



**LITECOM INFINITY**

INFINITY MODE

## **Legal information**

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# 1 How to use these instructions

We are pleased that you have chosen this *Zumtobel Lighting GmbH* product. So that you can get the most from these instructions, this section provides the following information:

- Signs and icons in these instructions
- Further information
- Target audience of these instructions
- Software version

## Signs and icons in these instructions

The following signs and icons are used in these instructions:


Sign/icon	Explanation								
1.	Individual steps in the instructions are numbered.								
▷	Single-step instructions are indicated by the ▷ icon at the beginning of the line.								
➡	After a step has been described, a description of the expected results will follow. These results are indicated by the ➡ icon at the beginning of the line.								
—	Requirements which need to be checked before carrying out a step are indicated by —.								
i	Notes can be recognised by the i icon. In addition, notes are identified by the word <b>Note</b> .								
[ <b>Bold text</b> ]	Bold text indicates words that are shown on a device display or software user interface.								
	<p>Danger and safety instructions are indicated by this icon. Safety and warning information is labelled and classified using the following words:</p> <table> <tr> <td><b>DANGER</b></td><td>indicates an immediate danger. This could lead to death or severe injury if not avoided.</td></tr> <tr> <td><b>WARNING</b></td><td>indicates a potentially dangerous situation. This could lead to death or severe injury if not avoided.</td></tr> <tr> <td><b>CAUTION</b></td><td>indicates a potentially dangerous situation. This could lead to minor injury or damage to property if not avoided.</td></tr> <tr> <td><b>Attention</b></td><td>indicates a situation involving potential damage. If it is not avoided, the product or something in the vicinity may be damaged.</td></tr> </table>	<b>DANGER</b>	indicates an immediate danger. This could lead to death or severe injury if not avoided.	<b>WARNING</b>	indicates a potentially dangerous situation. This could lead to death or severe injury if not avoided.	<b>CAUTION</b>	indicates a potentially dangerous situation. This could lead to minor injury or damage to property if not avoided.	<b>Attention</b>	indicates a situation involving potential damage. If it is not avoided, the product or something in the vicinity may be damaged.
<b>DANGER</b>	indicates an immediate danger. This could lead to death or severe injury if not avoided.								
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<b>CAUTION</b>	indicates a potentially dangerous situation. This could lead to minor injury or damage to property if not avoided.								
<b>Attention</b>	indicates a situation involving potential damage. If it is not avoided, the product or something in the vicinity may be damaged.								

Table 1: Signs and icons in these instructions

## Further information

Further information on the setup and function of your *LITECOM infinity* system can be found in our product and system documentation.

If you should have any further questions, please contact your sales partner.

General information on our products can be found on our website:

[www.zumtobel.com](http://www.zumtobel.com)

## Target audience of these instructions

These instructions are intended for persons (e.g. electricians and facility managers) with special *LITECOM* product training who would like to enable Infinity mode in order to gain access to apps that are only available in Infinity mode, or to create an Infinity system consisting of several *LITECOM* CCDs.

## Software version

These instructions are based on software version *LITECOM 3.1.0*.



### Note

This manual contains path information which can be used to access the configuration options. The path always starts from the app overview.

Example: "Path: app overview > **Basic settings** > **Date and time**" means that you should go to the app overview, tap on **Basic settings** and then tap the **Date and time** button.

## 2 Other available documents

All *LITECOM* manuals can be downloaded from the website:

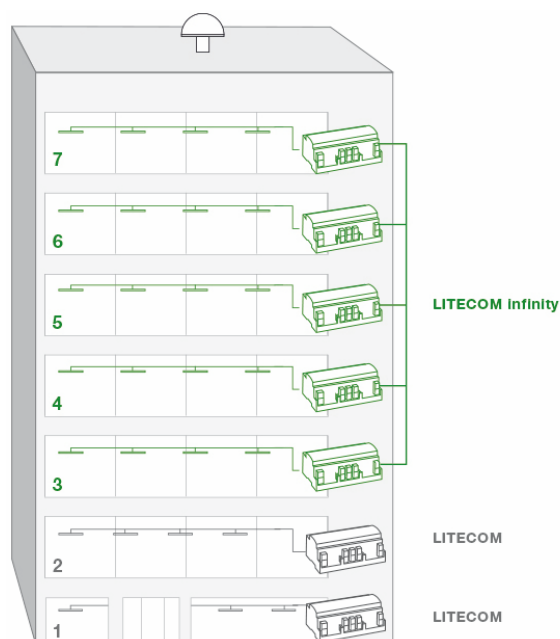
<http://www.zumtobel.com/gb-en/products/litecom.html>

