Monte seu roteador caseiro

Douglas Esteves

ROADSEC 10/11/2018

$ whoami

LHC

Douglas Esteves

Computer Engineer // Enthusiast with Internet of things

Co-Founder **IoTMakers**

Member **LHC** (Laboratório Hacker de Campinas)

Dumont Hackerspace

DUMONT Hackerspace

IoTMakers

Makers de Internet das Coisas

- Fundada em Maio de 2015
- Atualmente 417 Membros
- Pessoas do Brasil Inteiro

- Fórum (Talvez)

Link : https://t.me/iotmakers

OpenWrt

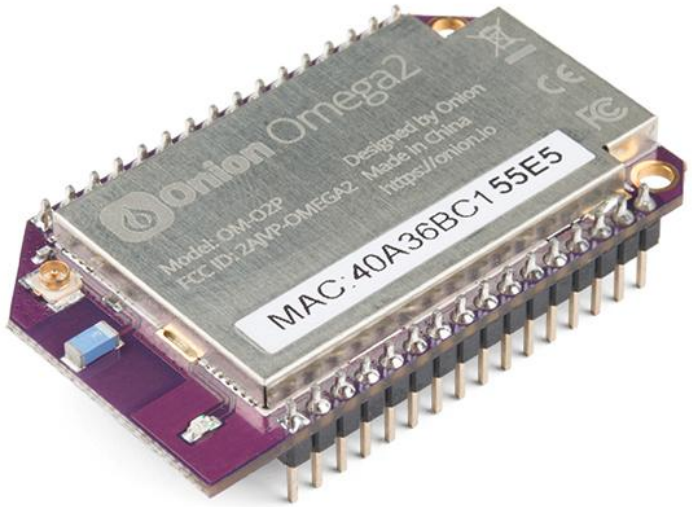
Wireless Freedom

OnionOS

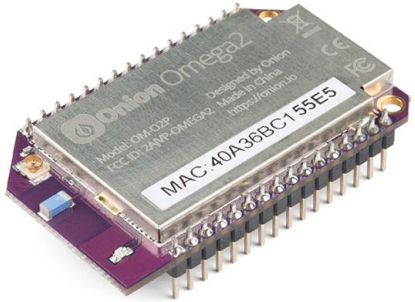
moz://a

IoT

Opções de Hardware



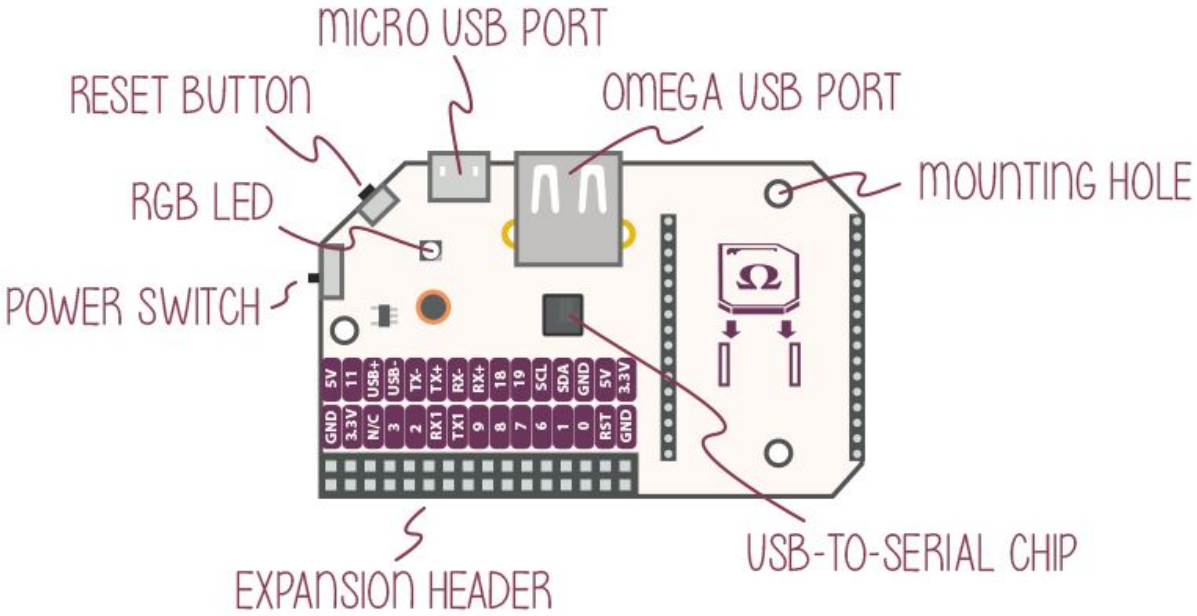
Onion

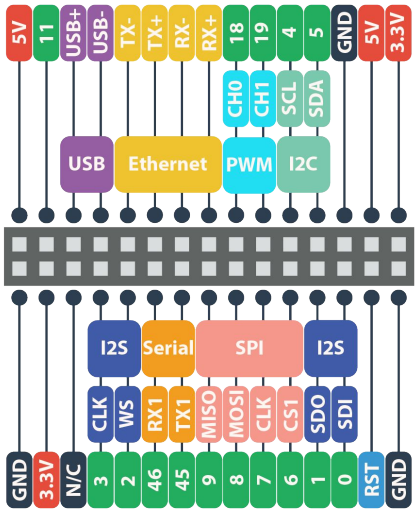


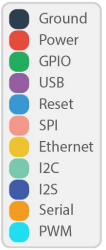
- 580MHz CPU
- 64MB //128MB
- 16MB //32MB Storage
- USB 2.0
- N/A // Micro SD slot
- b/g/n Wi-Fi

- Processador MediaTek
- MT7688 @580MHz
- MIPS24KEc
- I2C
- I2S
- SPI
- PWM
- GPIOS
- Open Hardware

