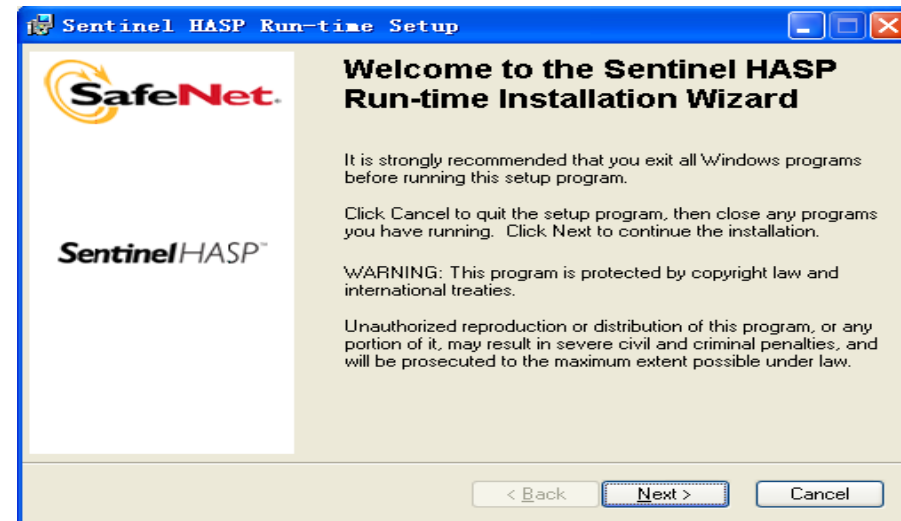
- While executing script, the DOS window will show the number of effected rows and the serial number of script being executed. Until “Press any key to go on” showed on the screen, you can press any key to end this process.



Pic 10 Execute Script

### 9. Install HASP

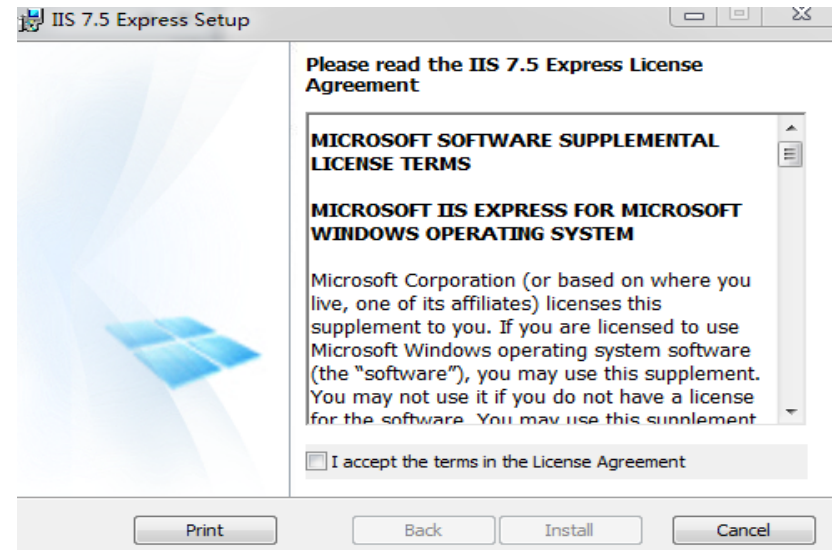
- Install HASP, the software will install automatically the needed drivers.



Pic 11 Install HASP

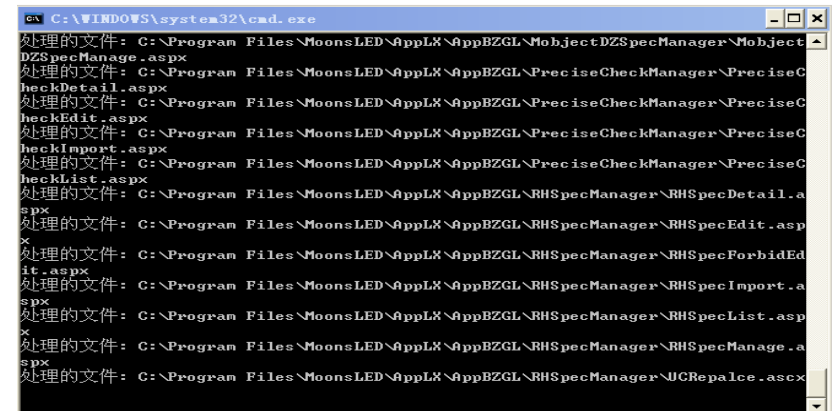
10. Install IISExpress. Choose “I accept the terms in the License Agreement”, and then “Install”.

- IISExpress will be installed automatically on the non-server computer.
- The users will be told to install IIS plugin if the operating system is Sever 2003 or Sever 2008.



Pic 12 Install IISExpress

11. Provide writable authorization for the IIS



Pic 13 Provide writable authorization

12. Install the Silverlight provided by Microsoft.



Pic 14 Install Silverlight

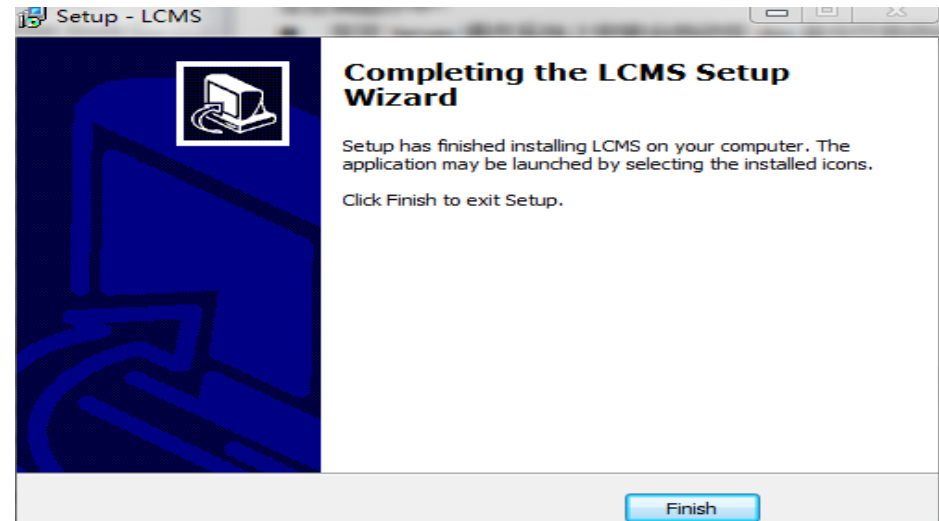
13. Install Ria Services which is necessary to run the software.

- It will be installed automatically on the non-server computer.
- Choose “I accept the terms in the License Agreement”, and then “Install”.




Pic 15 Install Ria Services

14. The installation is completed. Click “Finish” to exit setup.

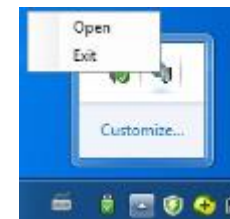


Pic 16 Installation completed

## Fast Access

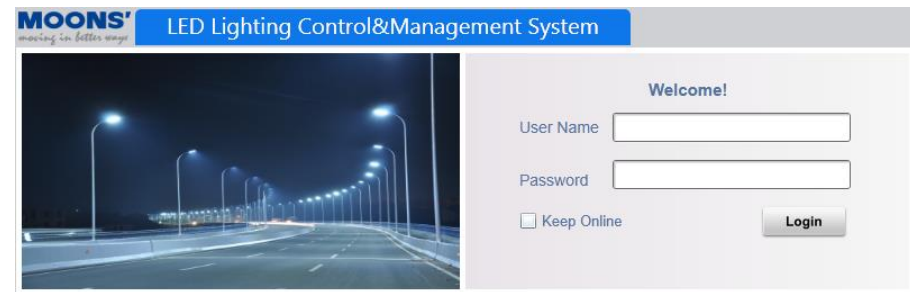
After the installation completed, please double click on the icon “” on the desktop. Then find it in the lower right corner as shown in Pic 17.

- Right click on the icon to open it.



Pic 17 Icon in the lower right corner

- As shown in Pic 18 you can input the username and password on the Login screen. The initial username is “system” and the password is null, then you can click on the Login to use the software.