Manual	Description
Commissioning and maintenance	This manual is aimed at electricians without any special <i>ZUMTOBEL</i> product training and describes how the basic functions can be commissioned. It also describes general maintenance functions.
Shows	This manual is aimed at electricians without any special <i>ZUMTOBEL</i> product training and describes how shows can be commissioned and configured.
Special luminaires	This manual is aimed at electricians without any special <i>ZUMTOBEL</i> product training and describes how special luminaires (e.g. RGB luminaires, TW luminaires, <i>SEQUENCE infinity</i> ) can be commissioned and configured.
Daylight linking	This manual is aimed at electricians without any special <i>ZUMTOBEL</i> product training and describes how daylight linking with sky scanner or with one or more light sensors can be commissioned and configured.
Blind control	This manual is aimed at electricians without any special <i>ZUMTOBEL</i> product training and describes how blind control can be commissioned and configured.
Self-contained emergency luminaires	This manual is aimed at electricians without specific <i>ZUMTOBEL</i> product training and describes how emergency lighting functions for self-contained emergency luminaires can be commissioned, configured and monitored in a <i>LITECOM</i> system that itself has already been commissioned.
BACnet	This manual is aimed at electricians and system integrators without any special <i>ZUMTOBEL</i> product training and describes how BACnet can be commissioned and configured.
REST API & MQTT	This manual is aimed at system integrators without any special <i>ZUMTOBEL</i> product training and describes how REST API and MQTT can be commissioned and configured.

Table 2: Other available documents – *LITECOM*

### 3 LITECOM lighting management system

*LITECOM* is a lighting management system that is designed for the control of luminaires and motors.



*LITECOM* provides a facility for automating up to 250 luminaires and motors with one *LITECOM* CCD. It is therefore particularly suitable for smaller buildings or – as the figure on the left shows – individual floors.

*LITECOM infinity* provides a facility for automating up to 2,500 luminaires and motors with a maximum of 15 *LITECOM* CCDs. This makes it possible to flexibly adapt a system to different requirements. For example, an office that is spread over 5 floors can be operated as a whole. In order to do this, 5 *LITECOM* CCDs, for example, can be combined in one Infinity system, as shown in the figure on the left. If the requirements of the system change, additional *LITECOM* CCDs can be added to the Infinity system at any time or individual *LITECOM* CCDs can be removed from the Infinity system. *LITECOM* CCDs which have been removed from the Infinity system can be used individually again.

Figure 1: Application example – *LITECOM* and *LITECOM infinity*

#### Control options

The *LITECOM* system is commissioned, configured and maintained using a web application. (1) Various control options are available to the user. An interface (2) was specially designed for operation in order to be able to ensure ease of use even on smaller screen sizes. To use this interface, the user must establish a connection to the *LITECOM* system via a special connection app. This connection app can be downloaded from the *Google Play Store* or *Apple App Store*.

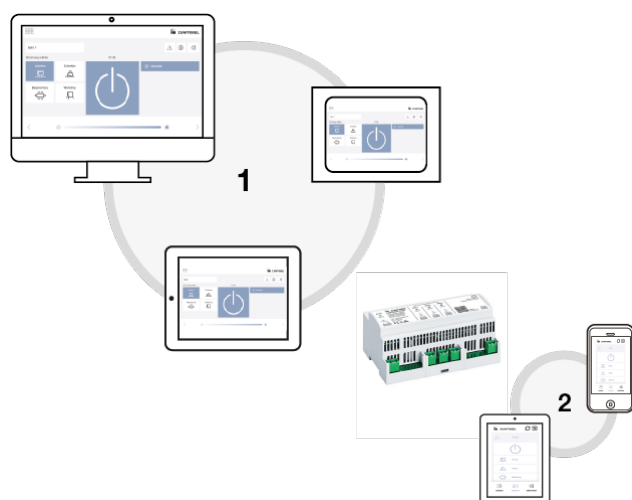


Figure 2: Schematic representation of control options

Different functions are available depending on the display device and the connection method.

Display device	Connection method	Functional scope			
		Commissioning	Configuration	Maintenance	Operation
Computer, laptop	Via web browser	✓	✓	✓	✓
Internet-capable mobile devices with larger screen size (e.g. tablet PCs, smartphones)	Via web browser	✓	✓	✓	✓
	Connection app from <i>Google Play Store</i> or <i>Apple App Store</i>	✓	✓	✓	✓
Internet-capable mobile devices with smaller screen size (e.g. smartphones)	Connection app from <i>Google Play Store</i> or <i>Apple App Store</i>	✗	✗	✗	✓

Table 3: Display devices and corresponding functional scope

## Operating system and web browser

The following operating systems and web browsers have been tested and approved for *LITECOM 3.1.0*:

- Windows with Google Chrome (version 31 or higher)
- Android 5.0.2 with Google Chrome 46.0
- Android 6.0.1 with Google Chrome 49.0
- iOS 8.1 with Google Chrome 33.0
- iOS 9.2.1 with Google Chrome 49.0
- iOS with Safari



### Note

*LITECOM* has been optimised for the operating systems and web browsers specified above. Please note that there may be problems with new versions at the beginning, which will be corrected as quickly as possible.

