



Cutting-edge Solution

MegaChips
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NESSUM

EU Day 2024

Today's Agenda

- Introduction
- What is the function of Nessum ?
- What are the features of New Generation ?
- What can MegaChips offer ?

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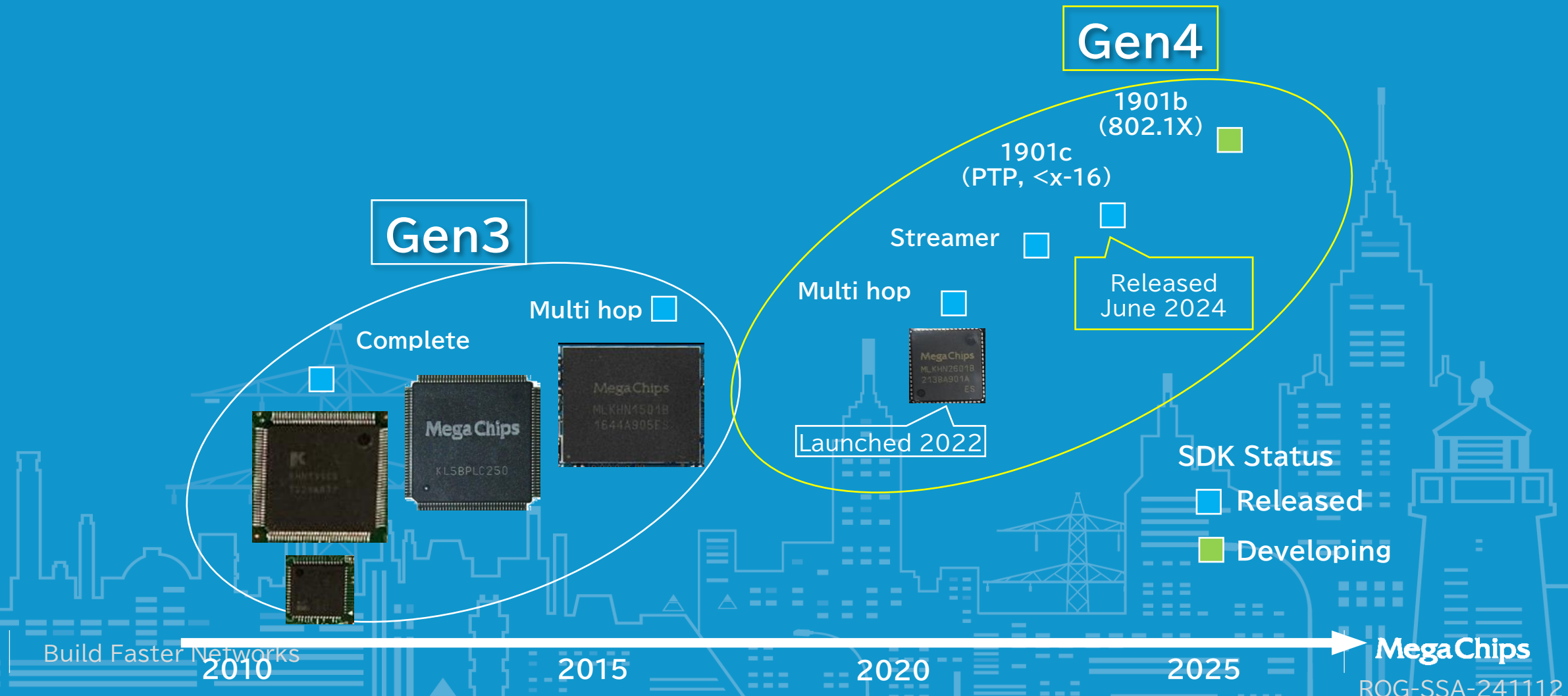
Who is MegaChips ?

- Founded in 1990
- Fabless semiconductor company



History with Nessum

- MegaChips develops H/W & S/W more than 10years



Application Development

- Nessum's application development is growing.