Expansion Dock

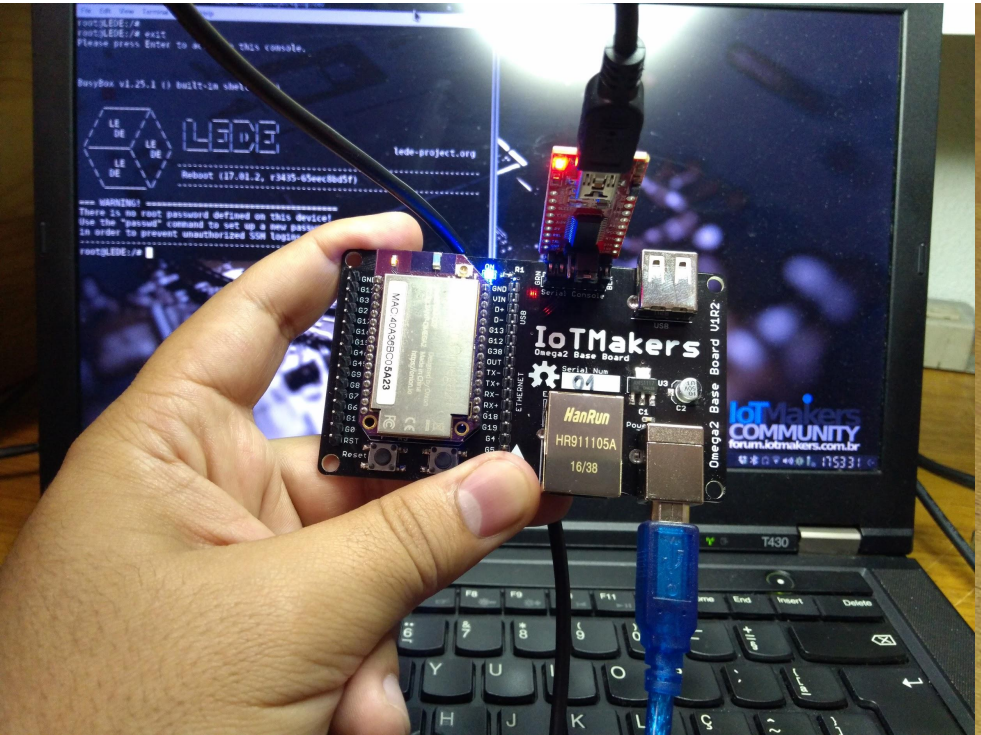


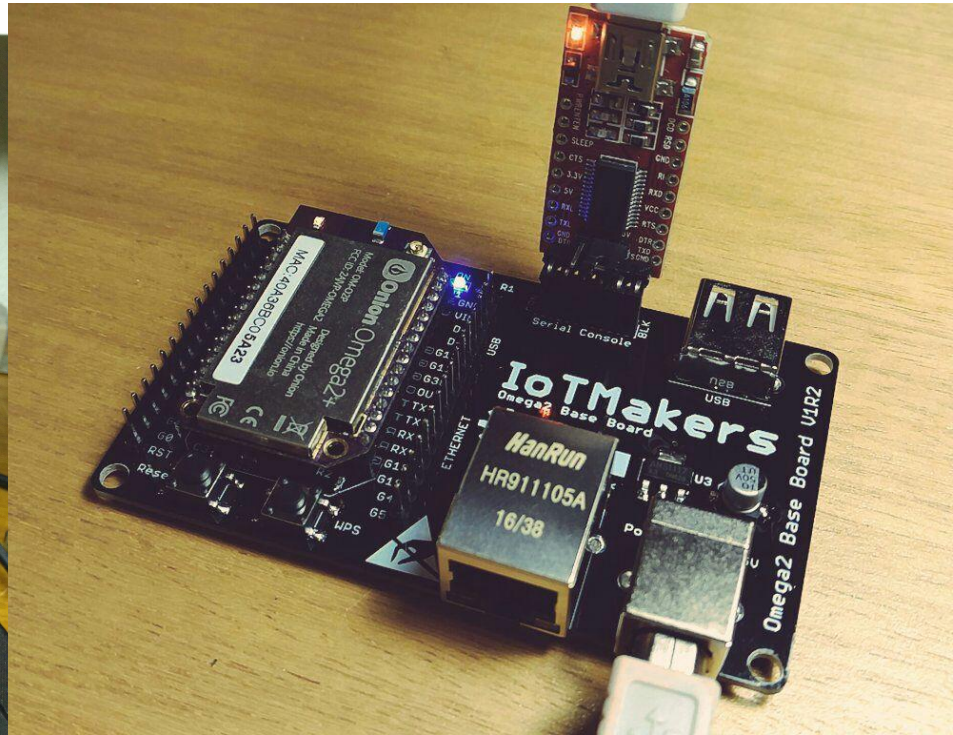




Omega 2 Base Board

http://iotmakers.com.br/omega2/omega2-base-board/





Onion’s fork of Lede Project’s

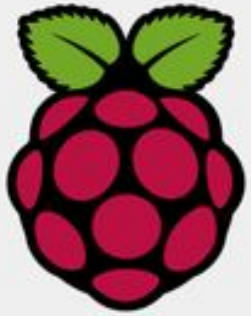
https://github.com/OnionIoT/source

Cutomizando e atualizando a Omega2

http://pedrominatel.com.br/pt/mt7688/customizando-e-atualizando-omega2/

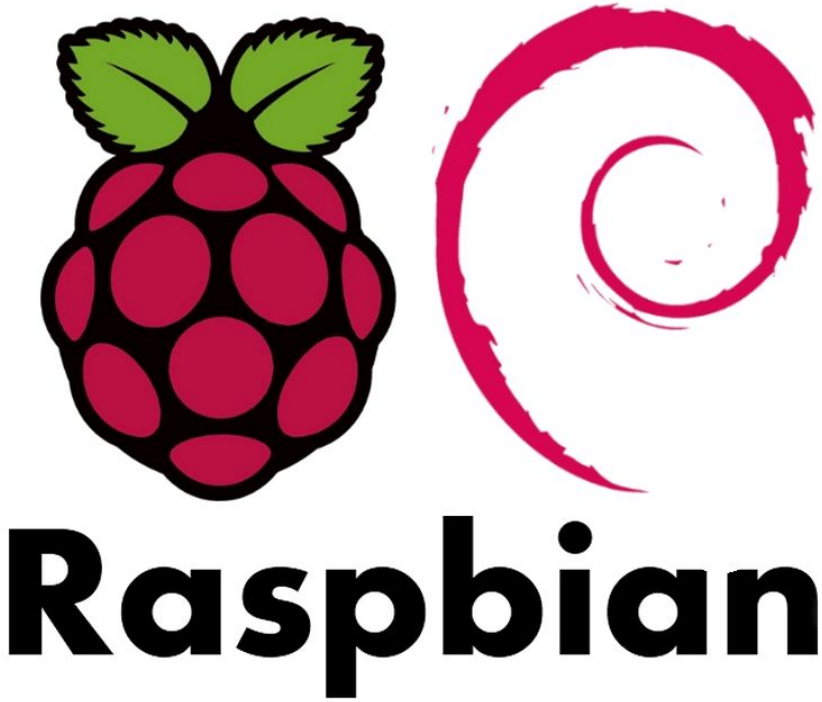
KEEP
CALM
AND
DEBUG
Raspberry PI

Raspberry PI



	Raspberry Pi 3 Model B	Raspberry Pi Zero	Raspberry Pi 2 Model B	Raspberry Pi Model B+
Introduction Date	2/29/2016	11/25/2015	2/2/2015	7/14/2014
SoC	BCM2837	BCM2835	BCM2836	BCM2835
CPU	Quad Cortex A53 @ 1.2GHz	ARM11 @ 1GHz	Quad Cortex A7 @ 900MHz	ARM11 @ 700MHz
Instruction set	ARMv8-A	ARMv6	ARMv7-A	ARMv6
GPU	400MHz VideoCore IV	250MHz VideoCore IV	250MHz VideoCore IV	250MHz VideoCore IV
RAM	1GB SDRAM	512 MB SDRAM	1GB SDRAM	512MB SDRAM
Storage	micro-SD	micro-SD	micro-SD	micro-SD
Ethernet	10/100	none	10/100	10/100
Wireless	802.11n / Bluetooth 4.0	none	none	none
Video Output	HDMI / Composite	HDMI / Composite	HDMI / Composite	HDMI / Composite
Audio Output	HDMI / Headphone	HDMI	HDMI / Headphone	HDMI / Headphone
GPIO	40	40	40	40
Price	$35	$5	$35	$35

Muito utilizado pela comunidade



Raspberry PI 3

Onde comprar ?