## Minimum web browser resolution

The minimum web browser resolution is 800 × 480 px. Please note that this specification does not include the menu bar.

A correspondingly higher resolution should thus be selected for tablet PCs. Otherwise a scroll bar will be shown in the web application.



## Navigation principles

There are different buttons in the web application for commissioning, configuring and operating the system. If a button is tapped, its colour changes briefly.




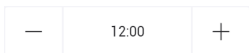







Button	Description
	<p>Set value (e.g. on the start page)</p> <p>You can enter a specific value in the click area so that all devices have the same control value.</p> <p>If, for example, different control values (80%, 60%) are set for the luminaires and you tap on 50%, all luminaires switch to the control value of 50%.</p> <p>If you tap on the left or right click area, the value you are setting decreases or increases respectively in the entire effective range by one unit. If different control values are saved for the luminaires (80%, 60%, 20%) and you tap on the  button, these control values are increased by one unit (81%, 61%, 21%). This function is not available for all setting options.</p>
	<p>Set value (e.g. fade time)</p> <p>Tap these buttons to increase or decrease the value being set. Tap the button to change the value by one unit. Tap and hold the button to change the value, and release when the desired value has been reached. The longer the button is held, the faster the value is changed.</p>
	<p>Special feature: set the time</p> <p>If the time is tapped, the <b>Set time</b> view appears. The hours and minutes can be set separately here.</p>
	<p>Expand – collapse</p> <p>The arrow indicates that additional information or selection options can be displayed (e.g. devices in a group).</p> <p>Tap the arrow pointing right to expand the information or selection options. The arrow changes so that it is pointing down.</p> <p>Tap the arrow pointing down to collapse the information or selection options. The arrow changes so that it is pointing right again.</p>
	<p>Save or confirm</p> <p>Tap this button to save the settings or confirm a message.</p>
	<p>Option not selected – option selected (single choice)</p> <p>This button marks multiple options that are available (e.g. different types of date groups), from which only one can be selected. As soon as an option for a switch is selected, all other switches change to the other option accordingly.</p>
	<p>Option not selected – option selected (multiple choice)</p> <p>This button marks multiple options that are available, from which multiple options can be selected. As soon as an option is selected, it is highlighted.</p>
	<p>Setting not selected – setting selected</p> <p>if an empty button is tapped (e.g. blind position at device level), the button is filled in with colour. One or more control elements (such as sliders) appear below.</p>
	<p>Switch between individual pages of the app overview</p> <p>The number of points corresponds to the number of the pages in the app overview. The point filled in with colour indicates the page currently being displayed. Tap an empty point to go to the corresponding page.</p>
	<p>Tap the logo to access the <b>Information</b> view. This page contains manufacturer information, the reference number and version of the web application and information on the licences used.</p>

Table 4: Navigation principles

## 4 LITECOM infinity

### Application area

The *LITECOM CCD* is a control device designed to control up to 250 luminaires and motors. It has three DALI-compliant outputs and an LM-Bus interface.



#### Note

The LM-Bus is not supplied with power via the *LITECOM CCD*. It requires an external bus supply: *LM-BV* (art. no. 20 975 247) or *LM-BVS35* (art. no. 22 115 026).

### System limits – hardware

- Max. 250 luminaires and motors per *LITECOM CCD*
- Max. 64 DALI or DALI-2 addresses and 64 eD addresses per DALI-compliant output
- Per DALI-compliant output, 200 mA guaranteed supply current for max. 100 DALI loads and 250 mA max. supply current

### System limits – system image

- Max. 15 *LITECOM CCDs* per Infinity system, with max. 2,500 luminaires and motors per Infinity system

## Available apps

The following table contains an overview of the apps that are available in *LITECOM infinity* in comparison to *LITECOM*.
























App	LITECOM CCD	LITECOM infinity
 Addressing	✓	✓
 Addressing wizard	✓	✗
<b>BACnet</b> BACnet	✓	✓
 Blind control	✓	✓
 Calendar	✓	✓
 Conditional scene recall	✓	✓
 Control device linking	✓	✓
 Data backup	✓	✓
 Daylight linking (with light sensor)	✓	✓
 Daylight linking (with sky scanner)	✓	✓
 Faults	✓	✓
 Installation test	✓	✓
 Log	✓	✓
 Presence linking	✓	✓
 Protective functions	✓	✓
 REST API & MQTT	✓	✓
 Scenes	✓	✓
 Self-contained emergency luminaires	✓	✗
 SEQUENCE infinity	✓	✓
 Shows	✓	✓
 Special luminaires	✓	✓
 System image	✓	✓
 User management	✓	✓
 Zones	✓	✓

Table 5: Available apps

### i

#### Note

In software version 2.16.6 or lower, blind control and daylight linking with sky scanner are only available in Infinity mode.

