

# Nova M3 MFN300 Function Card Operation Manual

## 1. Overview

Nova M3 function card MFN300 can manage power distribution box of LED display. It has functions of ambient temperature and humidity detecting. With integrated audio output, it can also achieve audio transmission together with sending card. It' s light sensor supportive to achieve automatic brightness adjustment of LED display. And with both Ethernet and RS232 interface available, it' s very convenient and reliable to use.

## 2. Features

- 8-way contact on-off output control (to achieve scheduled on/off of LED display)
- Light sensor supportive (to achieve automatic brightness adjustment)
- Temperature and humidity detecting
- Integrated audio output

### 3. Outline drawing

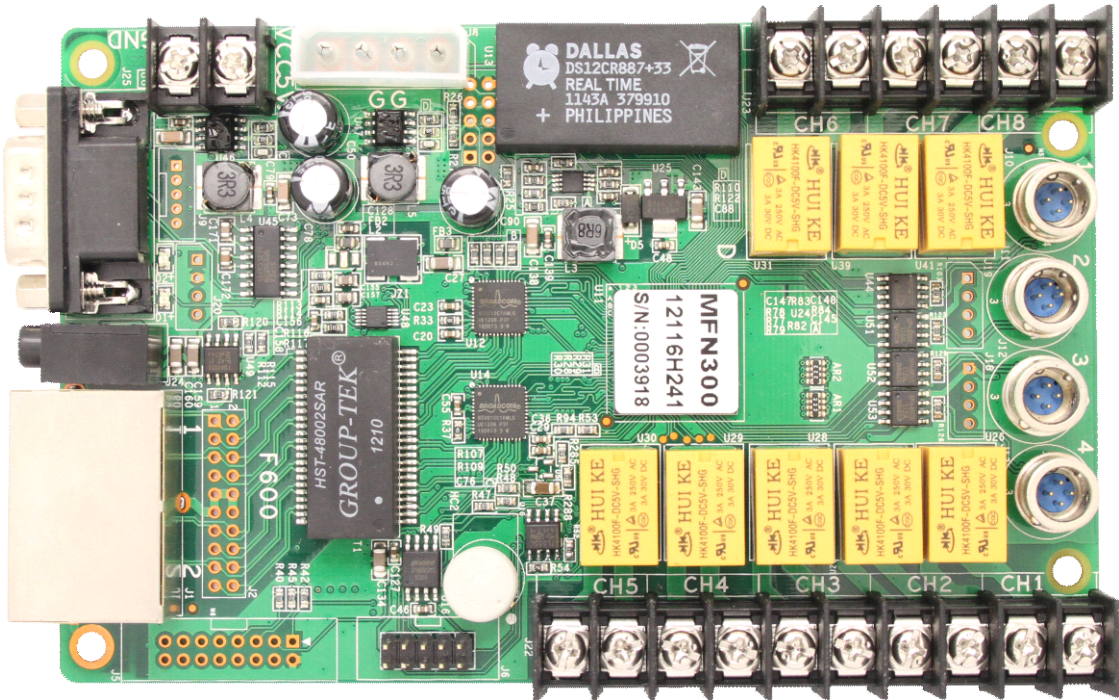


Figure-1

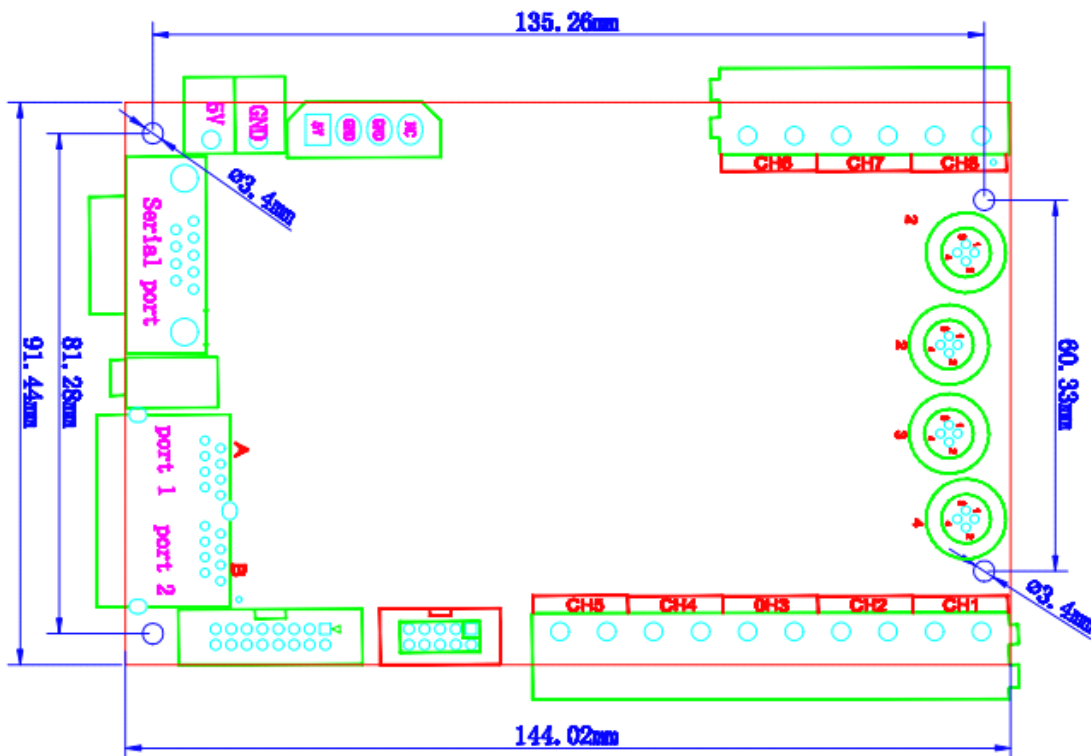


Figure-2

## 4. Operation instructions

Management of function card includes the configuration of itself (such as add, remove, and rename), external device configuration, monitor data updating, and power supply management.