Versão Brasileira

- Filipeflop

Importar placa

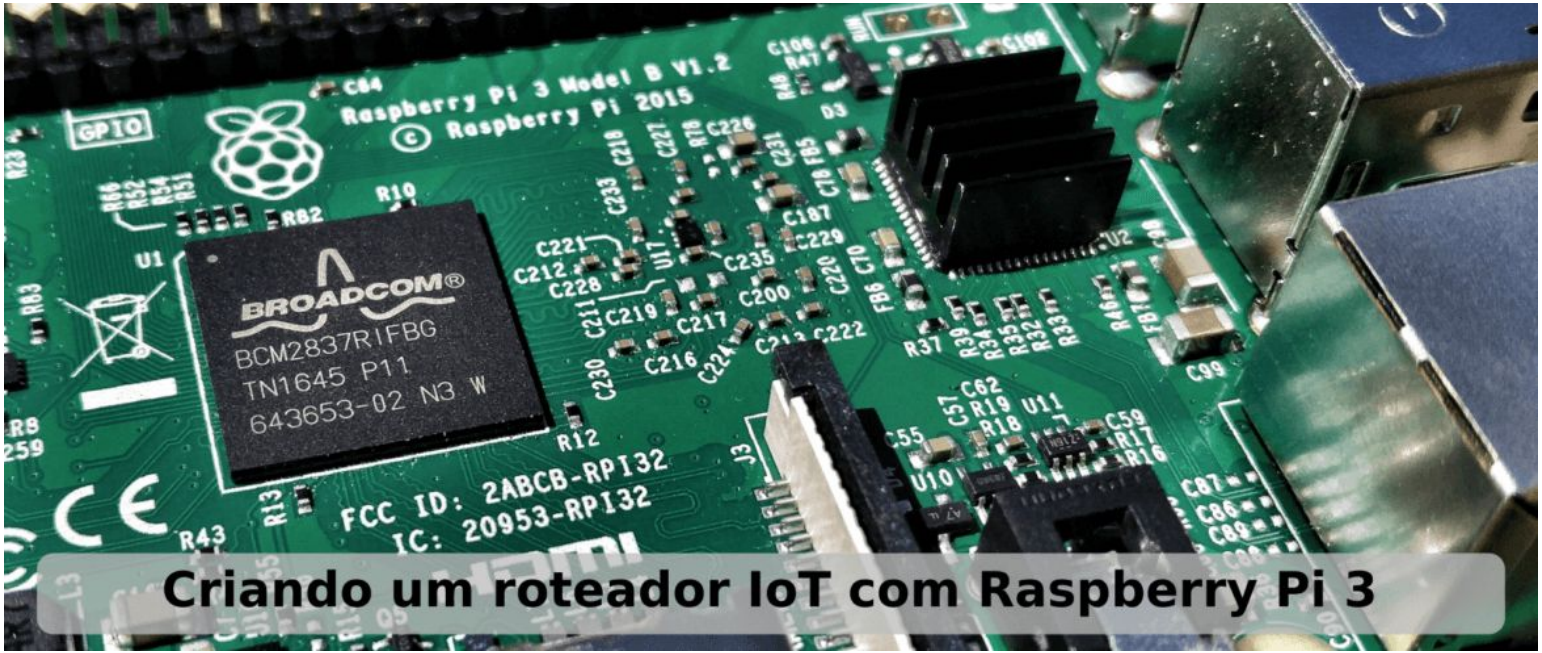
- N formas.

OpenWrt

Wireless Freedom

- Mais de 650 dispositivos (roteadores)
- Código Aberto (Aberto a contribuições)
- Comunidade ativa
- Customização da build
- Diversas arquiteturas

Criando um roteador IoT com Raspberry Pi 3



http://pedrominatel.com.br/pt/raspberry-pi/criando-um-roteador-iot-com-raspberry-pi-3/

Hands on

https://github.com/IoTMakers/ROADSEC-2018-rpi-openwrt

Preparar o ambiente

Clonar git

Configurar

“buildar”