Energy Management



Building /HVAC



Intercom



Home & Appliance

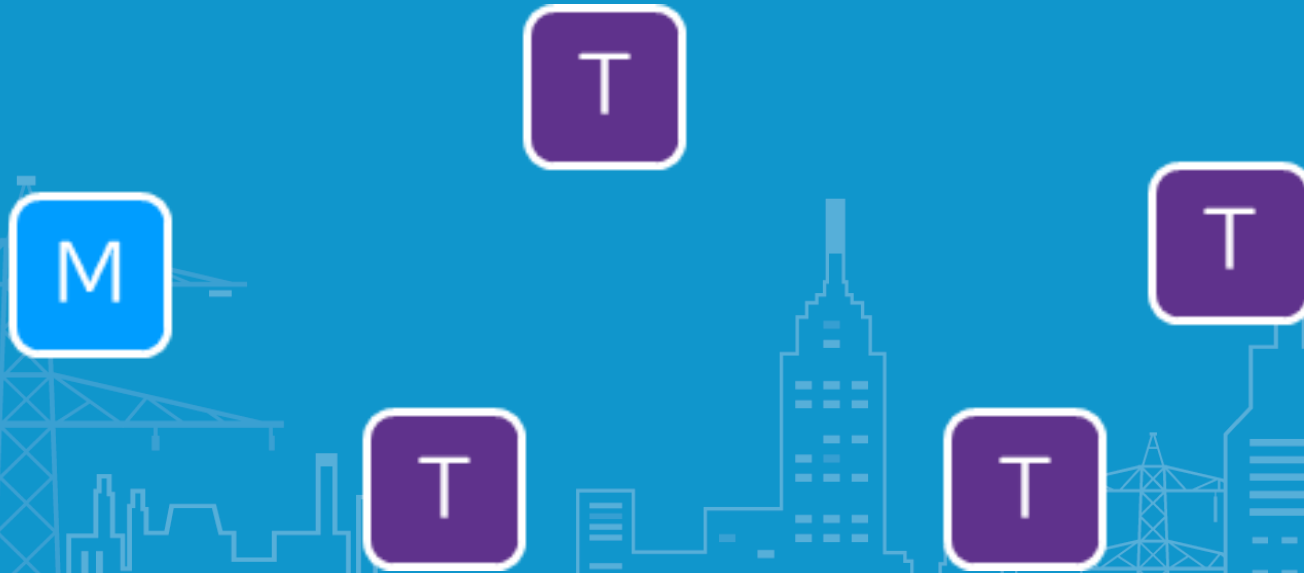


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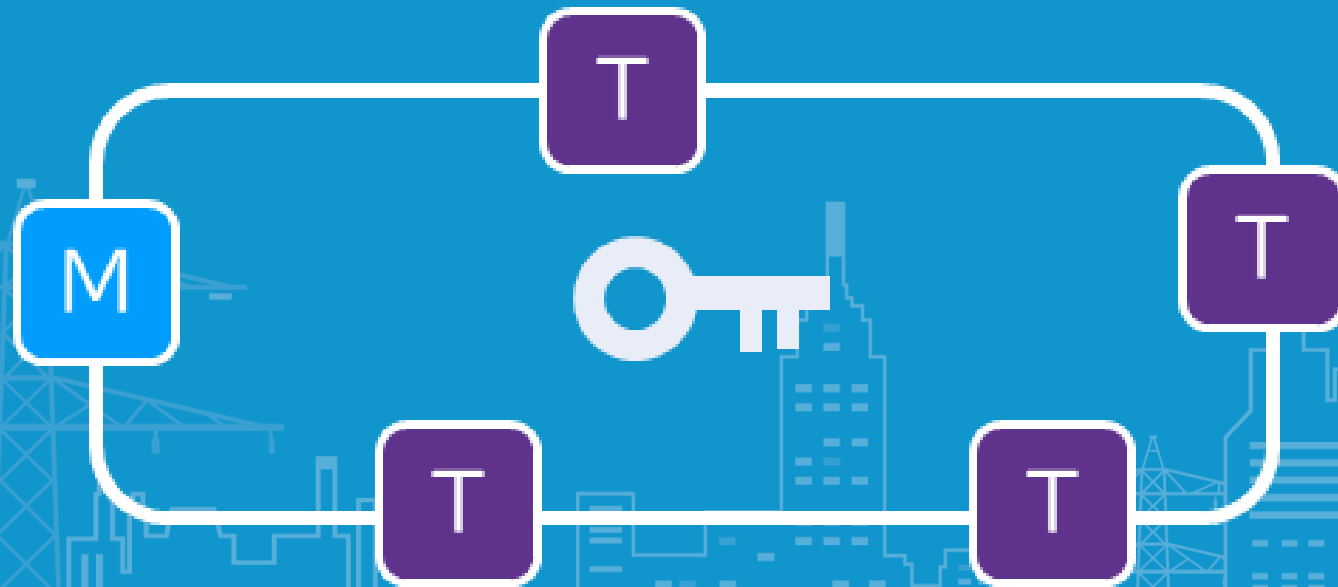
Function: Network Components

- Requires 1 Master, All Terminals are associated with its Master.
- Auto Master transition is available.



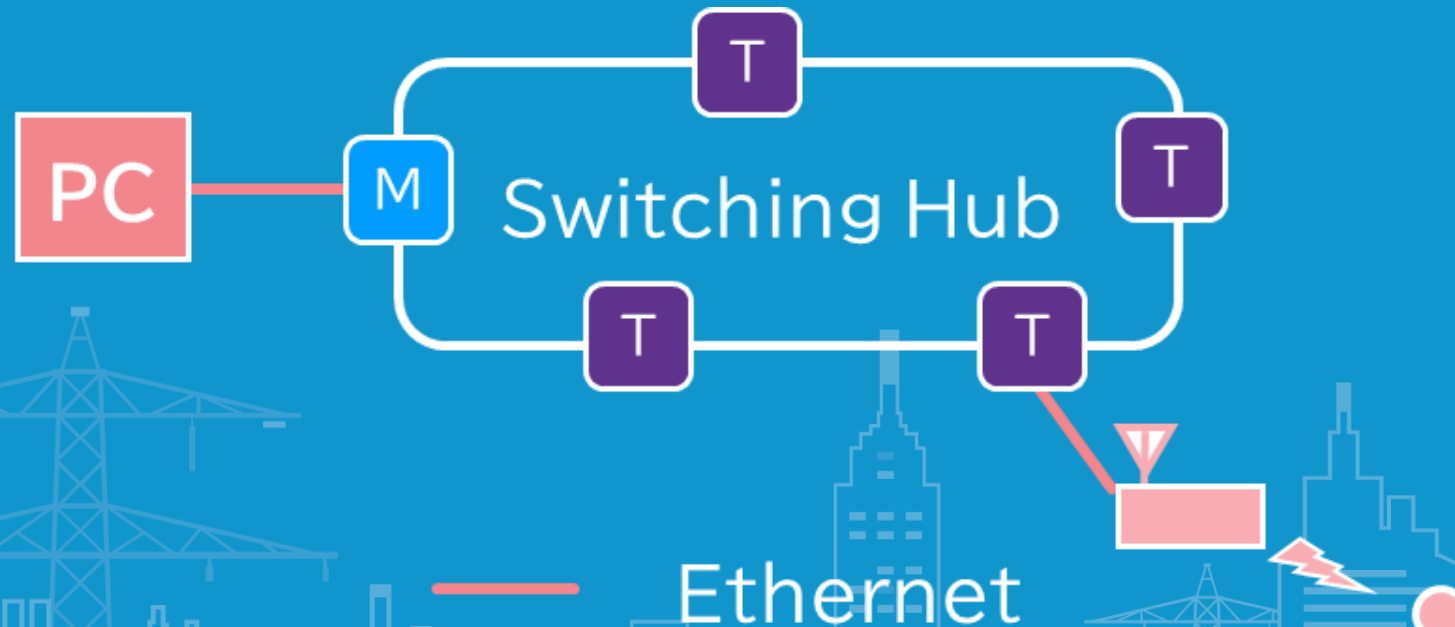
Function: Security

- Master manage secure authentication and deliver AES128 key for communication.