### 4.1 Hardware connection

#### 4.1.1 Serial communication

- Connect function card to computer directly by RS232 serial cable.



Figure-3

#### 4.1.2 Ethernet communication

- Connect function card between sending card (or independent controller) and the first receiving card.

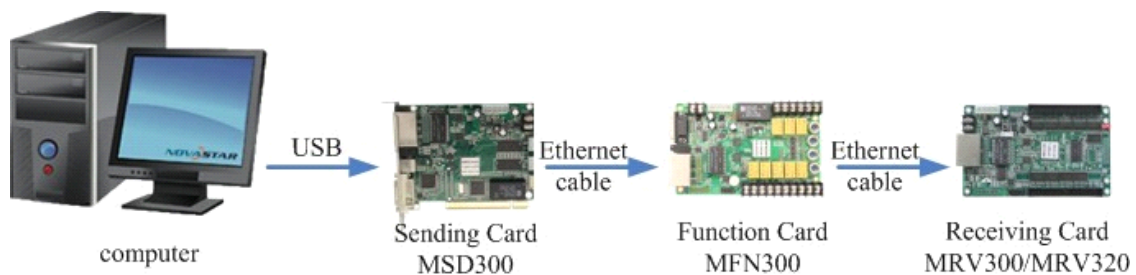


Figure-4

- Connect function card between any two receiving cards.

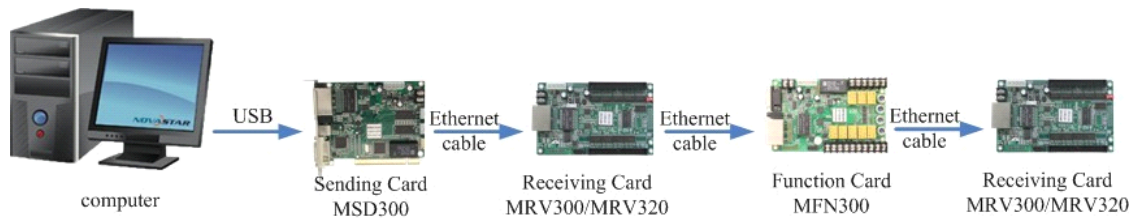


Figure-5

- Connect function card to the last receiving card.

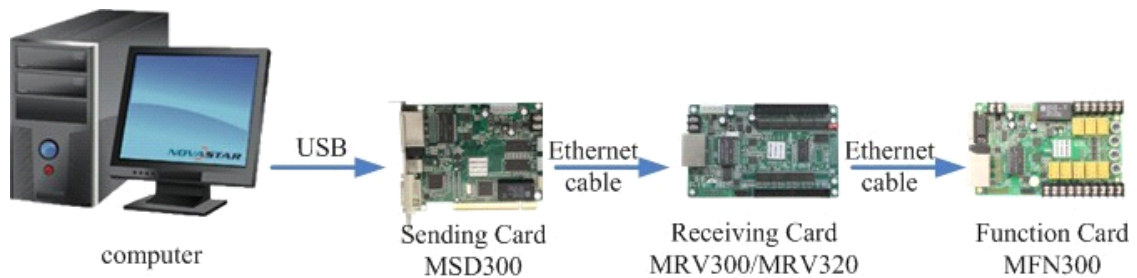


Figure-6

## 4.2 Software operation

Run **NovaLCT-Mars** control software, click **Function Card** button to open Function Card Management page.

