



Babi-LON

OpenDEV



LonMark IoT renews

Media-independent : TP/FT10, PL20, TP/RS485-78k, IP10L, IP70, ...

Daniel ZOTTI / Occitaline

- Already 30 years dedicated to distributed automation systems using LonWorks, ModBus, BACnet, and other networks...
- Founding President of NEWRON SYSTEM
- The sale of Newron System to ABB leads to the creation of OCCITALINE
- Co-founder of LonUser France
- President of LonMark France / LonMark Francophone
- Member of the Board of Directors of LonMark International
- Member of CEN TC247 Working Group 4 for communication protocols for BMS
- Member of the NGO eG4U, which advocates for users' interests in the use of IT.
- Chair of ATTM/SDM (Smart city group)
 - Participation in the IPv6 usage, and SmartM2M groups, as well as the IT Sustainability group.

Occitaline

- An innovative company founded in 2013.
- Designs and manufactures infrastructure products for building management systems (BMS) networks mostly LON.
- Team of 6 peoples.



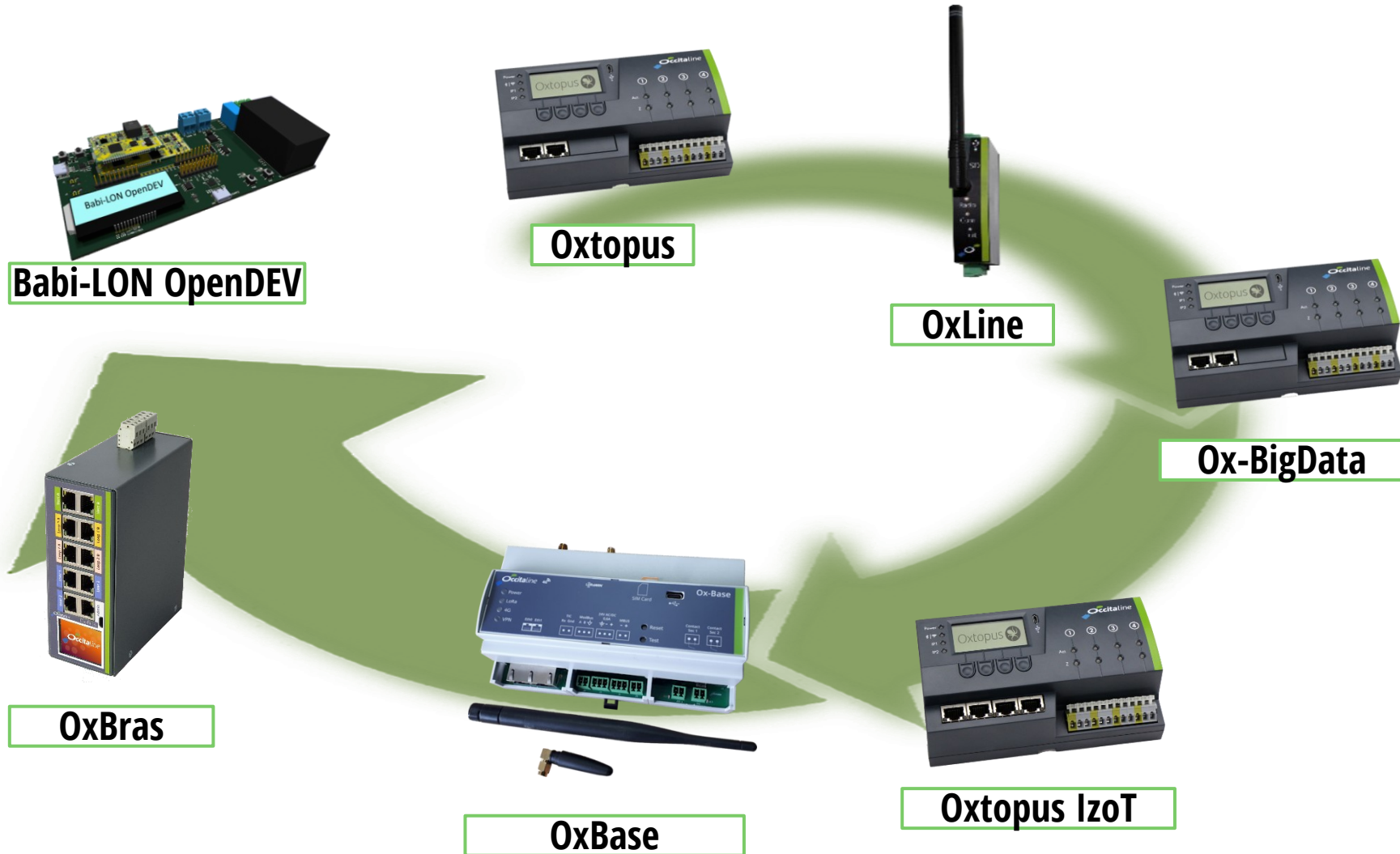
Occitaline
13 rue Antoine de Lavoisier
31830 Plaisance-du-Touch