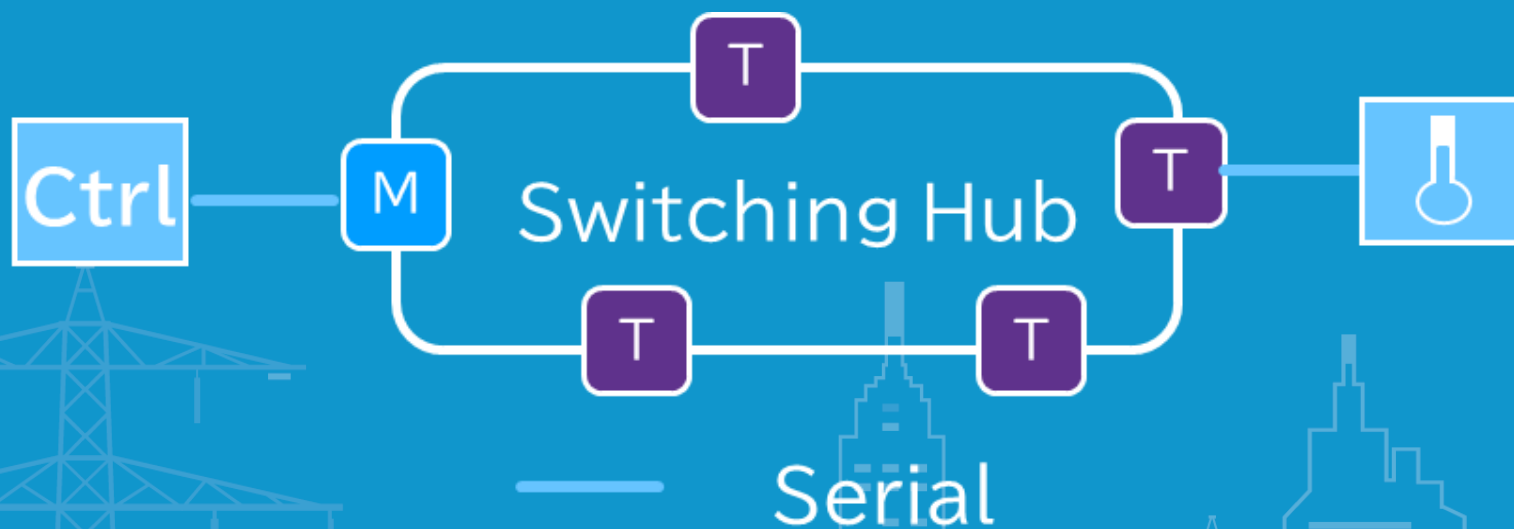
Function: Ethernet Bridge

- Act as L2 bridge



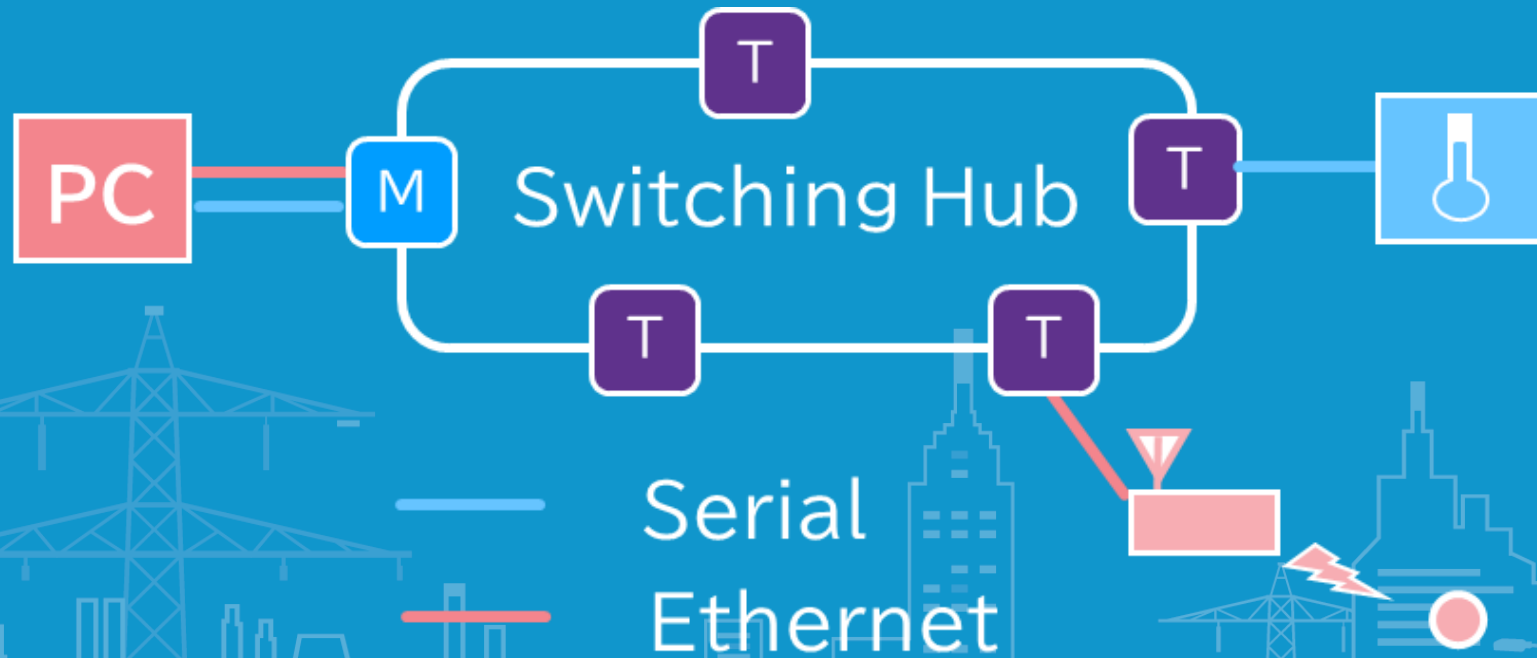
Function: Serial Bridge