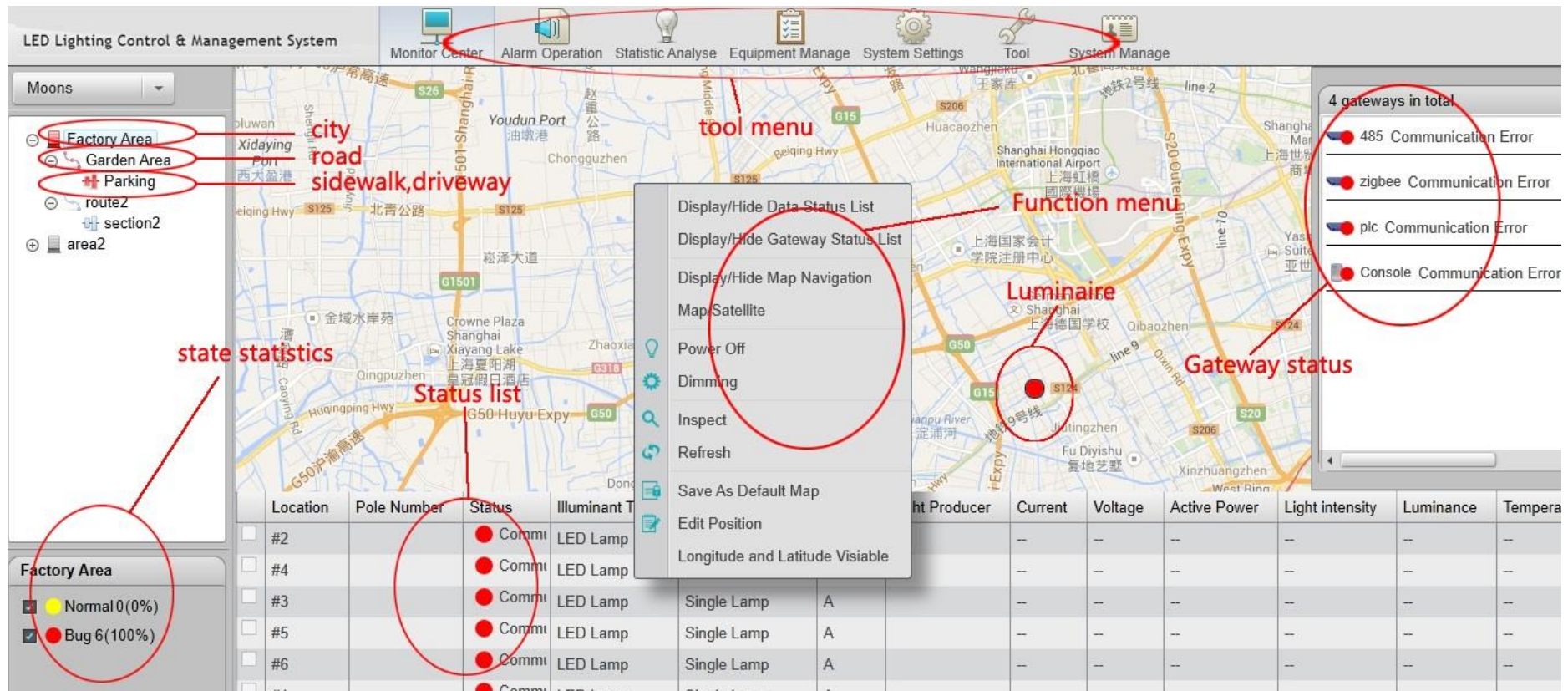
Pic 18 Login Screen

## Introduction of Maps

### Street Map

You can see the main user interface in Pic 19, different parts will be introduced:

- City area: to choose the area you want to check out.
- Status statistic: statistical information of lamps in the area you have chosen can be shown here, whether the area is the whole city or just a street.
- Tool menu: all the functions of the software are here.
- Google map: the map can be shown when you have internet support, otherwise, it can't be shown.
- Luminaire: the spots on the map, each spot represents one lamp. It has three kinds of status: lamp on, lamp off or communication error.
- Gateway status: the status of all the gateway are shown here, two statuses: OK or error and two modes: manual or automatic
- Status list: specific information of the lamps in the area you have chosen can be shown here.
- Function menu: including Display/Hide status list, dimming, refresh and so on.



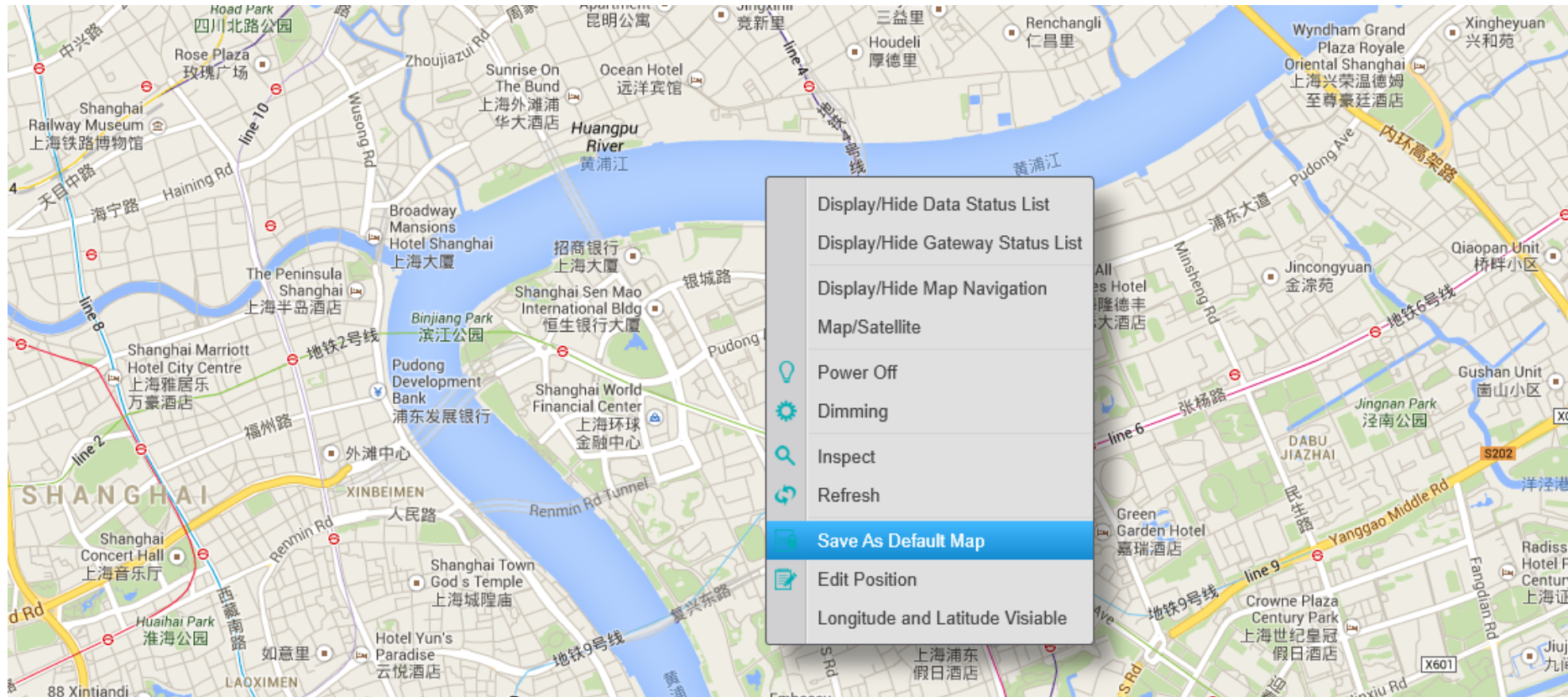
Pic 19 Main User Interface

## Operations

Some common operations will be introduced including Map zoom in and out, Lamp Positioning, dimming and inspection and position edit.

- Map zoom in/out:

1. Move the mouse wheel to zoom in and zoom out.
2. After setting the zoom level, please right click on the map to choose “Save As Default Map” to avoid setting again at next time.



Pic 20 Save as Default Map

- Lamp Positioning

1. In the Equipment Management—luminaire, input the latitude and longitude of a lamp, then you can see it on the map. As shown in Pic 21, the red spot

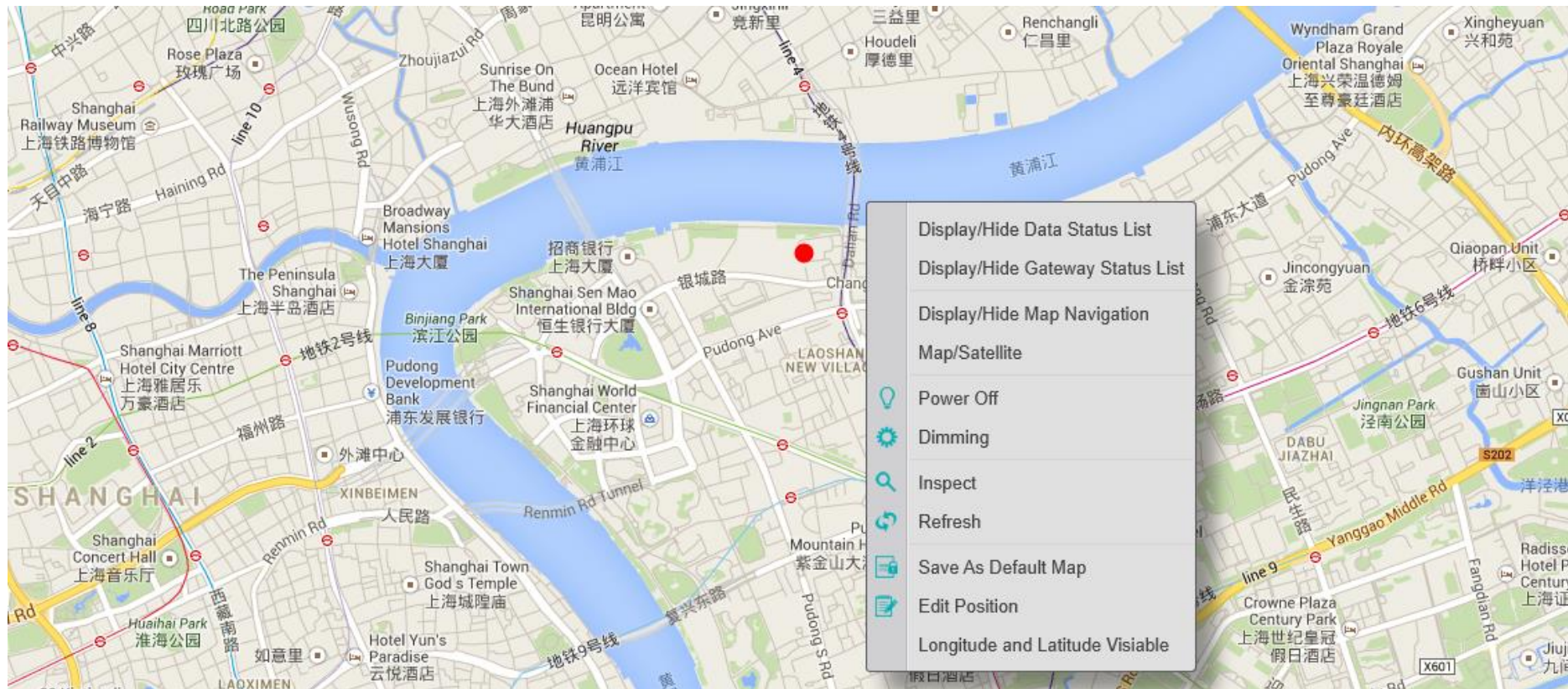


represents the right lamp.



