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Open Edge Gateway

Abstraction layer for IQRF gateways

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Open Edge Gateway

Open Source software platform for gateways providing high level abstraction of devices, edge control and edge connectivity. Fully customizable free software.





/garage/light:on
/bedroom/light:on
/my_kitchen/temp:20C
/waterMeter/mth:155kW
/livingroom/light:off



Multi-network Abstraction

Enables connection of devices from different networks and generation of their simple and unified high level abstraction.

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Edge Control Capability

Performs control tasks over connected devices via real-time execution of control script. Gateway becomes a control center of connected devices.

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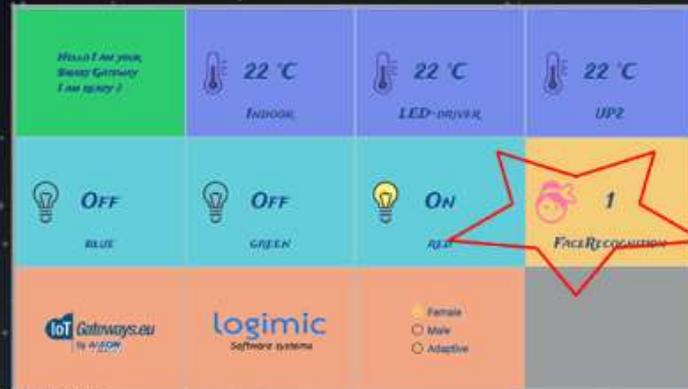
```
/home/garage/light: on  
/home/kitchen/light: on  
/home/kitchen/temp: 20C  
/home/pwCons/pmeter: 155kW
```

```
18  
19 begin -- architecture  
20 assert(a'length == b'length)  
21 report "Port A must be the longer vector"  
22 severity fatal;  
23 q for q in range(onesize(q_s));  
24  
25 adding_proc:  
26 process (aclr, clk)  
27 begin  
28 if (aclr == '1') then  
29 q_s = (others == '0');  
30 elsif rising_edge(clk) then  
31 q_s = ('0'&signed(a)) + ('0'&signed  
32 end if; -- clk'd  
33 end process;  
34  
35 end signed_adder_arch;
```



AI Features

Support of camera processing hardware AI CORE Movidius Myriad 2 with USB camera on UP Squared board. Gateway can perform image recognition, video recording and more...



Edge/Remote Connectivity

Dashboards display Open Edge Gateway data via JSON API on Websockets local or Internet connection. You can choose local or remote access to gateway.

[More >>](#)

online <small>iot-gateways.eu</small>	 20 Feb 2019	male face <small>FaceRecognition</small>	3.33 V <small>4iotech/Voltage</small>	22.4 °C <small>4iotech/Temperature</small>
616.66 m <small>cooper/Altitude</small>	1075.5 hPa <small>cooper/AtmPressure</small>	14 lx <small>cooper/Illuminance</small>	50 % <small>cooper/Humidity</small>	150 dB <small>cooper/Noise</small>
29.85 °C <small>cooper/Temperature</small>	1000 ppm <small>cooper/VolOrgCompound</small>	On on/off <small>ledstrip/blue</small>	Off on/off <small>ledstrip/green</small>	Off on/off <small>ledstrip/red</small>
94.85 °C <small>ledstrip/temperature</small>	On on/off <small>netio/outs/Output_1</small>	1.15 A <small>netio/sens/Current</small>	116.65 V <small>netio/sens/Voltage</small>	2200 ppm <small>protronix/CO2</small>
49.95 % <small>protronix/Humidity</small>	21.8 °C <small>protronix/Temperature</small>	 		

Female
 Male
 Adaptive

Industrial Control Solution

Scalable IIoT solution including Open Edge Gateway, IQRF Gateway Daemon, AWS cloud integration and user dashboards as start-up solution for connectivity of your devices.