## 5 Safety instructions



### Attention

- The system may only be used for the application area specified.
- Relevant health and safety regulations must be observed.
- Assembly, installation and commissioning may only be carried out by qualified personnel.
- The *LITECOM infinity* system and connected devices must only be operated when in full working order.
- The manufacturer does not accept liability nor provide any guarantee for consequential damage that may occur if these instructions are not followed.

## 6 Requirements

To use Infinity mode, ensure that the following requirements are met:

- The following network infrastructure requirements must be met (e.g. router, switches):
  - TCP/IP communication between several *LITECOM CCD* or between the *LITECOM CCD* and the end device.
  - IP multicast (especially the User Datagram Protocol (UDP) as a transport layer) must be supported. If there are special IT specifications for this, the multicast addresses and multicast ports can be configured in the **Infinity mode** app.



### Note

Network switches frequently use filters like IGMP snooping or block multicast communications when data traffic is heavy. These filters caused problems in Infinity systems and must therefore be disabled.

- The *LITECOM CCD* must have hardware batch **B3** at least.



### Note

The hardware batch can be found on the batch label of the *LITECOM CCD* in the second position, e.g. V1.00 **B3A** M17.

- Before the software update, the *LITECOM* platform must be updated to version 3.0.1 or higher with hardware batch **B3**.

Path: App overview > **Basic settings** > **Software versions** > **LITECOM CCD**



### Note

The required *PFF* file can be found on the *Knowledgebase*:  
<https://kb.zumtobel.com/de.html>

- The software version must be updated to version 3.1.0.  
 Path: App overview > **Basic settings** > **Software versions**

- The corresponding network port must be opened to use the respective service:

Service	Port	Protocol	Comm. service	Incoming	Outgoing	Client	Server	Description
<i>LITECOM</i> web application via HTTPS (secure)	443	TCP	HTTPS	x		Browser	Control device	HTTPS – <i>LITECOM</i> web application
	8889	TCP	HTTPS	x				WSS – WebSocket Secure
	4445	TCP	HTTPS	x				HTTPS – user management
<i>LITECOM</i> service page via HTTPS (secure)	8443	TCP	HTTPS	x		Browser	Control device	HTTPS – service page

Service	Port	Protocol	Comm. service	Incoming	Outgoing	Client	Server	Description
LITECOM web application via HTTP (unsecure)	80	TCP	HTTP	x		Browser	Control device	HTTP – LITECOM web application If portal connection via HTTP is not permitted, web application is redirected to port 443.
	8887	TCP	HTTP	x				WS – WebSocket
	4444	TCP	HTTP	x				HTTP – user management
LITECOM service page via HTTP (unsecure)	8080	TCP	HTTP	x		Browser	Control device	HTTP – service page If portal connection via HTTP is not permitted, service page is redirected to port 8443.
REST API	443	TCP	HTTPS	x		REST client	Control device	HTTPS – REST
MQTT	8883	TCP	MQTTS	x	x	MQTT client	Control device	MQTTS
BACnet	47808	UDP	BACnet	x		BACnet client	Control device	Support for BACnet communication
LITECOM infinity	45111	UDP	Multicast	x	x	Control device	Control device	OM multicast (data interface) Multicast via IPv4: 239.1.1.1 Port and IP address can be configured
	45112	UDP	Multicast	x	x			CMD multicast (command interface) Multicast via IPv4: 239.1.1.2 Port and IP address can be configured
	2222	TCP	HTTP	x	x			User management Infinity system
	4444	TCP	HTTP	x	x			User management Infinity system
NTP	123	UDP	NTP		x	Control device	NTP server	Time synchronisation
LITECOM Mobile App, LITECOM-Touchpanel TCI, emLINK v3	443	TCP	HTTPS	x		LITECOM Mobile App, LITECOM-Touchpanel TCI, emLINK	Control device	HTTPS – web application
	8889	TCP	HTTPS	x				WSS – WebSocket Secure
	4445	TCP	HTTPS	x				HTTPS – user management

Service	Port	Protocol	Comm. service	Incoming	Outgoing	Client	Server	Description
Network location	5353	UDP	mDNS	x		<i>LITECOM Mobile App, LITECOM-Touchpanel TCI, emLINK</i>	Control device	Automatic control device search by <i>LITECOM Mobile App, LITECOM-Touchpanel TCI, emLINK</i> Multicast via IPv4: 224.0.0.251 or IPv6: ff02::fb
SSH	22	TCP	SSH	x		SSH client	Control device	Direct connection to control device; access for development
Service interface	6852/ 6853	TCP		x		Gateway client (service interface)	Control device	Direct connection to service interface via analysis tools like <i>MMT</i> and <i>LMW-ADMP</i> Only available if a connection to the service interface is permitted.