- Serial nodes can communicate over PLC network



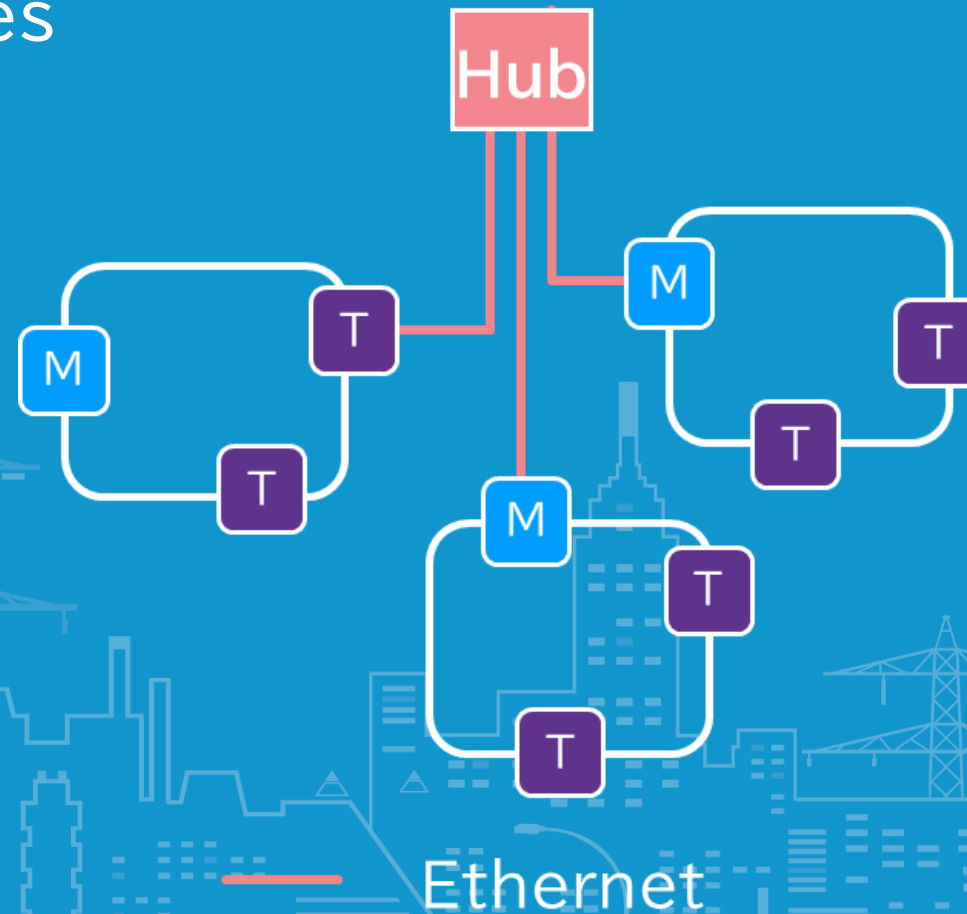
Function: Ether & Serial Bridge

- Both Ether and Serial can bridge same time.



