lumenradio

How to Integrate Wireless in 4 Simple Steps

The Roadmap to Becoming a LumenRadio OEM

From Idea to Integration

At LumenRadio, we've helped world-leading manufacturers integrate wireless successfully into their products. From the first conversation to product launch, your journey with us will be straightforward, fully supported and designed to get you to market at speed.

1 INTRODUCTION

Exploring the Opportunity

Goal: The first meeting clarifies your products and identifies the best wireless solution, showing how connectivity can add value to your offering.

2 EVALUATION

Proof of Concept, Testing and Validation

Goal: You verify LumenRadio's technology through a hands-on Proof of Concept using our evaluation kit.

3 PREPARATION FOR PRODUCTION

Finalizing the Product Design

Goal: After approving the PoC, you move into preparing a production-ready product design, with LumenRadio supporting as needed.

4 LAUNCH

Going to Market

Goal: LumenRadio supports you through certification, production start, and a smooth commercial launch.

AVERAGE PROJECT DURATION: **13 months**

Why Choose LumenRadio?

SPEED AND SIMPLICITY

- **Low investment, high return** – Easy integration with minimal internal resources or engineering effort.
- **Launch in months, not years** – Faster time-to-market thanks to globally pre-certified modules.
- **Integration without the headache** – Clear, predictable implementation steps.

SCALABILITY AND INTEROPERABILITY

- **Connected by trust** – Join a growing ecosystem of interoperable solutions backed by trusted global brands in demanding industries.
- **Future-proof design** – Go wireless with Modbus, BACnet and DALI with readiness for evolving standards. Full interoperability across wired and wireless systems for each of these protocols.

PROVEN RELIABILITY

- **Wireless that just works** – Integrate a patented wireless technology built on years of expertise from delivering wireless which works in the toughest environments.
- **Your partner at every phase** – Hands-on support from the first meeting to product launch.
- **Expertise when you need it** – Direct access to our wireless specialists in Sweden, Germany, USA and China.

BACKED BY TRUSTED GLOBAL BRANDS

Aputure® · ASTERA · AYRTON · CHAUVET PROFESSIONAL

PROLIGHTS · ROBE® · Honeywell · Munters

PRODUAL · S+S REGELTECHNIK® · SKF® · Swegon

STEP 1: INTRODUCTION

Exploring the Opportunity

GOAL
Understand your products and determine the right wireless solution for your portfolio.

This first meeting sets the foundation for our partnership. LumenRadio's team learns about your products and you learn how wireless connectivity can add value to your offering.

Together we:

- Map your product portfolio and target protocols (DALI, BACnet, Modbus)
- Discuss technical fit, application areas and integration possibilities
- Provide access to our open documentation and evaluation resources

OUTCOME
A shared understanding of the opportunity and what your wireless integration journey will look like.

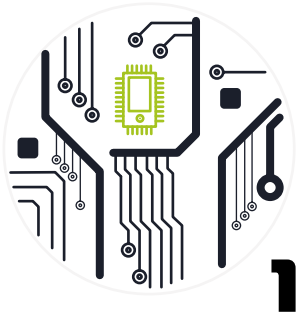
STEP 2: EVALUATION

Proof of Concept, Testing and Validation

GOAL
You validate LumenRadio's technology and its performance in your application.

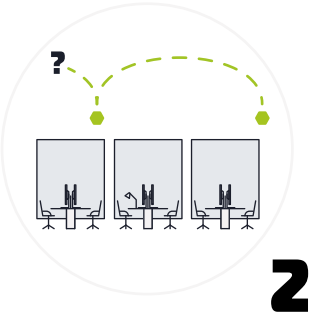
Your R&D team performs a hands-on Proof of Concept (PoC) using a LumenRadio evaluation kit. We supply the tools, you test the technology.

You perform:



Prototype PCB redesign

- Finding space for the RF module on your existing PCB
- Creating 20–30 prototype units for lab testing



Testing & measurement

- Range testing inside buildings
- Reliability evaluation
- Mesh performance

Analysis of test results

- Together, we review performance, design considerations and potential adjustments

What we provide:

- Complete documentation for setup and testing
- Direct access to engineering support
- Guidance on antenna placement, network configuration and evaluation methodology

OUTCOME
A verified Proof of Concept based on real tests – demonstrating that our wireless technology meets your technical requirements and is ready for product integration.

STEP 3: PREPARATION FOR PRODUCTION

Finalizing the Product Design

GOAL
Translate the successful PoC into a production-ready product design.

Once your internal teams approve the PoC results and decide to proceed, you enter your product preparation phase. This is your internal process – and we support where needed.