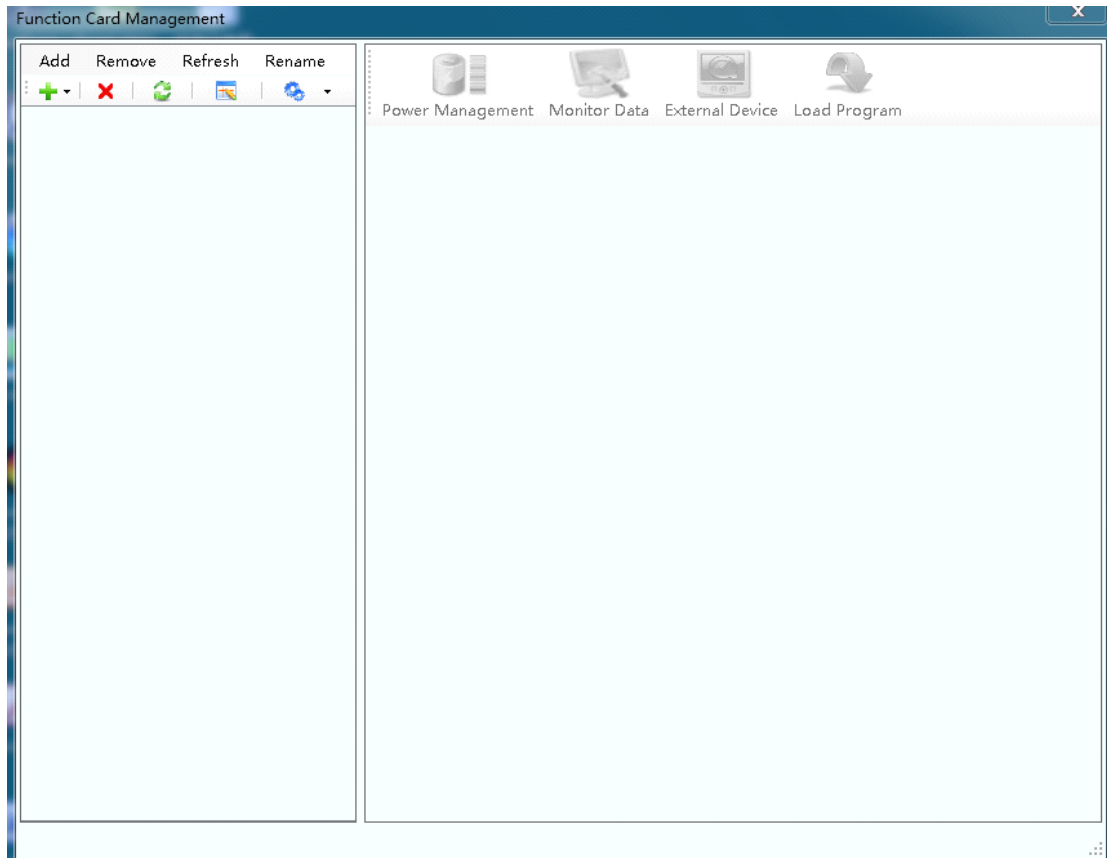


Figure-7

### 4.2.1 Function card Configuration

Use the menu in Figure-6 to configure function card, including add, remove, rename a function card, modify serial port, and replace serial port.

#### Add:

- **Serial port:** Add a function card which is connected to the serial port.
- **Ethernet port:** Add a function card which is connected to the Ethernet port.

**Remove:** Remove the selected node which could be a function card, Ethernet port, sending card or serial port.

**Rename:** Rename the selected function card.

### **Serial port operation:**

Click  icon to select Modify Serial Port or Replace Serial Port.

- **Modify Serial Port:** Set the selected serial port as one that no function card has been configured for it.
- **Replace Serial Port:** replace the selected serial port with the one which is configured but the configured device type is different from that actually connected, or is actually not connected.

**Note:** The icon is only available when the following requirements are satisfied: The selected node is a serial port; the device connected to it does not match the one configured to it, or the serial port is not connected.

## **4.2.2 Power management**

Click **Power Management** button in the Function Card Management page, to open the page for power management, as shown in Figure-7.

