

MQTT eHouse Gateway

!!! mqtt must be enabled in first line of config file 1!!! to activate support !!!

eHouse/eCity MQTT Topic Syntax **CASE Sensitive**

%eHousePROName% / %MQTTCommand% / %hex_address% / %signal% / %nr%

you must use low-case Hex coded numbers and commands for mqtt as it is case sensitive

%eHousePROName% eHouse.PRO Server Name Set In Configuration

%MQTTCommand% **state** - to read controller status

update - write/send command to the controller (change i/o states)

name - to read published names of current signal+ i/o nr

event - send direct command to the server

%nr% Numbers (0..max)

Default address ranges hex format – Lower case must be used

HLL

%hex_address%

3701..37ff - for RMs

0202 - for EM

0101 - for HM

0064..00c8 - for WiFiS

00c9..00fd - for ERMs

00f9 - ERM default

00fa - EPM

00fb..00fd - CM/LM

00fd - WiFi default

00fe - PRO Default

7f01..7fff CAN

8001..80ff FR

8101..8114 AURA

%signal%

Signals = adc, adch, adcl, temp, o, i, lm35, lm335, volt, percent, invpercent, mcp9700, mcp9701, adc_def



<http://isys.pl/>

<http://ehouse.pro/>

MQTT protocol support for eHouse/eCity MQTT configuration file **"/usr/local/ehouse/mqtt.cfg"**

Line Nr.	Default Value	tab	comments
1	0		//Enable MQTT gateway /* Enable MQTT support for eHouse.PRO server */
2	localhost		//MQTT Broker Host /* address of MQTT broker - mosquitto need to be installed */
3	ehouse		//User /* authentication - user */
4	ehousehouse		//Password /* authentication - password */
5	1883		//IP Port /* MQTT broker port */
6	0		//Auto Discovery /* publish names for enabled systems */
7	0		//Enable Authorization /* Authorization enabling*/
8	30		//Timeout /* Broker timeout */
9	0		//Debug /* Put verbose broker communication info to the screen */
10	30		//Delay /* */
11	90		//Keep Alive /* */
12	0		//Broadcast Pro Names /* Publish eHouse Pro Names via MQTT requires auto discovery */
13	1		//Broadcast eHouse Ethernet Names /* Publish eHouse LAN Names via MQTT requires auto discovery */
14	1		//Broadcast eHouse RS-422/85 Names /* Publish eHouse One Names via MQTT requires auto discovery */
15	1		//Broadcast eHouse WiFi Names /* Publish eHouse WiFi Names via MQTT requires auto discovery */
16	0		//Broadcast eHouse CAN Names /* Publish eHouse CAN Names via MQTT requires auto discovery */
17	0		//Broadcast eHouse RF Names /* Publish eHouse RF Names via MQTT requires auto discovery */
19	0		//\$Sys subscribe

CONFIGURATION FILE of MQTT Gateway for eHouse.PRO/eCity IoT service

Status

Read Signal Status of any device : %eHousePROName% /state/ %hex_address% / %signal% / %nr%

%signal%	eHouse.Pro	eHouse.LAN	One (RS422)	WiFi	RF	CAN	
Outputs	o	o	o	o	o	o	o - binary output
Inputs	i	i	i	i	i	i	i – binary inputs
Dimmers	d	d	d	d	d	d	d – dimmmer
ADCs	adc	adc	adc	adc	adc	adc	adc - adc input value
adch	adch	adch		adch			adch - adc high threshold value
adcl	adcl	adcl		adcl			adcl - adc low threshold value
temp			temp				temperature calculated lm335 (rs)
profile	profile	profile					profile - out/dimm program
pgm	pgm	pgm					program ??
zone	zone	zone					zone - security zone nr (eth/pro)
spgm	spgm	spgm					spgm - security+roller program (eth/pro)
apgm	apgm	apgm					apgm - adc/regulation program (eth)
		lm35					lm35 - temperature calculated (eth)
		lm335					lm335 - temperature calculated (eth)
		mcp9700					mcp9700 - temperature sensor (eth)
		mcp9701					mcp9701 - temperature sensor (eth)
		adc_def					adc_def - adc mode (sensor type) (eth)
		volt					volt - voltage calculated (eth)
		percent					percent - in respect to Vcc or Vref (eth)
		invpercent					invpercent - 100%-percent (eth)
	alarm						alarm initiated by input nr.
	warning						warning initiated by input nr.
	monitoring						monitoring initiated by input nr.
	silent						silent initiated by input nr.
	earlywarning						earlywarning initiated by input nr.
	horn						horn initiated by input nr.