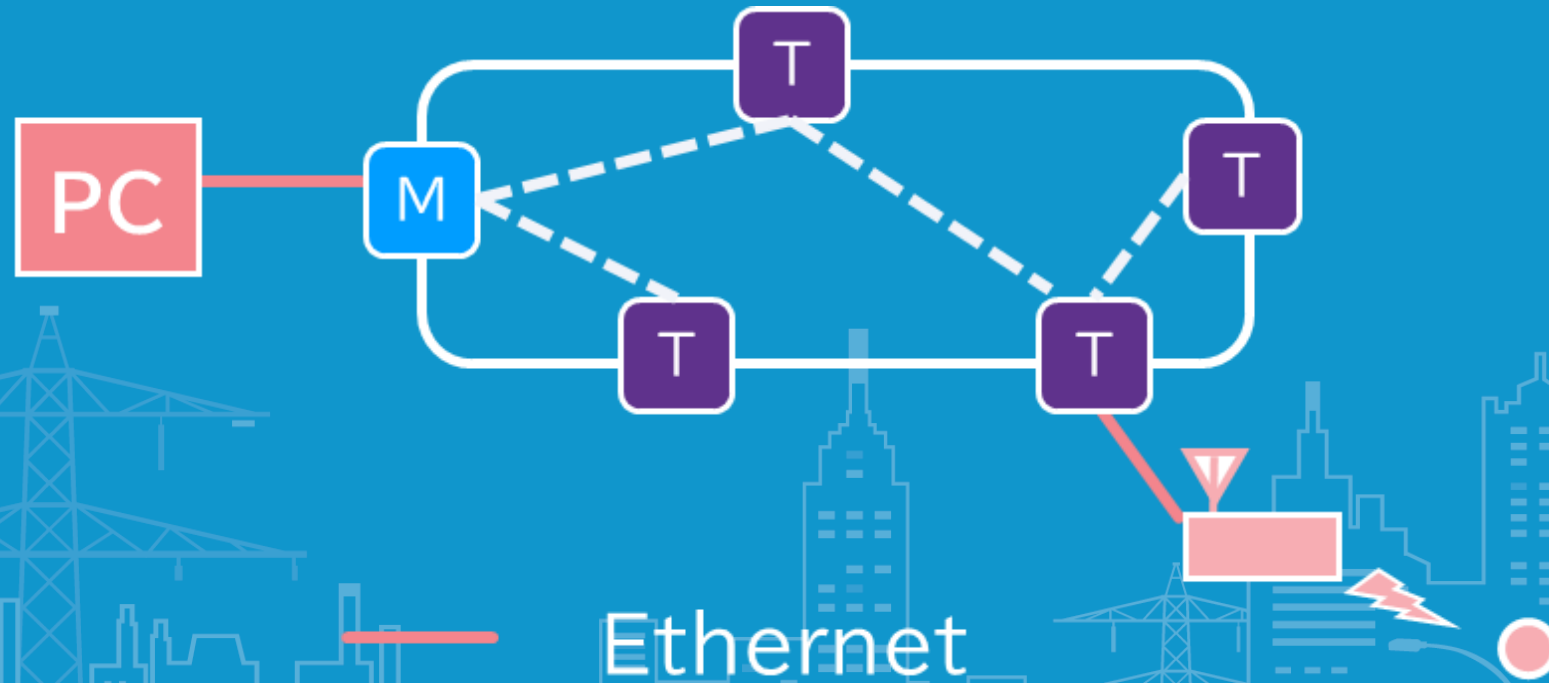
Function: Network Bridge

- Multiple PLC networks can be connected and expanded by using L2 switches



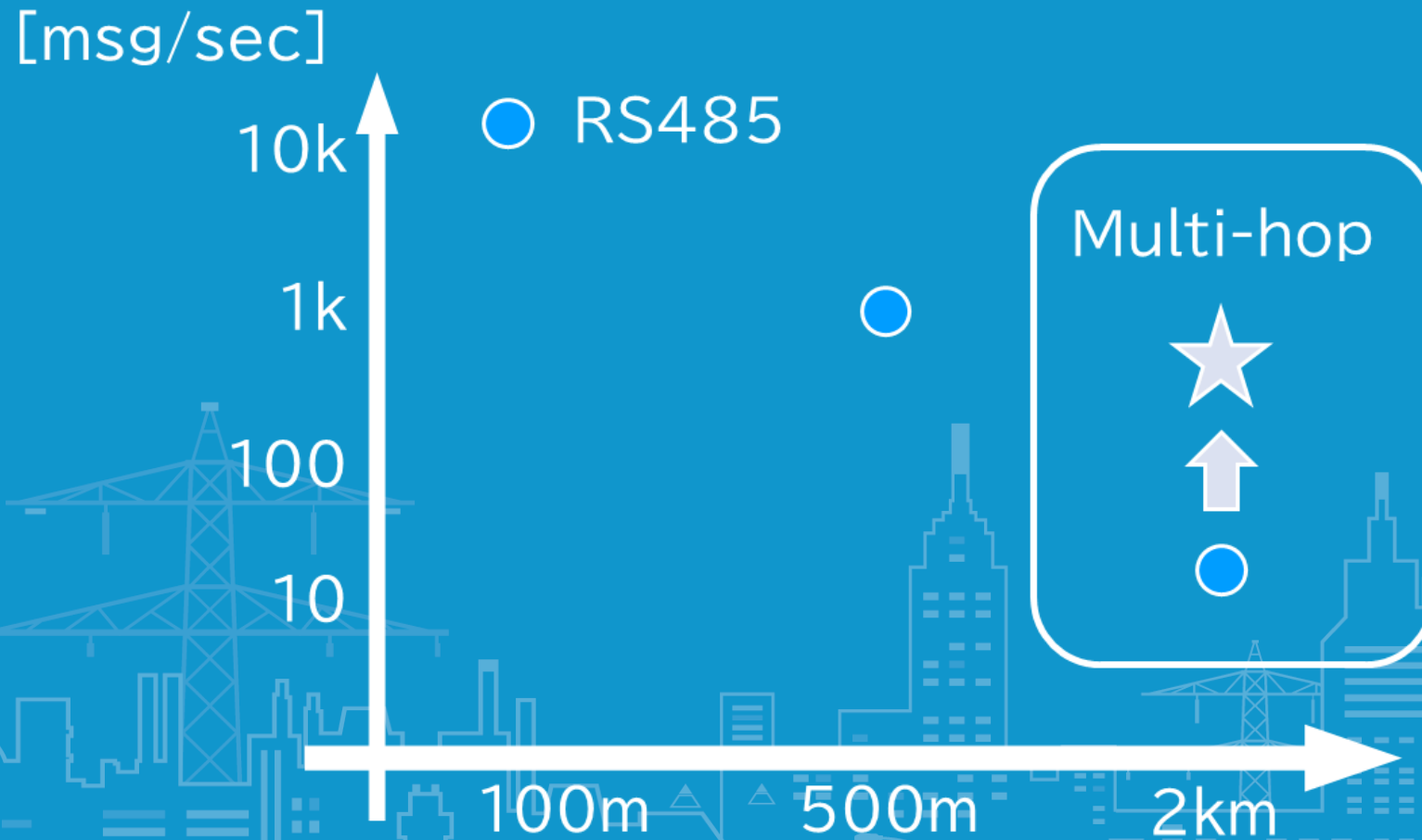
Function: Multi-hop

- Routing is automatically done.