Table 6: Network ports used

## 7 Commissioning

This section provides information on how to prepare for commissioning, activate the **Basic licence (Infinity)**, enable **Infinity mode** and combine several *LITECOM CCDs* in one Infinity system.

### 7.1 Preparation

The following steps are required:

- Step 1: establish a connection between the computer and *LITECOM CCD*.
- Step 2: change the IP address and device designation.  
Path: App overview > **Basic settings** > **Network settings**
- Step 3: set the time zone for the *LITECOM CCD*.  
Path: App overview > **Basic settings** > **Date and time** > button for selecting the time zone
- Step 4: connect the *LITECOM CCD* to the network.

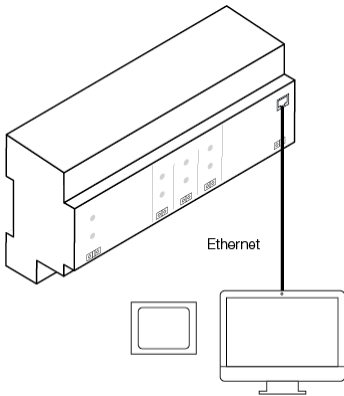
#### i

##### Note

In order to combine several *LITECOM CCDs* in an Infinity system, complete the preparation for all *LITECOM CCDs* before activating the licence. Assign a separate IP address to each *LITECOM CCD* for this purpose. In the next step you can then request the respective Infinity IDs and licences for all *LITECOM CCDs* from your sales partner at the same time.

#### Step 1: establish a connection between the computer and LITECOM CCD

▷ Connect the *LITECOM CCD* and computer via an Ethernet cable.





## Step 2: change the IP address and optionally the device designation

### Requirement:

- Navigate to the standard IP address of the *LITECOM CCD* in the browser:  
<http://10.10.40.254>

Path: App overview > **Basic settings** > **Network settings**

1. Navigate to the path.

➔ The **Change network settings** view is displayed.

MAC address:	d8-80-39-d8-05-7a
IP address:	192.168.113.91
Subnet mask:	255.255.0.0
Default gateway:	192.168.132.1
DNS 1:	192.168.105.99
DNS 2:	unknown

➔ The **Use static IP address** option is enabled.

➔ The MAC address, IP address and subnet mask are displayed at the bottom.



### Note

Obtaining the IP address automatically (via a DHCP server) is not permitted.

2. Tap the **Edit** button.

➔ The **Change network settings** view is displayed.

3. To change a value, select the corresponding button.
4. Change the value.
5. Note down the new IP address.



6. Tap the tick mark.  
 ➡ The **Change network settings** view is displayed.
7. Change the device designation.

**Note**

- The maximum length of the device designation is four characters, e.g. *LC01*, *0001* or *EG01*.
- If multiple *LITECOM CCDs* are added to the Infinity system, the device designations must be unique, i.e. no two *LITECOM CCDs* in the Infinity system can have the same device designation.

8. As soon as all the required data has been changed, tap the tick mark.  
 ➡ The changes are saved.  
 ➡ If the old and new IP address are located in the same IP address range, the web application is automatically redirected to the new IP address.  
 – or –  
 ➡ If the old and new IP address are located in different IP address ranges, the web application is not automatically redirected to the new IP address. A corresponding message is displayed.

**Step 3: set the time zone for the LITECOM CCD****Note**

- In order to combine several *LITECOM CCDs* in one Infinity system, ensure that the same time zone is set for all *LITECOM CCDs*.
- The date and time are automatically changed depending on the time zone.  
 For more information see Manual **Commissioning and maintenance**

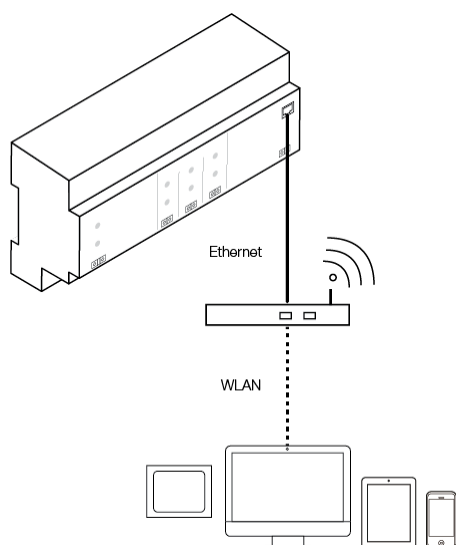
Path: App overview > **Basic settings** > **Date and time** > button for selecting the time zone



1. Navigate to the path.  
 ➡ The **Select time zone** view is displayed.
2. Select the time zone.  
 ➡ The **Setting the date and time** view is displayed.
3. Tap the tick mark.  
 ➡ The changes are saved.  
 ➡ If the time zone has been changed, the *LITECOM CCD* is restarted. This process may take several minutes. The start page is then displayed.

