

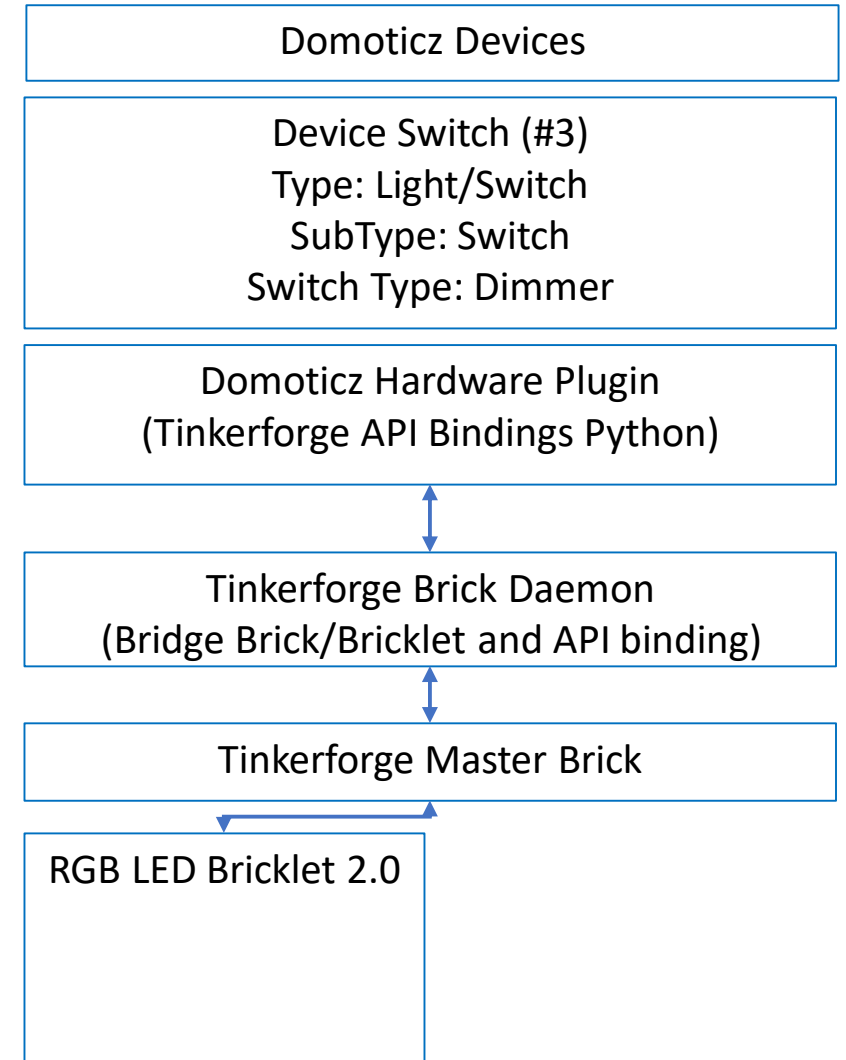
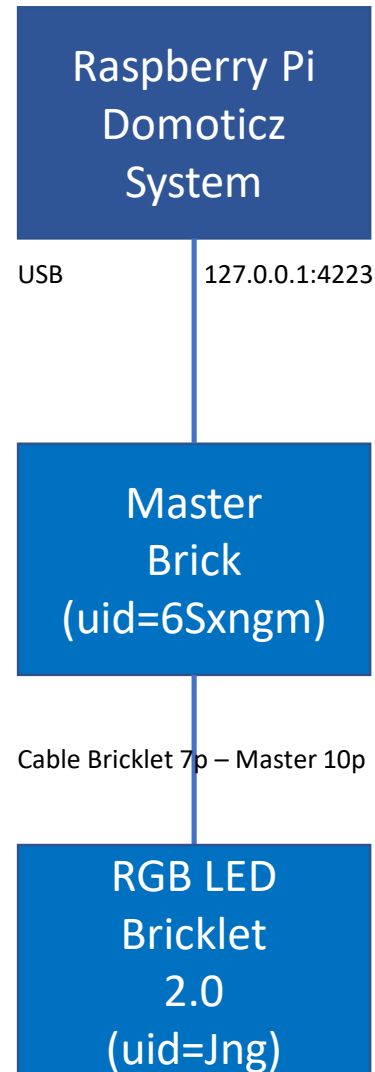
Domoticz Plugin

Tinkerforge RGB LED Bricklet 2.0

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06.02.2020

Communication - Overview



Domoticz – Add Hardware

Idx	Name	Enabled	Type	Address	Port	Data Timeout
7	RGBLED	Yes	Tinkerforge RGB LED Bricklet 2.0	127.0.0.1		Disabled

Showing 1 to 1 of 1 entries (filtered from 4 total entries) [First](#) [Previous](#) [1](#) [Next](#) [Last](#)

[Update](#) [Delete](#)

Enabled: ☒

Name:

Type:

Data Timeout:

Specifying a Data Timeout will restart the hardware device if no data is received for the specified time.
Do not enable this option for devices that do not receive data!

