





LIGOWAVE **QUICK INSTALL** GUIDE

Please read this document before installation





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POINT TO POINT CONFIGURATION

Useful link: https://www.ligowave.com/wiki/ligodlb-confi guration-scenarios/

When confi guring the Ligowave DLB5M-20 to function as a point to point network bridge, one unit must be confi gured as the **Access Point** and all other units are confi gured as **Stations**.

The Access Point is the master unit, this unit hosts the confi guration and security of the wireless netork.



Access Point Settings

1. Connect the DLB5M-20 to the **POE** output of the supplied POE injector. (Only the supplied POE injector can be used with the DLB5M-20, do not connect the DLB5M-20 directly to the POE port of an NVR or Switch).

2. Connect the LAN output of the POE injector to the NVR POE port or network switch.

3. Connect laptop to NVR or Switch POE port.

4. Confi gure laptop network settings to same IP range as the DLB5M-20. By default all DLB5M-20 units are set to DHCP with a

fallback IP address of **192.168.2.66**. If connecting the unit to a router or NVR POE port then the unit may be assigned a different IP address. In this instance note down the unit MAC address from the label on the unit or box and run **CMD** on the

computer, run an arp -a command and the units MAC address and IP address should be listed.

5. Login to the DLB5M-20 via laptop web browser. **Username:** admin **Password:** admin01

6. Select **I Agree** and choose your country from the **Operating Country** dropdown box, Click **Change** to accept and save the user

| 0 | | \bigcirc | - | | Uptime 31 min. 54 sec. | | CPU load (25 %) |
|--------|--------------------|---------------|---------------|-------------|---------------------------|----------------|-----------------|
| igoWav | e | |) (| | etho: Disconnec | ted | 🛜 1 stations |
| (((: | NETWORK CO | NFIGURATION | | | | | |
| å | | Network mode: | Bridge | • | Management VL | AN ID: 2 | |
| ≓ | | IPv6: | × | | | | |
| ¢° | Ethernet settings | | | | | | |
| | Interface | Mod | e | Speed, Mbps | Duplex | Autonegotiat | ion |
| 111 | eth0 | Auto | - | 10/100 | Full | Enabled | |
| | IPv4 configuration | n | | | | | |
| | | IP method: | Static | * | DNS se | erver 1: | |
| | | ID address: | 102.169.2.66 | | DNS ee | rver 2: | |
| | | Subnet mask: | 255.255.255.0 | | Second | lary IP: 🛛 🛛 🛪 | |
| | | | | | | | |

Select the settings cog at the top of the page, then select the network icon on the left side of the page.

Change the **Access Point** IP address in the IPv4 section, usually it is preferred to confi gure the IP range to the same as the camera network. For example 10.1.1.254

Save the setting.



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| LigoWave | | i 🔹 🗶 🖻 | | Uptime 36 min. 24 sec. | CPU load (27 %) |
|----------------|------------------------|-----------------------------------|------------|---------------------------|-----------------|
| (îr | WIRELESS CONFIGU | IRATION | | | |
| ភំរ | En | able radio: | | Operating country: GB | |
| ₽ | Opera | ting mode: Access point (iPoll 2) | \supset | | |
| Q ⁰ | Radio settings | | | | |
| ŝţŝ | Тх ро | ATPC: 16 | | Channel: Auto / 40 M | IHZ |
| | Advanced radio setting | <u>j</u> s | | | |
| | Network SSID | Security | Management | Broadcast SSID | VLAN |
| | LigoDLB | WPA/WPA2 Personal | Enabled | Yes | - 🧿 |

Confi gure the unit for Access Point (iPoll 2) in the Operating Mode drop down

box. Set channel to Auto

Select the cog icon in the Wireless settings (AP) section

| WIRELESS AP SETTINGS | | | | |
|----------------------|-------------------|---|-----------------|-------------|
| SSID: | LigoDLB | | Broadcast SSID: | |
| Security settings | | | | |
| Security: | WPA/WPA2 Personal | ¥ | | |
| Passphrase: | **** | | | |
| H WACL | | | | |
| Advanced settings | | | | |
| | | | | |
| | | | | Done Cancel |

| SSID | This is the wireless network name. |
|----------------|--|
| Broadcast SSID | This setting controls whether the access point is discoverable by other wireless devices. It is usually recommended to turn off this setting after all the congifuration is completed. |
| Security | The security level of the wireless network, usually WPA/WPA2 Personal is adequate. |
| Passphrase | This is the password to connect to the wireless network, once a password is chosen it is important to keep a record of it. |

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STATION



Station Settings

1. Connect DLB5M-20 to **POE** output of the supplied POE injector. (Only the supplied POE injector can be used with the DLB5M-20, do not connect the DLB5M-20 directly to the POE port of an NVR or Switch).

2. Connect the LAN output of the POE injector to the network switch or directly to the laptop. If connect to a network switch

also connect a laptop to the switch.