Toulouse

- « Pink Town »
- High-Tech City



La gamme des produits



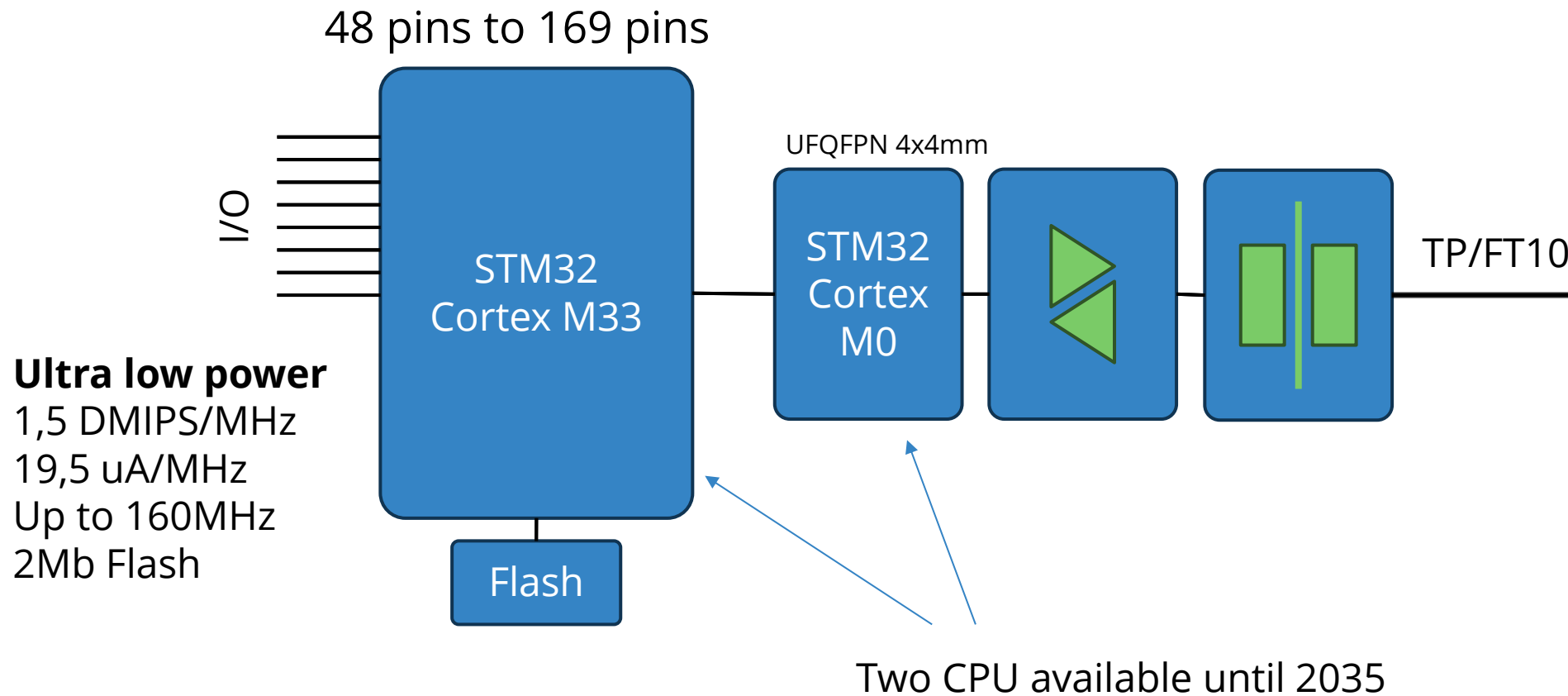
Babi-LON

- Cooperation started in 2018 between Occitaline and Safesquare
 - Share knowledge and human resources on replacing Neuron Chip
 - To replace Neuron Chip, not only protocol stack for device
 - To have a powerful main CPU for protocols stack and application
 - To have more BACnet objects than in FT6050 implementation
 - To manage larger application with competitive consumption
 - To work on Open-Source environment for maintenance and sustainability
 - Able to optimize Electronic Design accordance with volume and space
- To modernize design will be compliant with CRA regulation mandatory in 2027 for any sector.

Features

	Neuron Chip 3120 / 3150	Smart transceiver FT5000 / FT6050	Babi-LON OpenDEV Arm Cortex-M
Network variables	62	254	4096
Address tables entries	16	254	1024
Alias entries	16	127	1024
Input Output	12 pins 35 models	12 pins 35 models	All IO models supported
Language	Neuron C	Neuron C	C++
Security	Authentication	Authentication	Authentication + Certificate
Operating system	Scheduler	Scheduler	FreeRTOS / Linux
BACnet/IP	No	Yes (FT6050)	Yes
BACnet objects		DEV, AI, AO, AV, BI, BO, BV	DEV, AI, AO, AV, BI, BO, BV, MSI, MSO, MSV

