

Zipatile Internal app MQTT API v0.2

0.1	Initial draft
0.2	Added internal mqtt client configuration description

Internal MQTT client configuration

Internal MQTT client configuration GUI can be found here:
Zipato Launcher -> Zipato Settings -> Internal -> MQTT Settings

MQTT topic structure

Each internal function has a separate topic for events and a separate topic for commands, where applicable. All events and commands are in JSON format.

All topics have a common “root” topic:

- \$ROOT_TOPIC - zipato/zipatile/\$ZIPATILE_SERIAL
 - \$ZIPATILE_SERIAL should be replaced with the actual Zipatile serial number

Events and commands for the following internal functions are available via the MQTT API described in this document:

- Luminance Sensor
- Noise Sensor
- Motion Sensor
- Humidity Sensor
- Temperature Sensor
- Ext. Temperature Sensor
- Mains Power State
- Touch Events
- Shock Sensor
- Siren State
- RGB LED State
- Relays

Event Topics

Function	Topic	Example event
Luminance Sensor	\$ROOT_TOPIC/light/events	{"function":"LIGHT","unit":"Lux","value":"43.0"}
Noise Sensor	\$ROOT_TOPIC/noise/events	{"function":"NOISE","unit":"Level","value":"0.0"}
Motion Sensor	\$ROOT_TOPIC/motion/events	{"function":"MOTION","value":"MOTION"}
Humidity Sensor	\$ROOT_TOPIC/humidity/events	{"function":"HUMIDITY","unit":"%","value":"18.3"}
Temperature Sensor	\$ROOT_TOPIC/temperature/events	{"function":"TEMPERATURE","unit":"°C","value":"24.5"}
Ext. Temperature Sensor	\$ROOT_TOPIC/ext_temperature/events	{"function":"EXT_TEMPERATURE","unit":"°C","value":"24.5"}
Mains Power State	\$ROOT_TOPIC/mains_power/events	{"function":"MAINS_POWER","value":"CONNECTED"}
Touch Events	\$ROOT_TOPIC/touch_events/events	{"function":"TOUCH_EVENTS","value":"GESTURE"}
Shock Sensor	\$ROOT_TOPIC/accelerometer/events	{"function":"ACCELEROMETER","value":"ON"}
Siren State	\$ROOT_TOPIC/siren/events	{"function":"SIREN","unit":"Level","value":"0"}
RGB LED State	\$ROOT_TOPIC/rgb/events	{"function":"RGB","value":"00FF00"}
Relay 1	\$ROOT_TOPIC/relay1/events	{"function":"RELAY1","value":"OFF"}
Relay 2	\$ROOT_TOPIC/relay2/events	{"function":"RELAY2","value":"OFF"}
Relay 3 (US variant only)	\$ROOT_TOPIC/relay3/events	{"function":"RELAY3","value":"OFF"}
All Events	\$ROOT_TOPIC/allEvents	

Command Topics

The following functions can accept commands:

- Siren
- Relays
- RGB LED

All commands are in JSON format.

Siren

The internal siren accepts commands on the following topic:

- `zipato/zipatile/$ZIPATILE_SERIAL/siren/commands`

Several modes of sound notification are supported:

- STOP_SOUND
- EMERGENCY
- FIRE_ALERT
- AMBULANCE
- POLICE_CAR
- DOOR_CHIME
- BEEP

Example commands

- Turn EMERGENCY sound notification on:
 - `{"command": "SET_STATE", "value": "EMERGENCY"}`
- Turn siren off:
 - `{"command": "SET_STATE", "value": "STOP_SOUND"}`

Relays

Each relay has a dedicated command topic. A Relay accepts commands on the following topic:

- `zipato/zipatile/$ZIPATILE_SERIAL/relay[1,2,3]/commands`

Optional auto off timer

Each relay has a dedicated auto off timer. The timer can be used to automatically turn a relay off, in half second intervals. An example command is provided in the section below.

Example commands

- Turn relay on:
 - `{"command":"SET_STATE","value":"ON"}`
- Turn relay off:
 - `{"command":"SET_STATE","value":"OFF"}`
- Turn relay on, with auto off timer set to 1 second:
 - `{"command":"SET_STATE","value":"ON","parameters":{"AUTO_OFF":"2"}}`

RGB LED buttons

RGB LED buttons accept commands on the following topic:

- `zipato/zipatile/$ZIPATILE_SERIAL/rgb/commands`

Example commands

- Set RGB state to full red:
 - `{"command":"SET_STATE","value":"FF0000"}`
- Set RGB state to full blue, set overall brightness to 50 percent:
 - `{"command":"SET_STATE","value":"0000FF","parameters":{"BRIGHTNESS":"50"}}`

Touch gesture events

Zipatite can interpret a wide selection of touch gesture events. Please note that finger gesture events are **not** published while the screen is on. Bezel button gesture events are always published.