3. Configure laptop network settings to same IP range as the DLB5M-20. By default all DLB5M-20 units are set to DHCP with

a fallback IP address of 192.168.2.66. If connecting the unit to a router or NVR POE port then the unit may be assigned a

different IP address. In this instance note down the unit MAC address from the label on the unit or box and run CMD on the

computer, run an **arp** -a command and the units MAC address and IP address should be listed.

4. Login to the DLB5M-20 via laptop web browser. Username: admin Password: admin01

5. Select I Agree and choose your country from the Operating Country dropdown box, Click Change to accept and save

the user agreement.

| Ligowave |) | i (| • × • | Uptime 40 min. 41 sec etil.0. 1 | c. CPU load (31 %) 100kaseT/full |
|------------|-----------------|------------------|---------------|---------------------------------------|-------------------------------------|
| ((t· | NETWORK C | ONFIGURATION | | | |
| க் | | Network mode: | Bridge 🔻 | Manager | ment VLAN ID: 2 |
| # | | IPv8: | × 11 | | |
| ¢° | Ethernet settin | gs | | | |
| | Interface | Mode | Speed, Mbps | Duplex | Autonegotiation |
| 141 141 | eth0 | Auto | 10/100 | Full | Enabled |
| | IPv4 configurat | tion | | | |
| | | IP method: | Static • | | DWS server 1: |
| | | IP address: | 192.168.2.66 | | DNS server 2: |
| | | Subnet mask: | 255.255.255.0 | | Secondary IP: |
| | | Default gateway: | 192.168.2.1 | | |

Select the settings cog followed at the top of the page, then select the network icon on the left side of the page.

Change the **Station** IP address in the IPv4 section, usually it is preferred to confi gure the IP range to the same as the camera network. For example 10.1.1.253

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Save the setting.



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| LigoWave | i | * * • | Uptime 42 min. 26 sec. eth0: 100baseT/full | CPU load (39 %) |
|----------|-------------------------|-------------------------------|--|-----------------|
| | WIRELESS CONFIGURATION | | | |
| â | Enable radio: 🧧 | | Operating country: GB | |
| ₽ | Operating mode: | Station (WDS/iPoll 2/iPoll 3) | | |
| 02 | Radio settings | | | |
| | Tx power (dBm): | 16 | Channel width (MHz): 20/40 | ¥ |
| ÅÅ | ATPC: | × | Non-standard channels: | |
| | | | Smart channel width | |
| | Advanced radio settings | | | |
| | Network SSID | Security | Management | VLAN |
| | LigoDLB | WPA/WPA2 Personal | Enabled | - 0 |

Configure the unit for **Station (iPoll 2)** in the Operating Mode drop down

box. All other settings should be left default.

Select the cog icon in the Wireless Settings (Station) section

| SSID: | LigoDLB | ٩ | Lock AP by MAC address: | 00:00:00:00:00:00 | |
|-------------------|-------------------|---|-------------------------|-------------------|--|
| ecurity settings | | | | | |
| Security: | WPA/WPA2 Personal | ¥ | | | |
| Passphrase: | ***** | | | | |
| Advanced settings | | | | | |
| | | | | | |

Enter the connection details for the **Access Point**, the SSID can be entered manually or by performing a scan using the magnifying glass icon.

Select the wireless security level of the **Access Point** and enter the passphrase confi gured previously.

Click done.



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CHECKING CONNECTIVITY

To check the connection status of the link, log into the **Access Point** and go to the **Status | Information page**. The information page will display wireless information of the link.

The status page of the **Access Point (iPoll2)** must indicate that one peer **(Station iPoll2)** is connected and information about the connection must be displayed as follows:

| 0 | (; | | Uptime 45 min. 34 sec. | | CPI | Jload (28 %) | |
|----------|--|--|---|---------------------------|------|--------------|---|
| LigoWave | | | eth0: Disconne | cted | (î: | 1 stations | |
| i | INFORMATION | | | | | | 0 |
| k | Product name: Device serial No.: | LigoDLB 5-20 0816154700000080 Paides | Operating country: Friendly device name: | GB LigoDLB 5-20 | | | |
| 1 | Wireless mode: | Access point (iPoll 2) | Latitude/Longitude: | 0/0 | | | |
| := | Channel: Channel width (MHz): Tx power (dBm): Neire Ievel (dBm) | 149 (5745 MHz) 40 Upper 16 95 | Protocol: Radio mode: Antenna gain (dBi): | iPoll 2 MIMO 2x2 20 | | | |
| | Wireless (Access point (iPo | ll 2)) | | | | | |
| | Network SSID | Security | Broadcast \$SID | | VLAN | Stations | |
| | LigoDLB | WPA/WPA2 Personal | Yes | | | 1 | |
| | Network | | | | | | |
| | IP method: IP address: Subnet mask: Default gateway: | Static 192.168.2.66 255.255.255.0 192.168.2.1 | IPv6 method: | Disabled | | | |

