AL-PWS-8D

DALI Bus power supply with 8 RJ45 connectors

8 power outputs with current limiting

AL-PWS-8D
https://atxled.com

1 - DALI +
2 - DALI -
3 - N-Way
4,5 +V
2,6,7,8 Gnd
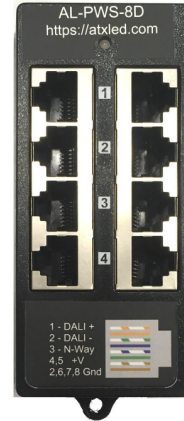
**Product Description - AL-PWS-8D – PoE injector with DALI bus power**

This DALI bus power supply and PoE injector provides power for any DALI system using convenient RJ45 connectors.   It also can provide up to 30 watts of power on each RJ45 port for DC lighting systems using Cat-5e cable.   Use with any DALI driver or switches. Optimized for the AL-PWS-DR1 wall switch where LEDs with 6 watts each can be powered over Ethernet cable. The AL-PWS-8D connects to a 48v power supply and supplies current limited power to 8 outputs.   It also powers the AL-DALI-Pi directly.

Specifications for AL-PWS-8D

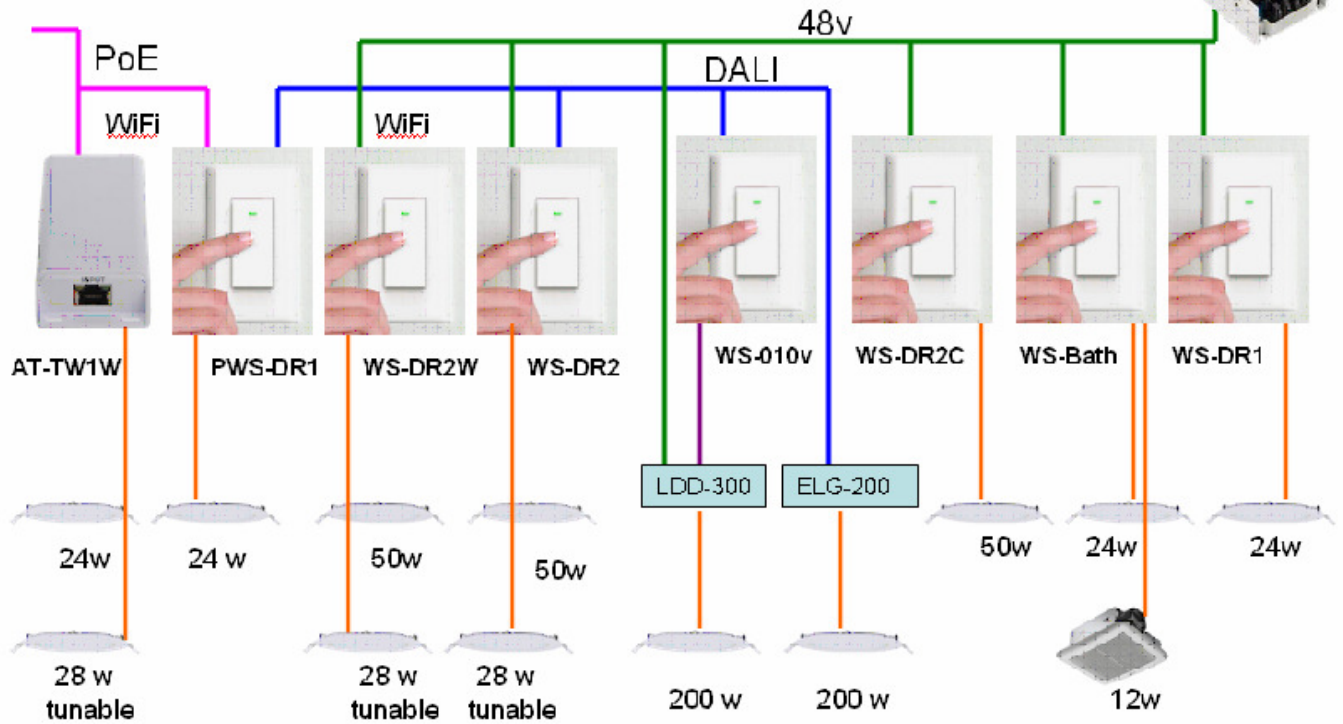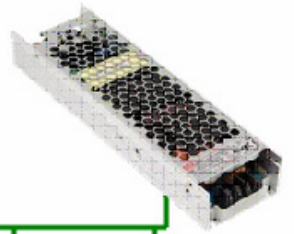|	
Main power input	24 to 56 volts DC up to 5 amps
RJ45 Output Connectors	8 connectors (same pinout on each)
	RJ45 standard connector with 8 pins
LED status (v2)	Red+Green means PoE with no internal DALI power
	Green means PoE and internal DALI power
	Red means either DALI shorted or no PoE power
Output Power	Limited to 650 mA per RJ45 connector port -
	36 watts at 56 volts 31 watts at 48 volts
	16 watts at 24 volts
DALI power supply	Enabled by default , remove internal jumper to disable.
	65 mA current limit at 12 volts
	16 mA at zero volts, 16 volt open circuit
DALI bus load	5 mA if internal DALI supply is disabled by jumper
Input power	2.1mm x 5.5mm DC connector with up to 5 amps
Pinout	Passive PoE pinout (see chart)
Protection	Reverse, short and static protection
Operating Temperature	0°C ~ 50°C

