

FR Device MQTT Topics and Message Structure

Message Communication Topic

Device Subscribed Topics

mqtt/face/{ID}

Device Published Topics

Fixed Topics

Heartbeat topic: **mqtt/face/heartbeat**

Online/Offline topic: **mqtt/face/basic**

Unfixed Topics

Stranger Capture Logs Topic: **mqtt/face/{ID}/Snap**

Authentication (Control) Logs Topic: **mqtt/face/{ID}/Rec**

Device Status

1. Application Layer Heartbeat

1.1 Description

Application layer heartbeats are distinguished from the underlying heartbeats that connect the device to the server, and are a special message type added by the device to assist in determining the device's online status; the device's application layer heartbeats do not need to be replied to. The interval heartbeat time for the device is roughly 60 seconds, and this value can be set on the web-side page.

1.2 API Description

Items	Description
Interface Name	Application layer heartbeat
Data flow	Device->Platform
Uplink data topic	Mqtt/face/heartbeat
Downlink data topic	NULL

1.3 Description of reported fields

Key	Type	Values	Description
operator		HeartBeat	Device heartbeat
info	Object		Content

facesluiceld	String		Device ID/SN is used by default to ensure uniqueness
time	String	2023-01-01 00:00:00	Heartbeat time YYYY-MM-DD hh:mm:ss

1.4 Reporting Example

```
{
  "operator": "HeartBeat",
  "info": {
    "facesluiceld": "2582493",
    "time": "2025-09-07 23:34:49"
  }
}
```

2. Device Online/Offline Notifications

2.1 Description

Devices going online and offline will be notified to the corresponding customer platforms via this topic. Offline notifications include offline caused by canceling MQTT services or underlying IO anomalies, and so on

2.2.1 Online Notification

1. Description

Device on-line notification, on-line notification needs to be replied to by the platform, reply error or

do not reply to the on-line notification, will be sent again in the interval on-line notification.

2. API Description

Items	Description
Interface Name	Online Notification
Data flow	Device->Platform
Uplink data topic	mqtt/face/basic
Downlink data topic	mqtt/face/{ID}

3. Description of reported fields

Key	Type	Values	Description
operator		Online	Online notification

info	Object		Content
facesluiceld	String		Device ID/SN is used by default to ensure uniqueness
username	String		Cloud Username
time	String	2023-01-01 00:00:00	Heartbeat time YYYY-MM-DD hh:mm:ss
ip	String		Device ip address
facesname	String		Device name

4. Reporting example

```
{
  "operator": "Online",
  "info": {
    "facesluiceld": "2582493",
    "username": "",
    "time": "2025-09-07 23:42:54",
    "ip": "",
    "facesname": "Face1",
    "wifilp": "192.168.50.72"
  }
}
```

5. Description of the Reply Message

Key	Type	Values	Description
operator		Online-Ack	Platform replies to received online notifications
info	Object		Content
facesluiceld	String		Device ID/SN is used by default to ensure uniqueness
result	String	"Ok"	Cloud Username

6. Example of the Reply Message

```
{
  "operator": "Online-Ack",
}
```

```

    "info": {
        "facesluiceld": "1305433",
        "result": "ok"
    }
}

```

2.2.2 Offline Notification

1. Description

Canceling the device connection to the MQTT service or an error in the underlying IO, etc., the device generates offline notification.

2. API Description

Items	Description
Interface Name	Offline Notification
Data flow	Device->Platform
Uplink data topic	mqtt/face/basic
Downlink data topic	NULL

3. Description of reported fields

Key	Type	Values	Description
operator		offline	Online notification
info	Object		Content
facesluiceld	String		Device ID/SN is used by default to ensure uniqueness
time	String	2023-01-01 00:00:00	Heartbeat time YYYY-MM-DD hh:mm:ss

4. Reporting example

```

{
    "operator": "offline",
    "info": {
        "facesluiceld": "2582493",
        "time": "2025-09-07 23:42:54"
    }
}

```