

Specification Data	
Job Name	
Type	
Catalog #	
Comments	

PRODUCT OVERVIEW

The EMB24 is a 3rd generation, intelligent embedded wireless controller. As part of the SimplySnap ecosystem, it opens an exciting integration path for LED Luminaires.

The EMB24 interfaces with off the shelf PIR motion sensors, dry contact, momentary switches, or limited DALI-2 sensors to create a simplified and cost-effective solution for indoor and outdoor controls. The EMB24 can autodetect 0-10V or DALI-2 D4i Drivers to simplify installation.

Energy savings can be realized by deploying strategies using Motion, High End Trim, Schedules, and Daylight Harvesting. Pairing the EMB24 with a SimplySnap Site Controller makes it easy to comply with ASHRAE 90.1, Title 24, DLC NLC Indoor/Outdoor, and other energy codes today and in the future.

KEY FEATURES:

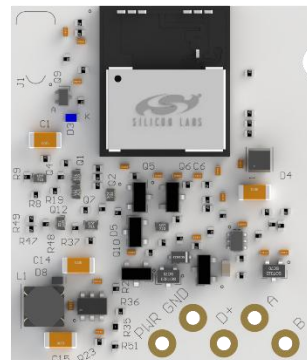
- Seamless SimplySnap Integration
- DC Powered – 12/24VDC Aux Power from LED Driver
- Autodetects 0-10V dimming or DALI-2 D4i
- DLC NLC Certification for both Indoor and Outdoor
- 2 Sensor Inputs
- Power Monitoring – DALI-2 D4i LED Drivers Only
- Power-On Dimming Test
- F Models – No Case, Bare Board
- X5 Model – Plastic Case (*Future Release*)
- IP Model – IP66 Plastic Case (*Future Release*)

0-10V DIM to OFF LED Drivers:

- LED Driver must support DIM to OFF functionality

IEC 62368 DALI-2 D4i Certified:

- Requires DALI-2 D4i LED Driver
- D4i – Type D – Single Master Controller
- DALI-2 Linear Dimming - Part 218
- RGBAW Color Support
- Compatible with these DALI-2 Sensors:
 - o WattStopper FDP-301
 - o TE Lumawise



Product	Description	Antenna	IP Rating
EMB24-F	Bare Board, No Wires	Int Antenna	NA
EMB24-F3	Bare Board, 3-Wire	Int Antenna	NA
EMB24-F5	Bare Board, 5-Wire	Int Antenna	NA
EMB24-X5	TBD	Ext Antenna	IP30
EMB24-IP	TBD	Int Antenna	IP66

SPECIFICATIONS:

Dimensions	PCB – 1.4" x 1.2" (36mm x 31mm)
Input Power	12-24 VDC +/- 10%, 750 mW
Wires	Solid 20 AWG (Hole Size 18-20 AWG Solid)
Operating Environment	-40°C to +80°C 0% to 95% RH, non-condensing
Dimming	Auto Detect 0-10V (Sink Only, 10mA max) DALI-2 D4i Dimming
D4i LED Drivers ¹	Limited to 4 DALI-2 D4i LED Drivers
0-10V LED Drivers	Up to 8 0-10V LED Drivers
Sensor Input	Analog: 0-10V Digital: 0-24V
Radio	SNAP 2.4GHz ; 802.15.4 +20 dBm Transmit Power -105 dBm Receive Sensitivity
Certifications	FCC/IC, CE, cULus, UKCA, DLC – Indoor/Outdoor, DALI-2 D4i
Warranty	5 Years, Warranty Terms

1. Maximum of 4 LED Drivers defined by 250mA max DALI bus current. SimplySnap supports up to 6 DALI-2 D4i LED Drivers if 2 of the DALI-2 D4i LED Drivers have the DALI bus turned off.