Multi-hop upgrade RS485 network

- increased bandwidth more than 10x than existing RS485 cable

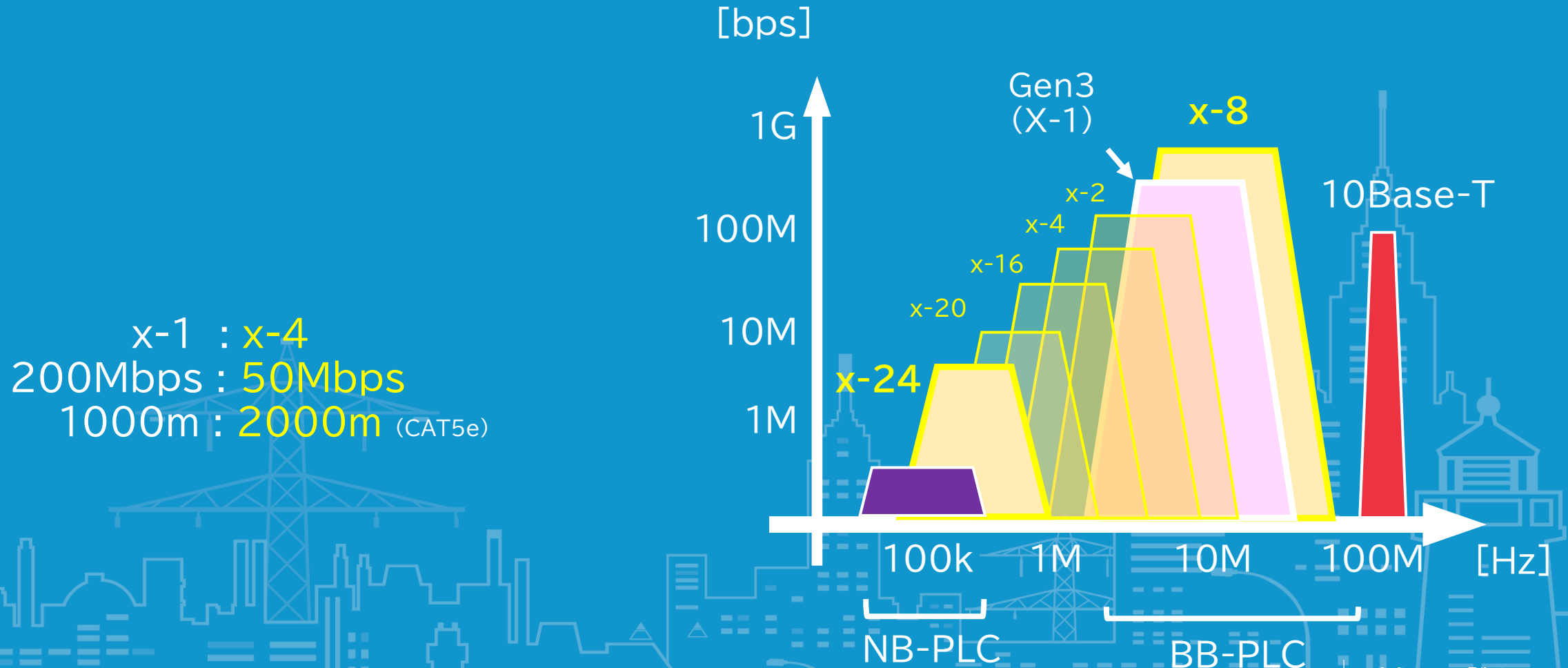


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New Feature : Flexible Channel

- Can select for customer application



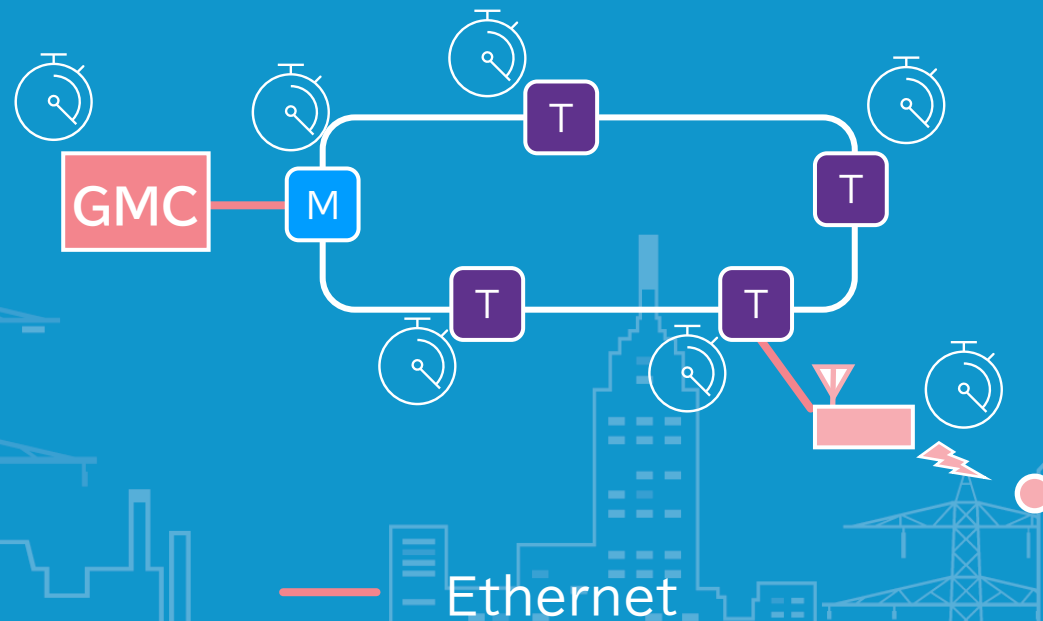
Build Faster Networks

MegaChips

ROG-SSA-241112

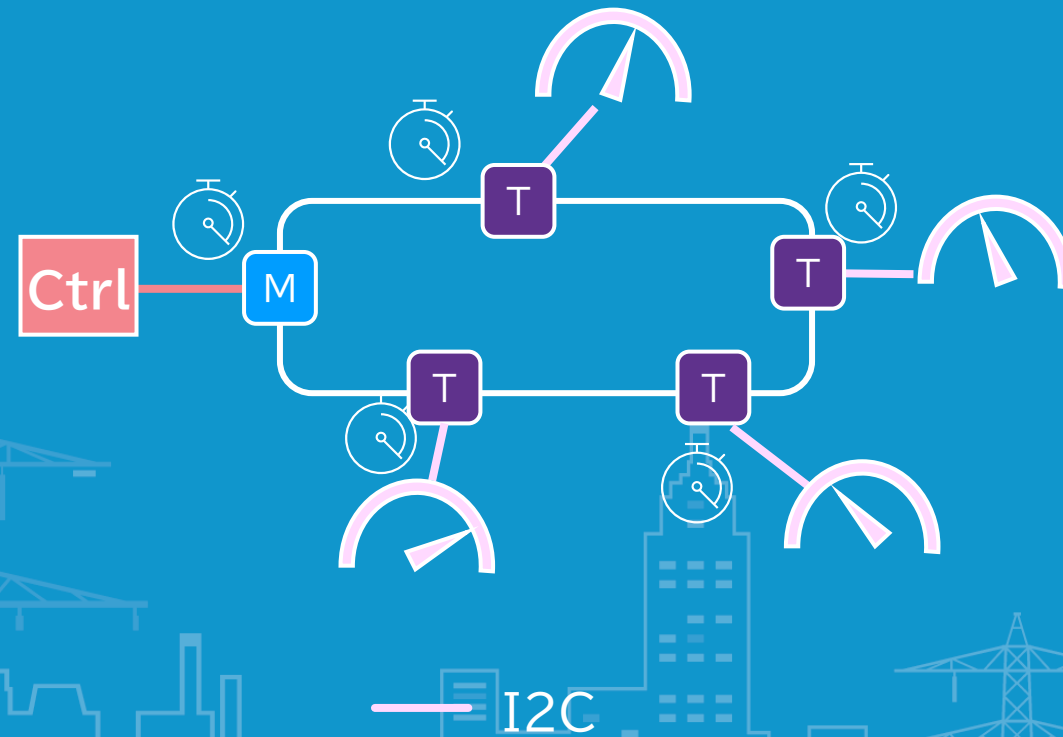
New Feature: Time synchronization (PTPv2)

- Micro second level time synchronization.



