

Midea Open For OEM

ChangeLog

version	date	content
v0.1	2020-05-01	Define OEM communication scheme
v0.2	2020-06-01	1. Add test environment host 2. Add reqId field as request id
v0.3	2021-03-26	1. remove API:/oem/v1/device/random/get 2. In /oem/v1/device/bind: useverificationCode instead of randomData
v0.4	2021-12-25	Add dehumidifier query and control API
v0.5	2022-05-26	Add dehumidifier "pump" function.
v0.6	2022-07-15	Add AC parameters query function: group one
v0.7	2022-12-09	Add AC functions: 1. 8 Degree Heat 2. C/F temperature unit 3. terminal barcode 4. add AC error check
v0.8	2024-05-31	Add water heater
v0.9	2025-04-27	Add sterilization function API for water heater. There are changes in chapters "3.4.1" and "3.4.4"

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Scheme description

- OEM APP:The APP used by customers, developed by OEM partner. The customers use the OEM APP to control MIDEA AC
- OEM cloud:The cloud developed by OEM partner. OEM APP connect to the OEM cloud
MideaAppSDK:Provided by the MIDEA, integrated in OEM APP. MideaAppSDK sends the WIFI SSID and password the AC.
- Appliance: Midea WIFI Appliance
- AirConditioner: Midea AirConditioner
- MIDEA cloud: The cloud developed by MIDEA. It controls the Air Conditioner, and check the request OEM cloud.



MIDEA APP SDK

The OEM APP needs clientId, clientSecret to initialize MIDEA APP SDK.

- client_id: test_client_id
- client_secret: test_client_secret

MIDEA Cloud API

1. Host

Production environment host: <https://obm.midea.com>

Test environment host: <https://oemtest.midea.com>

2. OAuth2

The MIDEA cloud assign client_id and client_secret to the OEM cloud.

- **client_id:** The development ID assigned by the MIDEA cloud for developers, the platform itself will also have a developer ID for permission control.
- **client_secret:** The development key allocated by the MIDEA cloud for each developer is used for identity authentication, information digest, encryption and other security authentication marks, which shall be properly kept to prevent leakage.

2.1 Get OAuth2 token (/oem/v1/oauth2/token)

The OEM cloud must get OAuth2 token from MIDEA cloud first.

Example:

```
curl https://HOST/oem/v1/oauth2/token -d  
'grant_type=client_credentials&client_id=100&client_secret=4e37f8feaaa54876a00f697  
e5f78068d'
```

Return:

```
{"access_token":"6d8600eb-a732-4dca-b6e0-  
3b3cfe41466f","token_type":"bearer","expires_in":28799}
```

The access token will expire, so the OEM cloud need to refresh the access token regularly.

3 APIs

The OEM cloud send requests to MIDEA cloud, with the access token. The access token is sent in the HTTP headers. The request format like:

```
curl 'https://HOST/URI' -d '{JSON-DATA}' -H 'Authorization: Bear 775ff5eb-6ac8-  
4a34-a3b2-49f64841b8b9' -H 'Content-Type:application/json'
```

If access token is not valid, MIDEA cloud will return:

```
{"error":401,"message":"invalid token"}
```

3.1 Bind Appliance (/oem/v1/device/bind)

URI:/oem/v1/device/bind

HTTP Method:POST

Content-Type: application/json

Description:The MIDEA cloud binds the AC to the OEM cloud. If the AC is not belongs to the OEM cloud, other request like /oem/v1/device/status/get, /oem/v1/device/status/control will fail.

