

# Looking to jumpstart your electronic product with existing solutions ?

NionAI hardware solution library helps you in ;

## -Off-the-shelf solutions

readily available solutions with source files and lifetime support.

## -Customizable

customizable hardware with fast delivery .

## -Fast time to market at lowest cost

Little-to-no development costs . Save upto 4000 USD , an estimated R&D budget for IOT hardware development .

## Key Benefits :

Our library includes Electronic Design or Circuit Design and Firmware Design, Mechanical Design , PCB Layout Design ,PCB Manufacturing, SMT or PCB Assembly, Product Assembly, Product Verification and Certification .

# Smart-Home hardware solutions :

## 1.WiFi Smart Switch

Use smart switch to turn on-off 220v appliances using WiFi . The design is made using triac and thus creates efficient switching without any EMI . It has inbuilt LED dimmer , to provide complete solution for smart lighting in a small form factor .

### Features

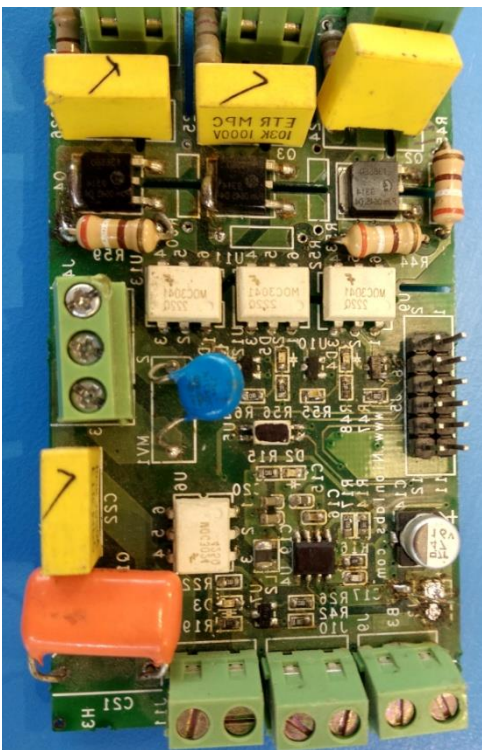
WiFi with 32bit MCU

Load capacity : 400W per channel

Low cost & Small form factor

Field Tested device with after sales warranty

Integrate with Amazon Alexa or Google Home

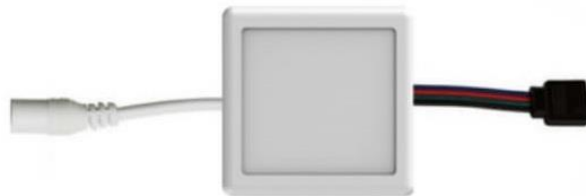


## 2. WiFi RGB +CCT Controller

This device is used to control RGB leds in bulb and strips , provides PWM signal , enabling user to change colours from app .

### Features

WiFi with 32bit MCU  
Sensor type : PWM -CV  
Versions : CCT Only , RGB , Dimmer only  
Low cost & Small form factor  
Field tested device with after sales warranty



Link

<https://www.nionlabs.com/uvva>

### 3. WiFi Glass break sensor / Door open sensor

Detects vibration in glass occurred due to breakage or unwanted intrusion.

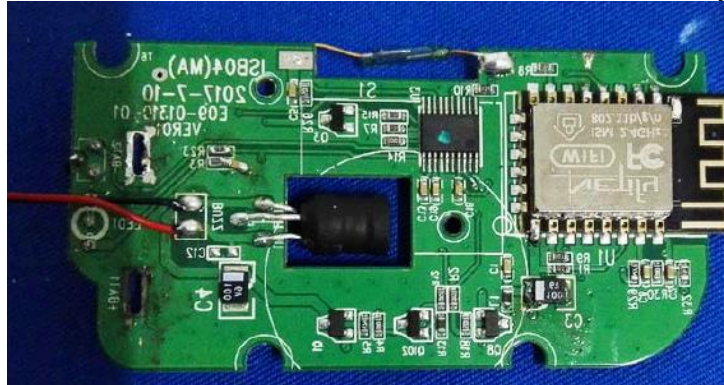
#### Features

WiFi with 32bit MCU

Sensor type : Piezo / accelerometer

Low cost & Small form factor

Field Tested device with after sales warranty



### 3. WiFi Motion sensor

Detects motion in room and sends notification to cloud and user's app.

#### Features

WiFi with 32bit MCU

Sensor type : PIR

Low cost & Small form factor

Field Tested device with after sales warranty



# AQI Hardware Solutions

## 1. WiFi AQI Sensor

This device detects key parameters of harmful gases emitted from indoor and outdoor environment .