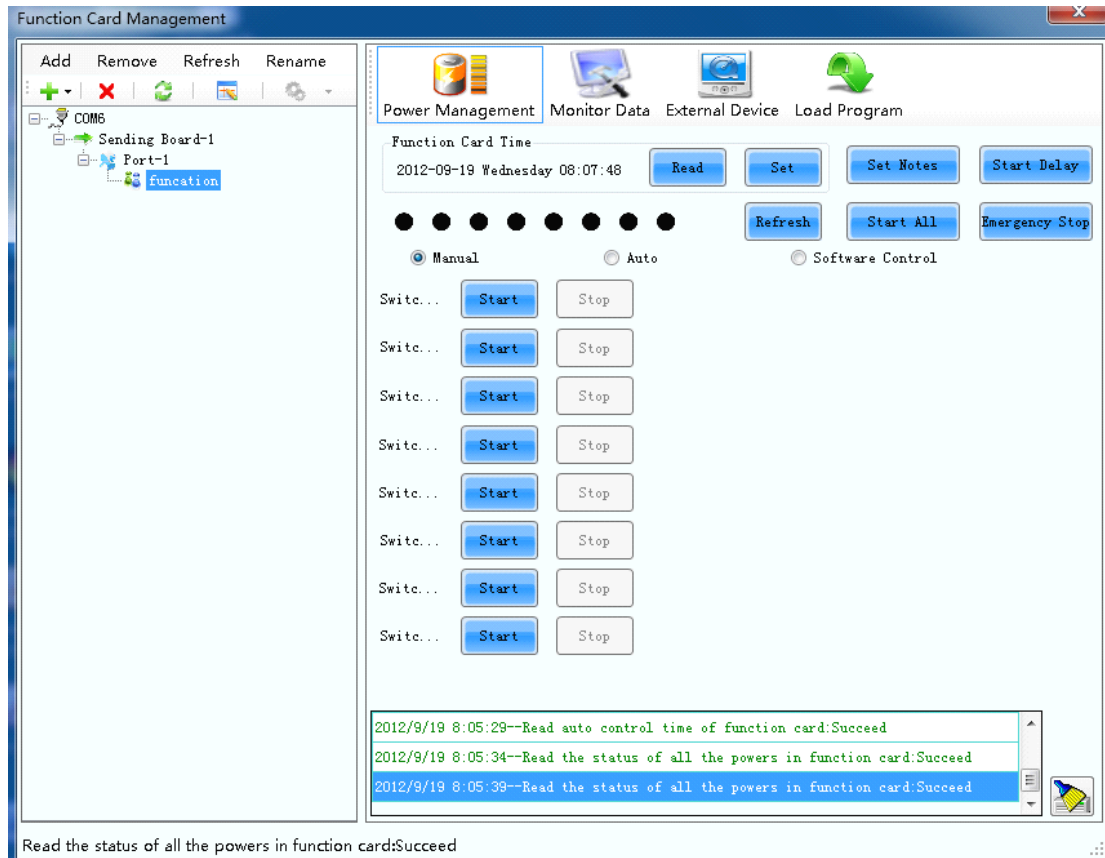


Figure-8

**Function card time:**

- **Read:** Read the time of selected function card and show it on the page.
- **Set:** Set current computer time of to the selected function card.

**Set notes:** Set note for each power supply of selected function card.

**Start delay:** Set the delay time for starting power of function card. After successful setting, the start of each power supply will delay for certain time. For example, the delay time is set as 2 seconds, then each power supply will delay 2 seconds when

starts.

**Note:** 0 delay time is not acceptable. Otherwise 255 seconds will be applied.

**Refresh:** Refresh the power control mode, power supply status, function card time, and starting power delay time of selected function card.

**Start all:** Start all the power supplies controlled by selected function card.

**Emergency stop:** Turn off all the power supplies controlled by selected function card. In auto control mode, the schedule will be disabled when the emergency stop operation is executed, unless **Start All** button is clicked again.

**Manual:** Set the power control into manual control mode. Use Start button or Stop button to control each corresponding power manually.

**Auto:** Set the power control into auto control mode. The hardware system will control the power supplies according to the schedule (setting by software) automatically.

**Software control:** In this mode, the software controls the power supplies start and stop according to the schedule settings.

#### 4.2.2.1 Manual control



Select Manual to achieve up to 8-way power supplies control manually.

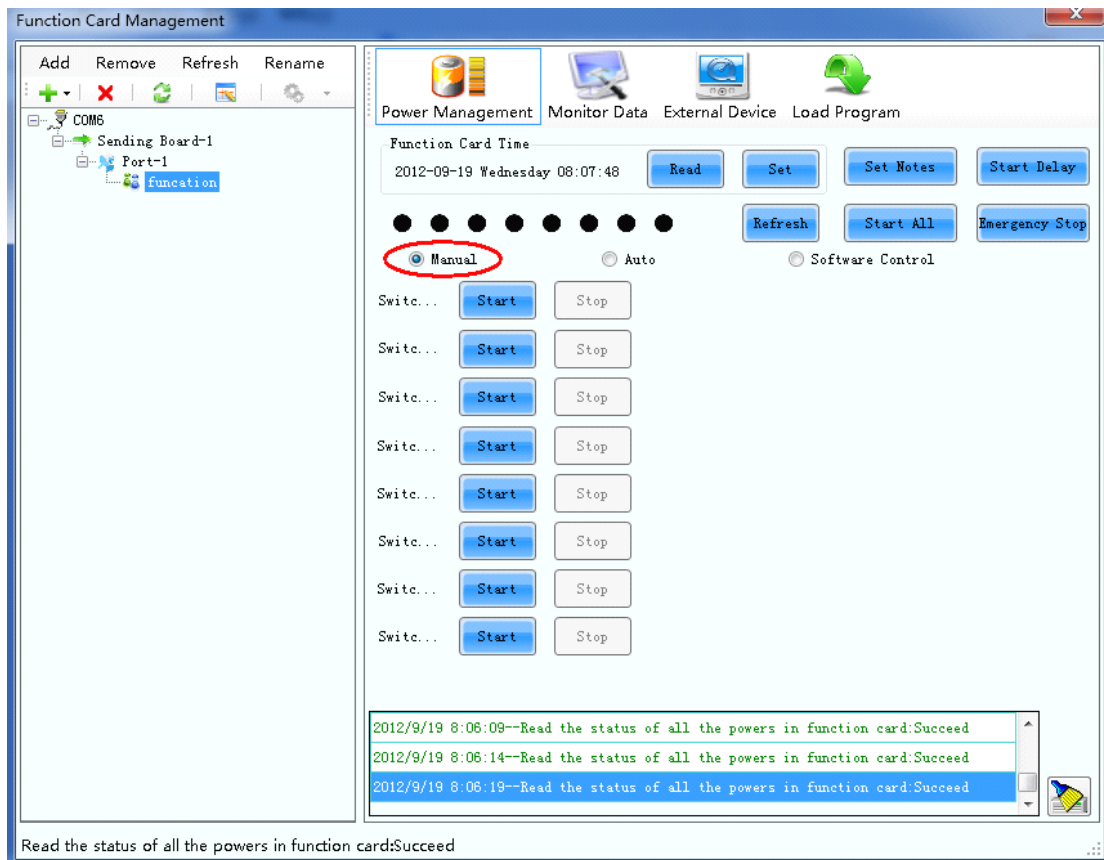


Figure-9

#### 4.2.2.2 Auto control

Select Auto to achieve up to 8-way power supplies control automatically according to software settings.