Gravar

Configurar arquivos

Configurando arquivos

Editar os arquivos

/etc/config/wireless

/etc/config/network

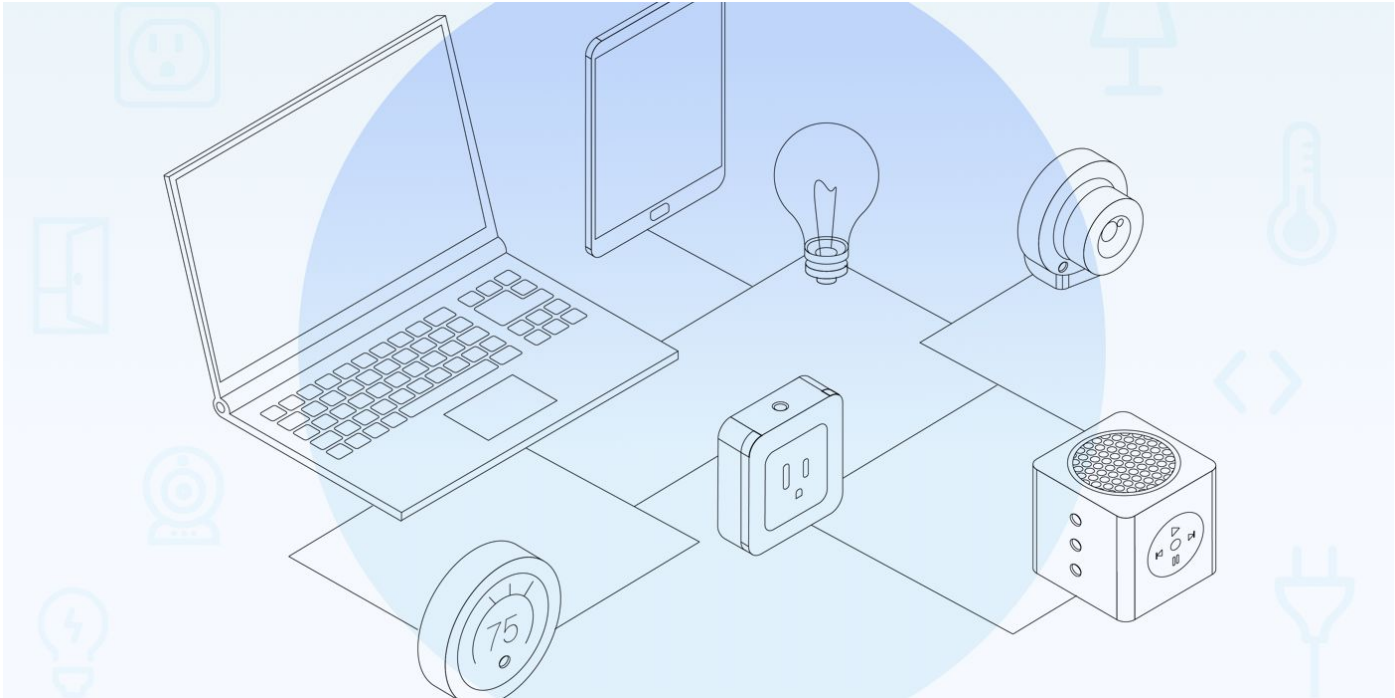