AL-PWS-8D
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RJ45 connector pinout
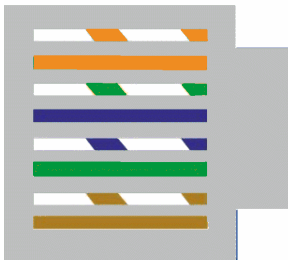
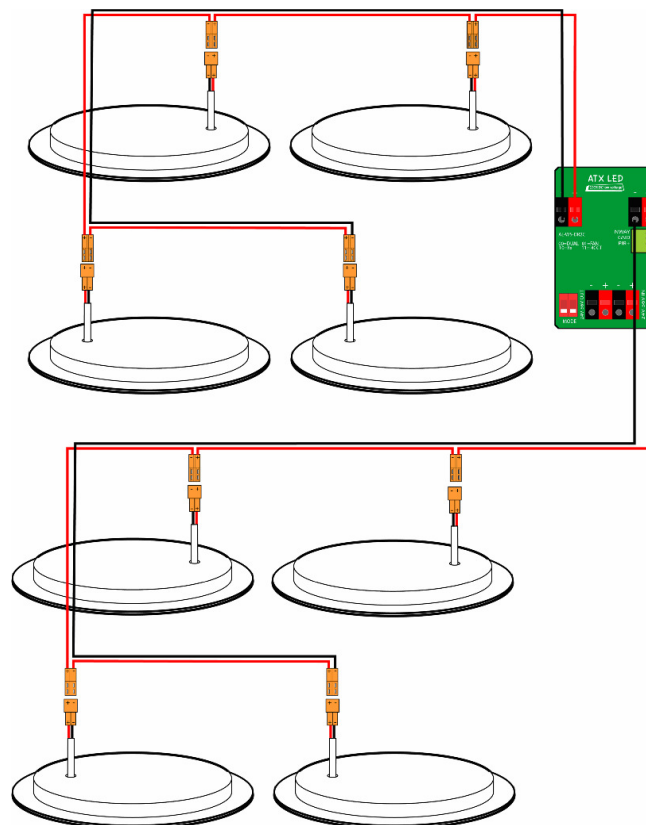| Pin	V2 (Black case)	V1(Blue case)
1	DALI +	DALI +
2	DALI – (gnd)	DALI +
3	NC**	NC
4	+ Voltage	+ Voltage
5	+ Voltage	+ Voltage
6	DALI – (gnd)	DALI – (gnd)
7	Ground	Ground
8	Ground	Ground

** pin 3 is the N-Way input to a AL-PWS series switch. Internal jumper allows cross connection between adjacent RJ45 connectors (left to right)   Note: Version 1 AL-PWS-DR1 are not compatible with the V2 injector – use V1 AL-PWS-8D

ATX LED
100% DC low voltage

48v

PoE

DALI

WiFi

WiFi

| AT-TW1W | PWS-DR1 | WS-DR2W | WS-DR2 | WS-010v | WS-DR2C | WS-Bath | WS-DR1 |

LDD-300   ELG-200

24w   24 w   50w   50w   50w   24w   24w

28 w tunable   28 w tunable   28 w tunable   200 w   200 w   12w

Wiring the AL-WS-DR2 for up to 8 LEDs

AL-DALI-Pi with ZWD

DALI master
System Hub

Hue emulation,
home automation,
white and tunable white

Product Description - AL-DALI-Pi with ZWD

This hub manages a DALI lighting system. It can operate offline or can connect a DALI bus with the Cloud.   It assigns useful names to the physical addresses of each driver, and allows all DALI features of the drivers to be configured by any user. If cloud enabled, it allows access to Alexa, Google and Siri for home automation.   The main user friendly features of this device are:

- Assign persistent friendly names to each DALI switch or DALI driver
- Synchronize names and status with Alexa / Google Home
- Build Scenes and groups
- Turn on/off any device, set brightness, fade rate, minimum/maximum levels
- Record device On/Off status
- Create schedules and macros
- Create and manage scenes
- Connect with DMX devices
- Control tunable white with DT8
- Set special modes like Fan timers, 3-Way switching
- Detect power outages and manage as needed

Local Management

This device connects by Ethernet or WiFi to your network.   Then, you can connect to it to access the management pages.   Examples are shown below: Use any web browser.