## Step 4: connect the LITECOM CCD to the network

▷ Connect the *LITECOM CCD* to the network.



### i

#### Note

In order to combine several *LITECOM CCDs* in an Infinity system, complete the preparation for all *LITECOM CCDs* before activating the licence. Assign a separate IP address to each *LITECOM CCD* for this purpose. In the next step you can then request the respective Infinity IDs and licences for all *LITECOM CCDs* from your sales partner at the same time.

## 7.2 Licensing

In order to use the **Infinity mode** app, you must first activate the **Basic licence (Infinity)**.

Path: App overview > **LITECOM Store** > **Basic lic. (Infinity)**

The following steps are required:

- Step 1: request the licence.  
Path: App overview > **LITECOM Store** > **Licensing information**
- Step 2: activate the licence.  
Path: App overview > **LITECOM Store** > **Activate licence**

Figure 3: Overview of licensing

	Function	Description
(1)	Licensing information	<p>This page provides information about your licence (article number of the app and reference number (HW-ID)). You will need this information to request a basic licence (Infinity) from your sales partner. You can also see whether the licence has been activated or not.</p> <div> <p><b>i</b> <b>Note</b></p> <ul style="list-style-type: none"> <li>• Since the hardware licences are disabled when Infinity mode is enabled, previously licensed apps are no longer enabled in Infinity mode. These must therefore be re-licensed.</li> <li>• Please also ask your sales partner for licence numbers for the other apps that are required.</li> <li>• In the event of a system extension, you must note down the reference number (HW-ID) and the Infinity ID in order to receive a valid basic licence (Infinity).</li> <li>• The same Infinity ID must always be used when extending the system.</li> <li>• One basic licence for <i>LITECOM infinity</i> must be ordered for each <i>LITECOM CCD</i>.</li> <li>• If you wish to activate other apps for <i>LITECOM infinity</i> (e.g. <b>Daylight linking</b>), only one licence needs to be ordered (regardless of the number of <i>LITECOM CCDs</i> in the Infinity system). The other licences are always valid for the entire Infinity system.</li> </ul> </div>

	Function	Description
(2)	Activate licence	<p>You can activate the licence with a licence number here.</p> <div> <div><b>i</b></div> <div> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• The licence number, the number of activated devices and the validity period are shown for each activated licence.</li> <li>• To access the ordered licence numbers, go to the website <a href="http://litecom.zumtobel.com">litecom.zumtobel.com</a> and enter the reference number (HW-ID) for the <i>LITECOM CCD</i>.</li> </ul> </div> </div>

Table 7: Overview of licensing

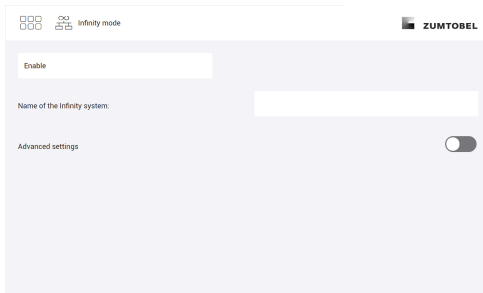
## 7.3 Infinity mode

Enabling Infinity mode gives you access to apps that are only available in this mode. Infinity mode is also a requirement for creating an Infinity system by combining several *LITECOM CCDs*. This makes it possible for all *LITECOM CCDs* in an Infinity system to communicate with each other and for the overall *LITECOM infinity* system to be operated.

### 7.3.1 Overview of the “Infinity Mode” app

The following gives you an overview of the functions in the **Infinity mode** app.

Path: App overview > **Infinity mode**

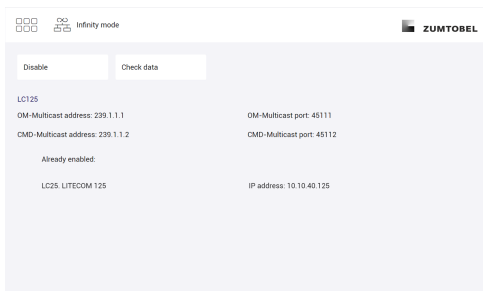


The **Infinity mode** view provides a facility for entering the name of the Infinity system and enabling Infinity mode.

For more information see Section [Enabling Infinity mode](#) <sup>22)</sup>

The multicast addresses and multicast ports that are stored as standard under **Advanced settings** can be optionally changed. For example, this may be necessary if there are any special IT requirements.

For more information see Section [Advanced settings](#) <sup>23)</sup>



Once you have enabled Infinity mode, the appearance of the **Infinity mode** view changes. You can see a view of the most important data of the Infinity system on this page:

- Name of Infinity system
- Used multicast addresses and multicast ports
- Already enabled *LITECOM CCDs* which are combined in the Infinity system

### 7.3.2 Enabling Infinity mode

Path: App overview > **Infinity mode**

1. Navigate to the path.

➡ The **Infinity mode** view is displayed.