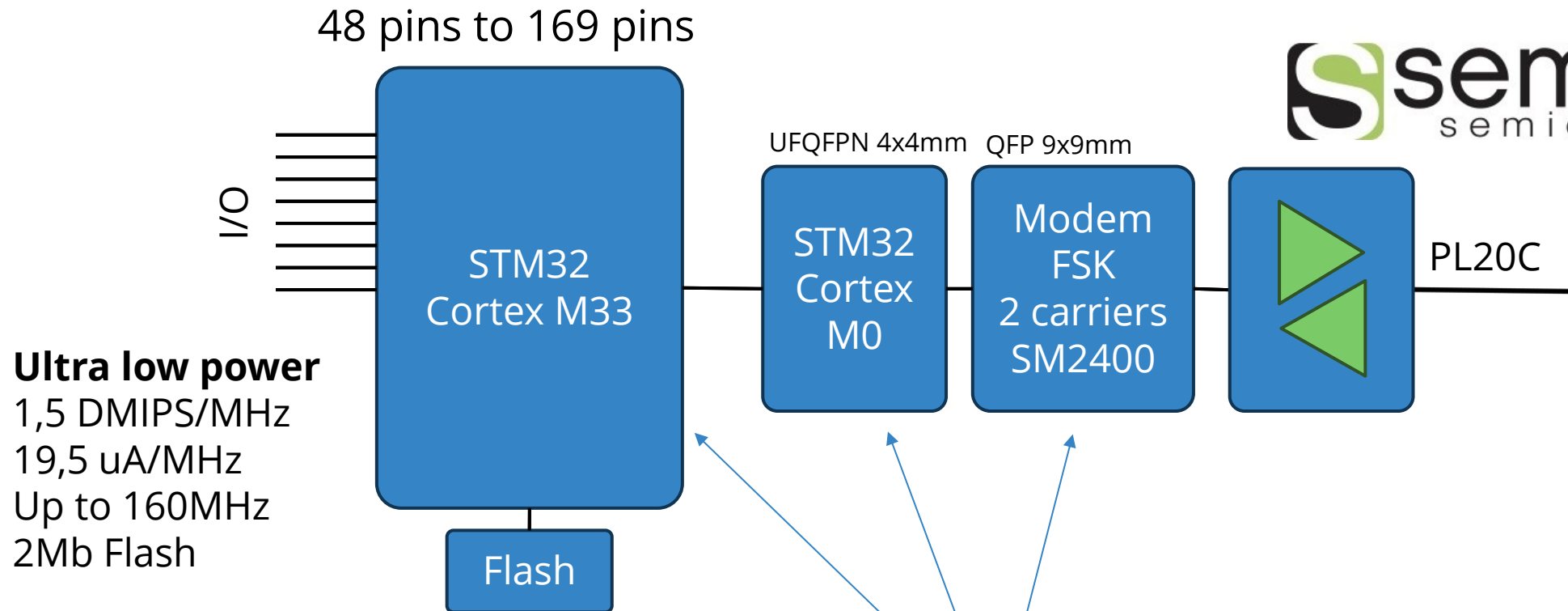
Hardware architectures RTOS : TP/FT10



Hardware architectures RTOS : PL20



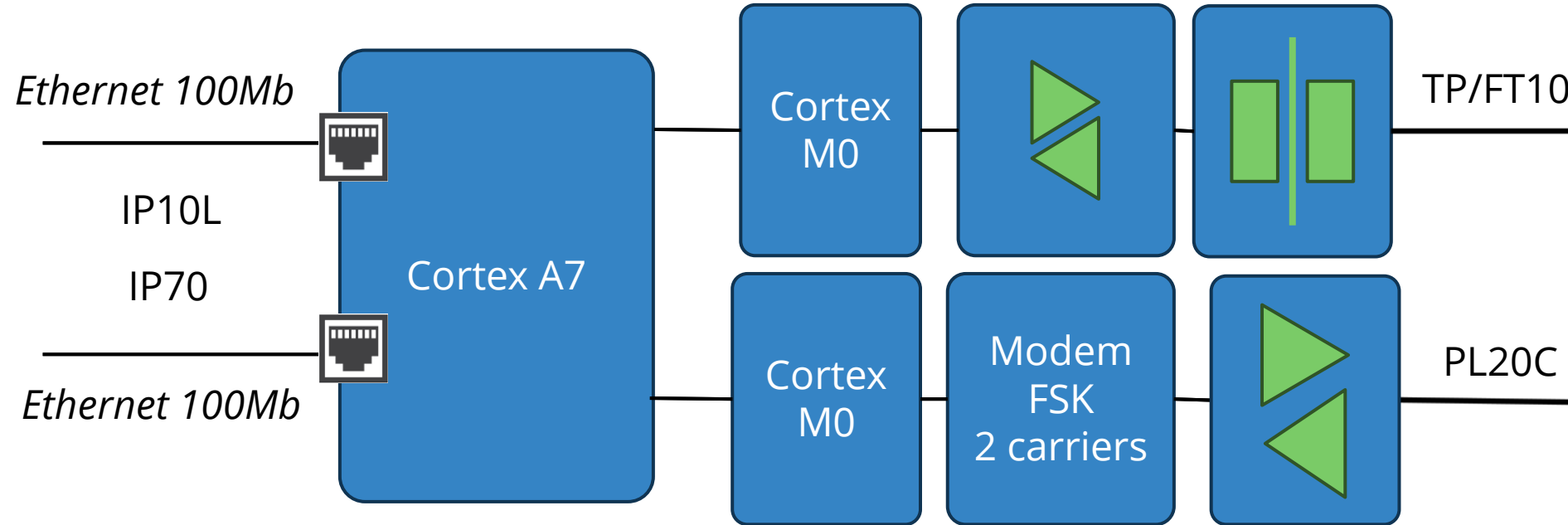
life.augmented



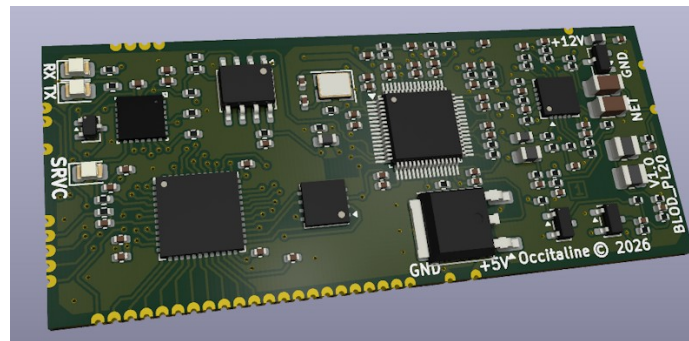
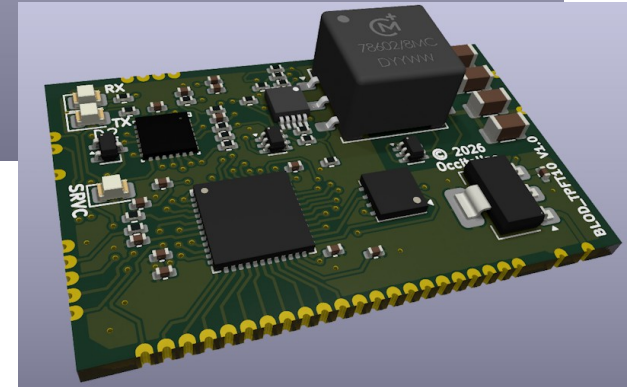
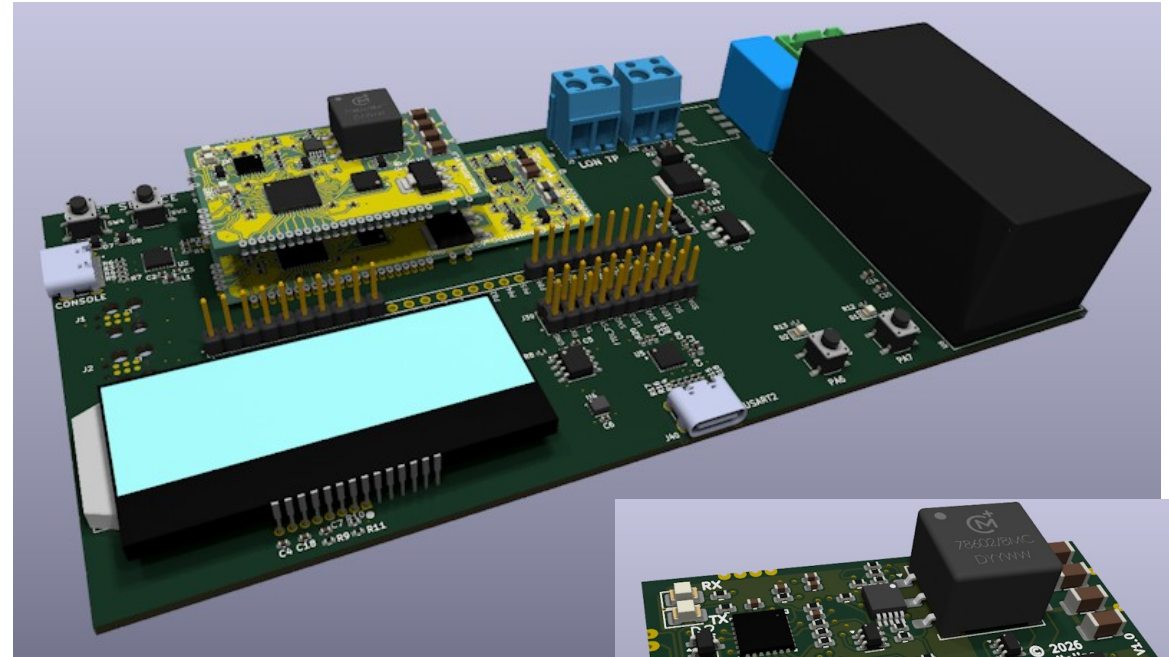
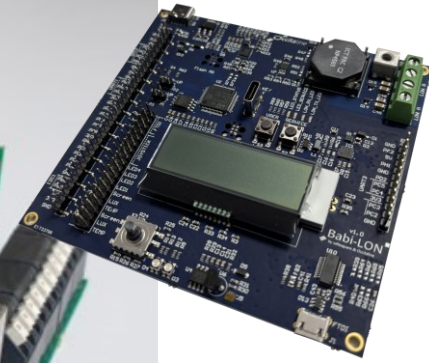
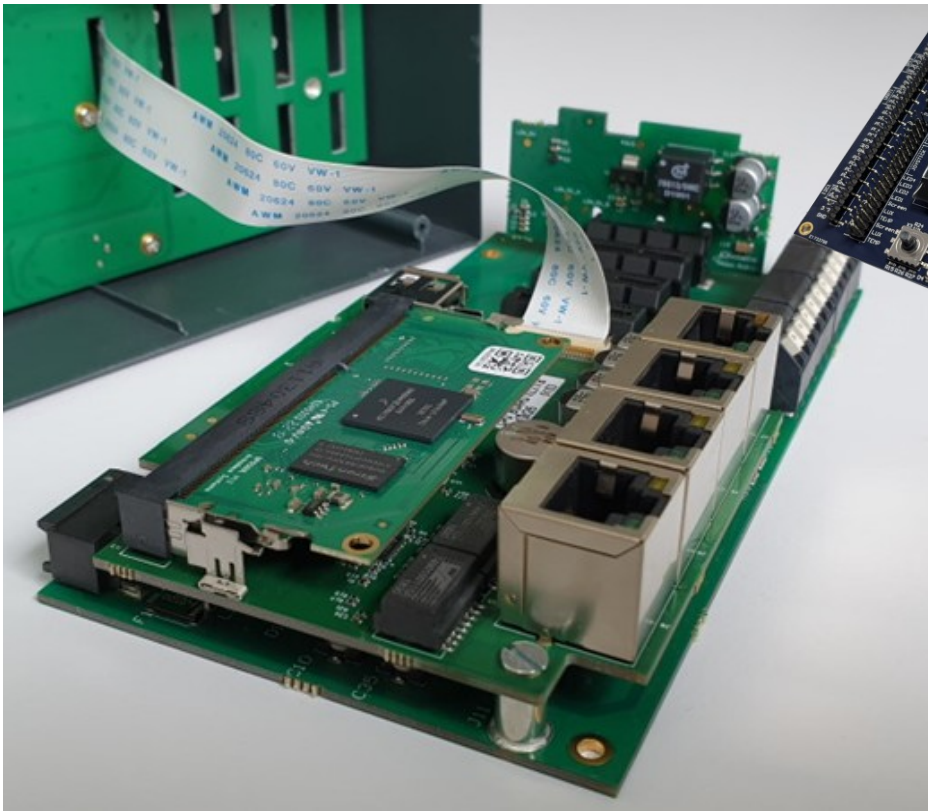
FT3120 **Repeating** implemented

