LonWorks Technology Transition – Frequently Asked Questions (FAQ)

Prepared by LonMark International

1. What is happening with the Neuron® Chip and LonWorks technology?

Renesas recently announced the discontinuation of the remaining Neuron family of devices, which serve as the core microcontroller for many LonWorks-based products. This marks a pivotal change for the LonWorks ecosystem, as the Neuron Chip has been foundational to device communication for over three decades.

2. Why is this important for the LonWorks community?

The Neuron Chip has long been the standard for native LonWorks devices. Its discontinuation affects developers, integrators, OEMs, and end users who rely on LonWorks networks for building automation, smart cities, transportation, and industrial systems.

3. Does this mean LonWorks is going away?

Absolutely not. LonWorks is a protocol, not a chip. While the Neuron family is sunsetting, there are multiple viable paths forward—software-based stacks, alternative microcontroller solutions, and new development tools—all of which support the continued use and expansion of LonWorks networks.

4. What options exist for continuing LonWorks product development?

LonMark International has identified several development paths, including:

- Open-source LON protocol stack implementations.
- Software-based Neuron alternatives deployable on standard microcontrollers (e.g., ARM).
- Third-party solutions and licensing models compatible with existing LonWorks networks. Details and updates are available on the LonMark Development Resources page.

5. Will existing LonWorks devices still work?

Yes. Installed LonWorks networks and devices will continue to function as usual. The protocol is still fully supported.

6. Is there a last-time-buy opportunity for Neuron Chips?

Yes. Renesas has announced a last-time buy window. Stakeholders are encouraged to evaluate long-term needs and plan accordingly. Visit our website for the latest updates.

7. How is LonMark International supporting members during this transition?

LonMark International is actively:

- Maintaining a live Transition Resource Hub on its website.
- Hosting informational webinars to guide developers and integrators.
- Coordinating with ecosystem partners to support alternative development models.
- Facilitating collaboration through technical working groups

8. What are the benefits of this transition?

While the end of the Neuron chip era may pose short-term challenges, it opens exciting opportunities:

- More flexible hardware choices
- Open development models
- IoT-aligned and cloud-friendly architectures
- Increased community innovation

9. How does this affect LonMark certification and interoperability?

All future development options will remain compatible with existing devices implementing the LON protocol and following the LonMark interoperability guidelines. Devices developed using supported alternative LON stacks can still be LonMark Certified, ensuring consistency and quality across the ecosystem.

10. What is LonMark International doing to ensure long-term continuity and innovation?

As the recognized authority in LonWorks technology, LonMark International is committed to:

- Defending the integrity and legacy of the protocol
- Driving forward-looking solutions for modern deployment models
- Partnering with members and the industry to preserve and grow the LonWorks installed base

11. Where can I learn more or get involved?

- Visit www.lonmark.org for news and updates
- Subscribe to the newsletter
- Join webinars and working groups
- Contact info@lonmark.org for specific questions or collaboration opportunities

12. What is the future of LonWorks commissioning and integration tools?

Multiple vendors continue to support these tools:

EnOcean

- OpenLDV: Windows driver for the U10 USB interface, customizable for other LON interfaces
- IzoT Net Server: LON network middleware with LON/IP support (successor to and compatible with LNS Server and OpenLNS Server)
- IzoT CT: Modern commissioning tool (successor to and compatible with LonMaker and OpenLNS CT)
- SmartServer IoT, SmartConnect, SmartSupervisor: multi-protocol edge servers with LON and LonMark IAP integration

ABB

- NL220 : Generic LNS manager tool
- NLFacilities : LNS zoning graphical manager tool

SafeSquare

- ALEX – LON commissioning and integration tool

These tools provide continued support for LON system integration, commissioning, maintenance, monitoring, and control applications.

13. Are these tools compatible with Windows 11?

Yes. The latest versions of OpenLDV, IzoT Net Server, and IzoT CT are tested and compatible with Windows 11.

14. Will LonMark coordinate alternatives if tool support changes in the future?

Yes. LonMark International recognizes the strategic importance of these tools to the community and is prepared to facilitate:

- Member engagement to assess tool usage and future requirements
- Technical coordination around open-source alternatives or new toolchains
- Strategic partnerships to secure ongoing support
- Exploratory efforts into community-based development models, should the need arise

We are building a working group to formalize this process and welcome participation from all stakeholders.