RM status examples

eHouse.Pro.1/state/3701/adc/0 - adc value for ADC input 0
eHouse.Pro.1/state/3701/temp/1 - temperature calculated 1
eHouse.Pro.1/state/3701/o/1 - output 1

ERMs: Ethernet

WiFi

eHouse.Pro.1/state/00c9/adcl/1 - adc threshold (preset) low
eHouse.Pro.1/state/00c9/adch/1 - adc threshold (preset) high
eHouse.Pro.1/state/00c9/apgm - adc/regulation program
eHouse.Pro.1/state/00c9/profile - output/dimm program

Execute

Send any Direct Event Command to the eHouse/eCity system

Execute Command/Event: **Send direct command to the system as hex coded message**

MQTT Topic: %eHousePROName% / **event** / %id%

eHouse.Pro.1/event/xxx

xxx - unique id as the message would be overwritten with null after reception

eg:

mosquitto_pub -r -t eHouse.Pro.1/event/6 -m 00c92107020000000000

Update

Update Commands Signals availability – depends of architecture

mqtt command send to devices in most cases first letter of signal is check

	eHouse.Pro	eHouse LAN	One (RS422)	WiFi	RF	CAN	
Outputs	o	o	o	o	o	o	o - binary output
Dimmers	d	d	d	d	d	d	d – dimmmer
Drives/Servos	r	r		r	r	r	r... - roller
adch	adch	adch		adch			adch - adc high threshold value
adcl	adcl	adcl		adcl			adcl - adc low threshold value
profile	profile	profile	profile				profile - out/dimm program
pgm	pgm	pgm	pgm				program ??
	apgm	apgm					apgm - adc/regulation program (eth)
	spgm	spgm					s... - security/rollers program
	zone	zone					Z... - zone

example

```
mosquitto_pub -r -t eHouse.Pro.1/update/00c9/profile/0 -m 6 set profile nr 7 for Ethernet Controller 00c9
```

o - command
 0' - turn off
 1 – turn on
 2 – toggle (change state)

d - command
 0' - turn off
 -' - decrement one step
 +' - increment one step
 --' - decrement to min
 ++' - increment to max

adch, adcl - commands valid number for adc range
 0..1023 for 10b ADC
 0..4095 for 12b ADC

profile, pgm, apgm, spgm, zone
 0..max (numbers count from zero to the max)

example

```
mosquitto_pub -r -t eHouse.Pro.1/update/00c9/o/1 -m 0
mosquitto_pub -r -t eHouse.Pro.1/update/00c9/o/0 -m 1
```

Names

Auto-Discovery – query names for Signals

Names Publish - require auto discovery option in mqtt.cfg

%eHousePROName% /name/ %hex_address% / %signal% / %nr%

	eHouse.Pro	eHouse LAN	One (RS422)	WiFi	RF	CAN	
Outputs	o	o	o	o	o	o	o - binary output
Dimmers	d	d	d	d	d	d	d – dimmer
Drives/Servos	r	r		r	r	r	r... - roller
adc	adc	adc	adc	adc	adc	adc	adc input
profile	profile	profile	profile				profile - out/dimm program
pgm	pgm	pgm	pgm				program ??
	apgm	apgm					apgm - adc/regulation program (eth)
	spgm	spgm					s... - security/rollers program
	zone	zone					z... - zone

eg :

eHouse.Pro.1/name/00c9/o/1

r