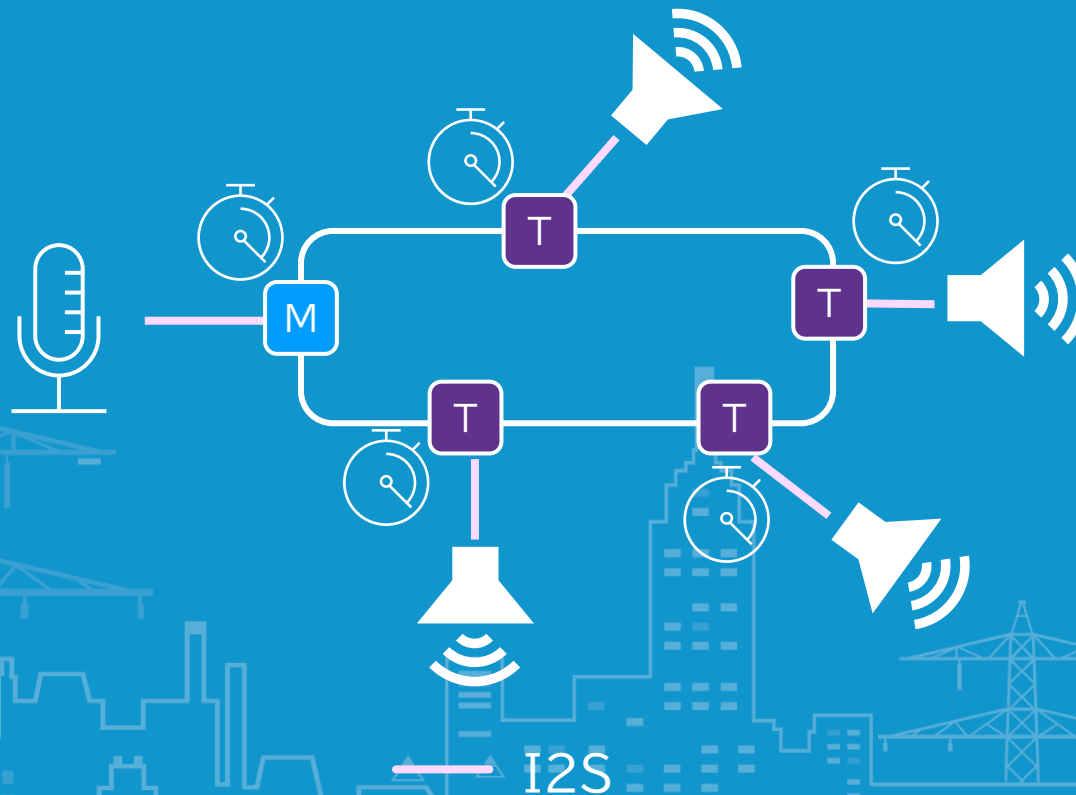
New Feature: Structural Monitoring

- Support I2C sensors



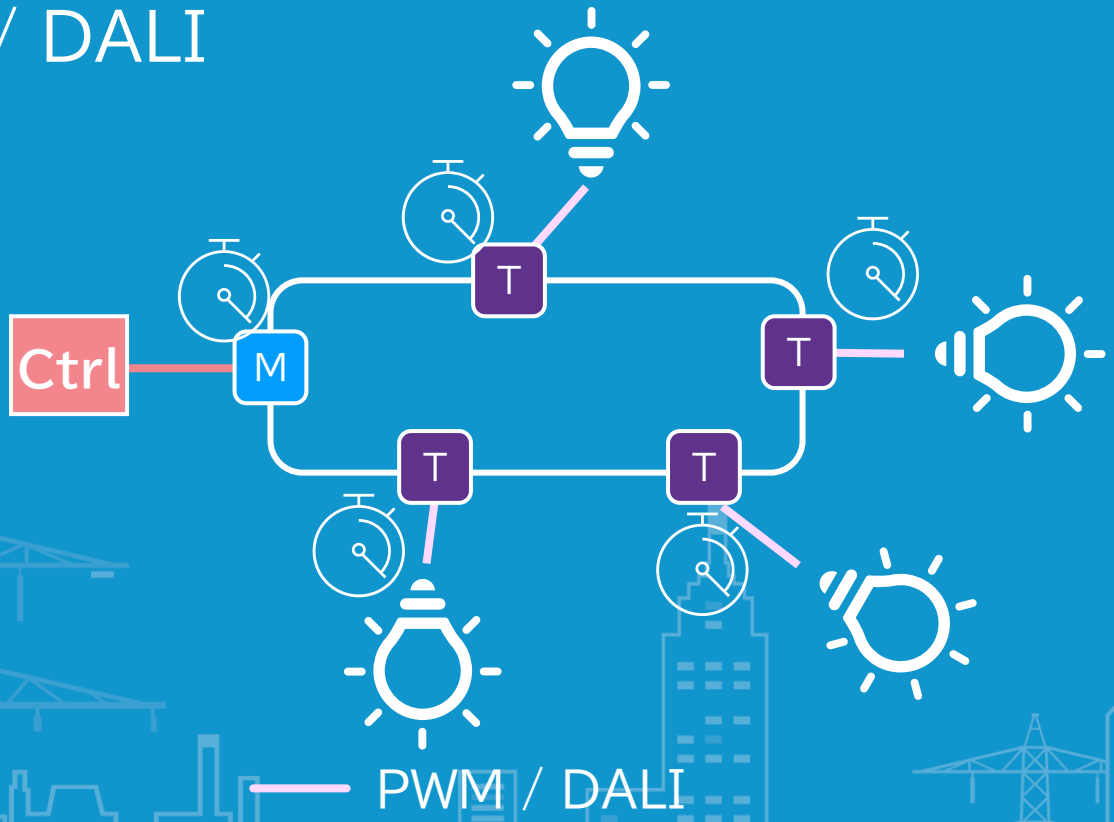
New Feature: AoIP (Audio over IP)

