# ArtronShop Smart Office protocol

this protocol on top of ESP-NOW, ESP-NOW use broadcast mac address and this protocol filler payload by mac address

## Protocol:

<Sender MAC Address>,<Receiver MAC Address>,<Command>,<Payload>

Receiver can be broadcast mac address but sender can’t

## Command List

### 1: Control light bulb

control light bulb ON/OFF

* Direction: Controller -> Light Bulb
* Command: 1
* Payload:
  + 1 = ON
  + 0 = 0FF

### 2: Light bulb status report

light bulb reports self-status

* Direction: Light Bulb -> Controller
* Command: 2
* Payload:
  + 1 = ON
  + 0 = 0FF

### 3: Require light bulb status

controller require light bulb status

* Direction: Controller -> Light Bulb
* Command: 3
* Payload: NULL

### 4: Door sensor status report

Door sensor reports self-status

* Direction: Door sensor -> Controller
* Command: 4
* Payload:
  + 1 = OPEN
  + 0 = CLOSE

### 5: Require door sensor status

controller require door sensor status

* Direction: Controller -> Door sensor
* Command: 5
* Payload: NULL

### 6: Temperature & Humidity sensor status report

Temperature and humidity sensor reports self-status

* Direction: Sensor -> Controller
* Command: 6
* Payload: <Temperature>,<Humidity>

### 7: Require Temperature & Humidity sensor status

controller require temperature and humidity sensor value

* Direction: Controller -> Sensor
* Command: 7
* Payload: NULL

### 8: PM sensor status report

PM sensor reports self-status

* Direction: Sensor -> Controller
* Command: 8
* Payload: <PM2.5>,<PM1.0>,<PM10.0>

### 9: Require PM sensor status

controller require PM sensor value

* Direction: Controller -> Sensor
* Command: 9
* Payload: NULL

## Real life communication

### Controller

if controller is power on, controller will send 3: Require light bulb status and 5: Require door sensor status with broadcast mac address then light bulb/Door sensor reply 2: Light bulb status report, 4: Door sensor status report for controller update UI on screen

When press Switch on screen, controller will send 1: Control light bulb then light bulb reply 2: Light bulb status report for controller update UI on screen

### Light bulb

if light bulb is power on, it gets last control status from EEPROM then update Relay status and broadcast 2: Light bulb status with broadcast mac address

When press Switch ON/OFF, it broadcast 2: Light bulb status with broadcast mac address for controller update UI on screen

When light bulb got 1: Control light bulb from ESP-NOW, it updates Relay status and broadcast 2: Light bulb status

### Door sensor

if door sensor is power on or door status is change or got 5: Require door sensor status from ESP-NOW, it broadcast 4: Door sensor status report with broadcast mac address

### Temperature & Humidity sensor

if sensor is power on or sensor value change or got 7: Require Temperature & Humidity sensor status from ESP-NOW, it broadcast 6: Temperature & Humidity sensor status report with broadcast mac address

### PM sensor

if sensor is power on or sensor value change or got 9: Require PM sensor status, it broadcast 8: PM sensor status report with broadcast mac address