Chips available until 2035

Hardware architectures IP10L / IP70 / TP/FT10 / PL20C Linux



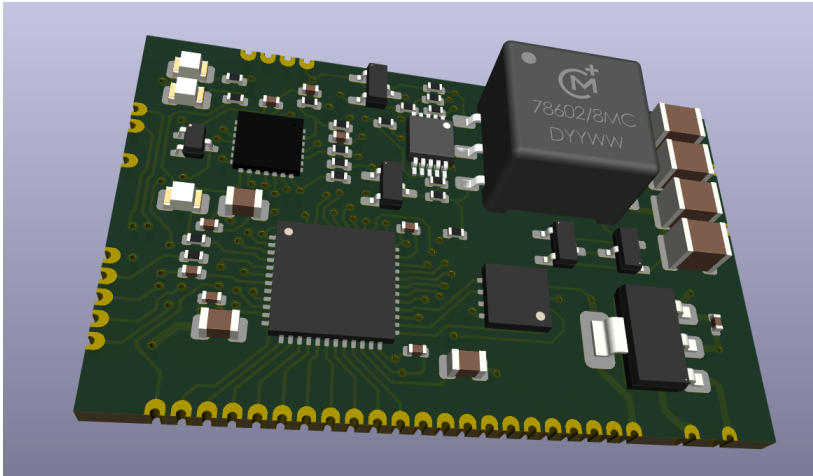
Old, current and new products based on Babi-LON TP/FT10



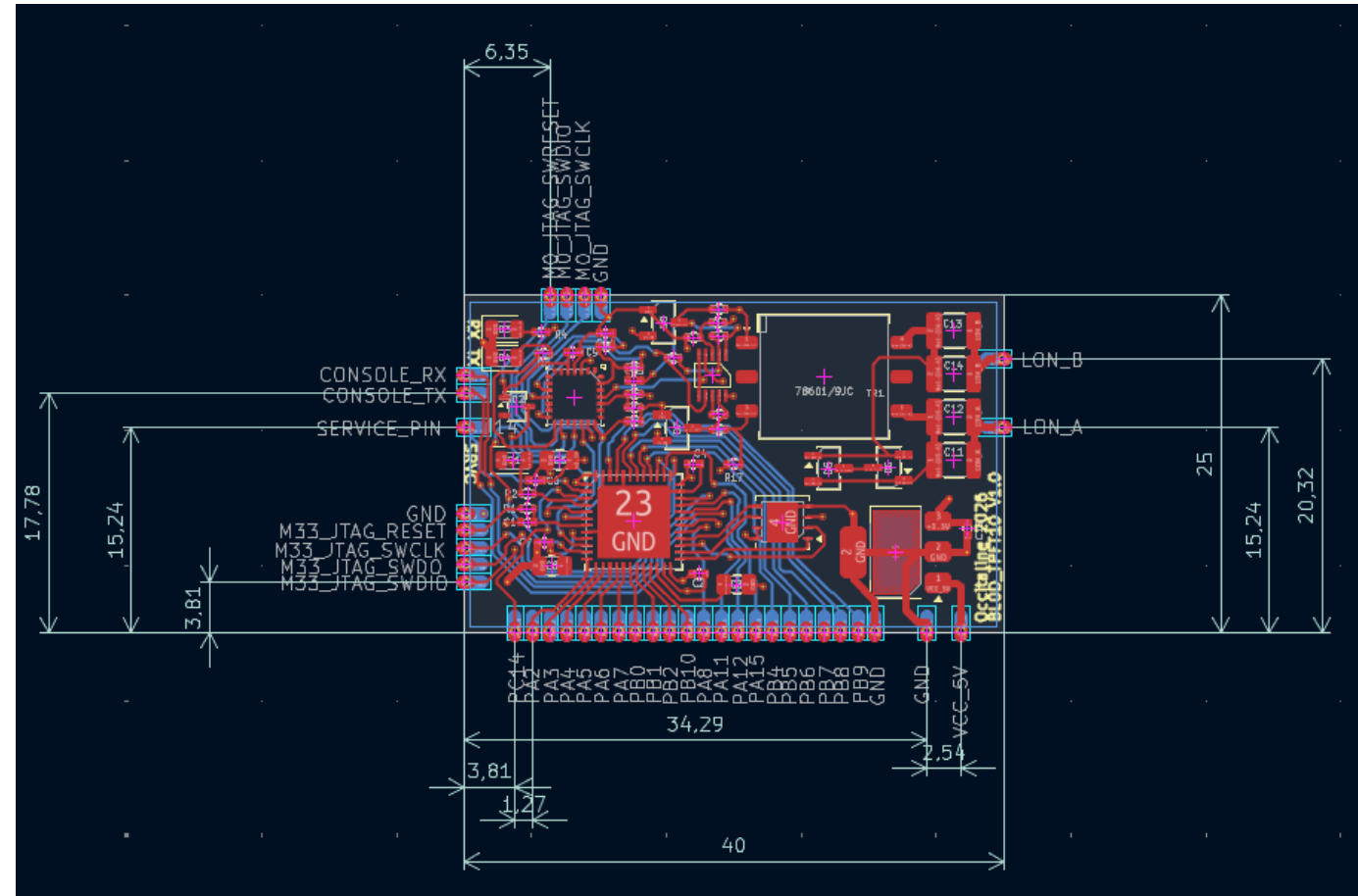
Evaluation board Babi-LON PL20 presented in Australia 2026