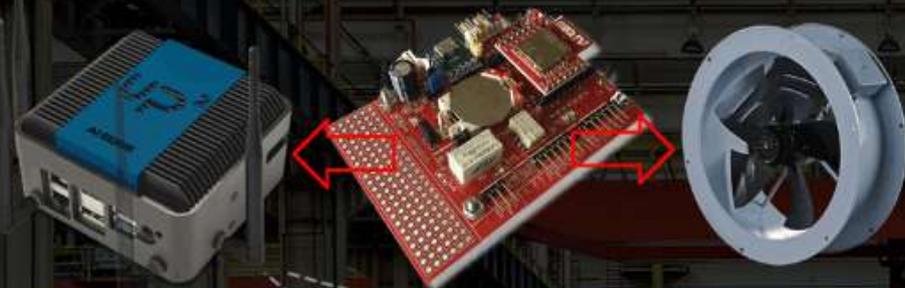
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by AAEON

IQRF[®]

amazon
web services



Open Edge Gateway



Open Edge Gateway ensures control logic of IQRF devices provided via IQRF Gateway Daemon.

Use existing IQRF interoperable devices or IQRF development board for connectivity design of your devices.

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Cloud Integration

Integration with Amazon Web Services ensures gateways management, customer profiles and accesses maintenance, data broadcasting, databases and more..

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Data Analytics

Measured or action data stored in AWS Dynamo database can be used for data analytics and determination how effective your devices have been and whether you could improve their efficiency.

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Scalable Features

Distribute and monetize new software features remotely and anytime.
Remotely upgrade gateway software, control scripts or IQRF devices software via Pixla software.

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Fans Control Application

Write simple control logic in Java Script or Typescript language where you define a control logic. The script can be loaded to gateway.

```
if (this._thingSpace !== undefined) {  
  let tempSensor = this.thingSpace.getThing("/4iotech/Temperature");  
  let stripG = this.thingSpace.getThing("/ledstrip/green");  
  let powerSocket = this.thingSpace.getThing("/netio/outs/Output_1");  
  
  if (  
    (typeof tempSensor !== 'undefined') &&  
    (typeof stripG !== 'undefined') &&  
    (typeof powerSocket !== 'undefined')  
  ) {  
    // If Temperature less than 19.0 of Celsius  
    // then turn light and heating valve on.  
    if (tempSensor.value <= 19.0) {  
      stripG.value = true; // turn light on  
      powerSocket.value = true; // turn valve on  
    } else {  
      stripG.value = false; // turn light off  
      powerSocket.value = false; // turn valve off  
    }  
  }  
}
```

18.8
°C

4iotech/Temperature

On
on/off
ledstrip/green

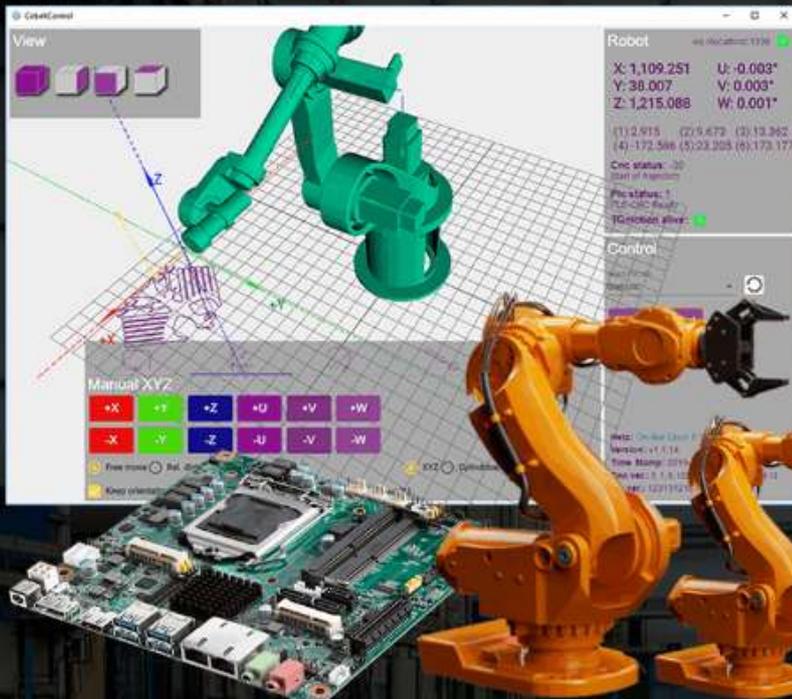
On
on/off
netio/outs/Output_1



Industrial Robot Control App

Integration of more sophisticated software modules within gateway plug-in architecture. Gateway based control server of 6-axes robots extends customer low-level real time system with mathematics operations, trajectory planning, speed optimization and more..