2. Enter name of the Infinity system.
3. If necessary, show the **Advanced settings** option in order to change multicast addresses and multicast ports.



#### Note

For more information see Section [Advanced settings](#) <sup>23</sup>

4. As soon as all of the required data has been entered or changed, tap the **Enable** button.




#### Note

- In order to combine several *LITECOM CCDs* in an Infinity system, you must always enter the same name as the name of the Infinity system.
- Only ASCII characters can be used in the name of the Infinity system.
- In order to combine several *LITECOM CCDs* in an Infinity system, the same advanced settings (e.g. OM-Multicast address and OM-Multicast port) must be set for all *LITECOM CCDs*.
- If multiple *LITECOM CCDs* are added to the Infinity system, the device designations must be unique, i.e. no two *LITECOM CCDs* in the Infinity system can have the same device designation.
- As soon as the control device has been enabled in Infinity mode, the Infinity ID is displayed in the licensing information in the *LITECOM Store* instead of the reference number.
- As soon as the control device has been enabled in Infinity mode, the display of the app overview changes and the **Addressing wizard** app is no longer available, for example.
- If you would like to use two or more Infinity systems in a network, you must note the following:
  - The names of the Infinity systems must be different.
  - The OM-Multicast addresses and the CMD-Multicast addresses must be different.
  - The OM-Multicast ports and the CMD-Multicast ports must be different.

## Advanced settings

The multicast addresses and multicast ports that are stored as standard can be optionally changed. For example, this may be necessary if there are any special IT requirements.

Path: App overview > **Infinity mode** > 

The following table provides a description of the individual configuration options:

Parameter	Description
OM-Multicast address	IP address that is needed together with the OM-Multicast port to synchronise the system image on all <i>LITECOM</i> CCDs.
OM-Multicast port	Port number that is needed together with the OM-Multicast address to synchronise the system image on all <i>LITECOM</i> CCDs.
CMD-Multicast address	IP address that is needed together with the CMD-Multicast port in order to forward commands to the correct <i>LITECOM</i> CCD(s).
CMD-Multicast port	Port number that is needed together with the CMD-Multicast address in order to forward commands to the correct <i>LITECOM</i> CCD(s).

Table 8: Advanced settings

### 7.3.3 Extending the Infinity system

If you would like to combine several *LITECOM* CCDs in one Infinity system, ensure that the following requirements have been met:

- Other *LITECOM* CCDs are connected to the existing network.
- **Basic licence (Infinity)** has been activated for all *LITECOM* CCDs.  
For more information see Section [Licensing](#)<sup>[19]</sup>
- The time zone of the other *LITECOM* CCDs does not match the time zone of the *LITECOM* CCD that has already been enabled.  
Path: App overview > **Basic settings** > **Date and time** > button for selecting the time zone

In order to combine several *LITECOM* CCDs in an Infinity system, Infinity mode must be enabled for the other *LITECOM* CCDs.

For more information see Section [Enabling Infinity mode](#)<sup>[22]</sup>



### 7.3.4 Infinity system status

The start page provides information on the current status of the Infinity system. An additional icon may be displayed at the top right of the start page, depending on the status of the Infinity system. An overview of the individual status options is shown in the following:




Additional icon on start page	Status	Description
No icon	All <i>LITECOM</i> CCDs available	All <i>LITECOM</i> CCDs are available in the Infinity system.
	<i>LITECOM</i> CCD is being added	<ul style="list-style-type: none"> <li>At least one <i>LITECOM</i> CCD is being added to the Infinity system.</li> </ul> <div> <p><b>i</b> <b>Note</b></p> <p>If all <i>LITECOM</i> CCDs in an Infinity system are restarted (e.g. after a mains failure or a software update), the individual <i>LITECOM</i> CCDs are automatically added to the existing Infinity system one after the other. This process may take several minutes.</p> </div> <ul style="list-style-type: none"> <li>While this status is active, no structural changes can be made in the <i>LITECOM</i> infinity system (e.g. deleting a group or room). As a result, only the following apps and functions are available for all <i>LITECOM</i> CCDs in the Infinity system: <ul style="list-style-type: none"> <li>Log out</li> <li>Lock function</li> <li>Language</li> <li>Start page</li> <li>Infinity mode</li> <li>Log</li> <li>Faults</li> <li>Installation test</li> </ul> </li> </ul>
	<i>LITECOM</i> CCD not available	<ul style="list-style-type: none"> <li>At least one <i>LITECOM</i> CCD is not available in the Infinity system (e.g. device error).</li> <li>The <i>LITECOM</i> CCDs available in the Infinity system can still be configured and operated. Example: luminaires for one available and one unavailable <i>LITECOM</i> CCD are assigned to a room. If a scene is recalled in this room, the scene is only recalled for the luminaires for the available <i>LITECOM</i> CCD.</li> <li>In the <b>Infinity mode</b> app, the following icon is displayed next to the unavailable <i>LITECOM</i> CCD: </li> </ul>

Table 9: Infinity system status

## 8 Next steps

After enabling Infinity mode and extending the Infinity system, if applicable, the following steps are recommended:



- Activate licences for other apps in the LITECOM Store.
- If a new system is being commissioned or a system is being extended, address the devices.
- In the event of an upgrade from a *LITECOM* system to *LITECOM infinity*, configure the necessary functions.



