

### Features

- Bidirectional signal converter between LAN and DALI Bus.
- DC 18-22V from external power supply.
- Built-in DALI power, easy to use switch ON or OFF
- Ethernet Interface
  - Ethernet Interface : 10Base-T, 100Base-TX Ethernet
  - RJ-45 connector
  - Build-in web server setting page for parameter by user.
- DALI PHY Interface
  - Compatible with IEC-62386-101 102 (DALI) international standards
  - Connected and Compatible with Philips, OSRAM, Tridonic LED Drive
  - OVP at DALI Bus (AC100-277V)

### Description

AO-1220 LAN to DALI Bridge integrates the communication capabilities between LAN and DALI PHY interfaces, enables the users to access and manage DALI bus devices from LAN devices, such as laptop computers, significantly enhancing the scalability of the system and enabling real openness and compatibility.

In the LAN side, AO-1220 uses TCP/IP protocol and can be set as TCP/IP server or client via the web page. In the DALI side, AO-1220 uses DALI standard transmission protocol (IEC-62386-101 102) and can send and receive DALI data.

### Ordering Information

PART NUMBER	INPUT/OUTPUT	DALI POWER	INPUT SUPPLY	TEMPERATURE
AO-1220A	LAN/DALI DALI/LAN	None	DC18-22V	0°C to 70 °C
AO-1220B	LAN/DALI DALI/LAN	Built-in	DC18-22V	0°C to 70 °C



# AO-1220

## LAN to DALI Bridge

### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Storage temperature	$T_S$	-10	80	°C	
Supply voltage	$V_{CC}$	0	22	V	Typical 18V
Operating current	$I_{OP}$	0.91	750	mA	Max peak current

### Recommended Operating Conditions

PARAMETER	SYMBOL	MIN	MAX	UNITS	NOTE
Operating ambient temperature range	$T_A$	0	70	°C	
Supply voltage	$V_{CC}$	0	22	V	Typical 18V
Operating current	$I_{OC}$	---	350	mA	

### DALI PHY Interface

$V_{IN} = 3.0\text{ V to }3.6\text{ V}$ ,  $T_C = 0\text{ °C to }70\text{ °C}$ ,

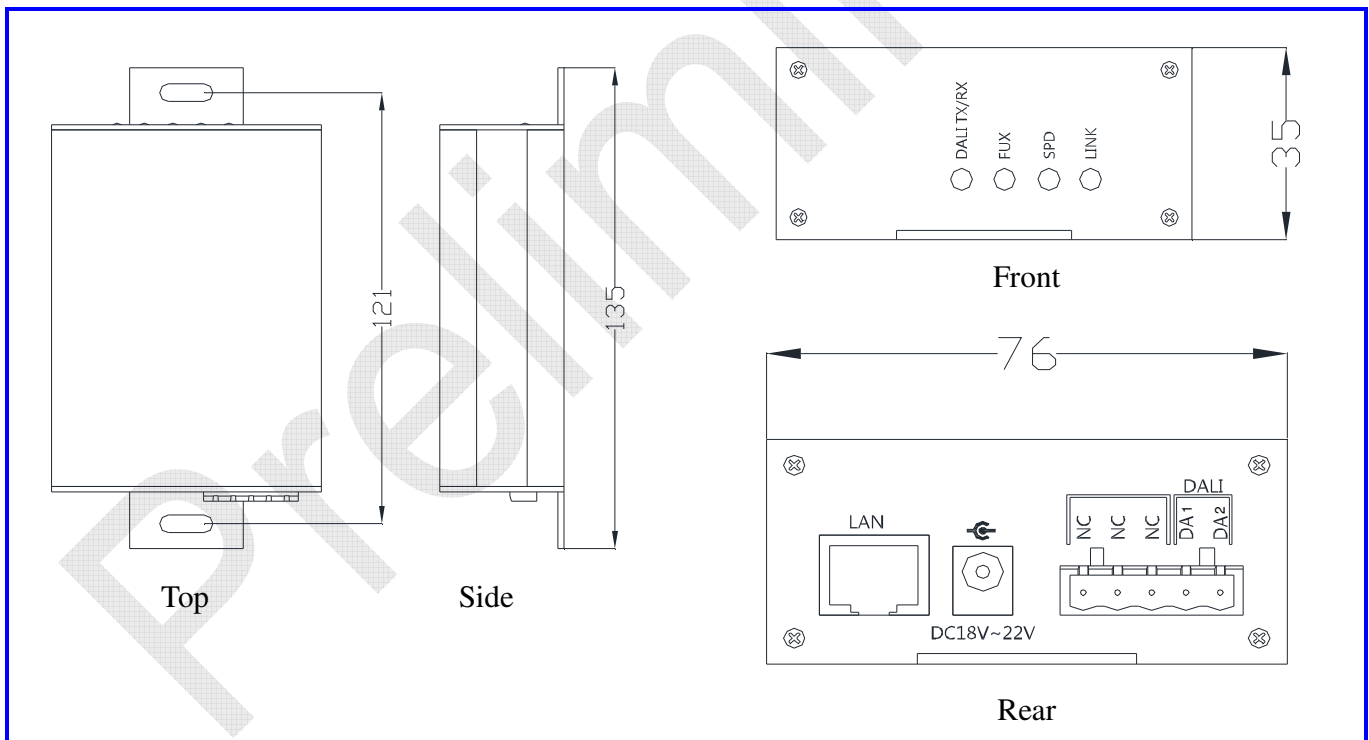
PARAMETER	MIN	TYP	MAX	UNITS	NOTE
Input Voltage	2.7	3.3	3.6	V	
Input Current	12	16.6	21	mA	
DALI High Level Voltage	11.5	16	20.5	V	
DALI Low Level Voltage	-4.5	0	4.5	V	
DALI Current			250	mA	
Operating Power	32.4	54.78	75.6	mW	