/etc/config/dhcp

/etc/config/firewall

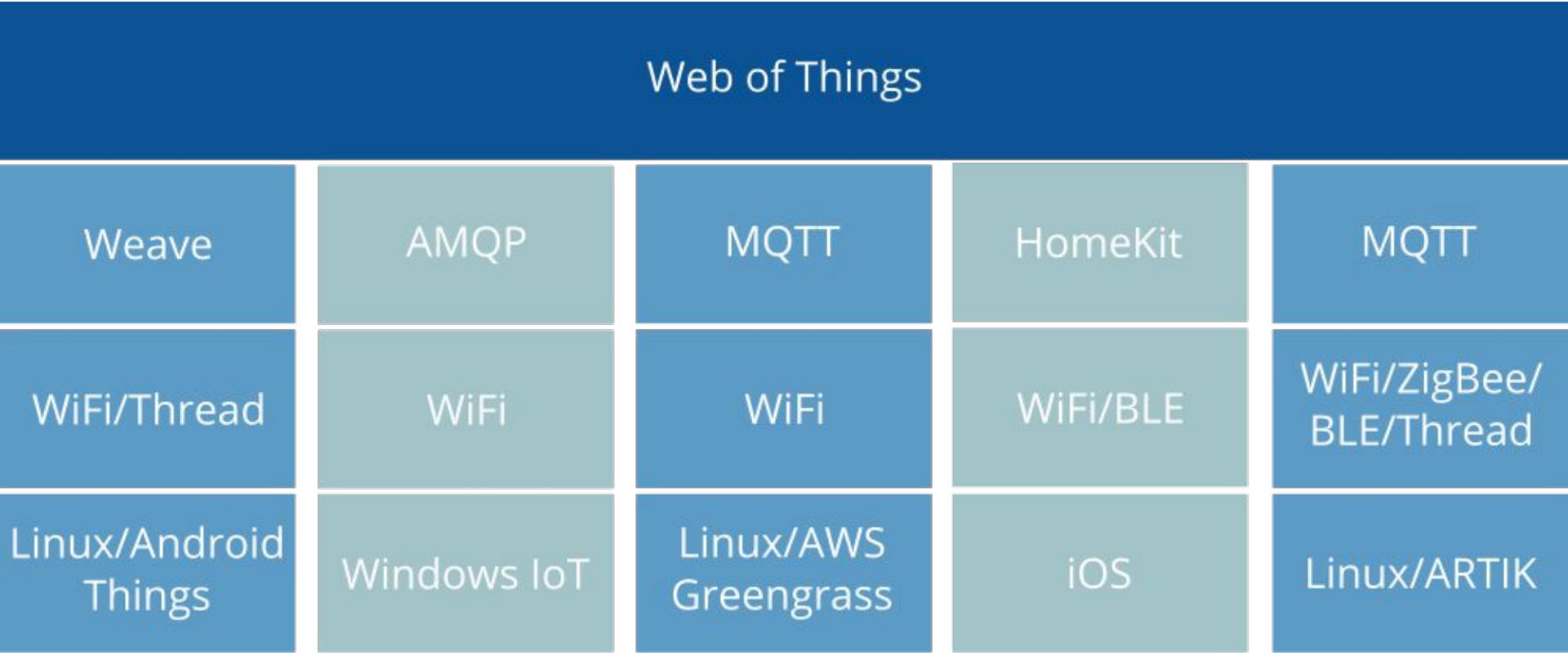
https://github.com/IoTMakers/ROADSEC-2018-rpi-openwrt

