With dense placement of luminaires and sensors, lighting can serve as the wired or wireless backbone of a building and even as part of its IT infrastructure.

What It Is

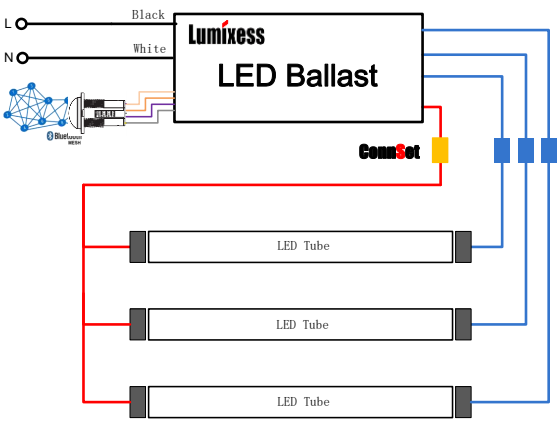
ConNexTube's Connected-Ready LED Ballast adds control and wireless integration without redesigning the fixture. Each ballast includes:

- **0–10V dimming** interface (industry standard)
- **Dim-to-Off** capability
- **12V auxiliary power (always-on)** to power wireless sensors or controllers

Together, these features turn any modular LED fixture into a network-ready node at minimal cost (without replacing the fixture or changing optics).

Why It Matters

- **Low system cost:** re-use existing linear fixtures; add connectivity only when needed.
- **Flexibility:** works with most 3rd-party wireless controllers and sensors.
- **Scalability:** start small, expand to building-wide control at your pace.
- **Simple labor:** standard 0–10 V wiring means no special training required.
- **Future-proof:** fixtures can act as part of the building's digital backbone, not just as lights.



How It Works

- **Dedicated LED ballast** drives the Type-C tubes.
- **Auxiliary 12V power** supports a plug-in sensor or wireless node.
- **0–10V dimming line** lets controllers adjust light levels or switch off entirely.
- Fixtures and sensors form a **wireless mesh network**, or connect to wired systems if required.

What Problems It Solves

- **Expensive integrated fixtures:** avoid replacing the whole luminaire just to get "smart" capability.
- **Complex installs:** skip proprietary wiring; stick to standard 0–10V.
- **Open ecosystem:** choose from a wide range of compatible sensors and controllers.
- **Easy commissioning:** sensors powered directly by the ballast's aux supply, no extra power packs.

Where This Helps Most

- **ESCOs and contractors:** deliver advanced controls at retrofit cost, not rebuild cost.
- **Facility managers**: add occupancy/daylight sensors fixture-by-fixture, no ceiling surgery, no extra wiring.
- **Distributors**: stock one ballast family that covers both ordinary dimming and full connected-ready jobs.
- **IT & building teams**: use lighting as dense, always-powered nodes in the digital infrastructure.

Typical Compatible Controls

Broad compatibility with 3rd-party sensors or controllers, including but not limited to:

- Casambi, Enlighted, Silvair, Osram OS-Net, Philips EasySense, etc.
- 0–10V wall dimmers, daylight harvesting sensors, wireless zone controllers.

At-a-Glance Value

- Control-ready from day one
- Lowest cost path to wireless
- Standard interfaces, no lock-in
- Upgrade fixture by fixture
- Lighting as digital backbone