

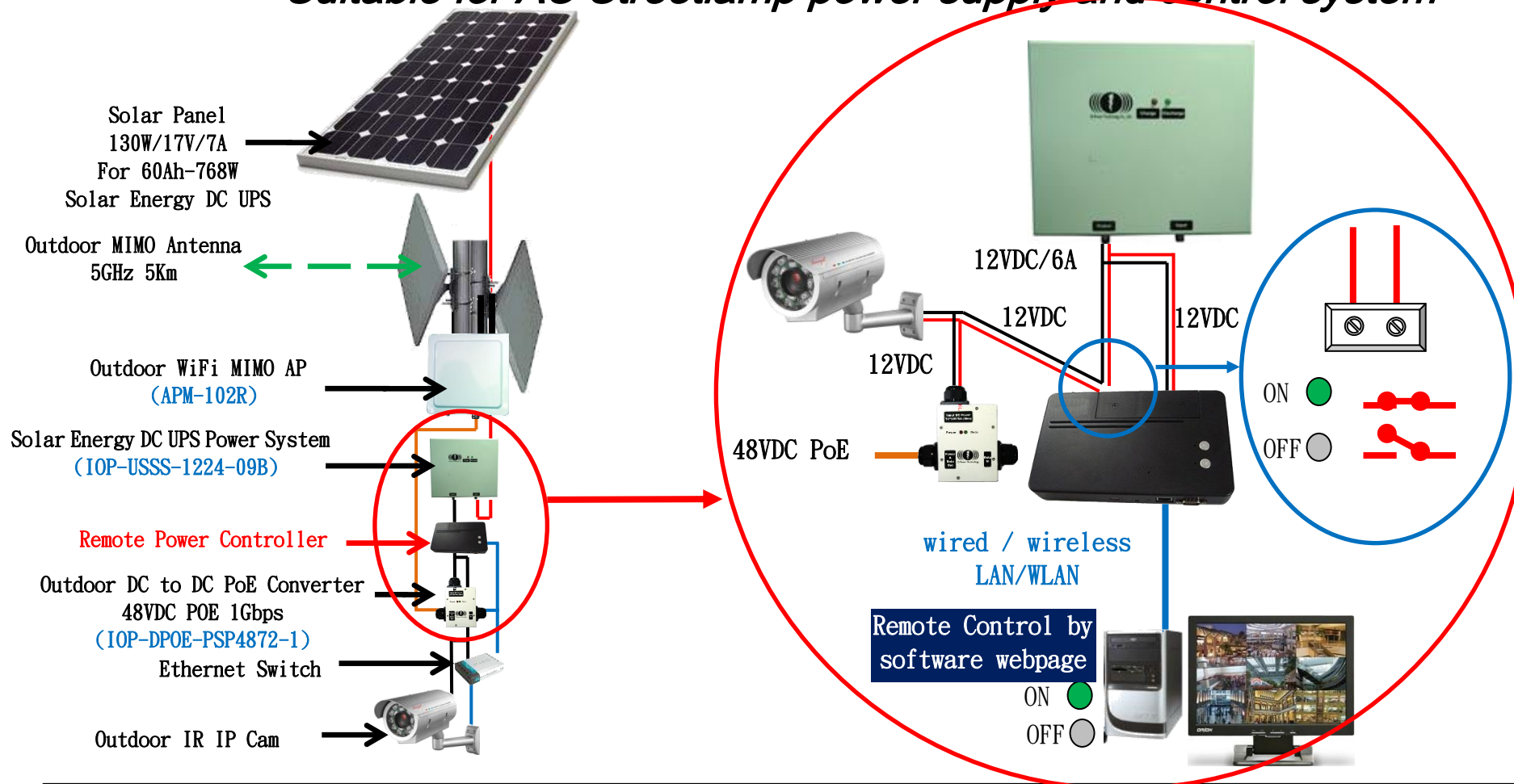


IO-Power Wireless Remote DC Power Controller System

Suitable for Outdoor DC UPS Power System

Suitable for Solar Energy DC UPS Power System

Suitable for AC Streetlamp power supply and control system





1、Remote Power Controller Operation Instruction:

The screenshot displays the 'Control Center' software interface. The 'Instant Control' tab is active, showing 'AC Switch Control' and 'Digital Output Control' sections. The 'AC Switch' is currently 'On/Off'. Under 'Digital Output Control', 'DOut 1' is highlighted with a red box and a green indicator light, and 'DOut 2' is currently 'On/Off'. The 'IR Control' section shows 'IR Mode' set to 'Emission Mode' and a list of IR devices (IR 1 to IR 7). The 'Scheduling' tab is also visible, showing a calendar for '2013-01-07, 週一' at '19:14:11'. A table of events is shown, with the first three events highlighted by a red box. The events are:

Event	Start Time	Action 1	End Time	Action 2
Event 1	10:15:00	DO1 Off	10:20:00	DO1 On
Event 2	10:30:00	DO2 On	10:40:00	DO2 Off
Event 3	10:25:00	DO1 Off	10:35:00	DO1 On
Event 4	00:00:00	None	00:00:00	None
Event 5	00:00:00	None	00:00:00	None
Event 6	00:00:00	None	00:00:00	None

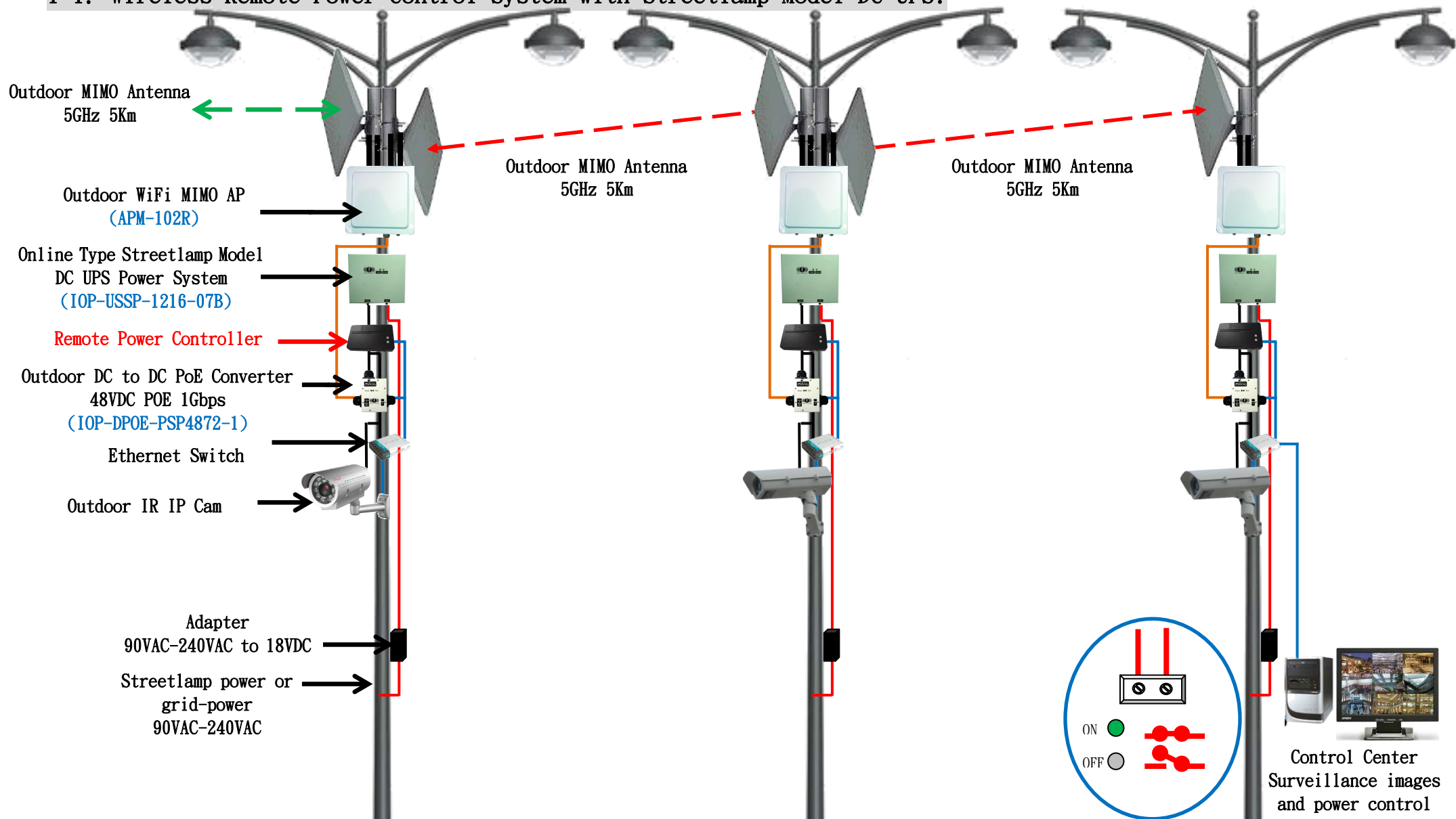
Red annotations on the screenshot include:

- 'Remote Power Controller IP & MAC' pointing to the IP address '192.168.100.55' in the 'Select Device(s)' list.
- 'One Remote Power Controller has 2 sets of power switching control' pointing to the 'DOut 1' and 'DOut 2' controls.
- 'There can be 12 sets of power switching each day.' pointing to the event table in the scheduling tab.



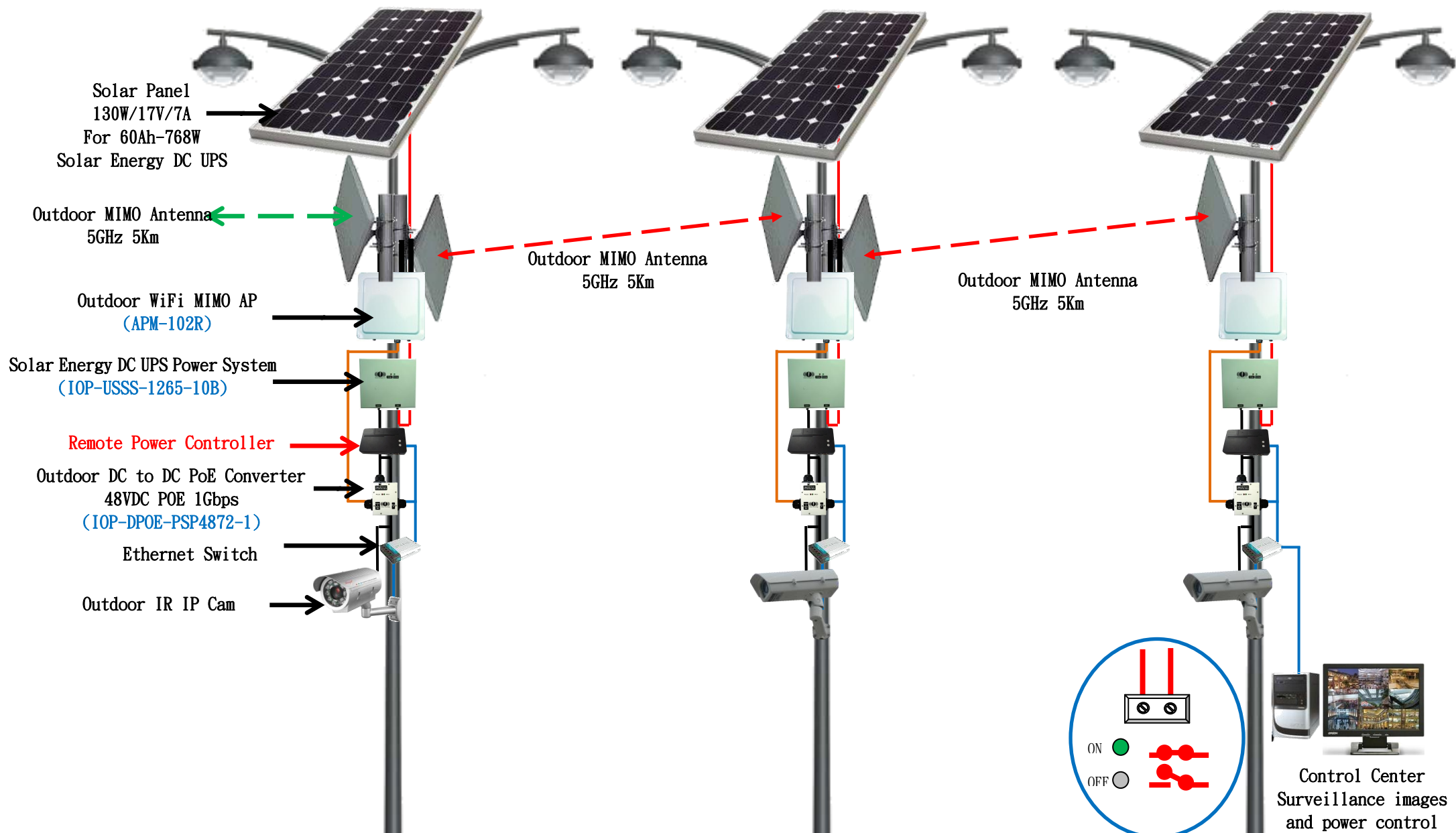
1、System Instruction

1-1. Wireless Remote Power Control System with Streetlamp Model DC UPS:



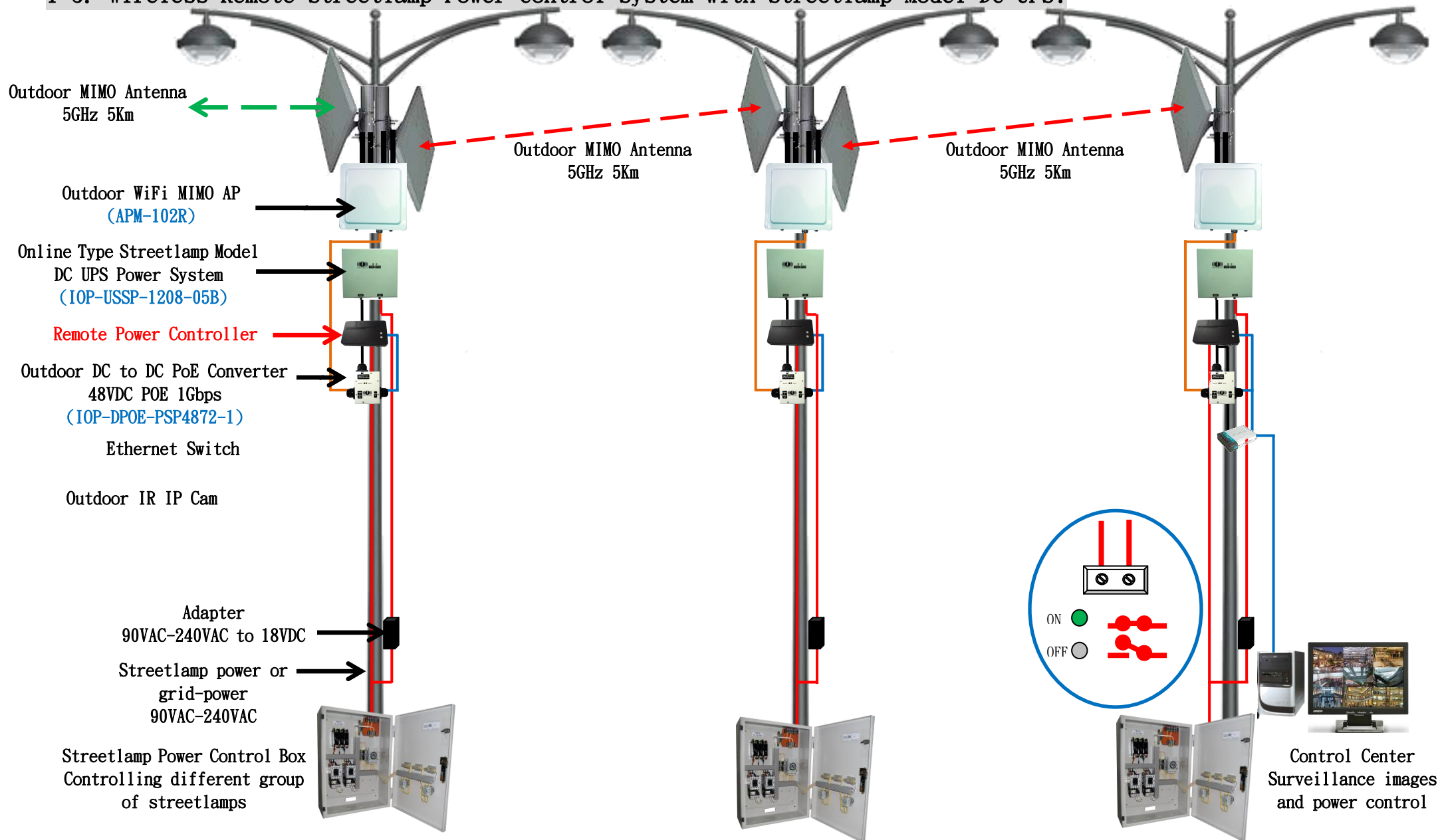


1-2. Wireless Remote Power Control System with Solar Energy DC UPS:





1-3. Wireless Remote Streetlamp Power Control System with Streetlamp Model DC UPS:





Wireless Remote Power Control System Design and Outdoor DC UPS Power System Calculation

Scheduling: AM04-05, AM:09-10, PM:04-05, PM:11-12

Streetlamp Model DC UPS

Wireless Remote Power Control System

1. Power consumption:

- 1-1. Outdoor WiFi MIMO AP: APM-102R- 7W/H
- 1-2. 12VDC to 48VDC PoE: 1W/H
- 1-3. IR IP Cam: 4W/H @ daytime, 8W/H@ nighttime
- 1-4. Remote Power Controller: 1.5W/H
- 1-5. Ethernet Switch: 3W/H

2. Streetlamp Model DC UPS Power System

Has **4 hours** of backup working time when the Power Company is out of service.

- 2-1. Outdoor WiFi MIMO AP (including 48VDC PoE)
 $7+1=8\text{W/H}, 8\text{W/H} \times 8\text{H}=64\text{W}$
- 2-2. IR IP Cam
 $((4+8) / 2)\text{W/H} \times 8\text{H}=48\text{W}$
- 2-3. Remote Power Controller
 $1.5\text{W/H} \times 24\text{H}=36\text{W}$
- 2-4. Ethernet Switch
 $3\text{W/H} \times 8\text{H}=24\text{W}$
- 2-5. Total power consumption
 $64\text{W} + 48\text{W} + 36\text{W} + 24\text{W}=172\text{W}$

Suggestion for Streetlamp Model DC UPS:
IOP-USSP-1216-07B 209WH (16.1Ah @ 12.8V)

Solar Energy DC UPS

Wireless Remote Power Control System

1. Power consumption:

- 1-1. Outdoor WiFi MIMO AP: APM-102R- 7W/H
- 1-2. 12VDC to 48VDC PoE: 1W/H
- 1-3. IR IP Cam: 4W/H @ daytime, 8W/H@ nighttime
- 1-4. Remote Power Controller: 1.5W/H
- 1-5. Ethernet Switch: 3W/H

2. Solar Energy DC UPS Power System

192 hours(8days) uninterruptible wireless surveillance system. **(only working 4 hours/day)**

- 2-1. Outdoor WiFi MIMO AP (including 48VDC PoE)
 $7+1=8\text{W/H}, 8\text{W/H} \times 4\text{H}=32\text{W}$
- 2-2. IR IP Cam
 $((4+8) / 2)\text{W/H} \times 4\text{H}=24\text{W}$
- 2-3. Remote Power Controller
 $1.5\text{W/H} \times 24\text{H}=36\text{W}$
- 2-4. Ethernet Switch
 $3\text{W/H} \times 4\text{H}=12\text{W}$
- 2-5. Total power consumption
 $32\text{W} + 24\text{W} + 36\text{W} + 12\text{W}=104\text{W}$

Suggestion for Solar Energy DC UPS:
IOP-USSS-1265-10B 832WH (65Ah @ 12.8V)
With 130W Solar Panel (832W/6 =138W)

Streetlamp Model DC UPS

Wireless Remote Streetlamp Power Control System

1. Power Consumption

- 1-1. Outdoor WiFi MIMO AP: APM-102R- 7W/H
- 1-2. 12VDC to 48VDC PoE: 1W/H
- 1-3. Remote Power Controller: 3W/H

2. Streetlamp Model DC UPS Power System

Has **4 hours** of backup working time when the Power Company is out of service.

- 2-1. Outdoor WiFi MIMO AP (including 48VDC PoE)
 $7+1=8\text{W/H}, 8\text{W/H} \times 8\text{H}=64\text{W}$
- 2-2. Remote Power Controller
 $1.5\text{W/H} \times 24\text{H}=36\text{W}$
- 2-3. Total power consumption
 $64\text{W} + 36\text{W} = 100\text{W}$

Suggestion for Streetlamp Model DC UPS:
IOP-USSP-1208-05A 103WH (8.05Ah @ 12.8V)

3. System Instruction:

- 3-1. Manage the power of Outdoor DC UPS Power System via long-distance wireless AP and the Remote Power Controller.
- 3-2. Use the Wireless Remote Power Controller to manage all devices to save the outdoor limited power.
- 3-3. Outdoor DC UPS Power System can be charged by streetlamp power, solar energy, or other green power.
- 3-4. According to users' definition of system working time, users only need to adjust the power capacity. °