mozilla

IoT



Web of Things



Project Things

Things Gateway

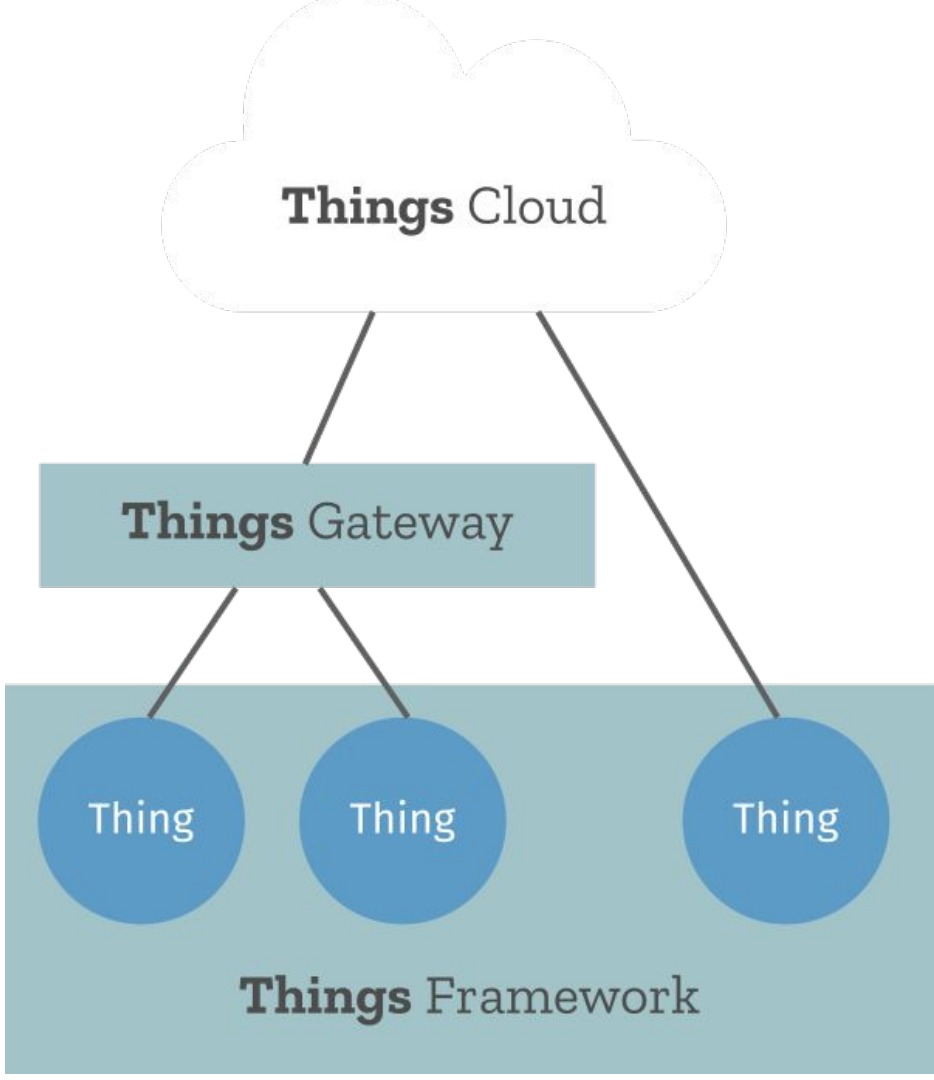
- Gateway

Things Cloud

- Serviços em cloud

Things Framework

- Softwares
- Componentes



Web Things API

- IETF
- W3C
- OCF
- OGC

- JSON
- REST

Web Thing API

Member Submission

W3C Member Submission 30 May 2017

This version:
https://www.w3.org/Submission/2017/Member-SUBM-WoT-20170530/

Latest published version:
https://www.w3.org/Submission/WoT/

Latest editor's draft:
https://moziot.github.io/wot/

Editor:
Ben Francis, Mozilla Corporation