- LEFT_UPPER_BEZEL_BUTTON_SINGLE_CLICK
- LEFT_UPPER_BEZEL_BUTTON_DOUBLE_CLICK
- LEFT_UPPER_BEZEL_BUTTON_HOLD
- LEFT_UPPER_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- LEFT_MIDDLE_BEZEL_BUTTON_SINGLE_CLICK
- LEFT_MIDDLE_BEZEL_BUTTON_DOUBLE_CLICK
- LEFT_MIDDLE_BEZEL_BUTTON_HOLD
- LEFT_MIDDLE_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- LEFT_LOWER_BEZEL_BUTTON_SINGLE_CLICK
- LEFT_LOWER_BEZEL_BUTTON_DOUBLE_CLICK
- LEFT_LOWER_BEZEL_BUTTON_HOLD
- LEFT_LOWER_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- RIGHT_UPPER_BEZEL_BUTTON_SINGLE_CLICK
- RIGHT_UPPER_BEZEL_BUTTON_DOUBLE_CLICK
- RIGHT_UPPER_BEZEL_BUTTON_HOLD
- RIGHT_UPPER_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- RIGHT_MIDDLE_BEZEL_BUTTON_SINGLE_CLICK
- RIGHT_MIDDLE_BEZEL_BUTTON_DOUBLE_CLICK
- RIGHT_MIDDLE_BEZEL_BUTTON_HOLD
- RIGHT_MIDDLE_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- RIGHT_LOWER_BEZEL_BUTTON_SINGLE_CLICK
- RIGHT_LOWER_BEZEL_BUTTON_DOUBLE_CLICK
- RIGHT_LOWER_BEZEL_BUTTON_HOLD
- RIGHT_LOWER_BEZEL_BUTTON_RELEASE_AFTER_HOLD
- ONE_FINGER_TAP
- ONE_FINGER_HOLD
- ONE_FINGER_RELEASE_AFTER_HOLD
- ONE_FINGER_UP
- ONE_FINGER_RELEASE_AFTER_UP
- ONE_FINGER_LEFT
- ONE_FINGER_RELEASE_AFTER_LEFT
- ONE_FINGER_DOWN
- ONE_FINGER_RELEASE_AFTER_DOWN
- ONE_FINGER_RIGHT
- ONE_FINGER_RELEASE_AFTER_RIGHT
- TWO_FINGER_TAP
- TWO_FINGER_HOLD
- TWO_FINGER_RELEASE_AFTER_HOLD
- TWO_FINGER_UP
- TWO_FINGER_RELEASE_AFTER_UP
- TWO_FINGER_LEFT
- TWO_FINGER_RELEASE_AFTER_LEFT
- TWO_FINGER_DOWN
- TWO_FINGER_RELEASE_AFTER_DOWN
- TWO_FINGER_RIGHT
- TWO_FINGER_RELEASE_AFTER_RIGHT
- THREE_FINGER_TAP
- THREE_FINGER_HOLD
- THREE_FINGER_RELEASE_AFTER_HOLD
- THREE_FINGER_UP
- THREE_FINGER_RELEASE_AFTER_UP
- THREE_FINGER_LEFT
- THREE_FINGER_RELEASE_AFTER_LEFT
- THREE_FINGER_DOWN
- THREE_FINGER_RELEASE_AFTER_DOWN
- THREE_FINGER_RIGHT
- THREE_FINGER_RELEASE_AFTER_RIGHT
- FOUR_FINGER_TAP
- FOUR_FINGER_HOLD
- FOUR_FINGER_RELEASE_AFTER_HOLD

- FOUR_FINGER_UP
- FOUR_FINGER_RELEASE_AFTER_UP
- FOUR_FINGER_LEFT
- FOUR_FINGER_RELEASE_AFTER_LEFT
- FOUR_FINGER_DOWN
- FOUR_FINGER_RELEASE_AFTER_DOWN
- FOUR_FINGER_RIGHT
- FOUR_FINGER_RELEASE_AFTER_RIGHT
- FIVE_FINGER_TAP

- FIVE_FINGER_HOLD
- FIVE_FINGER_RELEASE_AFTER_HOLD
- FIVE_FINGER_UP
- FIVE_FINGER_RELEASE_AFTER_UP
- FIVE_FINGER_LEFT
- FIVE_FINGER_RELEASE_AFTER_LEFT
- FIVE_FINGER_DOWN
- FIVE_FINGER_RELEASE_AFTER_DOWN
- FIVE_FINGER_RIGHT
- FIVE_FINGER_RELEASE_AFTER_RIGHT