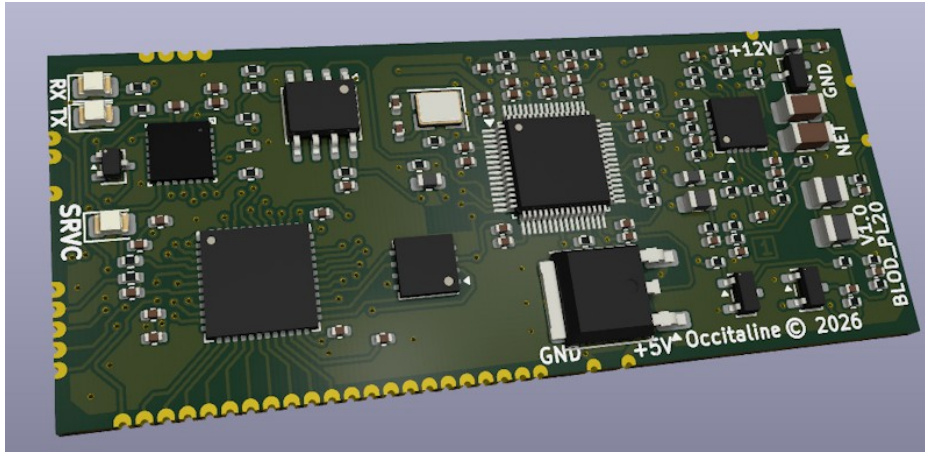
New concept : Module Babi-LON-OpenDEV



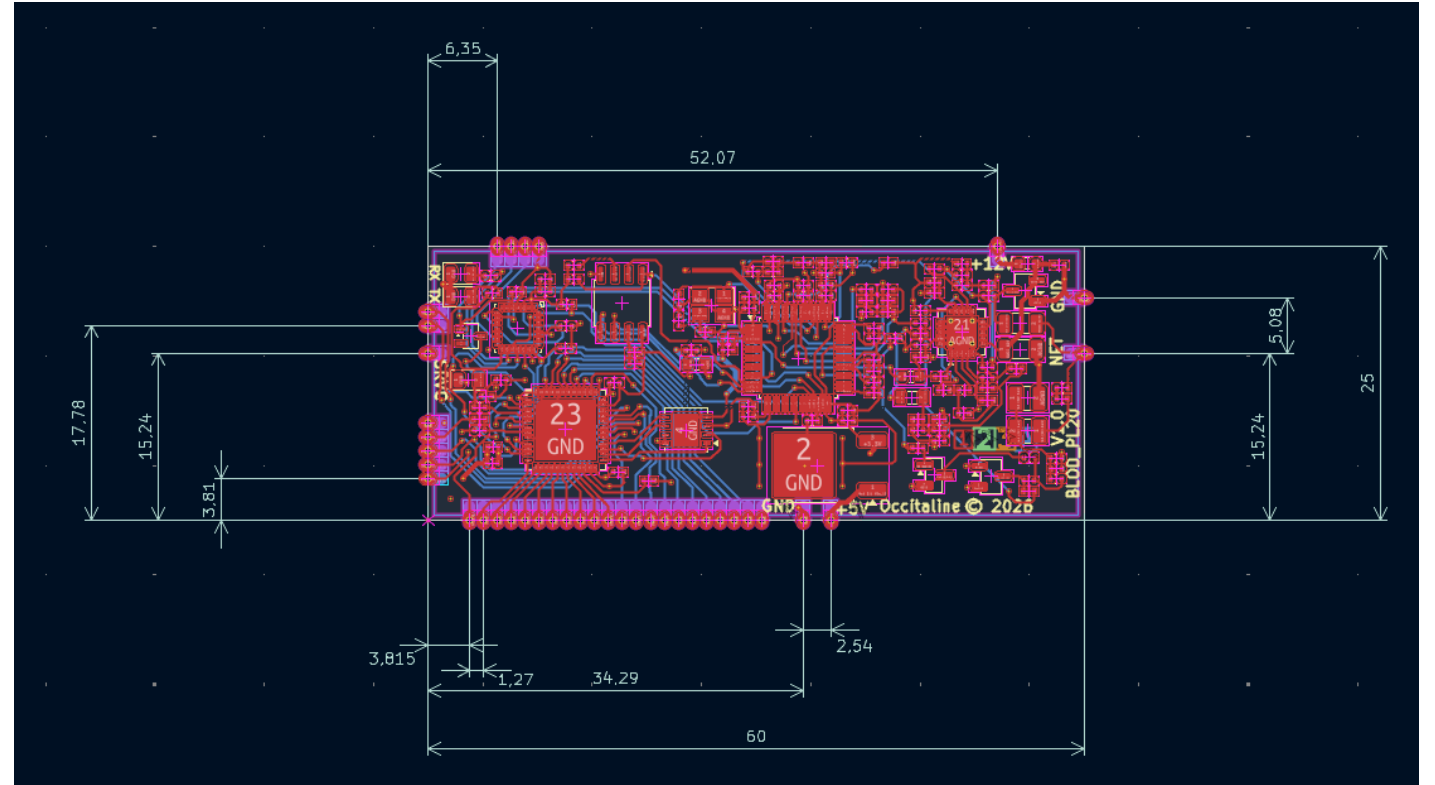
- Replace Neuron Chip + FTX3
- Very small module **40x25mm**
- More powerful than FT6k
- Ready to design
- Firmware updatable
- Downloadable via the network



New concept : Module Babi-LON-OpenDEV



- Replace Neuron Chip + FTX3
- Very small module **60x25mm**
- More powerful than FT6k
- Ready to design same IO pinout than TP/FT10
- Firmware updatable
- Downloadable via the network



Pinout Available on module

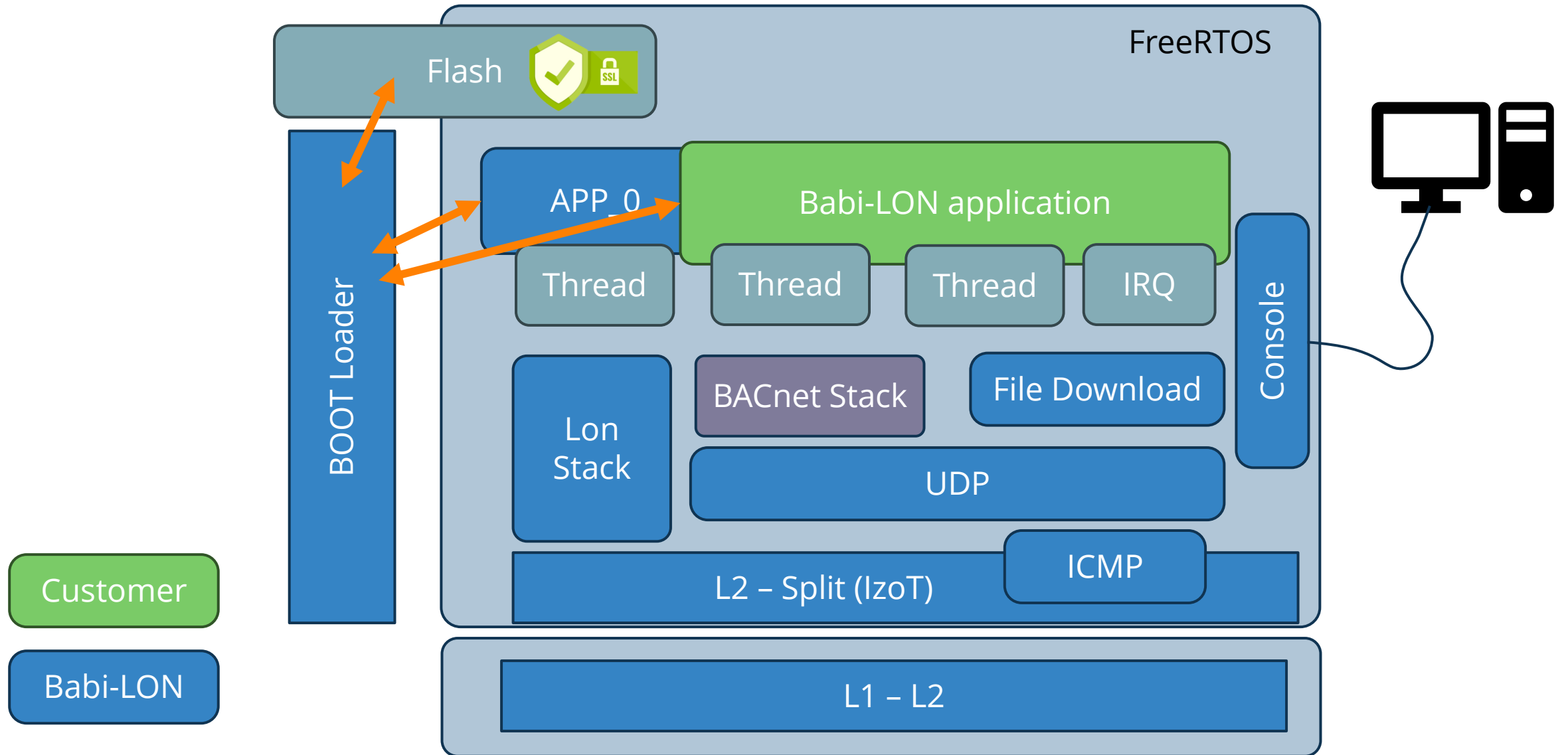
- **Pinout Available on module from STM32**