You perform:

1

Final PCB redesign

- Updating the hardware for series production
- Ensuring FCC/CE-ready RF design and antenna placement

2

System design & product specification updates

- Enclosure, UI, firmware and feature set

3

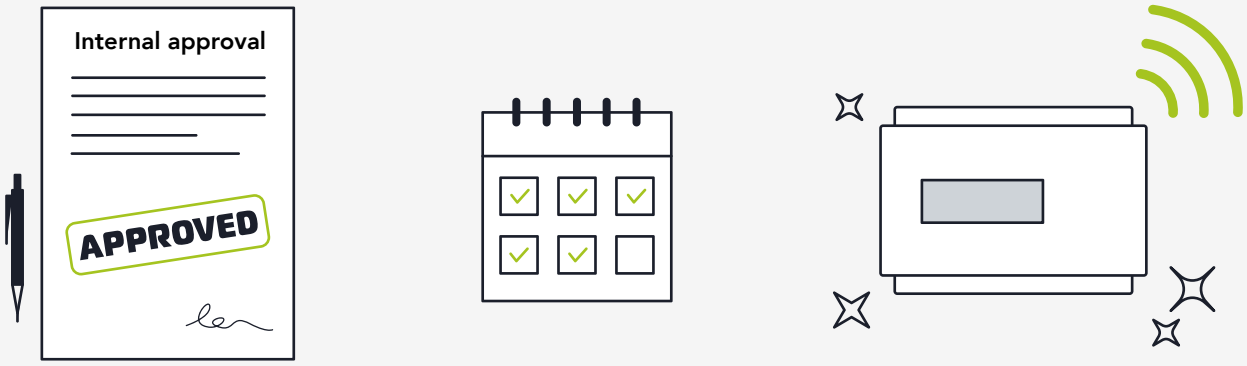
Internal approvals for production

- R&D, Product Management, Operations and Commercial teams all involved

We support with:

- Certification guidance (relevant documents, EMC information, module approvals)
- Final technical clarifications
- Commercial alignment on pricing, volume planning and supply

OUTCOME
A production-ready, wireless-enabled product fully prepared for series manufacturing.

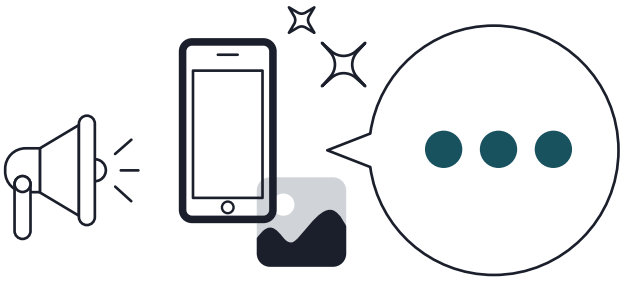


STEP 4: LAUNCH

Going to market

GOAL
Ensure a smooth path to certification, production start and commercial launch.

With the product ready for series manufacturing, LumenRadio supports you through final preparation and market introduction.



We provide:

- Reliable module deliveries with short lead times (typically 4–5 weeks)
- Support for CE certification submissions
- Marketing collaboration (messaging, use cases, sales arguments, press releases)
- Continued technical support throughout rollout and beyond

OUTCOME
Your wireless product is launched to market – backed by proven LumenRadio technology and a long-term partnership.

WIRELESS MODULES FROM LUMENRADIO

We got you covered

Our range of OEM RF modules can be directly integrated into your device to make it wireless.

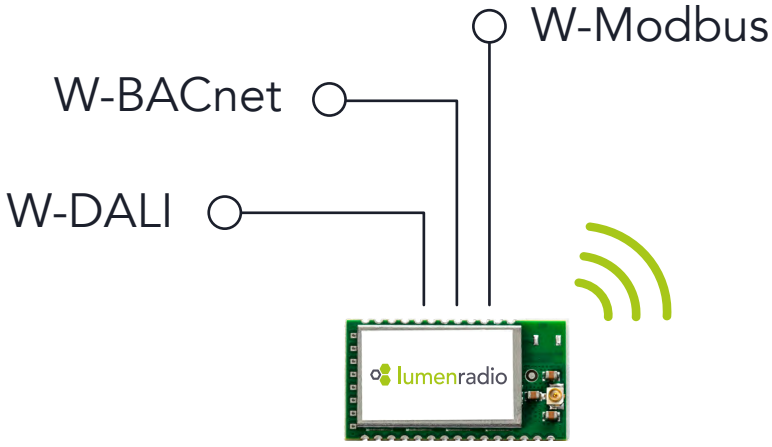
We have wireless alternatives for the BACnet, DALI and Modbus cable protocols.

NEXT STEPS

Book a consultation

If you are interested in starting a conversation about the integration of one of our radio modules into your product, then please reach out to Corc and book a personal consultation.

Book a meeting



Here are some simple, copy-paste ready explanations of the wireless technology features provided by LumenRadio's RF modules.

Cognitive Coexistence

All of LumenRadio's wireless control solutions are built on a patented technology called Cognitive Coexistence. Compared to normal wireless systems, Cognitive Coexistence is "interference-immune", making far more effective use of the gaps on the overcrowded 2.4 GHz frequency band to ensure the signal always gets through.

Adaptive Frequency Hopping (AFH)

AFH automatically identifies channels which are in continuous use by other devices. LumenRadio's technology takes this to the next level. It constantly adapts to changing conditions on the network by measuring the quality of channels, identifying which are the best to use and hopping to the ideal channel when required.

It also does this in real-time – every 10 milliseconds – which means it constantly has the most accurate picture of where to transmit based on the most recent input from the devices in the network.

Wireless Mesh

LumenRadio's offers a unique wireless mesh technology. Unlike simple point-to-point connections, a mesh network allows every node to communicate with multiple others, creating a self-configuring, self-healing network. If one path is blocked, data automatically reroutes, ensuring high reliability and long-range coverage across an entire building.

LumenRadio AB
Johan Willins gata 6
416 64 Göteborg
www.lumenradio.com