- Support Digital Audio (AES67)



New Feature: Lighting control

➤ Support PWM / DALI



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Evaluation Kit

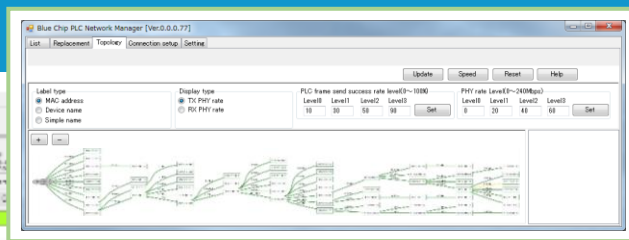
- EVK is ready for field trial on AC, DC, 2wire, and Coax.



Network Management Tool

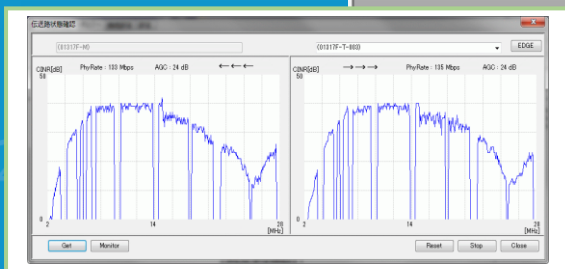
➤ BCPNM can manage hundreds of devices.

Topology

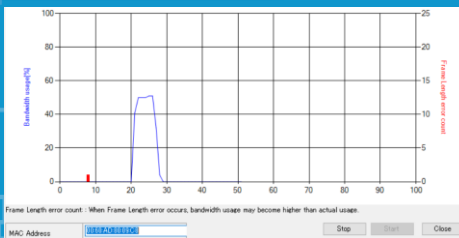
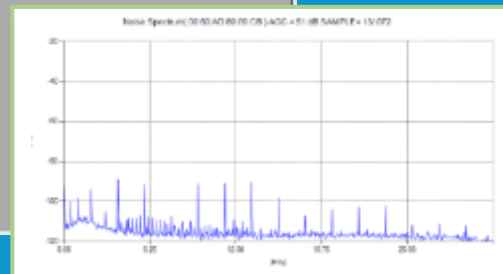


No.	Module name	PLC Address	Module name
1	PLC001-01	PLC001-01-01-01-01-01	
2	PLC001-02	PLC001-02-01-01-01-01	
3	PLC001-03	PLC001-03-01-01-01-01	
4	PLC001-04	PLC001-04-01-01-01-01	
5	PLC001-05	PLC001-05-01-01-01-01	
6	PLC001-06	PLC001-06-01-01-01-01	
7	PLC001-07	PLC001-07-01-01-01-01	
8	PLC001-08	PLC001-08-01-01-01-01	
9	PLC001-09	PLC001-09-01-01-01-01	
10	PLC001-10	PLC001-10-01-01-01-01	

CINR



Noise Level

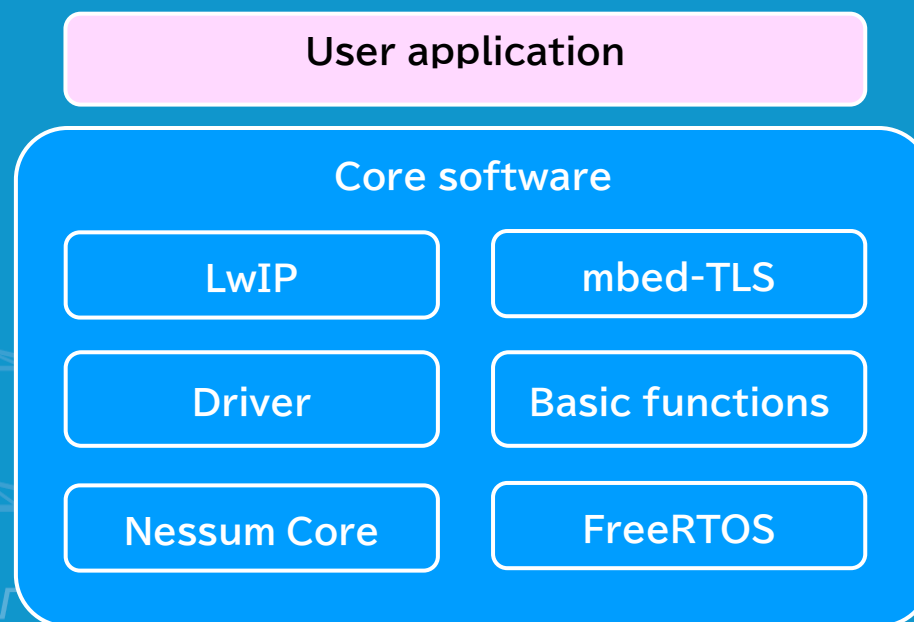


Traffic monitoring

Build Faster Networks

Software Development Kit (SDK)

- Customer can develop own function.



Support

- We have experiences supporting many types of applications.

Smart Meter



Doorbell



HVAC



Solar Panel



Street Lighting



Summary

- Nessum offers flexible channels fit to customer applications
- Low power consumption, small BOM and small size
- EVK is ready for your evaluation.



Available
NOW!

For more information go to:
<http://hd-plc.megachips.com/hd-plc/>

Thank You

Aiming for standard adoption
in smart city communication infrastructure

Thank you

NESSUM

EU Day 2024