Detailed information about connected peers stays at Status | Wireless page.

| C | i 🌣 | × | | Uptime 46 min. 29 s | ec. Disconnected | CPU load (34 | %) s |
|------------|---------------------------------|--------------|-------------|------------------------|---------------------|--------------|-----------------|
| i. | WIRELESS NETWORKS | | | | | | 0 |
| L.Z | Enter keyword to filter results | | | | | | Info Counters |
| | SSID: LigoDLB | | | | | | |
| \bigcirc | Total stations/limit: 1 / 128 | | | | | | |
| := | Station | ≑IP address | Signal, dBm | Tx/Rx rate, Mbps | Tx/Rx CCQ, % | * Protocol | ≑Link uptime |
| | 00:19:3B:07:EA:E3 LigoDLB 5-20 | 192.168.2.68 | -50 / -49 | 270 / 270 | 100 / 100 | iPoll 2 | 15 min. 13 sec. |
| | Kick selected | | | | | | |

The status of the **Station iPoll 2** must be displayed as connected and progress bars indicating the quality of the connection must be displayed.

|) | (i) 🌣 | × | | Uptime 47 min. 26 sec. | CPUloa | id (39 %) | |
|----------------------|--|-------------------|------------------|--|------------------|-----------------|---|
| ive | $\bigcirc \bigcirc \bigcirc$ | | | eth0: 100baseT/full | ? -49 | /-53 dBm | |
| | | | | | | | 1 |
| Proc | luct name: LigoDLB 5-20 serial No.: 0816154700000 | ZAD | Fri | Operating country: GB endly device name: LigoDLB 5- | 20 | | |
| Netw | ork mode: Bridge | | | Device location: Device loca | ition | | |
| Wirel | ess mode: Station (WDS/iP | 011 2/11*011 3) | l | Latitude/Longitude: 070 | | | |
| Radio | | | | | | | |
| | Channel: 149 (5745 MHz) | | | Protocol: 802.11a/n/if | Poll 3 | | |
| Channel wi Tx poy | dth (MHz): 40 Upper ver (dBm): 16 | | | Radio mode: MIMO 2x2 Antenna gain (dBi): 20 | | | |
| Noise le | vel (dBm): -95 | | | 3 | | | |
| Wireless (Station | (WDS/IPoll 2/IPoll 3)) | | | | | | |
| Network SSID | Security | Peer MAC | Tx/Rx rate, Mbps | Tx/Rx CCQ, % | Protocol | Link uptime | |
| LigoDLB | WPA2 Personal | 00:19:3B:07:E6:89 | 270 / 270 | 100 / 100 | iPoll 2 | 15 min. 47 sec. | |
| Network | | | | | | | |
| | P method: Dynamic | | | IPv6 method: Disabled | | | |
| Sut | P address: 192.168.2.68 onet mask: 255.255.255.0 | | | | | | |
| Defaul | t gateway: 192.168.2.1 | | | | | | |

If the signal indicator on either unit is red, hover the mouse cursor over it, if the status is shown as **Too Strong** lower the TX Power of each unit to the same level until both units show **Excellent** or **Good**.



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ACCOUNT SETTINGS

It is highly recommended that the administrative account for each unit is changed from the factory set password.

Select the cog icon followed, by the system icon on the left side of the web page.Click the **Edit** button within the User Accounts section.

| J | (i) | • × • | Uptime 49 min. 26 | sec. | | CPUload (39 %) |
|------------|--|-------------------|---|------------------|-----------------|----------------|
| Vave | | | eth | 0: 100baseT/full | | .50/-51 dBm |
| <i>h</i> . | SYSTEM CONFIGURATION | | | | | |
| 8 | Device settings | | | | | |
| | Friendly name: | LigoDLB 5-20 | | Location: | Device location | n |
| | Contact information: | Contact | | Latitude: | 0 | |
| | | Account | SETTINGS | | | |
| | System functions Backup configuration: | Backup | Username: | admin | | |
| | System functions Backup configuration: Restore configuration: | Backup | Username: Old password: | admin | | |
| | System functions Backup configuration: Restore configuration: | Backup Restore | Username: Old password: New password: | admin | | |
| | System functions Backup configuration: Restore configuration: User accounts User: admin | Backup Restore | Username: Old password: New password: Verify password: | admin | | |
| | System functions Backup configuration: Restore configuration: User accounts User: admin B LED settings | Backup Restore | Username: Old password: New password: Verify password: | admin | | |

Input the current password in the **Old Password** box.

Enter the a new password in the New Password and Verify Password

boxes Click **Change** to save the setting.

Factory Reset

In the event that the DLB5M-20 password settings are lost, the unit must be reset to factory settings. To do this press and hold the reset button until the indicator leds on the side of the unit light up sequentially.

The factory reset button is located to the side of the RJ45 connection.