### LAN Interface

$V_{IN} = 3.0\text{ V to } 3.6\text{ V}$ ,  $T_C = 0^\circ\text{C to } 70^\circ\text{C}$ ,

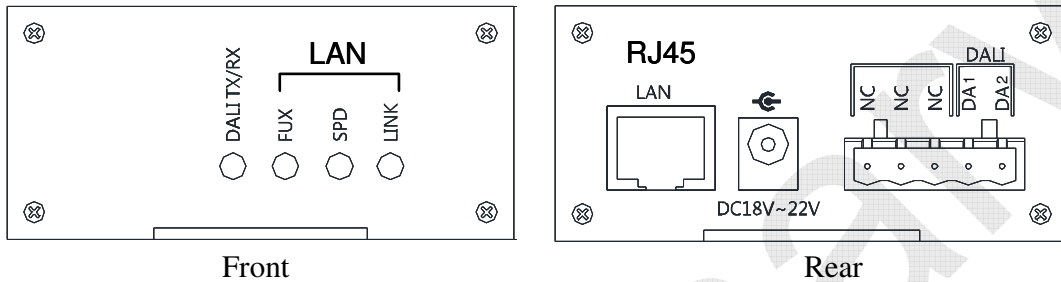
PARAMETER	LAN Module
Ethernet Interface	10Base-T, 100Base-TX
Speed/Duplex	Auto-negotiation 10/100Mbps Full/Half duplex
Protocols Supported	ARP, IP, ICMP, UDP, TCP, DHCP, TFTP, HTTP
Network Services	TCP Server, TCP Client, Web Control
Auto-MDIX	Yes
Maximum connection device (Server Mode)	8

### Dimensions (unit: mm)



## Installation Guides

1. Please use AC to DC 18V adaptor as power supply.
2. Power and DALI signal line linked to the 4-pin connector

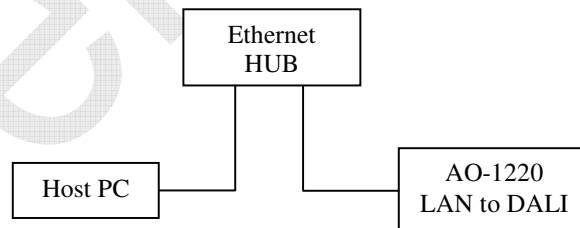


 The DALI (DA1 and DA2) signal is no polarity.

3. Plug Ethernet line in AO-1220 RJ-45 Connector
4. Basic setup: there are 2 approaches to connect AO-1220 and the host PC.
  - (1) Use the “Cross Over” CAT-5 cable to link AO-1220 and the Host PC directly, as shown below.



- (2) Connect AO-1220 and the Host PC though an Ethernet HUB, as shown below.



## 5. Quick LAN Setting

- (1) AO-1220 has a built-in web server; users can change all internal parameter setting by browser interface. The default IP address is 192.168.0.1.
- (2) To set the parameters, users can use any browser and open the URL (<http://192.168.0.1/setting.htm>). These parameters include serial and network settings as illustrated in the following figure.

Serial Settings	
Data Baud Rate	38400
Data Bits	8
Data Parity	None
Stop Bits	1
Flow Control	None

Network Settings	
<input type="checkbox"/> Enable DHCP	
Static IP Address	140.126.128.91
Static Subnet Mask	255.255.255.0
Static Default Gateway	140.126.128.254
Static DNS Server	168.95.1.1
Connection Type	TCP
Transmit Timer	1
Server/Client	Client
Server:	
Server Listening Port	4000
Client:	
Destination IP	140.126.128.87
Destination Port	4000
<input checked="" type="checkbox"/> Enable Reboot	
Apply    Reset	
Firmware Upgrade	

⚠ Don't change values

When the parameter setting is completed, just press the “Apply” button, then new parameters will be saved and the AO-1220 will reboot. The main page provides two essential functions,

- Apply: to update all parameters.
- Reset: to reset the configuration value to the default settings produced by the manufacturer.

### LED Indicator

1. DALI TX/RX: ON when DALI signal is activated
2. DALI Power (only AO-1220B): ON for DALI power good
3. FUX: indicate working mode; ON for Full duplex, OFF for Half duplex
4. SPD: indicate networking connected speed; ON for 100Mbps, OFF for 10Mbps
5. LINK: indicate linking status

### Connector Specification