Copyright © 2017 Mozilla

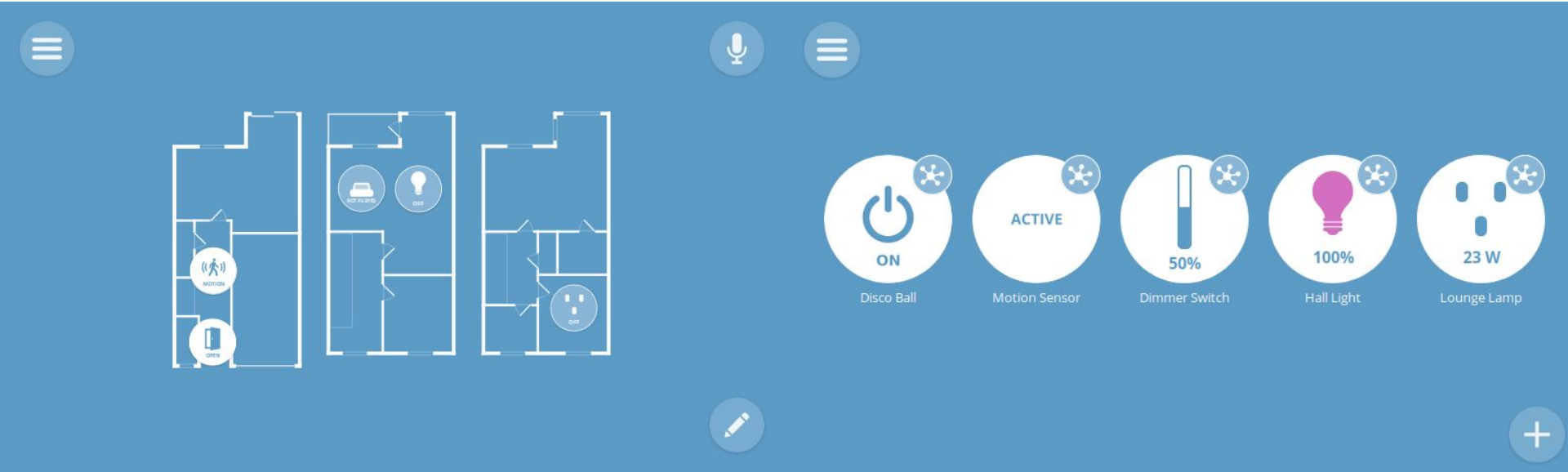
Abstract

This document describes a common data model and API for the Web of Things. The Web Thing Description provides a vocabulary for describing physical devices connected to the World Wide Web in a machine readable format with a default JSON encoding. The Web Thing REST API and Web Thing WebSocket API allow a web client to access the properties

moz://a

IoT

https://github.com/mozilla-iot



Muito Obrigado

Dúvidas ?

douglas@iotmakers.com.br

19 98230-3616