Hue Emulation

After assigning names to wall switch or fixture, the device will appear to the Hue App as a Hue Bridge with the names of the lights that you created.

Schedules and timers and macros

Use the built in scheduling or use Cloud apps for advanced controls. Run Python scripts as you like.

Sample Web Pages

ATX-LED Control Panel

Devices
Groups
Schedule
Virtual Groups
Hue
Admin
Provisioning

All lights — 107

- NW Closet — 8
- Office Hall — 8
- Master Bedroom — 8
- South Bed — 8
- Main hall — 8
- Pantry — 8
- Office Bath — 8
- Utility — 8
- Dine — 107
- Nook — 8
- South Bed Read — 8
- outside entrance — 8
- Powder — 8

ATX-LED Control Panel

Devices
Groups
Schedule
Virtual Groups
Hue
Admin
Provisioning

Lights control
Link device
Import from bridge
Import from Tradfri
Deconz
Add MiLight Bulb

Hue Emulator

All lights

- NW Closet
- Office Hall
- Master Bedroom
- South Bed
- Main hall
- Pantry
- Office Bath
- Utility
- Dine
- Nook

ATX-LED Control Panel

Devices
Groups
Schedule
Virtual Groups
Hue
Admin
Provisioning

Group 0 — 0
outside entrance, Outdoor, upstairs deck, Master Bath Rope, Hall Rope

ATX-LED Control Panel

Devices
Groups
Schedule
Virtual Groups
Hue
Admin
Provisioning

Schedule — Export | Choose File No file chosen | Import

New Entry

- Sunset
- Midnight
- Pre Sunset
- Sunrise

Edit name: Sunrise — Delete Entry
When? Sunrise
Offset: 15 minutes before
Actions: +
Set All lights to 0

ATX-LED Control Panel (1608 ADU)

DALI Devices
Groups
Schedule
Virtual Groups
Hue
Admin
DALI Log

Status
ZPDS version: 0125-37b8865
Channels: 1
HW version: 02
FW version: 08
Primary power: False
Secondary power: False
DALI power status:
  mode: 80 mA (locked)
  voltage: 15.942V
  current (at 0v): 0.046A
  current (at 6v, peak): 0.174A
  current (at 6v, final): 0.174A
Hat power status:
  voltage A: 47.8V
  voltage B: 48.0V
Local IP Address: 192.168.1.119
MAC Address: b827ebc65a6c

Tools
Update Server

Site Name
1608 ADU — Save

Provisioning
Rescan Addresses
Assign Addresses
Assign Addresses (quick)
This address assignment is faster, by skipping devices that already have short addresses, so won't always be correct.

Manual address reassignment
WARNING: only use this if you know what you're doing!
DALI Channel 1 | Old Address | New Address | Re-assign Address

ATX-LED Control Panel (1608 ADU)

DALI Devices
Groups
Schedule
Virtual Groups
Hue
Admin
DALI Log

DALI Log — Clear | Scroll To Bottom

```
20191210 19:45:34  send  h3FC5  0  A31  Read memory (dtr=12, dtr1=0
20191210 19:45:34  send  h3FC5  0  A31  Read memory (dtr=13, dtr1=0
20191210 19:45:34  send  h3FC5  0  A31  Read memory (dtr=14, dtr1=0
20191210 19:45:34  send  h3FC5  0  A31  Read memory (dtr=15, dtr1=0
20191210 19:45:34  send  h3FA5  0  A31  Get fade rates
20191210 19:45:34  send  h3F90  0  A31  Get dev status
20191210 19:45:34  send  h3F93  0  A31  Get dev on
20191210 19:45:34  send  h3F97  0  A31  Get dali version
20191210 19:45:34  send  h3F99  0  A31  Get dev type
20191210 19:45:34  send  h3F9A  0  A31  Get phy min level
20191210 19:45:34  send  h3FA0  0  A31  Get level
20191210 19:45:34  send  h3FA1  0  A31  Get max level
20191210 19:45:34  send  h3FA2  0  A31  Get min level
20191210 19:45:34  send  h3FA3  0  A31  Get power on level
20191210 19:45:34  send  h3FA4  0  A31  Get fail level
20191210 19:45:34  send  h3FC0  0  A31  Get group 0 7
20191210 19:45:34  send  h3FC1  0  A31  Get group 8 15
20191210 19:45:35  send  h3FC2  0  A31  Get addr hi
20191210 19:45:35  send  h3FC3  0  A31  Get addr mi
20191210 19:45:35  send  h3FC4  0  A31  Get addr lo
20191210 19:45:40  recv  v  0
20191210 19:45:40  recv  q  0
20191210 19:45:40  recv  p  0
20191210 19:46:16  recv  v  0
20191210 19:46:16  recv  q  0
20191210 19:46:17  recv  p  0
```