Pic 21 Find a lamp through latitude and longitude

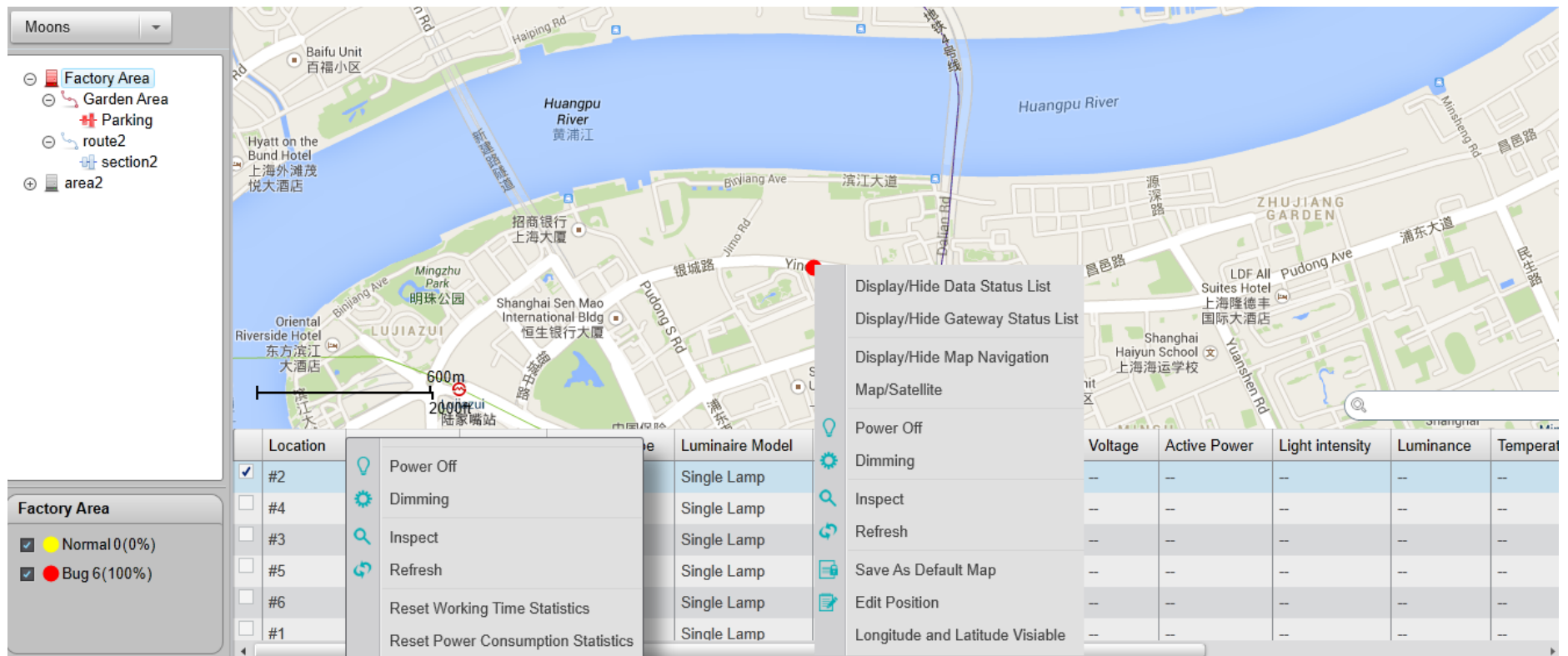
2. Right click on the map to choose “Longitude and Latitude Visible”, specific location information can be shown in the right top corner no matter where the mouse is.



Pic 22 Longitude and Latitude Visible

● Dimming and Inspect

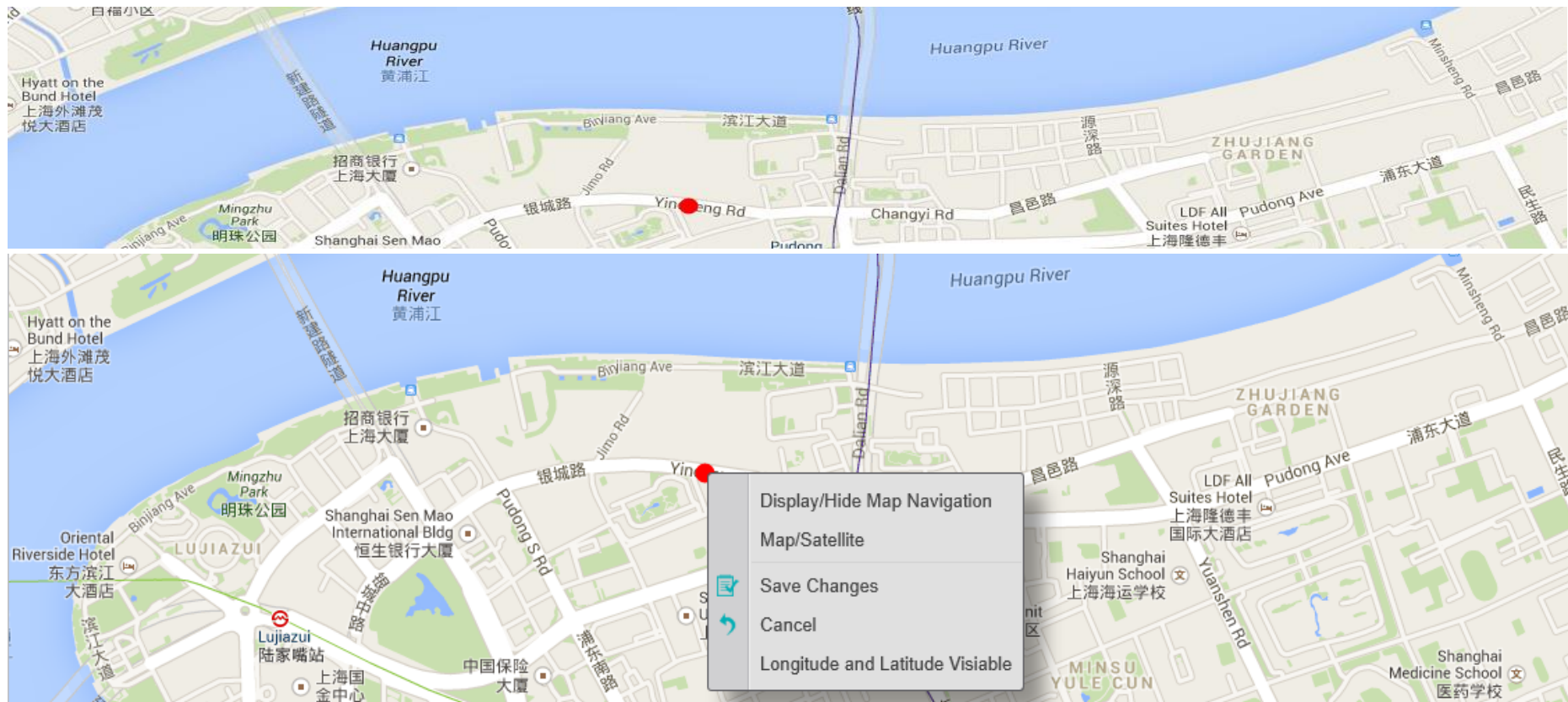
1. Find the lamp on the map, then right click on it to dim or inspect.
2. You can also find the lamp on the status list to dim or inspect.



Pic 23 To dim or inspect

● Edit position

- 1、 Right click on the map to choose “Edit Position”, then spots on the map can be moved. As shown in Pic 24&25, the red spot can be moved to YinCheng Road.
- 2、 Right click on the spot to save the new location or cancel this movement.



Pic 24&25 Edit Position of the red spot

## Special Map

1、 Special map shows specific areas beyond the resolution of Google Map, for example an area of a factory as shown in Pic 26. All the spots represent lamps on the

map.

- 2、 This kind of special map has the same functions as the Street map introduced above. The only difference is that Internet support isn't needed here.
- 3、 It has its own X axis and Y axis to build the positioning system.










Pic 26 Special Map of an Area of a Factory

## PART 2: Software Configurations

In this part we will introduce some basic configurations to administrators before using. We advise you to operate while reading this manual.

Pic27 shows the different icons on the screen and their functions.


| ICON  | ICON SHOW         | FUNCTION LIST  |
|---|-------------------|--|
|  | Monitor Center    | Home Page, Dimming, Inspection, GIS Map and Data                       |
|  | Alarm Operation   | Alarm Processing   |
|  | Statistic Analyse | Power consumption statistics, Inspection Historical Data and the Chart |
|  | Equipment Manage  | Luminaire, Gateway, sensor   |
|  | System Setting    | Area, Dimming Level, Scene Task, Dimming time Schedule                 |
|  | Tool              | Data Sampler, Update Online  |
|  | System Manage     | Set the User and Permission  |

Pic 27 Different Icons on the Screen

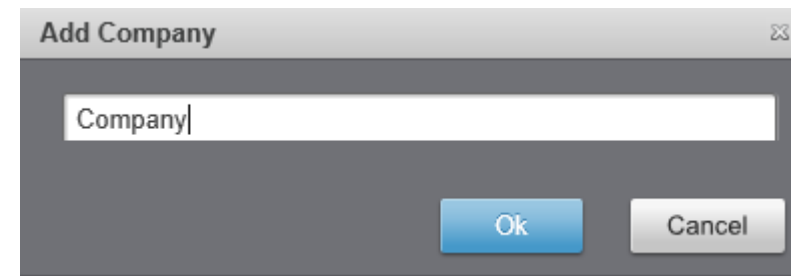
### Add basic information

Basic information includes how to add a company, an area and a datasampler.