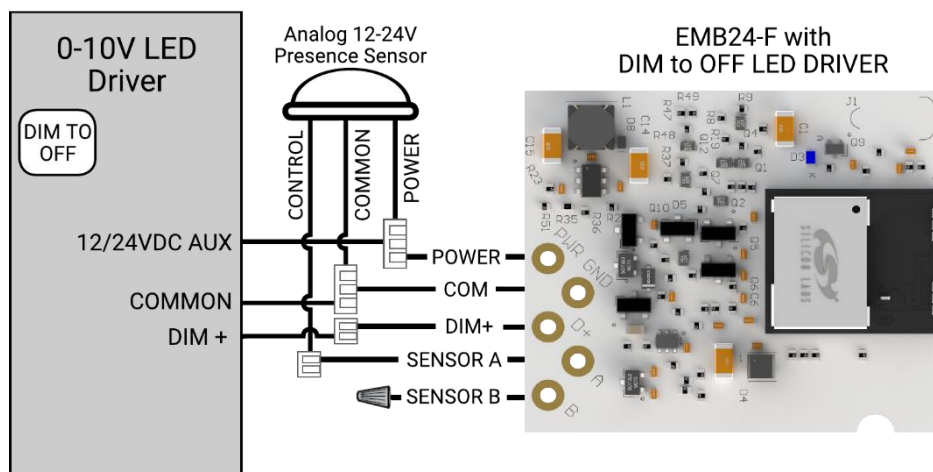
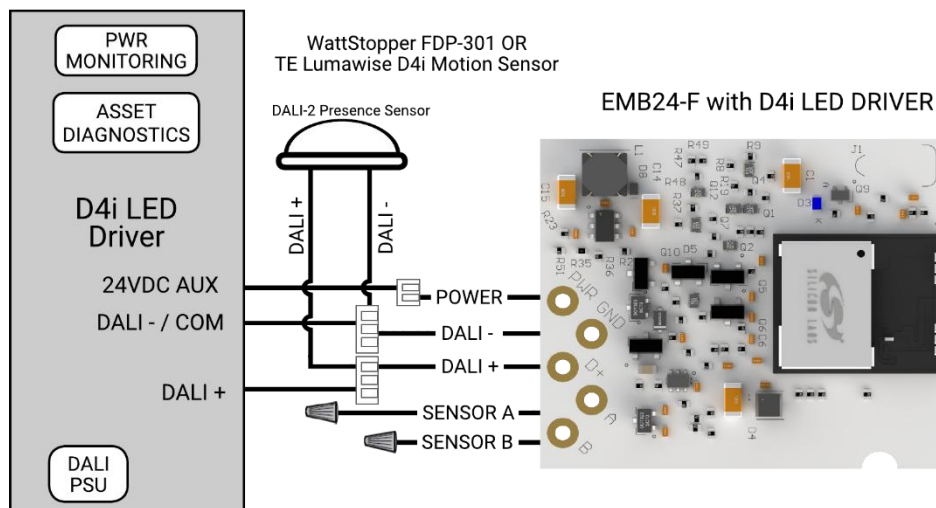
STATUS LED

Color	Meaning
Red	No Script on device
Blinking Red	No Network Found
Blue	Communication, No Config
Green	Normal Operation

SIGNAL WIRE COLORS

Signal	Wire Color
DC Power	Brown
GND (Common)	Pink / White Stripe
DALI+ / DIM+	Violet / White Stripe
Sensor Input A	Yellow (<i>F5 only</i>)
Sensor Input B	Orange (<i>F5 only</i>)

WIRING DIAGRAMS



SimplySnap Site Controller options – required for all deployments

Part #	Description	Application
SS450-002	SimplySnap, WiFi, Verizon LTE, Industrial Metal Enclosure	Indoor
CBSSW-450-002	Central Base Station SS450-based Model with 5-button Switch, 110-277VAC, Antenna Protection, NEMA 4X enclosure	Indoor/Outdoor

Patented – Virtual marking at <https://www.synapsewireless.com/about/patents>