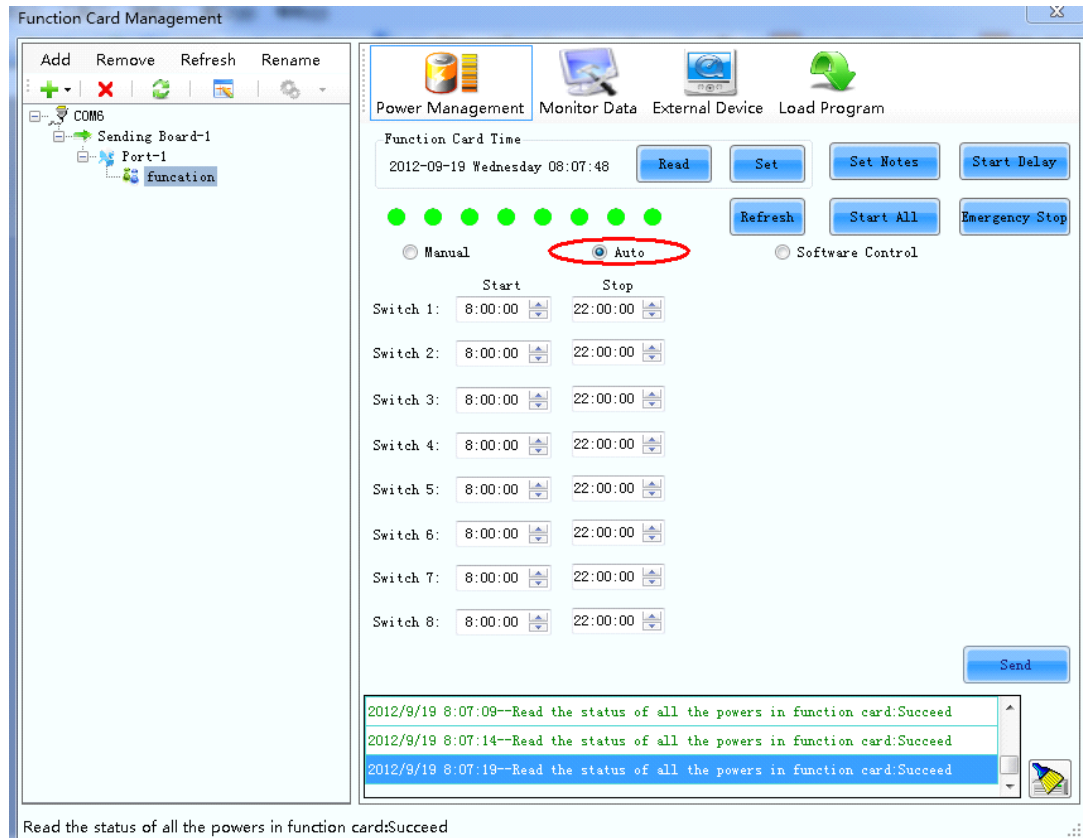


Figure-10

**Note:**

1. In auto control mode, the schedule will be disabled when the emergency stop operation is executed, unless **Start All** button is clicked again.
2. Auto power control is conducted according to the time on function card. Check function card time before setting schedule before setting auto control time. To check the function card time, click **Read** button in the Function Card Time panel. To set computer time to function card, click **Set** button.

### 4.2.2.3 Software Control

The page for software power control is shown in Figure-10.

