MOONS’ Wireless Intelligent Control System

WIFI/ZigBee intelligent control system

General Description

- Features: Intelligent control, Simple operation, Scenario diversification, Efficient chemical energy saving
- three control system: remote control system, LAN control system, Cloud service system
- Control terminal: Phone, Pad, PC, Sensors, Wall Panels etc.
- Applications: Landscape lighting, Business lighting, home lighting

ZigBee intelligent control system

- Supply ZigBee Home Automation 1.2 and ZigBee Light Link Protocol
- Enables simple networks without a centralized coordinator
- Simplifies pairing and reduces cost while being fully compatible with advanced whole home systems
- Upgrade devices from any manufacturer remotely using a gateway from any service provider

WIFI intelligent control system

- Enables simple networks without a centralized coordinator
- Through existing WIFI network to control lamps without the need to gateway

System Block Diagram

Downloaded from Arrow.com.
The MSDK800 Series Dimming Module is a RF control that operates DALI/DMX/0-10V controlled LED drivers based on input from Phone, Pad, PC, Sensors and Wall Panels. Each Dimming Module can control one or more fixtures and can be individually controlled or grouped with other MSDK800 Series devices.

### Features
- **RF Control Interface:** Communications via 2.4GHz RF to other devices within the wireless network. The 2.4GHz RF control interface includes Wifi and ZigBee protocol.
- **WIFI:** Support for IEEE 802.11b/g/n, RF: 2.4G
- **ZigBee:** Support for IEEE 802.15.4, RF: 2.4G, Protocol: ZHA 1.2 (ZigBee Home Automation) and ZLL (ZigBee Light Link)
- **DALI:** Support for IEC 62386-102/207/209
- **DMX:** Support for DMX512-A, DMX512-RDM
- **0-10V:** 0-10V dimming (meets IEC60929)
- **Power supply:** 5VDC 300mA

### Models Available

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Wireless Interface</th>
<th>BUS Interface</th>
<th>STATE</th>
</tr>
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<tbody>
<tr>
<td>MSDK800</td>
<td>WIFI</td>
<td>DMX</td>
<td>ACTIVE</td>
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<tr>
<td>MSDK801</td>
<td></td>
<td>DALI</td>
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<tr>
<td>MSDK802</td>
<td>0-10V</td>
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<tr>
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<td></td>
<td>DMX</td>
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<tr>
<td>MSDK804</td>
<td>ZHA1.2</td>
<td>DALI</td>
<td>NA</td>
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<tr>
<td>MSDK805</td>
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<td>0-10V</td>
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<tr>
<td>MSDK807</td>
<td></td>
<td>DALI</td>
<td>ACTIVE</td>
</tr>
<tr>
<td>MSDK808</td>
<td>ZLL (ZigBee Light Link)</td>
<td>DMX</td>
<td>ACTIVE</td>
</tr>
</tbody>
</table>

### Description
- ZigBee Gateways can be used for a multitude of scenarios where the communication between ZigBee networks and IP network infrastructure is required. The use of standard interfaces for the ZigBee and IP network connection creates the opportunity to have universal adapters and operate the connection with IP back-end systems such as Service Platforms or Machine-to-Machine platforms in a standard fashion.

### Features
- We can operate ZigBee lamps based on input from phones, computers and other WIFI devices Combined with the gateway
- **WIFI:** Support for IEEE 802.11b/g/n, RF: 2.4G
- **ZigBee:** Support for IEEE 802.15.4, RF: 2.4G,
- Supply ZigBee Home Automation 1.2 and ZigBee Light Link Protocol
- **Power supply:** 5VDC 300mA
WIFI System Configuration

1、System component
- Smartphone, Pad (Android/IOS)
- WIFI Router
- Wireless Dimming Module
- 5V DC Power supply
- MOONS’ DALI Intelligent Driver
- MOONS’ DMX Intelligent Driver
- LED lamps

2、System Wiring Diagram

3、WIFI APP Guide

How to add a new Wireless Dimming Module to the current WIFI Router
- Download and install the MOONS’-LED-APP from APP STORE or Android Market, as shown in Figure 1-2, Figure 1-3.
- Press the reset button until the red LED flashes three times, as shown in Figure 1-1, the Wireless dimming module is reset.
- Open the Smartphone’s WLAN list, select the “longsys_xxxxxx” in the list and connect it, the password is 12345678, as shown in Figure 1-4.
- Open the MOONS’-LED-APP, as shown in Figure 1-5.

Support System: iOS + Android

Downloaded from Arrow.com.
• Click the “+” in the red box, as shown in the Figure 1-5, Select the WiFi router’s SSID the wireless dimming module will join in, enter the password, click the “OK” icon, if configured successfully, the software will prompt “Configuration successful”, as shown in Figure 1-6.

• Connect the Smartphone to the wireless router previously selected, then return the MOONS’LED-APP.