### Add Company


【Location】 system settings—Area config-- (Company)


【Operation】 click on the icon—add company, input the name and then click OK.



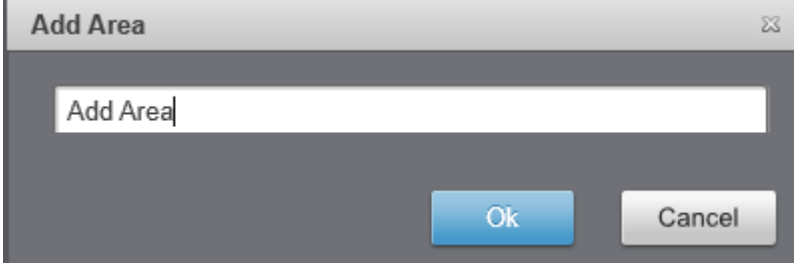
Pic 28 How to add a Company

## Add Area/Line(Street)/Section


【Location】 system settings—Area config --  (Area)


【Operation】 Click the company you have added first, then click on the icon .

Input the name of area as shown in Pic29.

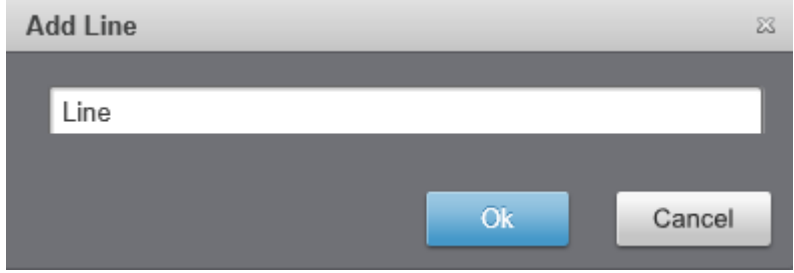


Pic 29 How to add an Area


【Location】 system settings—Area config --  (Line)


【Operation】 Click the area you have added first, then click on the icon .

Input the name of line as shown in Pic 30.

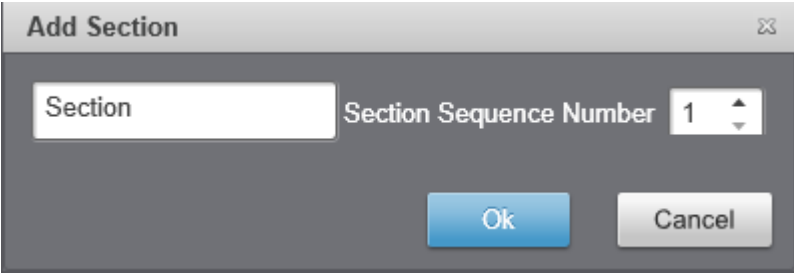


Pic 30 How to add a Line

【Location】 system settings—Area config --  (Section)

【Operation】 Click the line you have added first, then click on the icon .

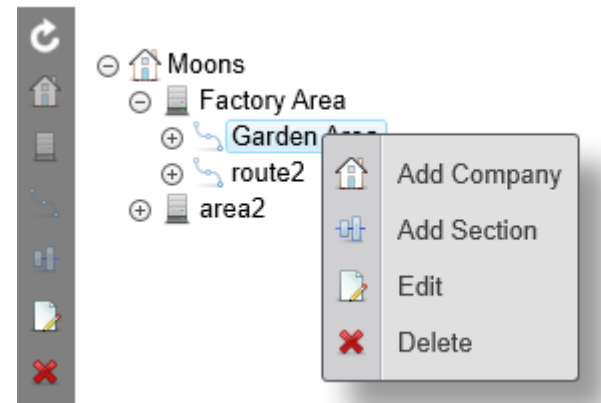
Input the name of section as shown in Pic 31.



Pic 31 How to add a section



**【Tips】** You can also right click on the icon to add these items or to edit or delete items as shown in Pic32.



Pic 32 The other way to add

## Add Datasampler Address

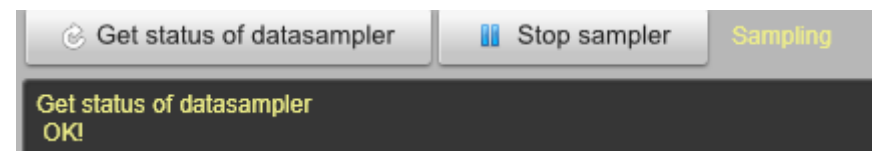
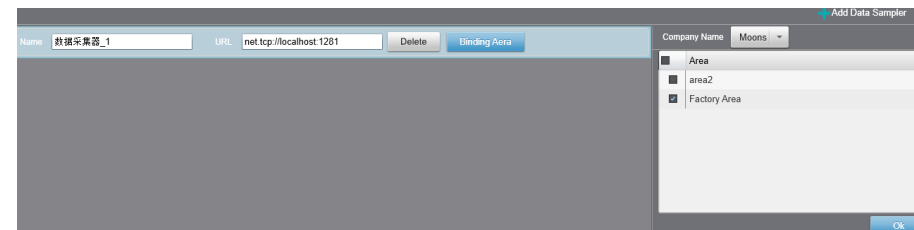
Datasampler is a tool which connects gateway and PC software. Here you should input an address to let PC know where the datasampler is.

**【Location】** Tool—Datasampler Management--**+**Datasampler

**【Operation 1】**After click add datasampler, as shown in the picture on the right, system creates a new Service Address: net.tcp://localhost:1281. Click to save

**【Operation 2】** Click binding area, choose the area you want to control.

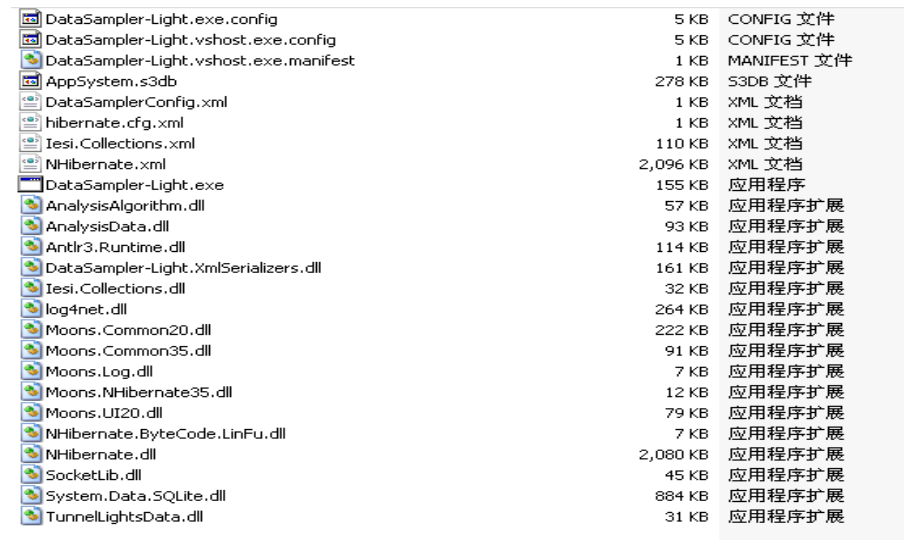
**【Operation 3】** run the datasampler, then click “Get status of datasampler”.



Pic 33&34 How to add a Datasampler

## Datasampler

CD has a file directory named datasampler. Please open it to find DataSampler-Light.exe, double click to run it. Pic 35 on the right shows it.

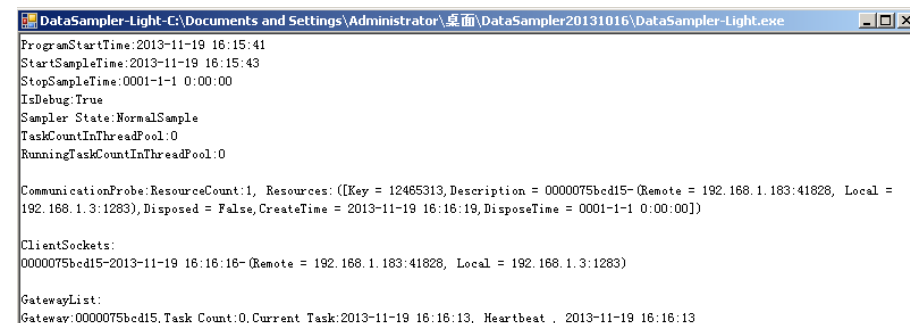


Pic 35 File includes DataSampler-Light.exe

Pic36 shows successful status

### 【Tips】

- CommunicationProbe on line 8, it shows the tasks being executed.
- ClientSocket on line 10: 0000075BCD15 is the UID of gateway, then the time when the connection completed, gateway IP and PC IP. All the information means gateway has been connected to PC.



Pic 36 DataSampler-Light.exe runs successfully

## Add Luminaire information

Luminaire including gateway information, luminaire information, sensor information, these configurations should be done after basic information completed.