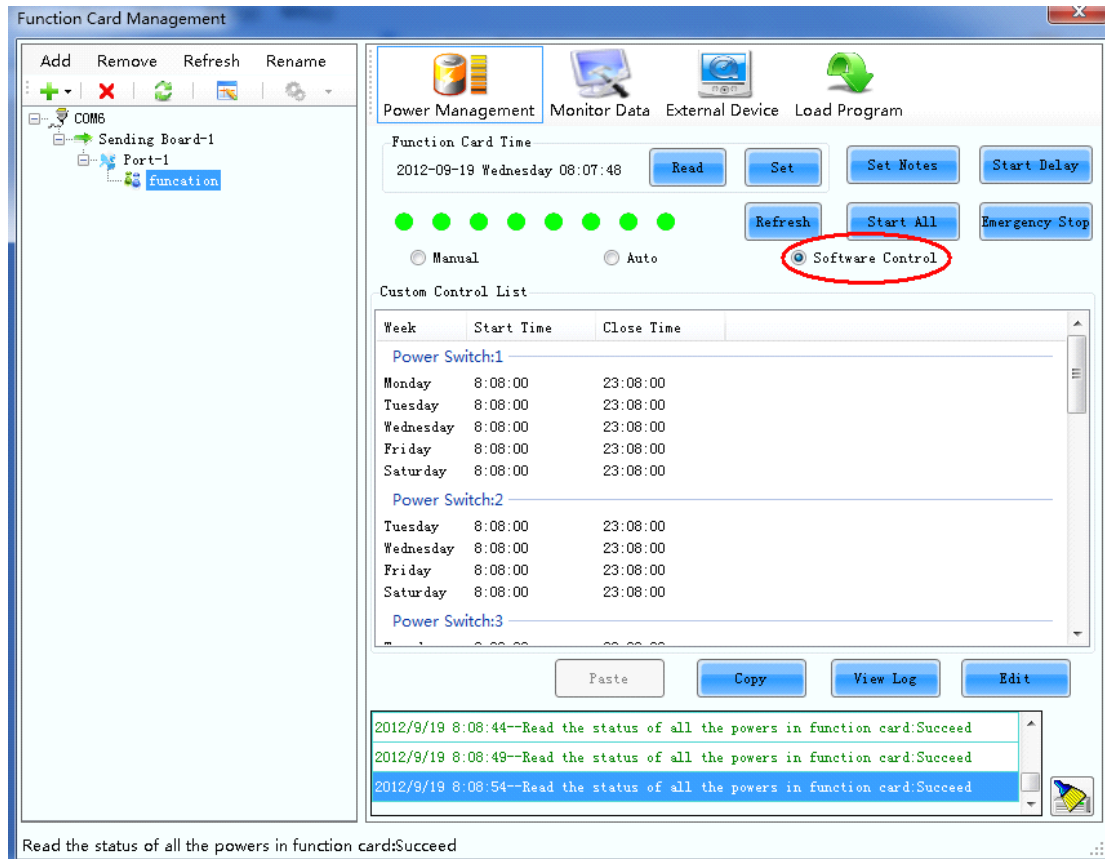


Figure-11

**Copy:** Copy current power control schedule so that it can be pasted to other function cards.

**Paste:** Paste the copied power control schedule to the current function card.

**View log:** Check the log of the control operations on the power supplies, as shown in Figure-11.

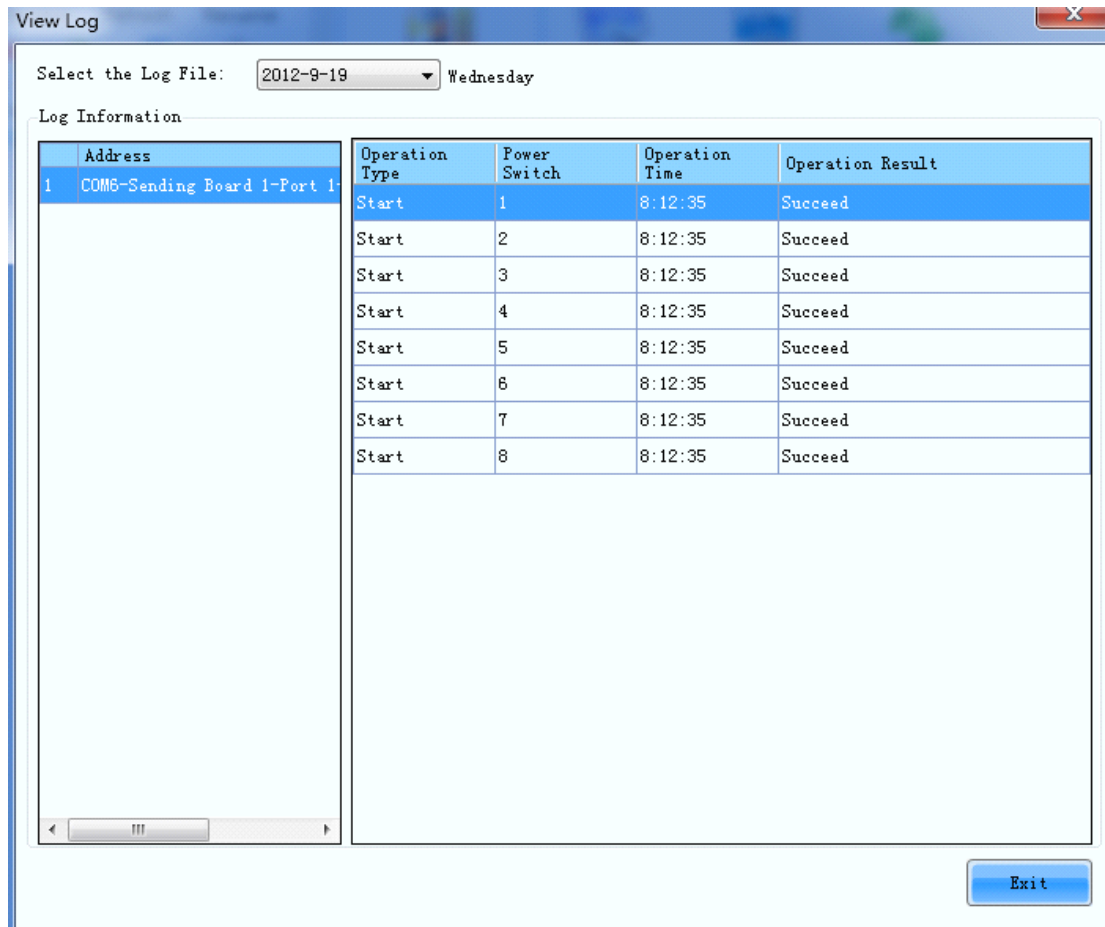


Figure-12

- **Select the Log File:** Select the log to be checked.
- Select the log to be checked, find the function card to be checked in the left list, the detailed information will be shown on the right.

