The breakthrough technology that turns electrical circuits into robust digital control networks
The breakthrough technology that turns electrical circuits into an enhanced digital lighting control network.

**Modern control made simple**
Add digital control to legacy wiring and bring instant versatility and energy savings to projects

**No new wiring**
Eliminates expensive, time-consuming data wiring, saving up to 30% of install costs

**Stable and robust**
Filters out noise to create a completely stable digital control network

Use Lumentalk™ with:

- Lumencove® XT
- Lumencove™ Family
- Lumencove™ Family
- Lumenbeams™ Family
- Lumenbeams™ Family
- Lumenfacade™ Family
- Lumenfacade™ Family
- Lumenline™ Family
- Lumenline™ Family
Why Lumentalk?

Lumentalk™ allows building owners to instantly adopt digital lighting controls and seamlessly convert to LED.

Why digital control?
- Allows dimming with absolute accuracy down to 1% intensity.
- Enables a flexible control network that adapts as your lighting needs evolve. Redefine new zones instead of being limited by electrical circuits.
- Bi-directional communication allows data harvesting and enables intelligent awareness across a lighting network. Lumentalk fixtures can report data about their health, lifetime and status over time.

Why over power line?
- Electrical wiring is a pervasive infrastructure, present in virtually any modern structure. Power Line Communication takes advantage of this existing network, eliminating the need to install new cables and conduits.
- Free of a limited topology, Lumentalk provides parallel access to any device on the network from any location, simply by connecting to your power line.
- Where wireless communication competes for bandwidth with other technologies, power lines offer a predictable and unpopulated environment, with bandwidth potentials rivaling broadband. The result is 100% reliability for bi-directional digital communication.

The Lumentalk network
- A Lumentalk network encompasses every Lumentranslator, Lumenlink and Lumentalk-enabled fixture, which can see each other over a circuit, or a network of circuits.
- The network is defined as soon as two Lumentalk devices begin communicating. It can be expanded to multiple circuits, multiple phases or to the entire electrical infrastructure using Lumenlinks as a bridge.
- This connection means you can control any fixture from anywhere, and reconfigure how your fixtures are controlled digitally as needed and as often as you want.

How Lumentalk enhances digital control
- Lumentalk is designed to enhance existing controllers, not replace them. In addition to eliminating the need for control wiring, the Lumentalk network frees standard digital protocols, like DMX or DALI, from their inherent limitations.
- With Lumentalk, there is no need to group DMX fixtures by Universe. Lumentalk can manage multiple DMX universes transparently across the same network while still providing individual fixture control.
- Lumentalk provides a platform for multiple DALI loops, up to 32, to be joined together on the same network. This simplifies your system design, while allowing control of up to 1024 fixtures grouped in up to 512 zones.

A flexible network that adapts as needs evolve

1. Adding control
   - Dimmer/Controller

2. Gaining flexibility
   - zone 1
   - zone 2
   - zone 3

3. Expanding the network
   - zone 1
   - zone 2
   - zone 3

4. Project-wide control
   - Control Room
   - Daylight Zone 4
   - Dimmer/Controller
The Lumentalk System

Lumentalk technology has components that allow it to communicate with the fixture network.

Lumentalk-enabled luminaire

Lumentalk is available as an embedded feature in Lumenpulse luminaires or in other manufacturers’ luminaires through our Lumentalk licensing program. Simply select Lumentalk as a dimming option when ordering a luminaire.

Lumentranslator

Lumentranslator is the gateway for bringing lighting control to the Lumentalk network. It translates input coming from any control source – Triac, ELV, 0-10V, DALI or DMX – and converts it to a robust digital signal that is carried over the power line.

Lumenlink

Lumenlink is the bridge that carries Lumentalk communication across multiple circuits and phases, allowing for the creation of a seamless lighting control network across an entire project.
When to use Lumentalk

1. "I want to add control to my lighting installation, but I can’t add any new cabling."
   
   Cabling is often one of the most complicated aspects of adding control to a lighting installation, especially when retrofitting LED fixtures into existing architecture. Lumentalk uses your existing electrical cables to not only bring power to your fixtures, but also control. Simply connect your Lumentranslator and dimmer anywhere on your electrical circuit and instantly gain dimming control, down to 1% intensity.

2. "I’m already using a dimmer to control my fixtures, but I need more flexibility."
   
   There are many traditional lighting controllers that dim fixtures over the power line – ELV, TRIAC or a simple light switch – to name a few. However, these methods are limited by the electrical circuit – all the fixtures have to be controlled as one group. If you want separate control of fixtures, a new electrical circuit must be added. This can be costly, and must be repeated each time your lighting needs change.

   With Lumentalk, our digital control system allows you to group and regroup fixtures as many times and in any configuration you can imagine. Adding new control zones is as simple as connecting your controller anywhere on your electrical circuit. This can be an off the shelf dimming slider, a daylight sensor, or DMX controller – the possibilities are endless.

3. "I want project-wide control, but without the cost and complexity."
   
   Project wide networks offer amazing capabilities for energy savings and intelligent control, but they can be complicated to design and expensive to implement.

   Using Lumentalk, you can create a project wide digital control network, connecting your fixtures and controllers together without adding any new cabling. This allows you to step beyond the boundaries of control circuits and data loops, controlling up to 1024 fixtures. Location and distance become irrelevant — with this extended network in place, it is possible to access any fixture from anywhere on the network.
The Lumenlink is used to connect multiple phases or circuits to create a single, seamless system. It is the phase router that ensures that each control panel or dimmer is capable of controlling the entire network regardless of how many phases or circuits are being used by lighting fixtures. The Lumenlink is the device that makes Lumentalk a completely scalable technology ideal for both small and large installations.

