## Ezlopi v2.x: Custom device/sensor integration guide

Prerequisite: Idea of cJSON is required before starting

Step-1: Create a respective folder in devices folder (eg. digital\_io)
Step-2: Create a src file which contains the sensor/device script (eg. digital\_io.c)
Step-3: Create a header file to declare the public function (eg. digital\_io.h)
Step-4: Create CMakeLists.txt to link the required modules (eg. please see devices/digital\_io/CMakeLists.txt for reference)
Step-5: Define the primary function for the device/sensor

eg. please follow the digital io

int digital\_io(e\_ezlopi\_actions\_t action,
s\_ezlopi\_device\_properties\_t \*properties, void \*arg)

@details This function will be called whenever any event occurs (event such as EZLOPI\_ACTION\_PREPARE or EZLOPI\_ACTION\_INITIALIZE or EZLOPI\_ACTION\_NOTIFY\_1000\_MS or EZLOPI\_ACTION\_GET\_EZLOPI\_VALUE, etc.)

@arg action respective action will be fed when called this function @arg properties the cloud and interface properties of sensor/device @arg arg pointer of any specific data required to fed (eg. cJSON packed of request on hub.items.value.set) @return int 0 if function execution were not success, 1 when function execution was a success, or return device properties type casted to int on `EZLOPI\_ACTION\_PREPARE'.

Use switch-case to implement the different event/action as in digital io

## Essential Actions:

EZLOPI\_ACTION\_PREPARE: This action stores the required properties for the particular device/sensor in a structure

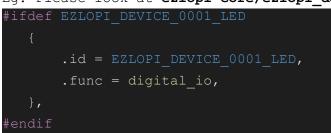
EZLOPI\_ACTION\_INITIALIZE: Initialize the device/sensor's interface
or GPIO pins

EZLOPI\_ACTION\_GET\_EZLOPI\_VALUE: add the value parts of cjson as in digital\_io example. This event will be executed whenever the value needs to send to the cloud.

EZLOPI\_ACTION\_NOTIFY\_1000\_MS: timer event. This event should be implemented if the device/sensor needs to sample the data each seconds. Similarly EZLOPI\_ACTION\_NOTIFY\_500\_MS for 500 ms, EZLOPI\_ACTION\_NOTIFY\_100\_MS for 100 ms and so on. For other than listed interval, user needs to implement themselves.

Similarly other events can be implemented.

Step-6: Put the device/sensor primary function on the device\_array
 Eq. Please look at ezlopi-core/ezlopi devices list.c



Define the macro for a particular device from the reference of the ezlogic app.

Step-7: Make sure the particular device is implemented on the ezlogic app.