**Edit:** Click this button to open the page for editing the power supply control schedule, as shown in Figure-12.

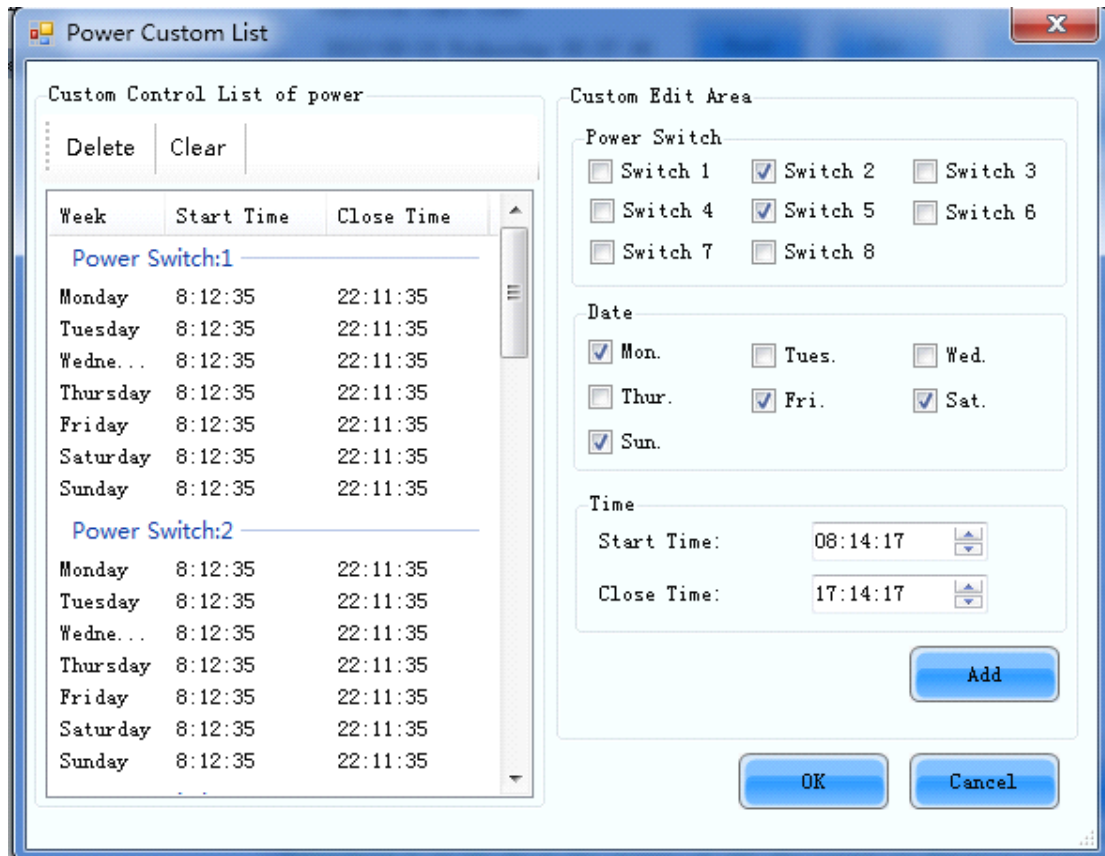


Figure-13

- **Delete:** Delete the selected items.
- **Clear:** Clear all existing custom control lists.
- **Power switch:** Check power switches to be controlled.
- **Date:** Check the day of the week to be controlled.
- **Time:** Set the time to be controlled.
- **Add:** Add the edited power control information to the left list.

**Note:**

1. Do not stop the NovaLCT-Mars control software under the custom mode.

2. Custom setting is conducted when time comes. The software will command the hardware to conduct corresponding actions only when the clock time reaches the time set by the software.

### 4.2.3 Monitor data

Click **Monitor Data** button in the Function Card Management page to open the page for data monitoring, as shown in Figure-13.