Each dimmer or control panel used in a project requires an electronic component called a Lumentranslator. The device translates the input signal (either DMX, 0-10V, TRIAC, DALI or ELV) and converts it into a robust digital signal that can be used over the entire power line. Each Lumentranslator on a network can be accessed to commission and address the entire system, and can be used as either a local or a global control.

Lumentalk power line communication is a control option available in Lumenpulse fixtures, and can be specified in the fixture ordering code as an alternative dimming option. Lumentalk control is best suited for white light installations where the cost of having to rewire for additional control cabling is prohibitive.

**Easy step-by-step ordering**

**STEP 1** Specify the Lumentalk™ dimming option when ordering Lumenpulse lighting fixtures.

**STEP 2** Determine how many control panels or dimmers are required and which protocol each uses.

- Lumentranslator™ DMX
- Lumentranslator™ 0-10V
- Lumentranslator™ TRIAC
- Lumentranslator™ DALI
- Lumentranslator™ ELV

**STEP 3** Do I need Lumenlink™ in the project?

- The installation includes multiple circuits **YES**
- The installation is limited to a single circuit **NO**
### Specifications

#### Electrical
- **Power consumption / Voltage input range**: 10W / 120-277V AC
- **Compatible input control signals**: 0-10V, DMX, DALI, ELV, or TRIAC
- **Compatible dimmers**: Consult our website for a list of compatible dimmers.

#### Physical
- **Dimensions (Length x height x depth)**: 4" x 4" x 2 15/16" / 102mm x 102mm x 56mm (fits in standard double gang box)
- **Wires**: Wire gauge: #14-20 power, #18-24 DMX input
- **Cover plate finish**: White, black or stainless steel finish
- **Operating temperatures**: 25°C to 50°C / 77F to 122F
- **Environment**: Dry location only

*Please consult our website for the latest updates.*
FAQ

Q: What is the Lumentalk network?
A: Lumentalk network is a single electrical circuit, or linked electrical circuits all sharing the same Lumentalk information. It is similar to an office communication network, where all devices can speak with and listen to any other device on the network. In order to expand your network, simply use a Lumenlink to link more electrical circuits into your network.

Q: What are Lumentalk’s capabilities in terms of control and distances?
A: On a single Lumentalk network it is possible to control up to 1024 fixtures, grouped into up to 512 different zones. You can connect up to 32 independent controllers on the same network – controlling any fixture from anywhere on the network.

Q: What are the performance capabilities of Lumentalk-enabled fixtures?
A: Lumentalk allows dimming of fixtures down to 1% intensity with communication speed 2.5 times faster than DALI.

Q: How do you address and group fixtures into zones once on the Lumentalk network?
A: Lumentalk allows fixtures on the same network to be grouped into individually controllable zones — assigned to controllers on that network. Through the use of the Lumentalk LumenID software, you can discover your fixtures, identify their location and drag and drop them into your zones. For DMX addressable fixtures, simply assign DMX addresses to your fixture using the same interface.

Q: Can Lumentalk be used with non-Lumenpulse fixtures?
A: Yes. Lumentalk technology is open to other manufacturers through our Lumentalk licensing program. For a current list of compatible manufacturers, please contact your Lumenpulse representative, or email us at info@lumenpulse.com

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Q: How do I determine how many Lumentranslators or Lumenlinks are needed?
A: Lumentranslators are the gateway to the Lumentalk network – they provide your lighting control point access to the network. A Lumentranslator is required for each individual dimming controller on your network. In addition, a single Lumentranslator can translate up to 48 channels of DMX control onto the network.

Q: Is Lumentalk compatible with voltages and electrical standards in my region?
A: Yes. Lumentalk has been developed for universal compatibility worldwide. It has a functional range from 100-277VAC 50/60Hz. Lumentalk is fully compliant with FCC and CENELEC communication standards to ensure problem free integration with your project’s existing electrical system.

Q: Will Lumentalk work with my existing control system?
A: Yes. Lumentalk is a lighting control network designed to work with the full range of lighting control protocols. Whether your system makes use of a few sensors and dimmers, or is an advanced intelligent control system, Lumentalk can provide the gateway required to bring control to your fixtures. For information on which controllers are certified as compatible with Lumentalk, please contact your Lumenpulse sales representative or write us at info@lumenpulse.com.

Q: How do I use Lumentalk to control my RGB or RGBW fixtures?
A: Currently not. Lumentalk is designed to facilitate control of architectural white lighting and Dynamic White lighting. Control for color changing fixtures is not currently supported.

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Lumenlinks are designed to expand your Lumentalk network to meet your project needs. Use a single Lumenlink to branch up to 3 circuits or 3 phases together for coordinated control across your project. Up to 3 Lumenlinks can be used on a single Lumentalk network.

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Q: Won’t electrical noise be an issue and can it affect other devices on the powerline?
A: No. One of the great strengths of Lumentalk is that it employs patented technology for powerline communication, including noise filtering and signal modulation designed to coexist with the noisiest components on your existing electrical circuit. Being compliant with FCC and CENELEC, Lumentalk is guaranteed to not interfere or be interfered with by parallel powerline control systems.

Q: Lumentalk is bi-directional. What information can I collect from Lumentalk fixtures, and how can I access it?
A: Lumentalk fixtures store and communicate information about their configuration, temperature, lifetime and health. Simply connect to the Lumentalk network and query your fixtures to collect this information. For more details on how this works, please contact your Lumenpulse sales representative or contact info@lumenpulse.com

Iain Ruxton, Speirs + Major

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