Request params:

Field	Require	Type	Description
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
verificationCode	true	String	verificationCode returns in APP SDK api: bindDeviceWithWifi
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
  "applianceCode": "123123",
  "verificationCode": "1b17635135591e215b28323a181e280e",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others means fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The return Data

3.2 AirConditioner

3.2.1 Get AC status (/oem/v1/device/status/get)

URI:/oem/v1/device/status/get

HTTP Method: POST

Content-Type: application/json

Description:The OEM cloud request the AC status

Field	Require	Type	Description
applicationCode	true	String	The unique identifier of AC assigned by MIDEA cloud. The unique identifier of AC assigned by MIDEA cloud.
reqid	false	String	The id to identify this request. UUID format, like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
  "applianceCode": "123123",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	the return data

result data structure:

Field	Type	Description
onlineStatus	String	Whether the AC is connected to MIDEA cloud. 1 online, 0 offline
power	String	Whether the air conditioner is work. 1 work, 0 idle.
mode	String	The AC mode setting. Values: auto, cool ,dry, heat, fan
tempSet	String	The AC temperature setting
templn	String	The indoor temperature
eco	String	Eco setting
wind_speed	String	Wind speed setting. Values: low, medium, high, auto
wind_swing_lr	String	Wind swing direction left and right. 1 the wind swap, 0 the wind stop swap.

Field	Type	Description
wind_swing_ud	String	Wind swing direction up and down. 1 the wind swap,0 the wind stop swap.

example:

```
{
  "errorCode": "0",
  "msg": "ok",
  "result": {
    "onlineStatus": "1",
    "eco": "0",
    "mode": "auto",
    "power": "0",
    "tempIn": "22.4",
    "tempSet": "26",
    "wind_speed": "low",
    "wind_swing_lr": "1",
    "wind_swing_ud": "1"
  }
}
```

3.2.2 Control AC (/oem/device/control)

URI:/oem/v1/device/control

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud send control json to MIDEA cloud.

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
power	false	String	Whether the air conditioner is work. 1 work. 0 idle.
mode	false	String	The AC mode setting. Values: auto, cool ,dry, heat, fan
tempSet	false	String	The AC temperature setting
eco	false	String	Eco setting

Field	Require	Type	Description
wind_speed	false	String	Wind speed setting. Values: low, medium, high, auto
wind_swing_lr	false	String	Wind swing direction left and right. 1 the wind swap,0 the wind stop swap.
wind_swing_ud	false	String	Wind swing direction up and down. 1 the wind swap,0 the wind stop swap.

example:

```
{
  "applianceCode": "123",
  "mode": "auto",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqid	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
onlineStatus	String	Whether the AC is connected to MIDEA cloud. 1 online, 0 offline
power	String	Whether the air conditioner is work. 1 work, 0 idle.
mode	String	The AC mode setting. Values: auto, cool ,dry, heat, fan
tempSet	String	The AC temperature setting
templn	String	The indoor temperature
eco	String	Eco setting
wind_speed	String	Wind speed setting. Values: low, medium, high, auto

Field	Type	Description
wind_swing_lr	String	Wind swing direction left and right. 1 the wind swap,0 the wind stop swap.
wind_swing_ud	String	Wind swing direction up and down. 1 the wind swap,0 the wind stop swap.

example:

```
{
  "errorCode": "0",
  "msg": "ok",
  "result": {
    "onlineStatus": "1",
    "eco": "0",
    "mode": "auto",
    "power": "0",
    "tempIn": "22.4",
    "tempSet": "26",
    "wind_speed": "low",
    "wind_swing_lr": "1",
    "wind_swing_ud": "1"
  }
}
```

3.4 Water Heater

3.4.1 Get Water Heater status (/oem/v1/waterHeater/status/get)

URI:/oem/v1/waterHeater/status/get

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud request the waterHeater status

Request params:

Field	Require	Type	Description
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
  "applianceCode": "123123",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Required	Type	Description
power	true	Integer	Appliance is ON or OFF. 0 means OFF while 1 is ON
mode	true	Integer	Appliance Mode. energy;standard;compatibilizing;smart;pump
fahrenheit_effect	true	Integer	Fahrenheit enable. 0 means OFF while 1 is ON
set_temperature	true	Integer	Target temperature set by user
set_temperature_min	true	Integer	Appliance's min temperature.
set_temperature_max	true	Integer	Appliance's max temperature.
set_sterilize_temp_min	true	Integer	Appliance's min temperature of sterilization.
set_sterilize_temp_max	true	Integer	Maximum sterilization temperature.
vacation	true	Integer	Vacation mode enable
set_vacationdays	true	Integer	Days of vacation mode
water_box_temperature	true	Integer	Current water temperature that in the tank
outdoor_temperature	true	Integer	Current outdoor temperature

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "power": "1",
```

```

    "mode": "energy",
    "fahrenheit_effect": "1",
    "set_temperature": "149",
    "set_temperature_min": "109",
    "set_temperature_max": "149",
    "set_sterilize_temp_min": "140",
    "set_sterilize_temp_max": "158",
    "vacation": "0",
    "set_vacationdays": "0",
    "water_box_temperature": "36",
    "outdoor_temperature": "70"
}
}