## Add Gateway Info

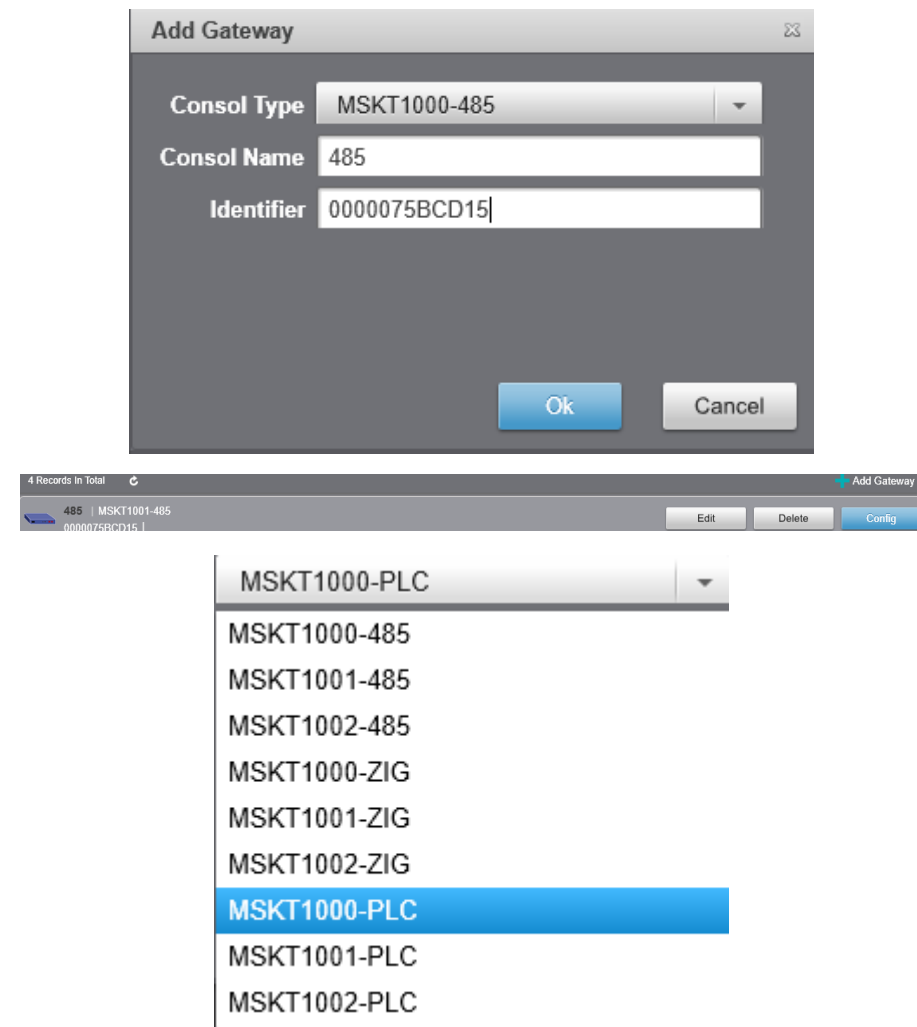
【Location】 Equipment Management—Gateway--Add Gateway

【Operation】 Gateway type: MSKT1000-485, Gateway UID: 0000075BCD15, Gateway name: Console 1. Click OK to finish.

As is shown in Pic 37, 38&39 on the right, you will see gateway icon, gateway type, gateway UID after adding the gateway. You also can click config to control gateway. How to control the gateway will be explained in part 3.

Now gateway type:


485/ZIG/PLC is type of gateway; 1000/1001/1002 is communication way, 1000 means normal, 1002 is 3G, 1001 means 485 communication.



Pic 37, 38&39 How to add a Gateway

## Add Luminaire Info

After setting gateway, let's complete Luminaire info as follows.

【Location】 Equipment Management—Luminaire--  (add/delete)

【operation 1】 Plus means add a luminaire

【operation 2】 Here are the blanks you have to fill in: section info, gateway, luminaire type, luminaire model, pole (Street) , Physical Address, location, group number, voltage upper and lower limit, current upper and lower limit, usage

【operation 3】 After all these blanks filled in, click confirm to save one record.

【Tips】

- You must have the gateway info and section info to add luminaire.
- Pole number is repeatable.
- Physical Address is UID of one node controller. It must be input correctly, otherwise gateway can't find it at all.
- Latitude and Longitude: you could find luminaire on the map by Latitude and Longitude information

|                        |                     |
|------------------------|---------------------|
| Section                | Garden Area-Parking |
| Gateway                | Console             |
| Illuminant Type        | LED Lamp            |
| Luminaire Model        | Single Lamp         |
| Pole Number            |                     |
| Light Physical Address | 127                 |
| Location               | 1                   |
| Group Number           |                     |
| Dimming Parameter      | 1                   |
| Default Dimming Value  | Memory mode         |
| Phase                  | A                   |
| Ground Type            | TT                  |
| Cable Model            |                     |
| Rated Power(W)         |                     |
| Voltage Upper Limit(V) | 400                 |
| Voltage Lower Limit(V) | 0                   |
| Current Upper Limit    | 400                 |
| Current Lower Limit    | 0                   |
| Longitude              |                     |
| Latitude               |                     |
| Light Function         | Emergency lightning |
| Color Temperature (K)  |                     |
| Pole Height (m)        |                     |
| Flange Dimensions      |                     |
| Base Frame Dimensions  |                     |
| Installation date      | 2017/11/16          |
| Mileage                |                     |
| Pole Manufacturer      |                     |
| Power Supply Producer  |                     |
| Power Supply Model     |                     |
| Light Producer         |                     |
| Light Model            |                     |

Pic 40, 41, 42 &43 on the right show how to add a luminaire and the list of luminaire info.



| Locatit | Pole Number | Light Physical Address | Illuminant Type | Luminaire Model | Group Number | Dimming Parameter | Phase | Rated Power(W) | Light Function  |
|---------|-------------|------------------------|-----------------|-----------------|--------------|-------------------|-------|----------------|-----------------|
| #1      |             | 127                    | LED Lamp        | Single Lamp     |              | 1                 | A     |                | Emergency light |

Pic 40, 41, 42 How to add a Luminaire  
Pic 43 List of Luminaire Info

## Add Dimming level and Scene

### Add Dimming Level

【Location】 system settings—Dimming level config--**+**Dimming level

【Operation 1】 Click **+** to add one dimming level record, as is shown in Pic 44, left blank is dimming value, the dimming value slide is in the middle, the right button is used to commit.

【Operation 2】 each area has their own dimming level



The screenshot shows a configuration window for adding dimming levels. It features three rows, each with a 'Dimming Level Description' field, a 'Dimming Value' slider, and a 'Delete' button. The values shown are 10%, 50%, and 100%.

| Dimming Level Description | Dimming Value | Delete |
|---------------------------|---------------|--------|
| 10%                       | 10            | Delete |
| 50%                       | 50            | Delete |
| 100%                      | 100           | Delete |

Pic 44 How to add Dimming Level

## Add Scene dimming Value

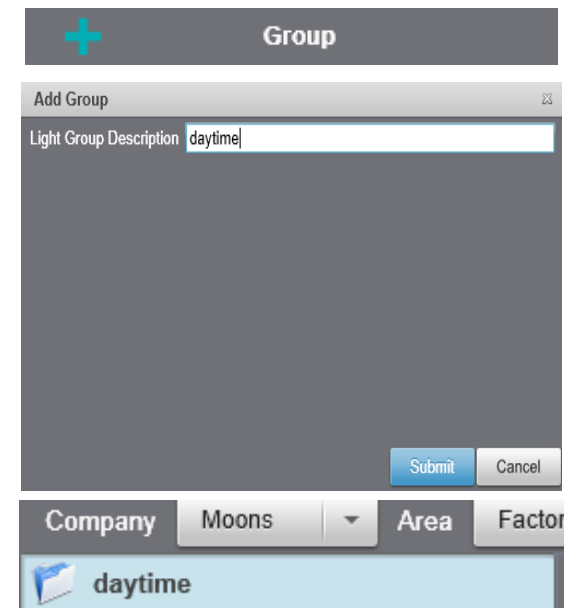
You can adjust luminaires of multiple groups to the different dimming values by Scene dimming.

## Add Scene Group

【Location】 system settings—Scene Config--**+**Group.

【Operation 1】 click **+** to add a new group, for example, Sunshine group. Click “Submit”, you can see the new group.

【tips】 you can add one or more Scene groups. One luminaire can be in different groups.



Pic 45 How to add a Scene Group

## Add Luminaire to Scene Group

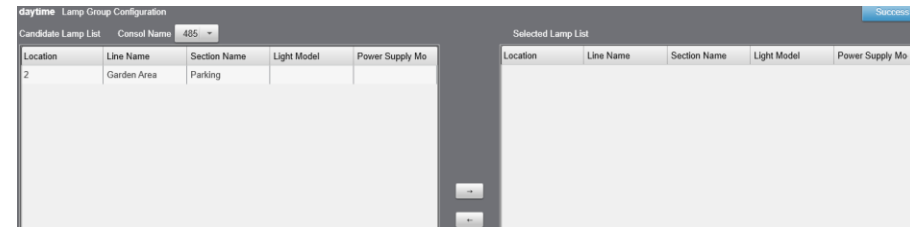
【Location】 system settings—Scene Config — **Lamp Group Configuration**

【Operation 1】 choose the Scene group, then click Lamp Group Config

【Operation 2】 As is shown in Pic 46, left list is the luminaires controlled by Console 1, right list is Scene group, click arrow of left to right to add one lamp to Scene group.

【Operation 3】 Different luminaires controlled by different gateways can be grouped in the same group by switching gateway.

【Operation 4】 Click to finish operation.



Pic 46 How to Finish Lamp Group Configuration

## Scene Value Config

【Location】 system settings—Scene Config -- **Dimming Value Configuration**

【Operation 1】 you can configure Scene number and dimming value, each Scene group has most 16 scenes

【Operation 2】 here is an example: Scene 1 is 20%, Scene 2 is OFF

【Operation 3】 we can add another Scene group named Rain. Set scene 1 as off, set scene 2 as 20%. The result is when you choose scenel to broadcast, sunshine group is dimmed to 20%, Rain group is off.



Pic 47&48 How to Finish Scene Dimming Value Setting

## Part 3: Hardware Configurations

### Use Gateway Config Tool

**【Install Route】** "C:\Program Files\Moons\Gateway Config Tool\"

**【Operation 1】**The default IP gateway is 192.168.1.183. Input 192.168.1.183 in device IP, input 8001 in data port, then click Connect.