15. Who assigns and manages Neuron IDs?

Neuron IDs were replaced by MAC IDs for LON device unique IDs upon publication of EN 14808-7 in 2019, and ANSI/CTA 709.7 in 2018 . All the Renesas Series 5000 and Series 6000 chips have MAC IDs and do not have Neuron IDs. LON/IP devices such as the EnOcean SmartServer use MAC IDs instead of Neuron IDs for their LON/IP interfaces. MAC IDs are assigned and managed by multiple vendors, coordinated by the IEEE Registration Authority.

Babi-LON uses a reserved range of unique IDs included in the M0 Layer 2 management.

For FetLON and the open-source LON stacks, a device developer is free to choose their source for unique IDs. They can use LON standard-compliant Neuron IDs or MAC addresses. They can also use chip serial numbers or their own serial numbers if interoperability is not required.

16. Which vendor supplies terminators?

A LON FT terminator is a single 52.3 Ω resistor. Resistors are widely available from multiple vendors through all major electronics component distributors.

17. Will certification become mandatory in the future like BACnet BTL?

LonMark certification by LonMark Intenational is currently optional and remains unchanged, just as BACnet certification by BACnet BTL is optional. LonMark International maintains a list of LonMark certified products at www.lonmark.org/products. BACnet International maintains a list of BTL certified products at http://www.bacnetinternational.net/btl. LON and BACnet certification is by product. For example products based on the Babi-LON platform have been BTL certified for products from Occitaline, Arcom, and ABB.

18. Can memory mapping be used for configuration properties?

Yes. The LON protocol supports memory-mapped configuration properties (CPs), accessible via random access.

In Babi-LON, the memory map is structured for CPs, protected application code, and protected firmware code.

FetLON uses different memory segments for configuration network variables, CPs and self- documentation. The LON memory read/write commands can be adapted to access CPs.

19. Can IzoT CT or LonMaker be used to load programs onto LonWorks devices?

Yes. IzoT CT is the current version of LonMaker.

For Babi-LON, an LNS plugin is available for individual or multiple program downloads.

Since FetLON supports a wide range of different processors, there is no common method to program a FetLON device. For a specific target platform, it would be possible to create an LNS Plug-In upon customer request. Ideally, the programming method would make use of the platform's (secure) bootloader.

20. What is the extension of the application file?

According to IzoT CT documentation, supported file extensions include .ndl, .apb, and .nxe.

21. Who owns the trademarks (LonMark, LonWorks, etc.)?

- LonMark: Owned by LonMark International
- LonWorks, LonTalk, LonScanner, IzoT: Owned by Renesas

22. Can LonMark provide a supplier list for components like terminators or transformers?

Yes. LonMark maintains a list of LonWorks-related component suppliers at: www.lonmark.org/development-resources

With Babi-LON, all chips are available via electronic distributors.

23. Who assigns the version_number of ND_query_status_response messages?

The LON protocol stack version number is assigned by the OEM building the device stack. This is similar to how BACnet stack version numbers are managed.

24. Is TP/XF-1250 supported on Babi-LON or FetLON?

Support for TP/XF-1250 is in development for the FetLON stack. FetLON shields for the EVK will be available soon.

TP/XF-1250 is not supported by the Babi-LON platform.

25. Is TP/XF-78 supported on Babi-LON or FetLON?

Support for TP/XF-78 is in development for the FetLON stack

TP/XF-78 is not supported by the Babi-LON platform.

26. With the continued availability of LonWorks solutions based on the Babi-LON platform, the FetLON stack, and the open-source LON stacks, why are some vendors discontinuing their LON products?

Many vendors received very short notice of the LON component discontinuations from Renesas. Renesas announced a requirement for their customers to place last-time-buy orders by September 30, 2025. Many LON product vendors are just learning of the alternate solutions for continuing their LON product lines in July 2025. The vendors that choose to redesign their products using one of the alternative solutions will need much more than two months to design and release their new products. There will likely be a gap between discontinuation of current LON products and the availability of alternative LON products. Anyone requiring LON products during the gap should place last-time-buy orders with their suppliers to ensure continued supply.