```

3.4.2 Get Water Heater week schedule (/oem/v1/waterHeater/weekRepeatSchedule/get)

URI:/oem/v1/waterHeater/weekRepeatSchedule/get

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud request the waterHeater week Repeat Schedule

Request params:

Field	Require	Type	Description
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
  "applianceCode": "123123",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
Monday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Tuesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Wednesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Thursday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Friday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Saturday	JsonArrayObject	Schedule Json Object, each day have 6 timers

Schedule Json Object Structure:

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit
opentime	String	The timer-on time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40
closetime	String	The timer-off time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "Monday": [
      {
        "id": 1,
        "effect": "1",
        "modevalue": "energy",
        "set_temperature": "115",
        "opentime": "3",
        "closetime": "5"
      }
    ],
    "Tuesday": [
      {
        "id": 1,
        "effect": "1",
        "modevalue": "energy",
        "set_temperature": "115",
        "opentime": "3",
        "closetime": "5"
      }
    ]
  }
}
```

```

    "set_temperature": "120",
    "opentime": "3",
    "closetime": "5"
  }
],
"Wednesday": [
  {
    "id": 1,
    "effect": "1",
    "modevalue": "energy",
    "set_temperature": "120",
    "opentime": "3",
    "closetime": "5"
  }
],
...
}
}

```

3.4.3 Get Water Heater Once schedule (/oem/v1/waterHeater/onceSchedule/get)

URI:/oem/v1/waterHeater/onceSchedule/get

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud request the waterHeater onceSchedule

Request params:

Field	Require	Type	Description
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
  "applianceCode": "123123",
  "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.

Field	Type	Description
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonArrayObject	The returns data, which has 6 timer

Schedule Json Object Structure:

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit
openhour	String	The hour of timer-on time
openminute	String	The minute of timer-on time
closehour	String	The hour of timer-off time
closeminute	String	The minute of timer-off time

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": [
    {
      "id": 1,
      "effect": "1",
      "modevalue": "energy",
      "set_temperature": "115",
      "openhour": "1",
      "openminute": "10",
      "closehour": "5",
      "closeminute": "0"
    },
    {
      "id": 2,
      "effect": "1",
      "modevalue": "energy",
      "set_temperature": "68",
      "openhour": "1",
      "openminute": "10",
      "closehour": "5",
      "closeminute": "0"
    }
  ]
}
```

```

    ...
]
}

```

3.4.4 Control Water Heater (/oem/v1/waterHeater/status/control)

URI:/oem/v1/waterHeater/status/control

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud send control json to MIDEA cloud

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of appliance assigned by MIDEA cloud.
data	true	JsonArrayObject	Control parameters

Control parameters Json Object Structure:

Field	Require	Type	Description
power	false	String	Whether the air conditioner is work. 1 work. 0 idle.
mode	false	String	The water heater mode setting. energy; standard; compatibilizing; smart; pump
set_temperature	false	String	The target temerature (Celsius:[43~65], Fahrenheit:[109~149])
set_temperature_max	flase	Integer	The temerature limit (Celsius:(43~65], Fahrenheit:(109~149])
vacation	false	Integer	1-vacation mode enable;0-vacation mode disable
set_vacationdays	false	Integer	Vacation days

example:

```
{
  "applianceCode": "178120883708513",
  "reqId": "1001",
  "data": {
    "power": "1",
    "mode": "standard",
    "set_temperature": 65,
    "set_temperature_max": 65,
    "vacation": 0,
    "set_vacationdays": 0
  }
}
```

```

        "mode": "smart",
        "set_temperature": "123",
        "set_temperature_max": "140",
        "vacation": "0",
        "set_vacationdays": "5"
    }
}
}