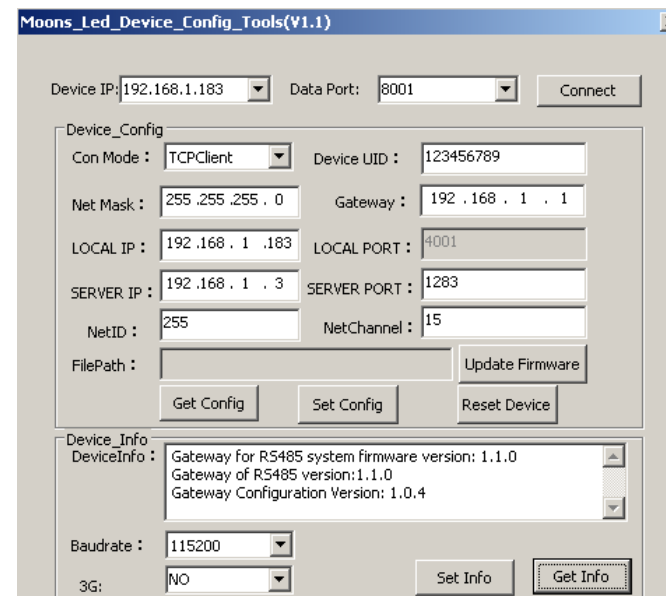
**【Operation 2】**Click Get Config to obtain gateway information, you can see the connection mode, gateway's UID, local IP and server IP, service port, NETID and NETChannel.

**【Operation 3】** please keep the connection mode as TCPClient, Netmask as 255.255.255.0, LocalIP as 192.168.1.183. LocalIP must be changed if ServiceIP changed. For example, ServiceIP is 10.3.2.184, LocalIP must be changed to 10.3.2.XXX.

**【Operation 4】** Service port is 1283

**【Operation 5】** netId and netchannel is referred to wireless 2.4GHz gateway, NetID ranges from 1 to 255; NetChannel ranges from 1 to 15.

**【Operation 6】** Click set config to save all the changes, click reset device to make changes effective.



Pic 51 How to Config Gateway



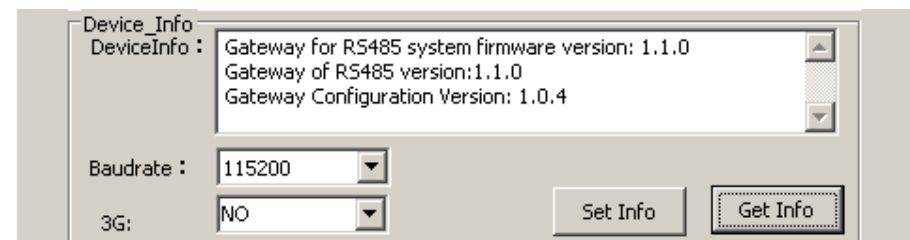
【Attention】 the Device UID is gateway's UID, in our software, it calls identifier. In gateway config tool, the UID is decimal, and in software, it is hexadecimal. For example UID: 123456789 (Dec), 75bcd15 (Hex), to meet 12 characters in software, so we get 0000075bcd15

## Get Firmware Info

To confirm your device info, you should click get info as shown in the picture on the right.

【Operation 1】 click get info to get firmware info of this gateway.

【Operation 2】 If you have any problem in using it, you'd better send the information back to us.



Pic 52 How to Get Firmware Info

## PART 4: Communication

### Initialization

After finishing software and hardware config, now let's connect gateway to PC.

### Time Sync

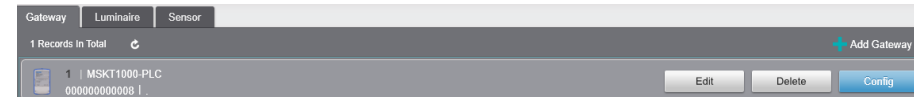
**【Location】** Equipment management—gateway—Synchronization time

**【Operation】** Click Synchronization time

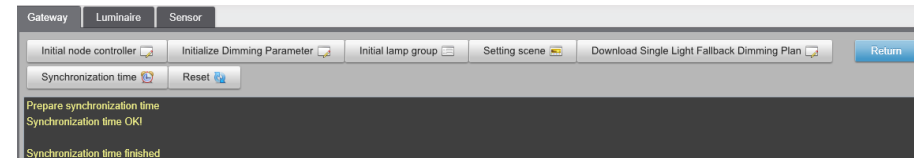
**【Tips】** This operation can check whether the connection between PC and gateway is OK.

**【Error tips】**

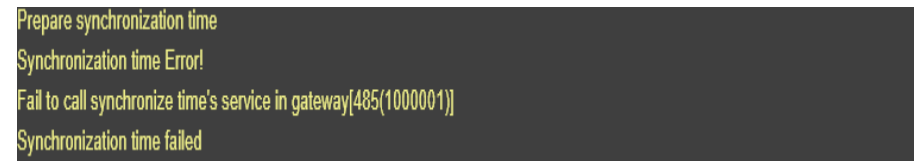
- When gateway is off, you will see the error message as shown in Picture 55.
- When gateway is power on, but datasampler is not running, you will see a message of connection timeout as shown in Picture 56.



Pic 53 Click Config button



Pic 54 Click “Synchronization time”



Pic 55 Gateway is Off



Pic 56 Datasampler is NOT Running

## Initialize Node Controller

【Location】 Equipment Management—Gateway—initialize node controller

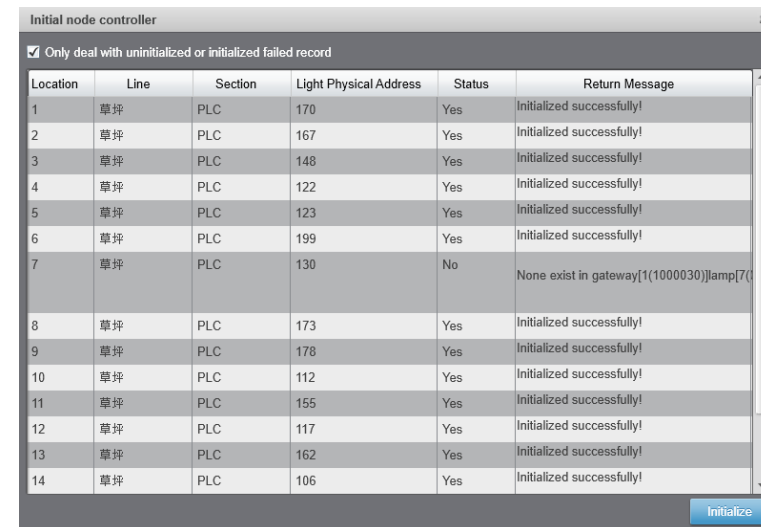
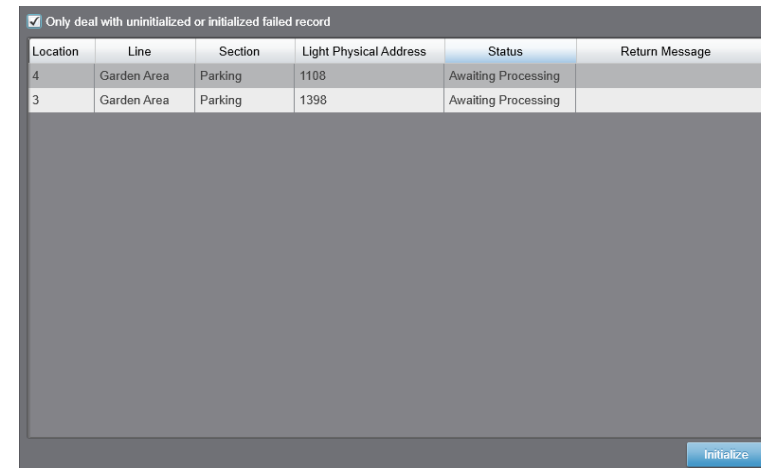
【Operation】 click initialize button

【Tips】

- This step is to check whether the physical connection between the luminaires on the list and the gateway exists or not.
- You can choose “only deal with uninitialized or initialization failed record”
- All luminaires need to be initialized again when you step into the initialization interface next time.

【Errors】

- If the physical address of one node controller doesn't exist or there is communication error, specific messages will be shown on that line.



Pic 57&58 How to Initialize node Controller

## Download Group Number to Node Controller

**【Location】** Equipment management—Gateway—initialize lamp group

**【Operation】** Click initialize lamp group.

**【Tips】**

- When you want to do multicast, please initialize lamp group first.
- “Initialized successfully” means PC sends group numbers to gateway successfully, but there is no message showing whether gateway sends group numbers to node controllers successfully or not. So you’d better do test through group dimming.

| Initial lamp group  |             |         |                        |               |                |
|---|-------------|---------|------------------------|---------------|----------------|
| <input checked="" type="checkbox"/> Only deal with uninitialized or initialized failed record |             |         |                        |               |                |
| Location  | Line        | Section | Light Physical Address | Status        | Return Message |
| 2   | Garden Area | Parking | 14735                  | Awaiting Proc |                |
| 1   | Garden Area | Parking | 15060                  | Awaiting Proc |                |

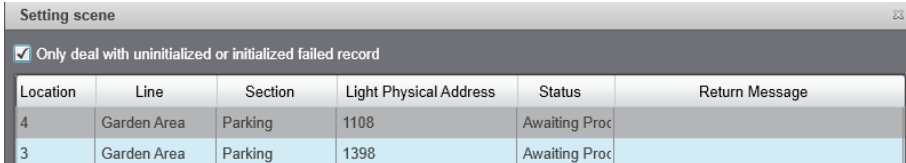
| Initial lamp group  |             |         |                        |        |                           |
|---|-------------|---------|------------------------|--------|---------------------------|
| <input checked="" type="checkbox"/> Only deal with uninitialized or initialized failed record |             |         |                        |        |                           |
| Location  | Line        | Section | Light Physical Address | Status | Return Message            |
| 2   | Garden Area | Parking | 14735                  | Yes    | Initialized successfully! |
| 1   | Garden Area | Parking | 15060                  | Yes    | Initialized successfully! |