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AI Camera Solution

Scalable IIoT solution build on UP2 board with USB camera and Movidius Myriad vision processor including Open Edge Gateway, IQRF Gateway Daemon and real-time user dashboards for fast edge image processing.

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Software systems

- Female
- Male
- Adaptive

IQRF[®]

AI Hardware



- Intel® Apollo Lake SoC Pentium E3950, 8 GB LPDDR4 memory, 64 GB eMMC Storage
- IQRF module
- Artificial Intelligence neural network module Movidius Myriad X
- 2 x Gigabit LAN, 1 x HDMI, 1x DP, 3 x USB 3.0, 1 x USB 3.0 OTG
- USB Camera

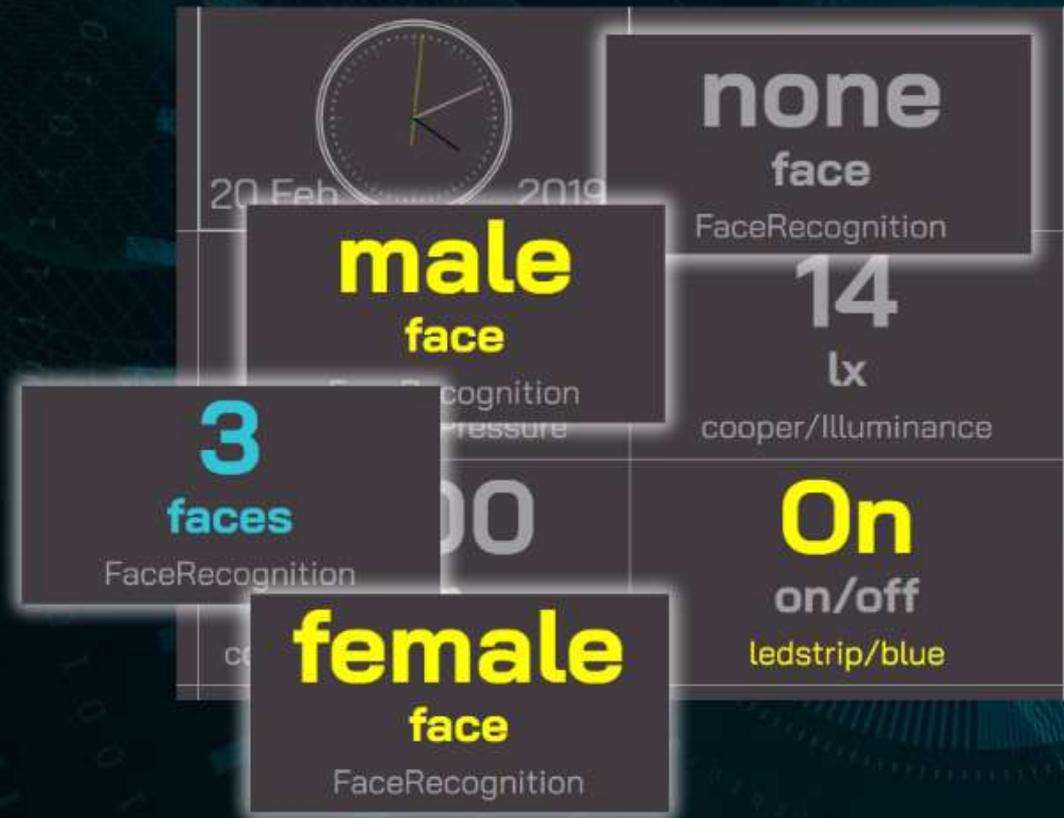
AI Software

Open Edge Gateway ensures camera image processing and control of IQRF devices accessible via IQRF Gateway Daemon. Open VINO SDK for machine and deep learning of Movidius neural network.



Faces Recog. App

Based on male or female recognized face the proper LED color scheme is triggered. Real-time display of face recognition and two skins of remoted dashboards.





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Ask for demo..!

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