```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
power	Integer	Appliance is ON or OFF. 0 means OFF while 1 is ON
mode	Integer	Appliance Mode. See Modes value in Figure 2
fahrenheit_effect	Integer	Fahrenheit enable. 0 means OFF while 1 is ON
set_temperature	Float	Target temperature set by user
set_temperature_min	Integer	Appliance's min temperature
set_temperature_max	Integer	Appliance's max temperature
set_sterilize_temp_max	Integer	Maximum sterilization temperature
vacation	Integer	Vacation mode enable
set_vacationdays	Integer	Days of vacation mode
water_box_temperature	Integer	Current water temperature that in the tank
outdoor_temperature	Integer	Current outdoor temperature

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "power": "1",
    "mode": "smart",
    "set_temperature": "123",
    "set_temperature_max": "140",
    "vacation": "0",
    "set_vacationdays": "5"
  }
}
```

```

    "fahrenheit_effect": "1",
    "set_temperature": "123",
    "set_temperature_max": "140",
    "set_temperature_min": "109",
    "set_sterilize_temp_max": "158",
    "vacation": "0",
    "set_vacationdays": "5",
    "water_box_temperature": "36",
    "outdoor_temperature": "70"
}
}

```

3.4.5 Control Water Heater Week Schedule(/oem/v1/waterHeater/weekSchedule/control)

URI:/oem/v1/waterHeater/weekSchedule/control

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud send control json to MIDEA cloud

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of appliance assigned by MIDEA cloud.
data	true	JsonArrayObject	Week Schedule list

Data Structure:

Field	Type	Description
Monday	JsonArrayObject	Schedule Json Object, each day have 6 timers (0~6)
Tuesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Wednesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Thursday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Friday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Saturday	JsonArrayObject	Schedule Json Object, each day have 6 timers

Schedule Json Object Structure:

Field	Type	Description
-------	------	-------------

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit
opentime	String	The timer-on time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40
closetime	String	The timer-off time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40

example:

```
{
    "applianceCode": "123123",
    "reqId": "1001",
    "data": {
        "Monday": [
            {
                "id": 1,
                "effect": "1",
                "modevalue": "standard",
                "set_temperature": "105",
                "opentime": "14",
                "closetime": "20"
            },
            {
                "id": 2,
                "effect": "0",
                "modevalue": "standard",
                "set_temperature": "105",
                "opentime": "14",
                "closetime": "20"
            }
        ],
        ...
        "Tuesday": [
            ...
        ],
        ...
    }
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
Monday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Tuesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Wednesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Thursday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Friday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Saturday	JsonArrayObject	Schedule Json Object, each day have 6 timers

Schedule Json Object Structure:

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit
opentime	String	The timer-on time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40
closetime	String	The timer-off time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "Monday": [
      {
        "id": 1,
        "effect": "1",
        "modevalue": "standard",
        "set_temperature": "105",
        "opentime": "14",
        "closetime": "20"
      },
      {
        "id": 2,
        "effect": "0",
        "modevalue": "standard",
        "set_temperature": "105",
        "opentime": "14",
        "closetime": "20"
      }
    ]
  }
}
```

```

    },
    "Tuesday": {
        [...]
    },
    ...
}
}

```

3.4.6 Control Water Heater Once Schedule(/oem/v1/waterHeater/onceSchedule/control)

URI:/oem/v1/waterHeater/onceSchedule/control

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud send control json to MIDEA cloud

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029- 4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of appliance assigned by MIDEA cloud.
data	true	JsonArrayObject	The returns data, which has 6 timer

Schedule Json Object Structure:

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit
openhour	String	The hour of timer-on time
openminute	String	The minute of timer-on time
closehour	String	The hour of timer-off time
closeminute	String	The minute of timer-off time