**Prepare initial lamp group**  
**Initialization is complete!**

Pic 59, 60&61 How to Download Group Number to Node Controller

## Download Scene Number and Scene Value to Node Controller

- 【Location】 Equipment management—Gateway—Set Scene
- 【Operation】 Click initialize
- 【Tips】 If initialization fails, there will be a message to show it.



| Location | Line        | Section | Light Physical Address | Status        | Return Message |
|----------|-------------|---------|------------------------|---------------|----------------|
| 4        | Garden Area | Parking | 1108                   | Awaiting Proc |                |
| 3        | Garden Area | Parking | 1398                   | Awaiting Proc |                |

Pic 62 How to Download Scene Number and Scene Value to Node Controller

## Reset Gateway

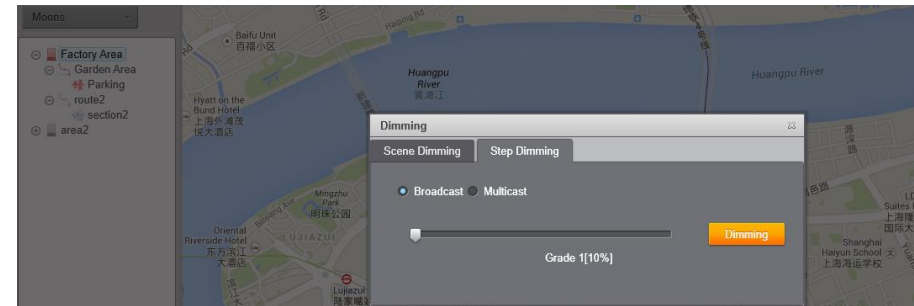
- 【Location】 Equipment management—Gateway—Reset
- 【Operation】 click Reset
- 【Tips】 Gateway will restart in about 1 minute when you click reset.

## Dimming

### Broadcast Dimming

【Location】 monitor center.

【Operation】 Right click on the company you have added in part 2 to choose dimming, then choose step dimming. You'll see two options: Broadcast and Multicast. Choosing Broadcast means that you can control all the luminaires in the area of the company by setting the dimming level. This operation can only be done on the company node.

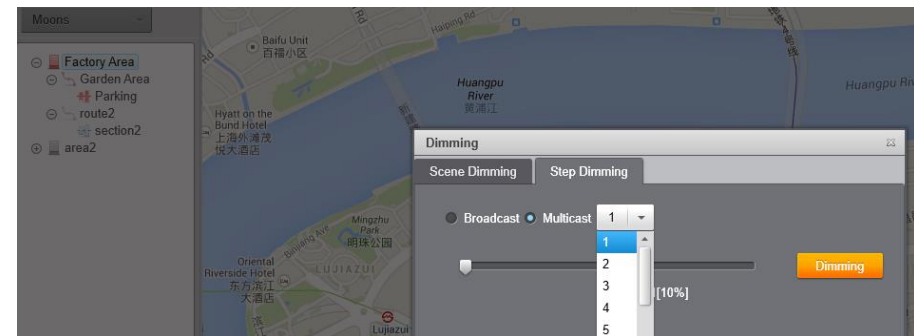


Pic 63 How to choose Broadcast Dimming

### Multicast Dimming

【Location】 monitor center.

【Operation】 Right click on the company you have added in part 2 to choose dimming, then choose step dimming. You'll see two options: Broadcast and Multicast. Choosing Multicast means that you can control all the luminaires in the same group by setting the dimming level. This operation can only be done on the company node.



Pic 64 How to choose Multicast Dimming

## Scene Dimming

【Location】 Monitor Center.

【Operation】 Right click on the company you have added in part 2 to choose dimming, then choose scene dimming. You can see 16 scenes and choose one. And this operation can only be done on the company node.

【Tips】

- The luminaires without being set to any scene will be up to 100%.

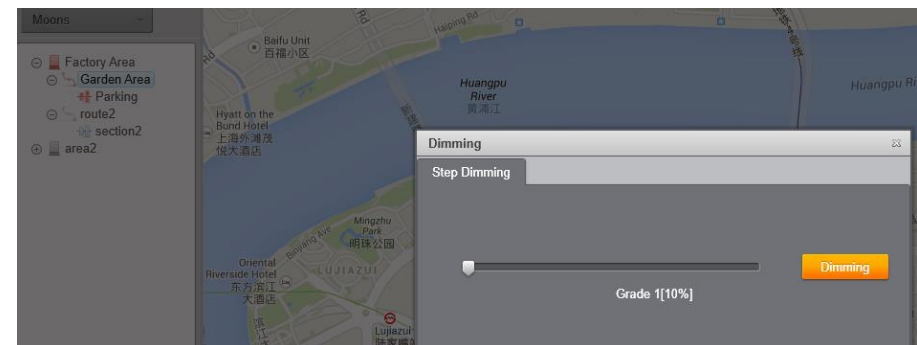


Pic 65 How to choose Scene Dimming

## Section Dimming

【Location】 Monitor center

【Operation】 Right click on the area, line or section you have added in part 2 to choose dimming.



Pic 66 How to choose Section Dimming

## Dimming task

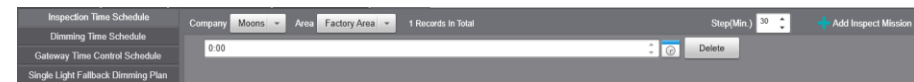
## Inspection task

【Location】 System settings—Time task—Inspection Schedule

【 Operation 】 Choose Inspection Time Schedule—inspection interval (Step)—add inspection mission

【Tips】

- System will follow the schedule to finish inspection task. Every inspection will be stored in database
- The shortest inspect interval is 1min



Pic 67 How to add an Inspection Schedule

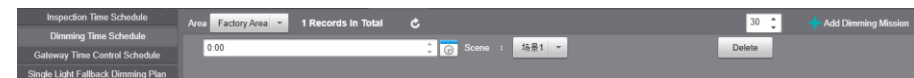
## Dimming Time Schedule

【Location】 System Settings—Time Task—Dimming time schedule

【Operation】 choose dimming time schedule—choose adding dimming interval (Step)—choose add dimming time schedule—choose scene number

【Tips】

- System will follow the schedule to finish dimming task.
- The shortest dimming interval is 1minute.
- Node controllers should be added to scene group before.



Pic 68 How to add a Dimming Schedule



## Gateway Dimming Schedule

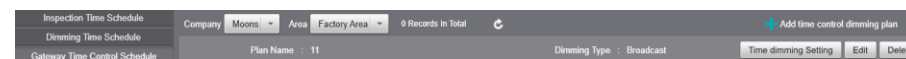
【Location】 System settings—Time Task—Gateway Dimming schedule

【Operation 1】 Choose Gateway Time Control Schedule—Add time control dimming plan

【 Operation 2 】 Fill in schedule name—Choose dimming type as broadcast—Change Time—Choose Scene number —Add Item

### 【Tips】

- Here are two dimming types, one is broadcast to choose scene number, the other is multicast to choose group number.
- As is shown in the picture on the right, the dimming type is broadcast.
- One scene can include different periods, but one period can be assigned to one scene.
- After adding the schedule, dimming type can't be changed. If you want to change it, please delete the schedule first.



Pic 69 Click Add time control dimming plan

The screenshot shows a dialog box titled 'Add time control dimming plan'. It contains the following fields and controls:

- Company: Moons
- Area: Factory Area
- Scheme Name: (empty text box)
- Dimming Type: Broadcast (dropdown menu)
- Time Dimming Item List: (empty list)
- Change Time: 0:00 (time picker)
- Scene: 1[场景1] (dropdown menu)
- Buttons: Add Item, Delete Item
- Table with columns: Change Time, Scene Number, Scene Description
- Buttons: Submit, Cancel

Pic 70 Complete Plan-Broadcast

【 Operation 3 】 Fill in schedule name—Choose dimming type as multicast—Change Time—Choose Scene number —Add Item

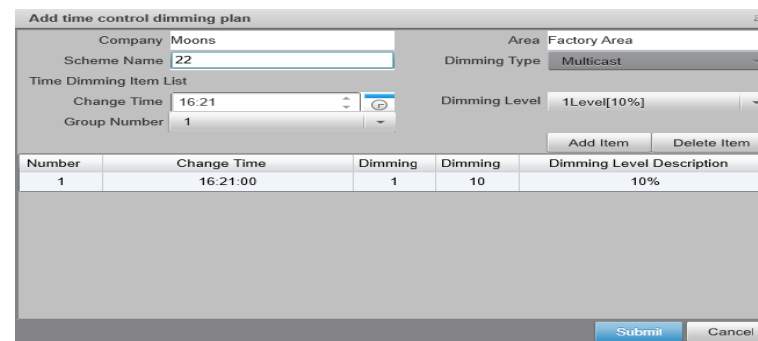
【Tips】

- As is shown in the picture on the right, the dimming type is multicast.
- One group can include different dimming levels, but one period can only have one dimming level.
- After adding the schedule, dimming type can't be changed. If you want to change it, please delete the schedule first.