Tinkerforge RGB LED Bricklet 2.0

This bricklet enables to control an RGB LED. Each of the three channels (Red, Green, Blue) can be set. For each of the channels, a Domoticz device is created from Type: Light/Switch, SubType: Switch, Switch Type: Dimmer. The Domoticz device slider for a color, has a range 0-100% which is mapped to a color value 0-255 used by the bricklet. The status light of the bricklet is turned off during start of the plugin.

Configuration

- Address: IP address of the host connected to. Default: 127.0.0.1 (for USB connection)
- Port: Port used by the host. Default: 4223
- UID: Unique identifier of RGB LED Bricklet 2.0. Obtain the UID via the Brick Viewer. Default: Jng

Notes

- If the Master Brick has been disconnected from the Raspberry Pi (i.e. plugged out) and connected again, the hardware must be updated (using Setup > Hardware > select the plugin > Update) or restart Domoticz.

Host:

Port:

UID:

Debug:

Parameter Notes

The Master Brick is connected via USB to the Raspberry Pi. As Host address 127.0.0.1 (which is local host) and default port 4223 are set.

The UID of the bricklet is set to Jng.

The 3 channels to set the individual colours R-G-B is handled by the switch devices with Type, SubType, SwitchType: Light/Switch, Switch, Dimmer.





Debug is by default set to true. If no issues, than set to false.

Domoticz - Add Hardware Log

```
2020-02-05 19:01:38.581 (RGBLED) Debug logging mask set to: PYTHON PLUGIN QUEUE IMAGE DEVICE CONNECTION MESSAGE ALL
2020-02-05 19:01:38.581 (RGBLED) 'HardwareID': '7'
2020-02-05 19:01:38.581 (RGBLED) 'HomeFolder': '/home/pi/domoticz/plugins/TFRGBLEDV2/'
2020-02-05 19:01:38.581 (RGBLED) 'StartupFolder': '/home/pi/domoticz/'
2020-02-05 19:01:38.581 (RGBLED) 'UserDataFolder': '/home/pi/domoticz/'
2020-02-05 19:01:38.581 (RGBLED) 'Database': '/home/pi/domoticz/domoticz.db'
2020-02-05 19:01:38.581 (RGBLED) 'Language': 'en'
2020-02-05 19:01:38.581 (RGBLED) 'Version': '1.0.0'
2020-02-05 19:01:38.581 (RGBLED) 'Author': 'rwbl'
2020-02-05 19:01:38.581 (RGBLED) 'Name': 'RGBLED'
2020-02-05 19:01:38.581 (RGBLED) 'Address': '127.0.0.1'
2020-02-05 19:01:38.581 (RGBLED) 'Port': '4223'
2020-02-05 19:01:38.581 (RGBLED) 'Key': 'TFRGBLEDV2'
2020-02-05 19:01:38.581 (RGBLED) 'Model': 'Jng'
2020-02-05 19:01:38.581 (RGBLED) 'Mode6': 'Debug'
2020-02-05 19:01:38.581 (RGBLED) 'DomoticzVersion': '4.11670'
2020-02-05 19:01:38.581 (RGBLED) 'DomoticzHash': 'f6af0fa0c'
2020-02-05 19:01:38.581 (RGBLED) 'DomoticzBuildTime': '2020-02-02 12:21:53'
2020-02-05 19:01:38.581 (RGBLED) Device count: 0
2020-02-05 19:01:38.581 (RGBLED) Creating new Devices
2020-02-05 19:01:38.582 (RGBLED) Creating device 'RGB Switch Red'.
2020-02-05 19:01:38.583 (RGBLED) Device created: RGBLED - RGB Switch Red
2020-02-05 19:01:38.583 (RGBLED) Creating device 'RGB Switch Green'.
2020-02-05 19:01:38.584 (RGBLED) Device created: RGBLED - RGB Switch Green
2020-02-05 19:01:38.584 (RGBLED) Creating device 'RGB Switch Blue'.
2020-02-05 19:01:38.588 (RGBLED) Device created: RGBLED - RGB Switch Blue
2020-02-05 19:01:38.588 (RGBLED) SetBrickletConfiguration
2020-02-05 19:01:38.592 (RGBLED) Set Status LED OFF
2020-02-05 19:01:38.693 (RGBLED) SetBrickletConfiguration OK
2020-02-05 19:01:38.182 Status: (RGBLED) Started.
2020-02-05 19:01:38.579 Status: (RGBLED) Initialized version 1.0.0, author 'rwbl'
2020-02-05 19:01:38.578 Status: (RGBLED) Entering work loop.
```