• Drag the page down and release to complete a refresh, as shown in Figure 1-7, when appear the “MOONS’-LED-x”, that means you added a lamp successfully, as shown in Figure 1-8.

NOTE: If you want to add more than one wireless dimming module in the WiFi network, please repeat the above steps.

How to add a new Group

• Select the “Group” menu, as shown in Figure 1-9, Click the “+” in the red box 1 to add a new group named “MOONS-LED-GROUP-0”.

• Reselect The “Lamp” menu (the left of “Group”), select and press the “MOONS-LED-0”, it will pop up the following interface such as Figure 1-10.

• Click “Join Group”, select the group you just added in the Figure 1-11, click “OK”.

• The added lamp node in the group “MOONS-LED-GROUP-0” will be displayed in the red box in Figure 1-12.

• Click “MOONS-LED-GROUP-0”, as shown in Figure 1-13, callout 1 it the list of “MOONS-LED-GROUP-0”, callout 2 can close the Corresponding lamps, callout 3 can adjust the luminance of the Lamps, the color wheel is used to adjust the color of RGBW Lamps.
For the new WIFI router, we need to re-configure the gateway, Once configured, the gateway will save the current parameters, Steps are as follows:

- Holding down the reset button for 5 s until the three LEDs on, then release, wait 5-7s, The three LED Revert to the default state, the gateway Enter the configuration mode.
- Select the“ WIFI-1500” in the Smartphone’s WLAN list, the password is “12345678” .
- Open MOONS’ LED-APP, choose the “setting” menu, as shown in Figure 2-1, then selct ZLL, it will link to the Figure 2-2

### 1、System component
- Smartphone、Pad(android/IOS)
- WIFI Router
- ZigBee Gateway
- 5V DC Power supply
- MOONS’ DALI Intelligent Driver
- MOONS’ DMX Intelligent Driver
- LED lamps

### 2、System Wiring Diagram

- MOONS’ Dali Intelligent Driver
- MOONS’ DMX Intelligent Driver
- 5V DC Power supply
- MOONS’ DALI Intelligent Driver
- MOONS’ DMX Intelligent Driver
- LED lamps

### 3、ZigBee APP Guide

How to add the ZigBee gateway to the current WIFI Router

For the new WIFI router, we need to re-configure the gateway, Once configured, the gateway will save the current parameters, Steps are as follows:

- Holding down the reset button for 5 s until the three LEDs on, then release, wait 5-7s, The three LED Revert to the default state, the gateway Enter the configuration mode.
- Select the“ WIFI-1500” in the Smartphone’s WLAN list, the password is “12345678” .
- Open MOONS’ LED-APP, choose the “setting” menu, as shown in Figure 2-1, then selct ZLL, it will link to the Figure 2-2

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**Figure 2-1**

**Figure 2-2**

**Figure 2-3**

Downloaded from Arrow.com.
· Click the “settings” in Figure 2-3, choose “Router Connection” as shown in Figure 2-4.
· Click “Select Gateway WiFi”, select the “WIF-1500” in the list.
· Click “Select Router WiFi”, select the WiFi router Gateway to connect, such as Figure 2-6.
· Click “WiFi Key”, enter the password of the selected router, click “OK”. Figure 2-7.
· After enter the password, we should click the callout 2 to save the current settings in Figure 2-8.
· Figure 2-10 indicates that the gateway is configured to success, click “OK”, it will jump to the Figure 2-11, click callout 1, it will prompt “1 device found” in the 2nd position. Click then callout 2 to jump to the Figure 2-13.
In order to get the control of lamps, we need to perform Touch Link command to bind a lamp and devices.

- Place the Gateway near the ZigBee lamps, then click the “Touchlink” to perform the binding operation, as shown in Figure 2-12.
- Another method: Press the middle button of ZigBee Gateway until three LEDs on, the nearby ZigBee devices are added to the gateway, as shown in Figure 2-14.
- If a new ZigBee node is added to the gateway successfully, click the callout 1 in Figure 2-15 to refresh, the node will be added to a group.
- Slide the screen to the left in Figure 2-15, it will jump to the “light list”, as shown in Figure 2-16, this list will display all the added lighting nodes.

To add/delete a new ZigBee node to the Gateway:

- Slide the screen to the right in Figure 2-16, it will return to the “Group list”.
- Click the callout 2 in Figure 2-15 to link to Figure 2-17.
- Click the callout 2 in Figure 2-17 to select the group lights, as shown in Figure 2-18.
- Click the callout 1 in Figure 2-17 to open/close the lights of group, callout 3, 4, 5, 6 are used to adjust the Hue value, Saturation value, Level value and Transition time.

How to adjust the lamps:

- In order to get the control of lamps, we need to perform Touch Link command to bind a lamp and devices.
- Slide the screen to the left in Figure 2-15, it will jump to the “light list”, as shown in Figure 2-16, this list will display all the added lighting nodes.