```

{
    "applianceCode": "123123",
    "reqId": "1001",
}

```

```

"result": [
    {
        "id": 1,
        "effect": "0",
        "modevalue": "standard",
        "set_temperature": "105",
        "openhour": "14",
        "openminute": "20",
        "closehour": "20",
        "closeminute": "0"
    },
    ...
]
}

```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
Monday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Tuesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Wednesday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Thursday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Friday	JsonArrayObject	Schedule Json Object, each day have 6 timers
Saturday	JsonArrayObject	Schedule Json Object, each day have 6 timers

Schedule Json Object Structure:

Field	Type	Description
id	Integer	Timer id, value range from 1 to 6
effect	String	Timer enable. 1-enable; 0-disable
modevalue	String	Timer mode. energy; standard; compatibilizing; smart; pump
set_temperature	String	The target temperature of timer. Value is relate to temperature unit

Field	Type	Description
opentime	String	The timer-on time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40
closetime	String	The timer-off time, 10min step. 0~144, ex. 2 is 0:20, 100 is 16:40

example:

```
{
    "errorCode": "0",
    "msg": "success",
    "reqId": "1001",
    "result": [
        {
            "id": 1,
            "effect": "0",
            "modevalue": "standard",
            "set_temperature": "105",
            "openhour": "14",
            "openminute": "20",
            "closehour": "20",
            "closeminute": "0"
        },
        ...
    ]
}
```

3.4.7 Get Water Heater Sterilization Status (/oem/v1/waterHeater/sterilize/get)

URI:/oem/v1/waterHeater/sterilize/get

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud request the waterHeater sterilization status

Request params:

Field	Require	Type	Description
applianceCode	true	String	The unique identifier of AC assigned by MIDEA cloud.
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8

example:

```
{
    "applianceCode": "123123",
    "reqId": "0d08a76c-4029-4396-b2eb-77b0d269fdc8"
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Feile	Type	Description
force_sterilize_effect	Integer	Immediate sterilization switch. 0 means OFF while 1 is ON.
auto_sterilize_effect	Integer	Automatic sterilization switch. 0 means OFF while 1 is ON.
set_sterilize_temp_max	Integer	Maximum sterilization temperature.
set_sterilize_temp_min	Integer	Minimum sterilization temperature.
set_sterilize_temp	Integer	Sterilization temperature.
auto_sterilize_week	Integer	Regular sterilization - what day of the week. (0~6)
auto_sterilize_hour	Integer	Regular sterilization - what day of the hour. (0~23)
auto_sterilize_minute	Integer	Regular sterilization - what day of the minute. (0~59)

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "force_sterilize_effect": "0",
    "auto_sterilize_effect": "1",
    "set_sterilize_temp_max": "158",
    "set_sterilize_temp_min": "140",
    "set_sterilize_temp": "158",
    "auto_sterilize_week": "1",
    "auto_sterilize_hour": "23",
    "auto_sterilize_minute": "0"
  }
}
```

3.4.8 Control Water Heater Week Schedule Sterilization (/oem/v1/waterHeater/sterilize/weekSchedule/control)

URI:/oem/v1/waterHeater/sterilize/weekSchedule/control

HTTP Method:POST

Content-Type: application/json

Description:The OEM cloud send control json to MIDEA cloud

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format,like:0d08a76c-4029-4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of appliance assigned by MIDEA cloud.
data	true	JsonArrayObject	Control parameters

Control parameters Json Object Structure:

Field	Require	Type	Description
auto_sterilize_effect	true	Integer	Automatic sterilization switch. 0 means OFF while 1 is ON
set_sterilize_temp	false	Integer	Sterilization temperature.Between set_sterilize_temp_min and set_sterilize_temp_max.
auto_sterilize_week	false	Integer	Regular sterilization - what day of the week. (0~6)
auto_sterilize_hour	false	Integer	Regular sterilization - what day of the hour. (0~23)
auto_sterilize_minute	false	Integer	Regular sterilization - what day of the minute. (0~59)

example:

```
{
  "applianceCode": "178120883708513",
  "reqId": "1001",
  "data": {
    "auto_sterilize_effect": "1",
    "set_sterilize_temp": "140",
    "auto_sterilize_week": "1",
    "auto_sterilize_hour": "15",
    "auto_sterilize_minute": "50"
  }
}
```

return:

Field	Type	Description
-------	------	-------------

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
force_sterilize_effect	Integer	Immediate sterilization switch. 0 means OFF while 1 is ON
auto_sterilize_effect	Integer	Automatic sterilization switch. 0 means OFF while 1 is ON
set_sterilize_temp_max	Integer	Maximum sterilization temperature
set_sterilize_temp_min	Integer	Minimum sterilization temperature.
set_sterilize_temp	Integer	Sterilization temperature.
auto_sterilize_week	Integer	Regular sterilization - what day of the week. (0~6)
auto_sterilize_hour	Integer	Regular sterilization - what day of the hour. (0~23)
auto_sterilize_minute	Integer	Regular sterilization - what day of the minute. (0~59)

example:

```
{
  "errorCode": "0",
  "msg": "success",
  "reqId": "1001",
  "result": {
    "force_sterilize_effect": "0",
    "auto_sterilize_effect": "1",
    "set_sterilize_temp_max": "158",
    "set_sterilize_temp_min": "140",
    "set_sterilize_temp": "140",
    "auto_sterilize_week": "1",
    "auto_sterilize_hour": "15",
    "auto_sterilize_minute": "50"
  }
}
```

3.4.9 Control Water Heater Sterilize Immediately (/oem/v1/waterHeater/sterilize/immediately/control)

URI:/oem/v1/waterHeater/sterilize/immediately/control

HTTP Method:POST

Content-Type: application/json

Description: The OEM cloud send control json to MIDEA cloud

Request params:

Field	Require	Type	Description
reqId	false	String	The id to identify this request. UUID format, like: 0d08a76c-4029-4396-b2eb-77b0d269fdc8K
applianceCode	true	String	The unique identifier of appliance assigned by MIDEA cloud.
data	true	JsonArrayObject	Control parameters

Control parameters Json Object Structure:

Field	Require	Type	Description
force_sterilize_effect	true	Integer	Immediate sterilization switch. 0 means OFF while 1 is ON
set_sterilize_temp	false	Integer	Sterilization temperature. Between set_sterilize_temp_min and set_sterilize_temp_max.

example:

```
{
  "applianceCode": "178120883708513",
  "reqId": "1001",
  "data": {
    "force_sterilize_effect": "1",
    "set_sterilize_temp": "150"
  }
}
```

return:

Field	Type	Description
errorCode	String	Result code. 0 means ok. The others mean fail.
msg	String	Description for the errorCode
reqId	String	The id to identify this request. UUID format
result	JsonObject	The returns data

Result Data Structure:

Field	Type	Description
-------	------	-------------

Feile	Type	Description
force_sterilize_effect	Integer	Immediate sterilization switch. 0 means OFF while 1 is ON
auto_sterilize_effect	Integer	Automatic sterilization switch. 0 means OFF while 1 is ON
set_sterilize_temp_max	Integer	Maximum sterilization temperature
set_sterilize_temp_min	Integer	Minimum sterilization temperature.
set_sterilize_temp	Integer	Sterilization temperature.
auto_sterilize_week	Integer	Regular sterilization - what day of the week. (0~6)
auto_sterilize_hour	Integer	Regular sterilization - what day of the hour. (0~23)
auto_sterilize_minute	Integer	Regular sterilization - what day of the minute. (0~59)

example:

```
{  
    "errorCode": "0",  
    "msg": "success",  
    "reqId": "1001",  
    "result": {  
        "force_sterilize_effect": "1",  
        "auto_sterilize_effect": "1",  
        "set_sterilize_temp_max": "158",  
        "set_sterilize_temp_min": "140",  
        "set_sterilize_temp": "150",  
        "auto_sterilize_week": "1",  
        "auto_sterilize_hour": "23",  
        "auto_sterilize_minute": "0"  
    }  
}
```