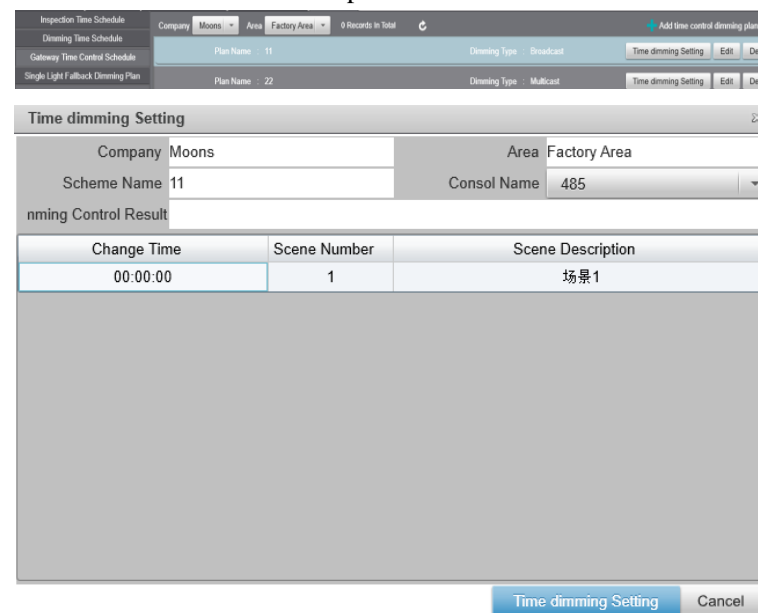
【Operation 4】 Choose Gateway Time Control Schedule—Time dimming setting

【Tips】

- Picture on the right shows Time Dimming Setting. Click “Time dimming Setting” button.
- Each time you can only download one to gateway
- When gateway lost connection with PC at least 5 minutes, the time control schedule would take effect.



Pic 71 Complete Plan-Multicast



Pic 72 &73 Time Dimming Setting

## Inspection

【Location】 Monitor Center—right click on the spot

【Operation 1】 Click on city, line or section to do inspection.

【Operation 2】 Right click on spot to do inspection.

【Operation 3】 right click on the record in status list



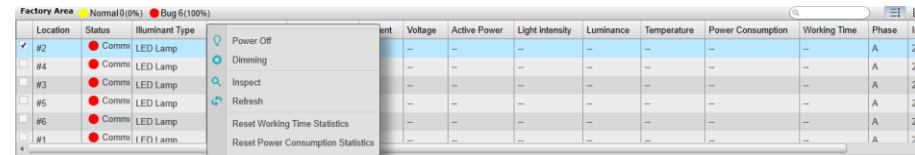
| Location                               | Operation                          | Luminaire Model | Phase | Light Producer | Current | Voltage | Active Power | Light intensity | Luminance | Temperature |
|--|------------------------------------|-----------------|-------|----------------|---------|---------|--------------|-----------------|-----------|-------------|
| <input checked="" type="checkbox"/> #2 | Power Off                          | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |
| <input type="checkbox"/> #4            | Dimming                            | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |
| <input type="checkbox"/> #3            | Inspect                            | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |
| <input type="checkbox"/> #5            | Refresh                            | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |
| <input type="checkbox"/> #6            | Reset Working Time Statistics      | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |
| <input type="checkbox"/> #1            | Reset Power Consumption Statistics | Single Lamp     | A     |                | --      | --      | --           | --              | --        | --          |

Pic 74 &75 How to do Inspection

## Reset Working Time and Consumption

【Location】 Monitor center—Right click on spot to do reset job

【Operation 1】 Right click on spot to do reset.



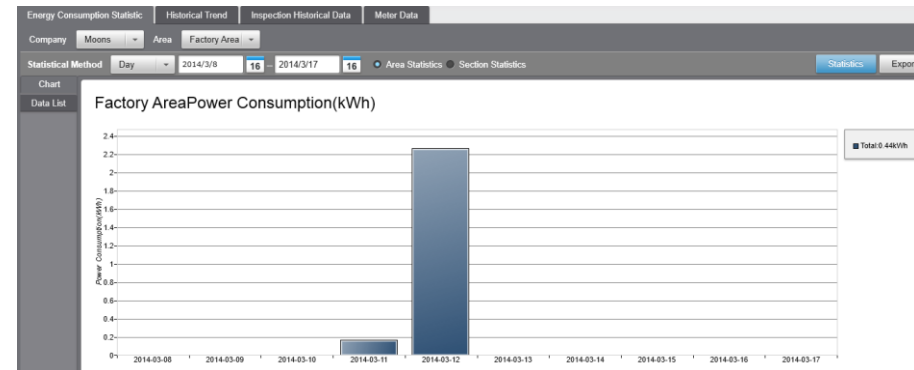
Pic 76 &77 How to Reset Working Time and Consumption

## Statistic Analyze

### Power Consumption Statistic

【Location】 Statistics Analysis—Energy Consumption Statistic—Chart

【Operation 1】 Click on chart, set time range, you can also view it by area or by section



【Operation 2】 Click on data list, set time range, you can also view it by area or by section

| Location     | 2014-03-08 | 2014-03-09 | 2014-03-10 | 2014-03-11  | 2014-03-12  | 2014-03-13 | 2014-03-14 | 2014-03-15 | 2014-03-16 | 2014-03-17 |
|--------------|------------|------------|------------|-------------|-------------|------------|------------|------------|------------|------------|
| #2           | 0          | 0          | -0.51      | -0.03       | 0.52        | 0          | 0          | 0          | 0          | 0          |
| #4           | 0          | 0          | -0.38      | 0.05        | 0.35        | 0          | 0          | 0          | 0          | 0          |
| #3           | 0          | 0          | -0.38      | 0.04        | 0.36        | 0          | 0          | 0          | 0          | 0          |
| #5           | 0          | 0          | -0.34      | 0.03        | 0.35        | 0          | 0          | 0          | 0          | 0          |
| #6           | 0          | 0          | -0.39      | 0.04        | 0.36        | 0          | 0          | 0          | 0          | 0          |
| #1           | 0          | 0          | 0          | 0.04        | 0.33        | 0          | 0          | 0          | 0          | 0          |
| <b>Total</b> | <b>0</b>   | <b>0</b>   | <b>-2</b>  | <b>0.17</b> | <b>2.27</b> | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>0</b>   | <b>0</b>   |

Pic 78 &79 How to Get Power Consumption Statistic

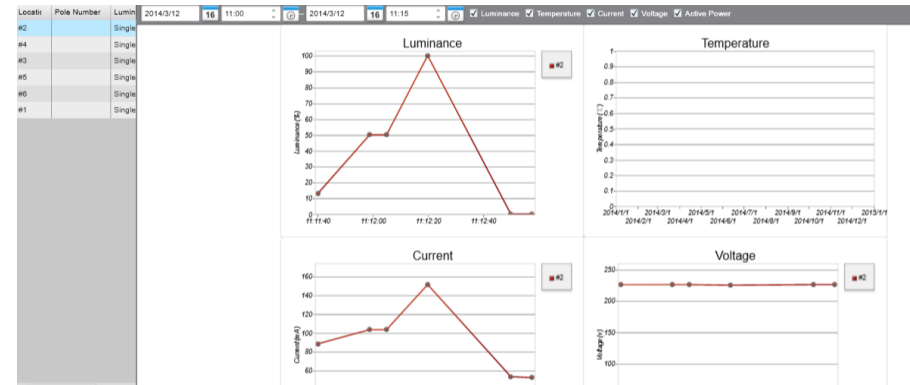
## Historical Trend

【Location】 Statistics Analysis—Historical Trend

【Operation 1】 Click historical trend, you can choose the luminaire to check its luminance, temperature, current, voltage and active power.

【Operation 2】 10 luminaires can be added to the same graph of trend.

【Operation 3】 you can choose items visible or invisible on the screen.



Pic 80 How to Get Historical Trend

## Inspection Historical Data

【Location】 Statistics Analysis—Inspection Historical Data

【Operation 1】 Click on inspection historical data, you can query the specific data of each luminaire.

| Company   | Area        | Factory Area   | Location        | Query          | 13 pages 244 records in total | Page 1 | of 13     |             |         |         |                 |              |              |                   |                     |                  |
|-----------|-------------|----------------|-----------------|----------------|-------------------------------|--------|-----------|-------------|---------|---------|-----------------|--------------|--------------|-------------------|---------------------|------------------|
| 2014/3/12 | 14          | 0:00           | 2014/3/17       | 18             | 23:00                         |        |           |             |         |         |                 |              |              |                   |                     |                  |
| Location  | Pole Number | Luminaire Type | Luminaire Model | Light Producer | Line/section                  | Phase  | Luminance | Temperature | Current | Voltage | Light Intensity | Active Power | Working Time | Power Consumption | Inspection time     | Firmware Version |
| #5        |             | LED Lamp       | Single Lamp     |                | Garden Area-Parking           | A      | 100%      | --          | 156mA   | 230v    | 3m              | 30w          | 1250min      | 0.53kWh           | 2014-03-12 11:58:51 | 21               |
| #6        |             | LED Lamp       | Single Lamp     |                | Garden Area-Parking           | A      | 100%      | --          | 197mA   | 230v    | 0m              | 30w          | 1250min      | 0.53kWh           | 2014-03-12 11:58:51 | 21               |
| #4        |             | LED Lamp       | Single Lamp     |                | Garden Area-Parking           | A      | 100%      | 25 °C       | 191mA   | 230v    | --              | 30w          | 1178min      | 0.51kWh           | 2014-03-12 11:58:48 | 18               |

Pic 81 How to Get Inspection Historical Data

## Meter Data

【Location】 Statistics Analysis—Meter Data

【Operation1】 click on the query button, you can query the data of meter.

| Console Name | Phase A Voltage | Phase B Voltage | Phase C Voltage | Phase A Current | Phase B Current | Phase C Current | Phase A Power | Phase B Power | Phase C Power | Phase A Power Factor | Phase |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|----------------------|-------|
| Console      | 0v              | 0v              | 0v              | 0mA             | 0mA             | 0mA             | 0             | 0             | 0             | 0w                   | 0w    |
| Console      | 0v              | 0v              | 0v              | 0mA             | 0mA             | 0mA             | 0             | 0             | 0             | 0w                   | 0w    |
| Console      | 0v              | 0v              | 0v              | 0mA             | 0mA             | 0mA             | 0             | 0             | 0             | 0w                   | 0w    |

Pic 81 How to Meter Data