- PA2, PA2, PA3, PA4, PA5, PA6, PA7, PA8, PA11, PA12, PA15
- PB0, PB1, PB2, PB4, PB5, PB6, PB7, PB8 , PB9, PB10,
- PH3
- PC14

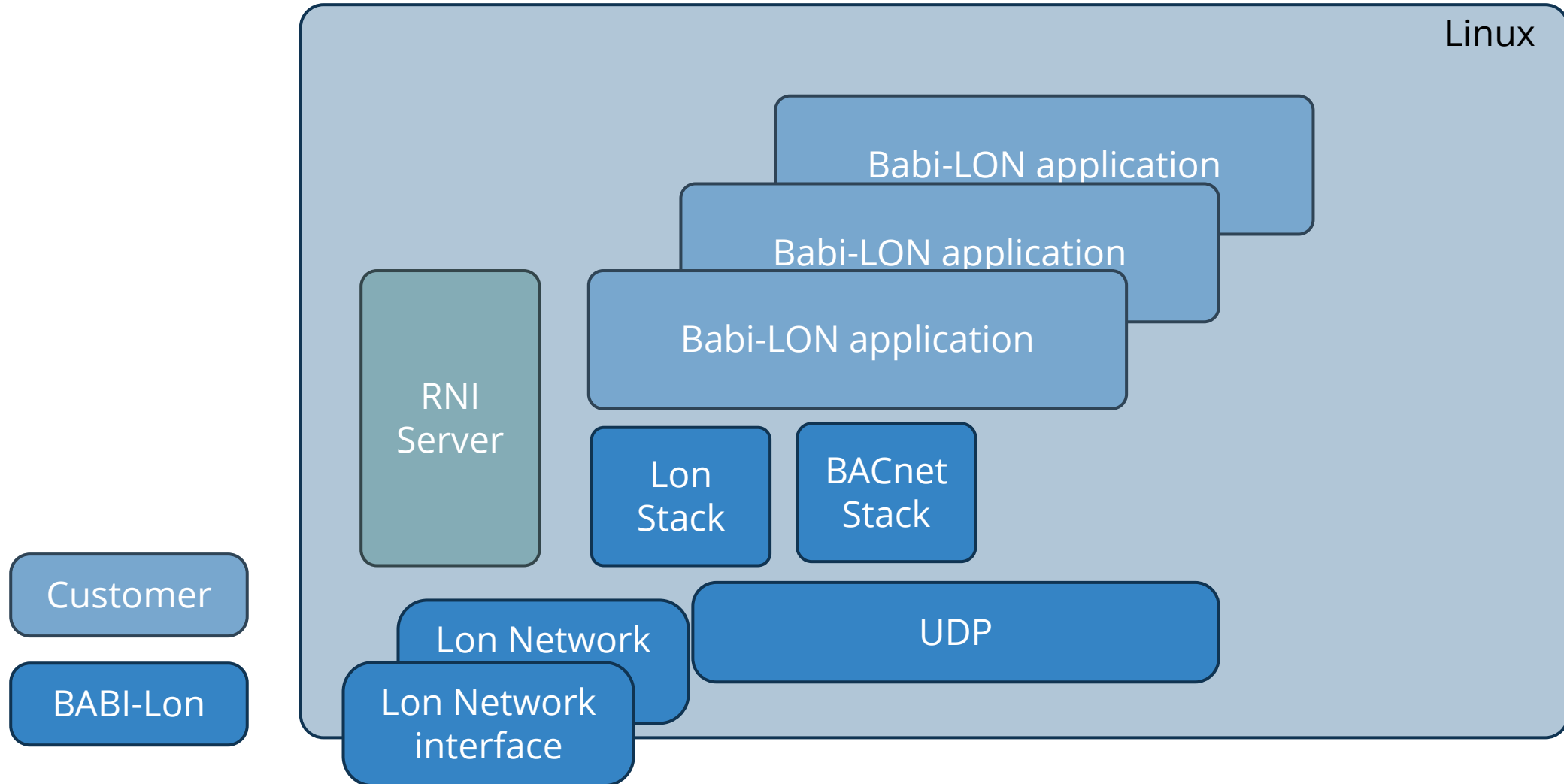
- **Hardware model usable**

- 9 x ADC, 2 x DAC, 1 x COMP, 1 x FDCAN, 3 x I2C, 1 x SPI, 1 x LPUART, 2 x UART, 2 x LPTIM, 22 x GPIO IN, 22 x GPIO OUT
- **For debug**
- Console on serial port dedicated independant of user IO