NH<sub>3</sub> / H<sub>2</sub>S in range of 0-10ppm

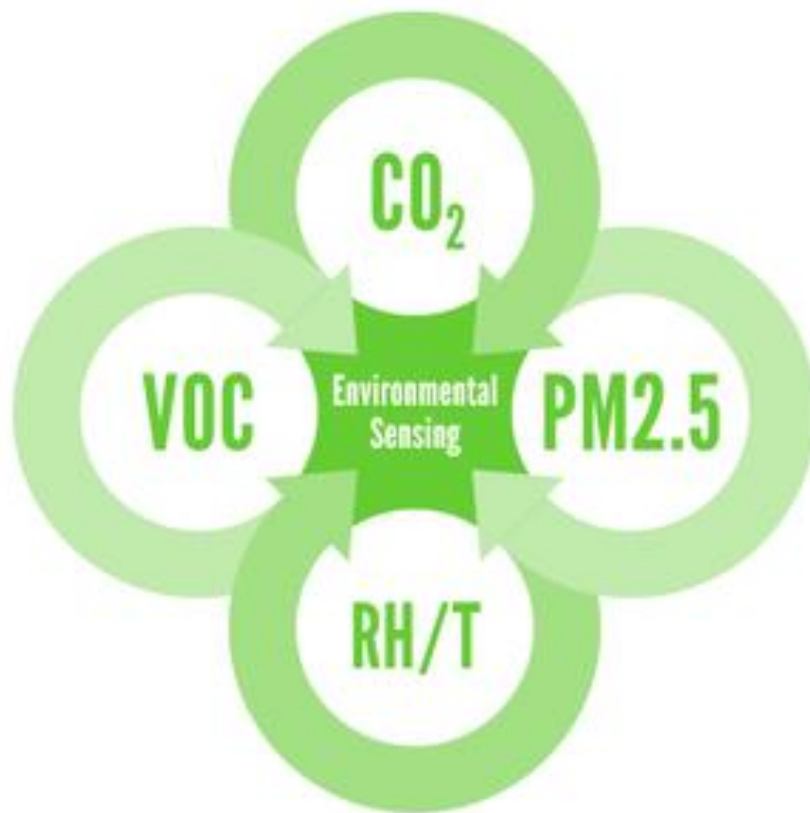
VOC in range of 0 – 8000 ppb

PM 1 , PM2.5 , PM10

eCO<sub>2</sub> in range of 0 to 2000ppm

Temperature in range of -30 to 80 degree centigrade

Humidity in range of 0-100Rh



## 2. WiFi Pollution Sensor to measure 10+ gases

This device detects types of gases that are categorized as harmful gases . Some primary gases are ;

NH<sub>3</sub> in range of 0-10ppm

H<sub>2</sub>S in range of 0-10ppm

CO in range of 0 – 500 ppb

NO<sub>2</sub> in range of 0 to 100ppb

SO<sub>2</sub> in range of 0 -100ppb

Ozone in range of 0 – 100ppb

PM 1 , PM2.5 , PM10 in ugrams

VOC in range of 0 – 1000ppm

LPG in range of 0 – 100ppb

Temperature in range of -30 to 80 degree centigrade

Humidity in range of 0-100Rh



# Smart Medical Sensors Hardware Solutions

## 1. BLE based ECG , SPO2 and Temperature sensor

This device measures 12 lead ECG , SPO2 and body temperature using state of the art sensors from trusted manufacturers .

We have developed field tested hand-held device for measurement of human vitals , and data can be sent to doctor via internet .



## 2. WiFi contactless bed sensor

The new bed sensor technology is based on the Ballistocardiographic (BCG) principle. When the heart pumps blood there is a recoil effect to the opposite direction. This means that when e.g. lying on a bed, the entire bed will be subject to micro movements due to the blood flow.

We use an ultra-sensitive accelerometer to capture this signal. A microcontroller with a specially made algorithms are able to extract heart rate and many other vital signs from the signal and information such as:

- Heart rate
- Respiration rate
- Heart rate variability (correlates to stress level)
- Relative stroke volume (how much blood the heart pumps)
- Bed status (is the bed empty, is patient in bed, is patient moving in bed)





# Telematics

## 1. WiFi GSM Gateway

This device provides gateway for WiFi based devices to send data via GSM communication .



## 2. GPS Tracker

This tracking device has both GSM and GPS to monitor location remotely . We can get speed , battery health , orientation , fall detection related data from tracker . Equipped with accelerometer , battery gauge and LiPo battery charging module , makes device dynamic for all applications .



## CLIENTS



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[NIONLABS.COM](http://NIONLABS.COM)

Kindly contact us for pricing ,  
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## ABOUT US

NionAI is a R&D and  
manufacturing company with  
award-winning innovations in  
led lighting, control and  
sensing technology-based  
products and solutions .

We have strategic partners in  
manufacturing and distribution  
in multiple industry for IOT  
based products .



[www.NionLabs.com](http://www.NionLabs.com)