Domoticz – Devices

Devices List


	Idx ▾	Hardware ^	ID ^	Unit ^	Name ^	Type ^	SubType ^	
	78	RGBLED	00070003	3	RGBLED - RGB Switch Blue	Light/Switch	Switch	Off
	77	RGBLED	00070002	2	RGBLED - RGB Switch Green	Light/Switch	Switch	Off
	76	RGBLED	00070001	1	RGBLED - RGB Switch Red	Light/Switch	Switch	On
	12	VirtualDevices	0001405C	1	RGBLED - Traffic Light Switch	Light/Switch	Switch	Off

Device Widgets


- 3 Colour Sliders for R-G-B (generated by the plugin; idx=76-78)
- 1 Selector Switch to set Colour R-G-B (*manually created* as VirtualDevice for tests; idx=12)

RGBLED - RGB Switch Red

On




Last Seen: 2020-02-05 15:55:00
Type: Light/Switch, Switch, Dimmer


 Log Edit Timers Notifications

RGBLED - RGB Switch Green

Off




Last Seen: 2020-02-05 15:55:00
Type: Light/Switch, Switch, Dimmer


 Log Edit Timers Notifications

RGBLED - RGB Switch Blue

Off



Last Seen: 2020-02-05 15:55:01
Type: Light/Switch, Switch, Dimmer

 Log Edit Timers Notifications

RGBLED - Traffic Light Switch

RED




Last Seen: 2020-02-05 15:55:00
Type: Light/Switch, Switch, Selector

RED

YELLOW

GREEN

 Log Edit Timers Notifications

Domoticz - Plugin Pseudo Code

See [plugin.py](#)

Define imports and amend path

Define constants for channel numbers (Units)

Define class BasePlugin:

 Init

 initial R-G-B colors

 onStart

 If first time, create the devices type Light/Switch, subtype Switch, Switch type Dimmer

 Configure the bricklet status led to off

 [function SetBrickletConfiguration()]

 onCommand

 Handle color channel changes by setting the color level from 0-100% to 0-255

 [function SetBrickletColor()]

Define own functions for communicating between Domoticz & Tinkerforge Building Blocks

 SetBrickletConfiguration

 SetBrickletColor

 and some helpers, i.e. MapRange, UpdateStatus

NOTES

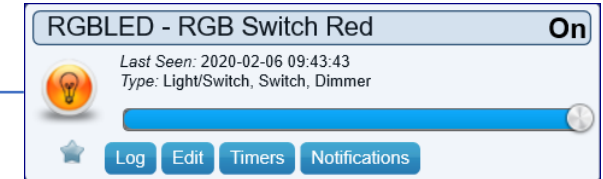
- Bricklet communication is on request = connect, execute function and disconnect from the Master Brick.
- There is no ongoing connection between the plugin and Domoticz, as no callback used.
- The plugin function onHeartbeat (every 10s) is not used.

Device Action – Domoticz Set Color Level

See [plugin.py](#)

Domoticz Set Color Level

- Triggered by Device with Idx = 76, Name = RGBLED - RGB Switch Red



Domoticz Plugin TFRGBLEDV2

- Receives Command On and calls plugin function onCommand

Function onCommand gets Unit, Command, Level, Hue

- Unit = Selected color, Command = "Set Color", "Off", "On", Level = color level 0-100%, Hue = color (not used)
- Triggers function SetBrickletColor with parameter self, Unit, Command, Level

Function SetBrickletColor(self, Unit, Command, Level)

- IP connect, set bricklet color and IP disconnect

Domoticz – dzVents Lua Automation Script Examples

See source codes

- `tfrgbledv2_blink_red.lua`
- `tfrgbledv2_trafficlight.lua`
- `tfrgbledv2_trafficlight_switch.lua`
- `tfrgbledv2_colorswitch.lua`