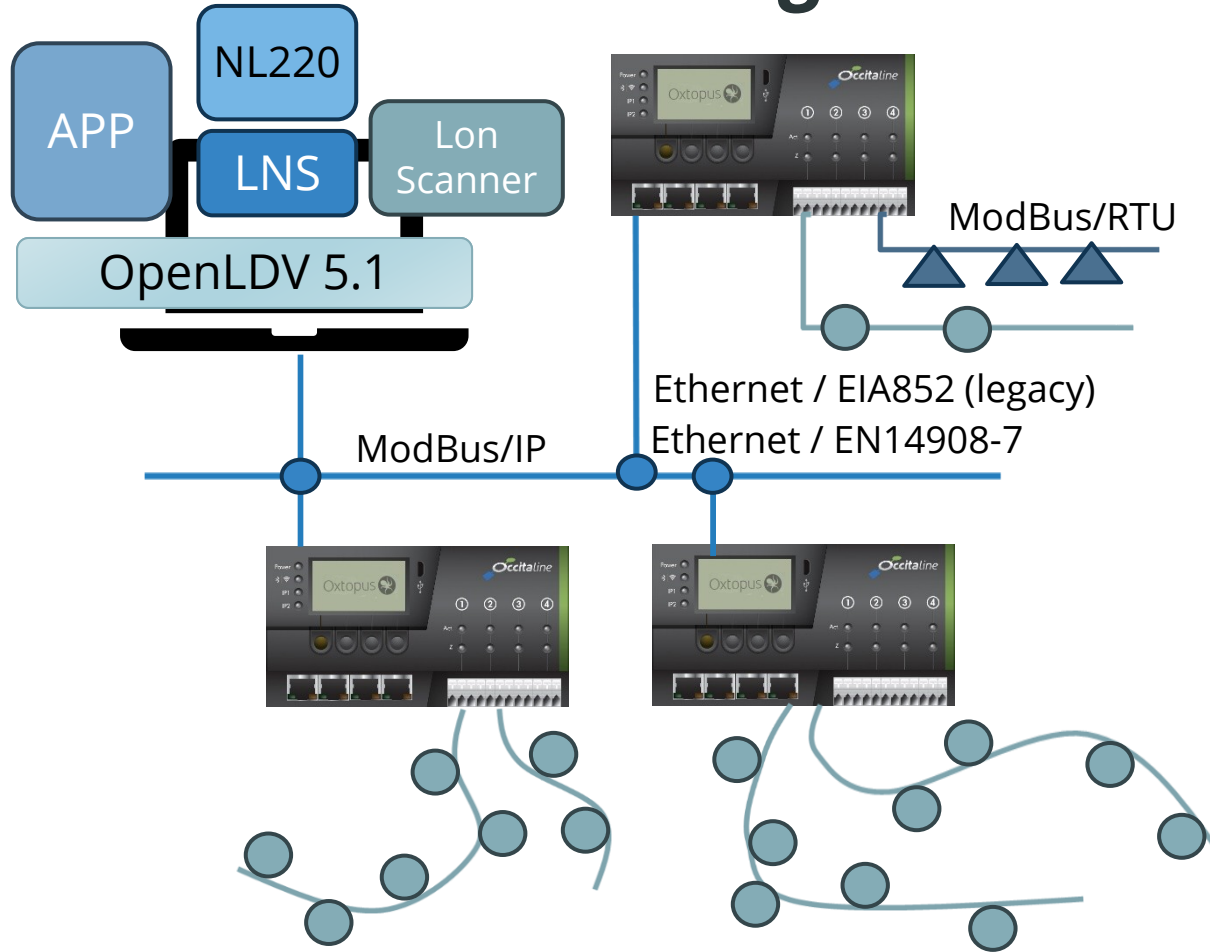
Device Software Architecture



Large Device Software Architecture



Babi-LON Router Usages

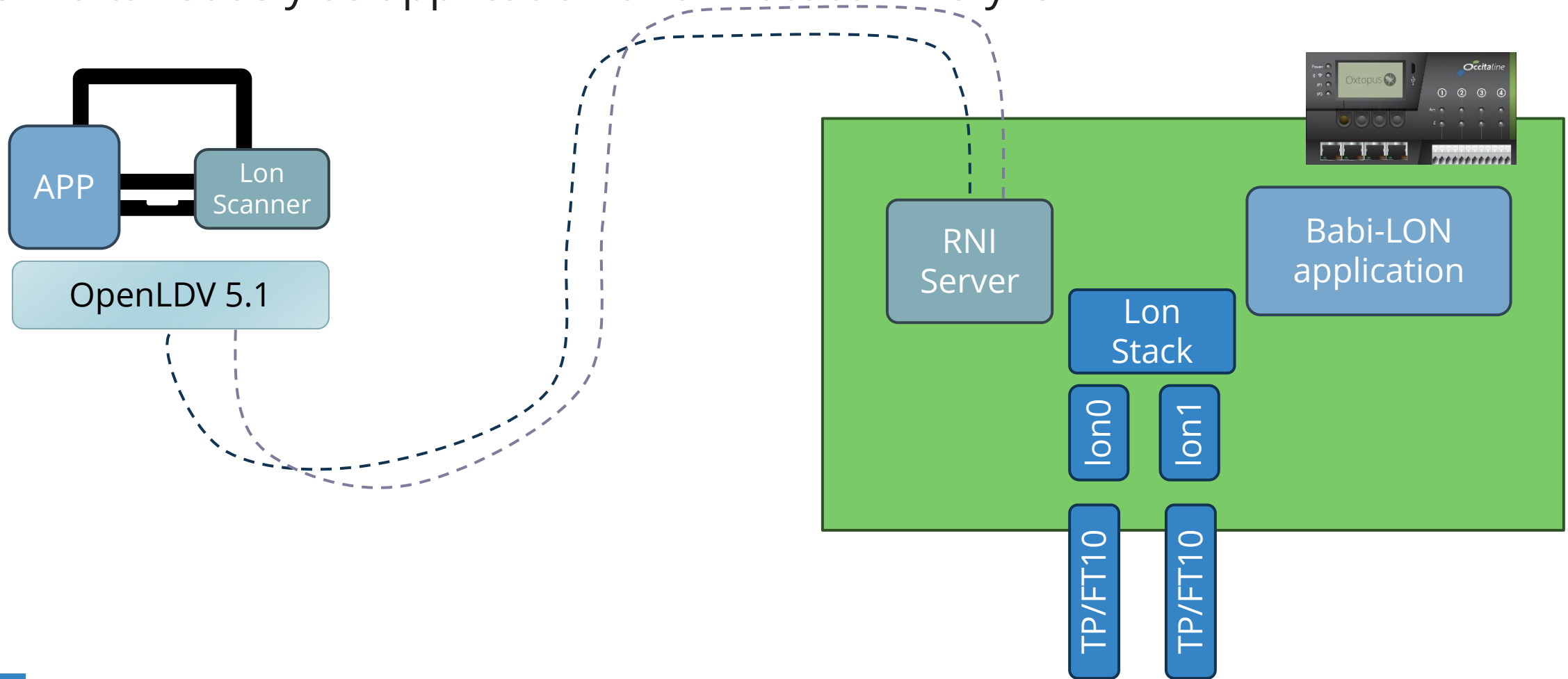


EIA-852 and IzoT (EN 14908-7) routers

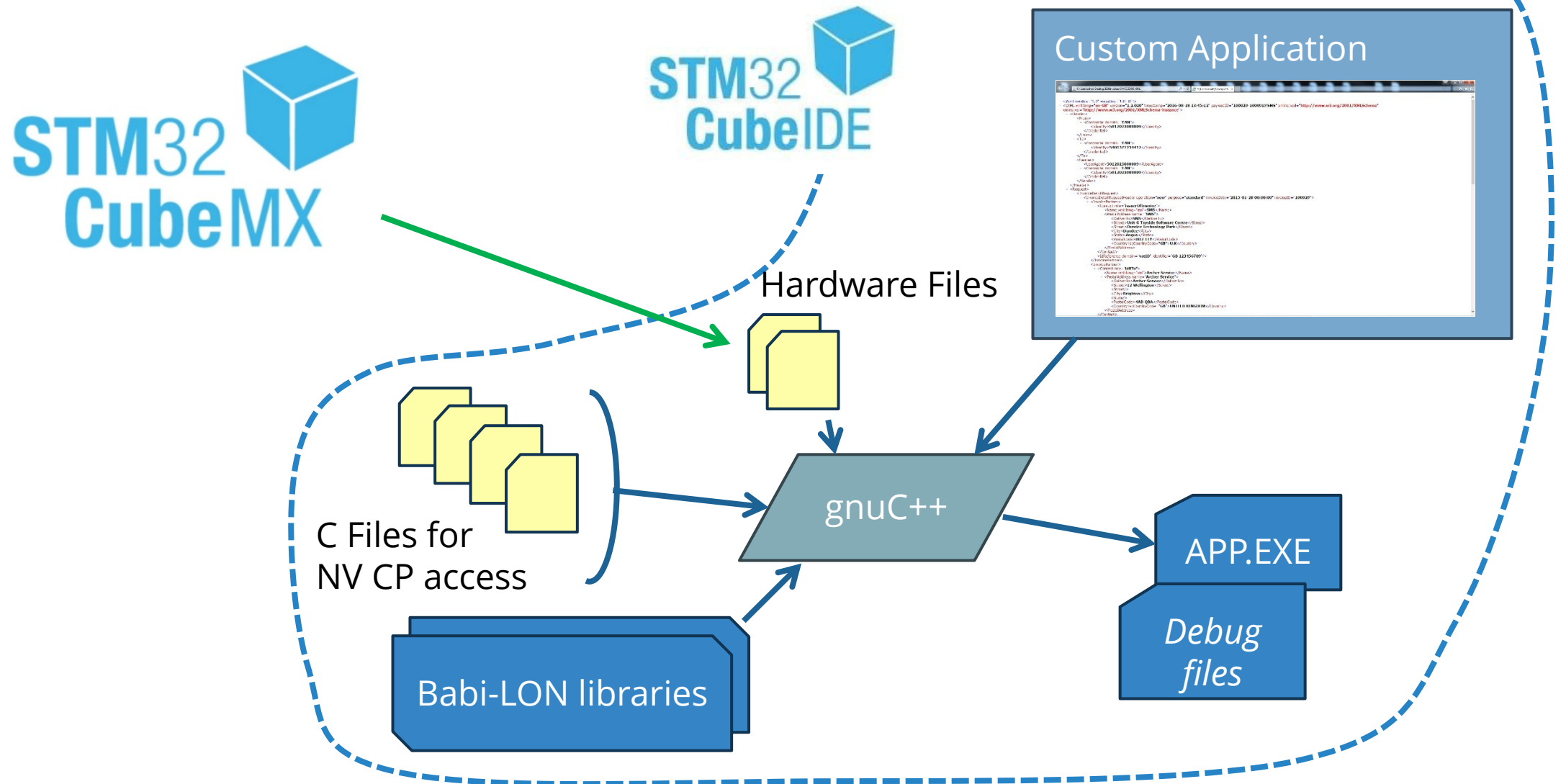
- Interconnect until 252 TP/FT10 device per Oxtopus router
- Impedance measuring on each line
- Config Server embedded
- Router between IzoT – EIA852
- RNI for application and LonScanner
- Usable with LNS or your application
- ModBus router possible RTU to IP
- 4 TP ports for LON, or ModBus RTU (requested at order)