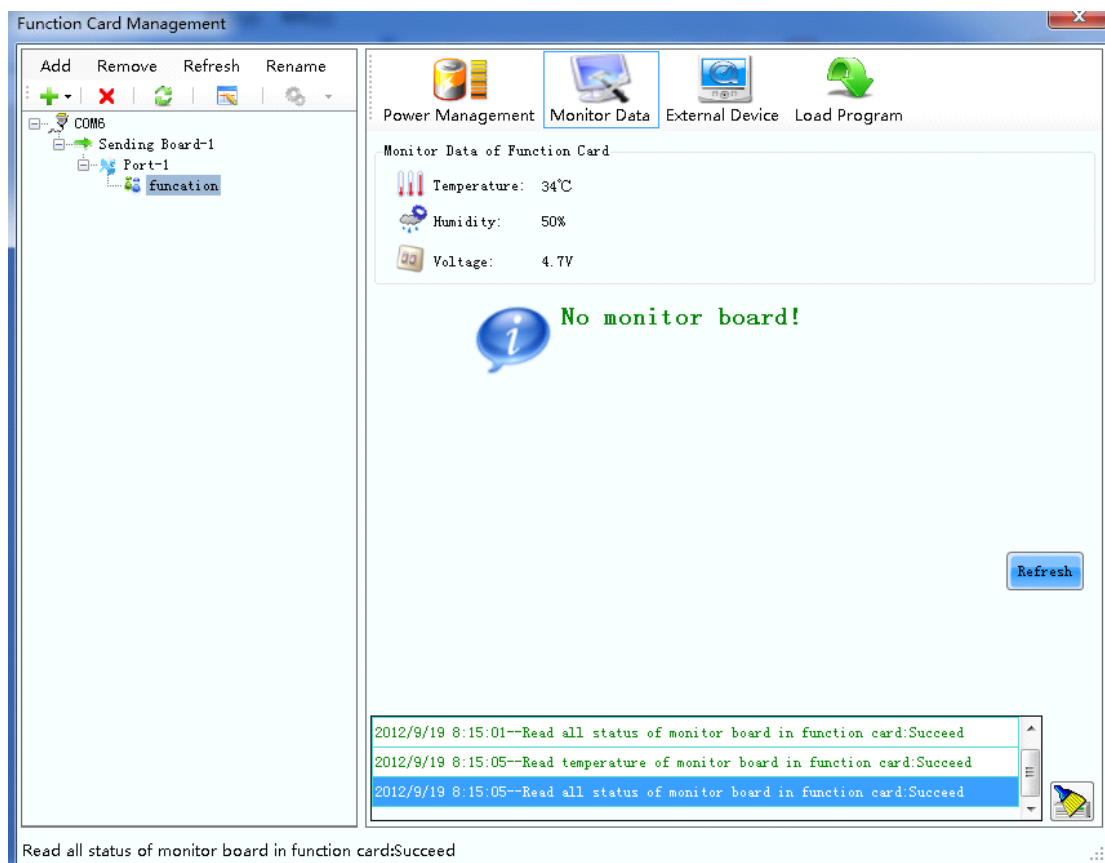


Figure-14

**Refresh:** Obtain monitoring data, including the voltage of function card, ambient temperature and humidity.

## 4.2.4 External device

Click **External Device** button in the Function Card Management page to open the page for external devices management, as shown in Figure-14.

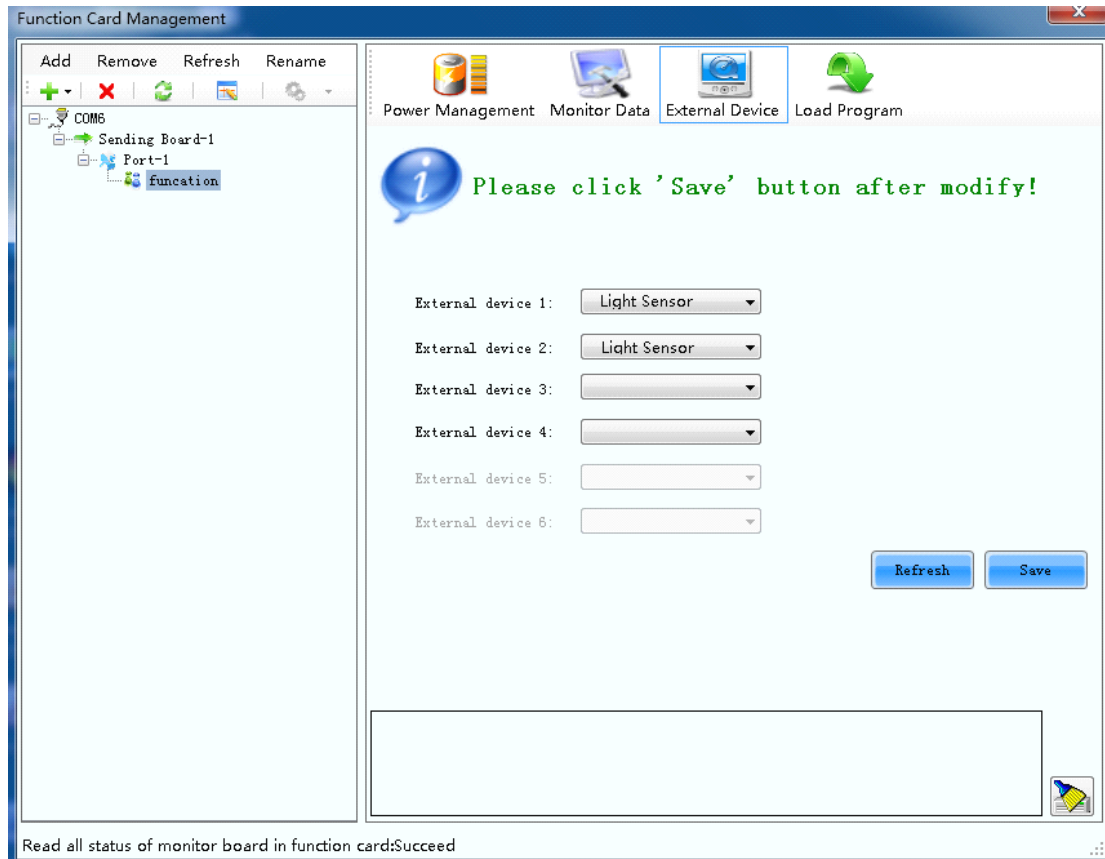


Figure-15

**Refresh:** Refresh the brightness value read by the configured external light sensor.

**Save:** Save external device type settings to file, **Save** button must be clicked if any modification made to the external device type settings.

### Hardware connection shown as follows:

**Phone:** NovaStar (Xian) +86 29 8450 7048 NovaStar (Shenzhen) +86 755 3359 2492

**Website:** [www.novastar-led.com](http://www.novastar-led.com)



Figure-16