Linux platform for dedicated applications

- Router or Linux platform can be used in remote with standard like OpenLDV simultaneously as application and Protocol Analyzer

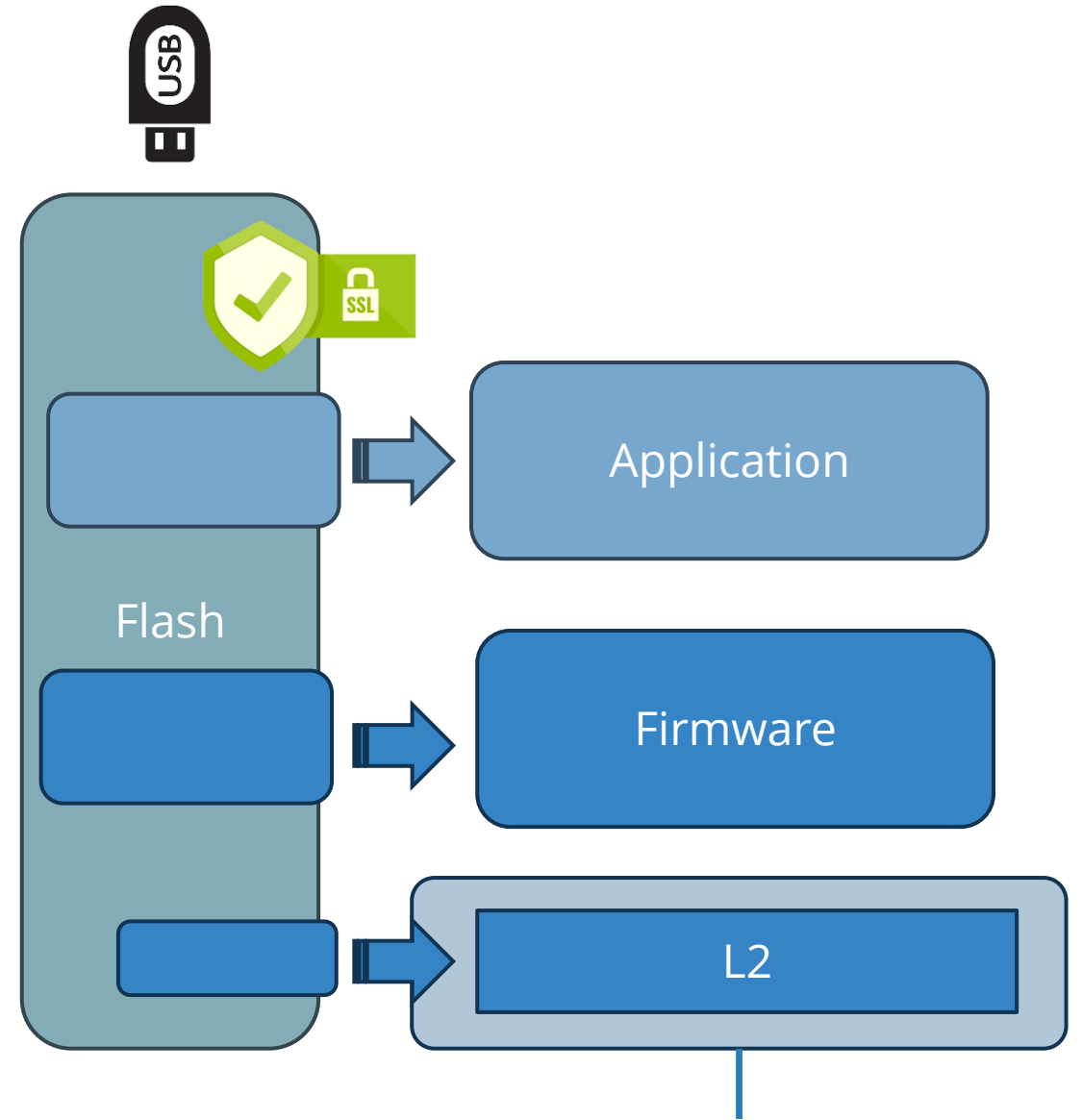


Development software workflow



Update Softwares

- Update is available through Lon Media od JTAG
- Any part of code could be updated independently.
- Flash is secured by manufacturer certificate to protect malicious code.



Unicast / Broadcast download on Lon Media

Babi-LON project and products

- Babi-LON Lon API is compliant with DX or EX Stack API.
- Babi-LON support all kind of device without MIP
- Babi-LON is integrated in existing products and deployed on sites.

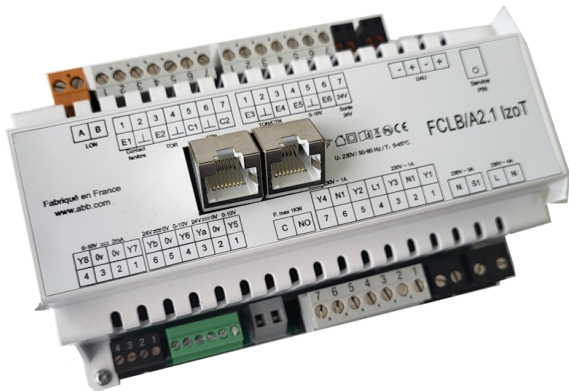


Babi-LON BTL certified products

- Babi-LON BACnet stack was BTL certified for different product actually since 2023.



OxBigData



FCLB/A 2,1E

BACnet ▾ BTL & Product Listings ▾ Testing ▾ Certification ▾ Learning ▾ Connect ▾ JOIN US 🔍



BACnet Application Specific Controller (B-ASC)

Product	Model	Version	PICS	BTL Listing	Certificate
HVAC Drive	ACH580	19.00			
E-AIRON FCL	FCLB/A 2.1-E, FCL/A 1.1-E, FCL/A 2.1-E, FCL/A 2.1 LITE -E	Babi- LONv1.0			



Thank you for your attention