### General differences between LITECOM and LITECOM infinity

	LITECOM	LITECOM infinity
<b>Addressing</b>	If you tap on <b>Addressing</b> in the app overview, you must then select the respective device type (e.g. <b>Luminaire</b> , <b>Motors</b> and <b>Input devices</b> ).	If you tap on <b>Addressing</b> in the app overview, you must first select the respective control device and can then select the respective device type (e.g. <b>Luminaires</b> , <b>Motors</b> and <b>Input devices</b> ).
<b>System image</b>	The RGA address is based on the following address scheme: room address/group address/individual address (e.g. <b>2-1-2</b> ).	The RGA address is based on the following address scheme: device designation/room address/group address/individual address (e.g. <b>LC01-2-1-2</b> ).
<b>Data backup</b>	A complete data backup or a partial data backup can be made.	Only a complete data backup can be made.
<b>LITECOM Store</b>	In the <b>Licensing information</b> the article number and the reference number (HW-ID) are displayed.	In the <b>Licensing information</b> the article number and the Infinity ID are displayed.
<b>Network settings</b>	Network settings can be changed at any time.	As soon as Infinity mode has been enabled, the network settings (with the exception of the device name and the device designation) can no longer be changed.
<b>Log and Faults</b>	The path consists of the room\group\device name e.g. <b>Room 1\Group 1\LIGHTS - 6400000100</b> .	The path consists of the device designation\room\group\device name e.g. <b>LC01\Raum 1\Gruppe 1\LIGHTS - 6400000100</b> .

Table 10: Differences between *LITECOM* and *LITECOM infinity*

## 9 Maintenance

In the **Infinity mode** app, if there is an exclamation mark  next to a *LITECOM CCD* that is already enabled, a fault has occurred with this *LITECOM CCD*. Two buttons appear next to the exclamation mark :


- Use the  button to delete the faulty *LITECOM CCD* from the Infinity system without replacing it. The data for this *LITECOM CCD* will be completely deleted from the Infinity system.
- Use the  button to replace the faulty *LITECOM CCD* with a new *LITECOM CCD*. The data for the faulty *LITECOM CCD* will be transferred to the new *LITECOM CCD*.

### Replacing a LITECOM CCD

#### Requirements:

- A complete data backup has been created for the system.
- Preparation of the new *LITECOM CCD* must be complete.  
For more information see Section [Preparation](#) <sup>15)</sup>
- The basic licence (Infinity) must be activated for the new *LITECOM CCD*.  
For more information see Section [Licensing](#) <sup>19)</sup>
- The non-functioning *LITECOM CCD* can already be physically removed from the network and disposed of.
- Access to the web interface must take place via the IP address of a *LITECOM CCD* that is available in the Infinity system.

Path: App overview > **Infinity mode**

1. Navigate to the path.  
➔ The **Infinity mode** view is displayed.
2. Tap the button next to the exclamation mark .  
➔ The **Enter IP address for the new control device** view is displayed.
3. Enter the IP address for the new control device.






#### Note

Enter the IP address that you assigned to the new *LITECOM CCD* during commissioning.

4. Select the complete data backup.  
➔ The data from the old *LITECOM CCD* is transferred to the new *LITECOM CCD*.  
➔ The Infinity mode view is displayed.  
➔ The data for the new control device is updated and the new control device then appears in the list in place of the old control device.

## 10 Appendix

This section contains the following information:

- [Factory settings](#) 
- [Icons](#) 
- [Glossary](#) 

### 10.1 Factory settings

#### Standard scenes

As soon as you create a room in your *LITECOM* system, five standard scenes are enabled in the room. The following table contains the defaults for these scenes.













Scene	Absence	Working	Writing	Meeting	Workshop
Icon					
Intensity	0%	100%	40%	16%	7%
Tunable White	3000 K	3000 K	3000 K	3000 K	3000 K
Colour	White	White	White	White	White
Pattern ( <i>SEQUENCE infinity</i> )	–	–	–	–	–
Light balance (direct/indirect)	50:50	50:50	50:50	50:50	50:50
Blind position	0%	0%	0%	0%	0%
Slat position	0%	0%	0%	0%	0%
Window position	100%	100%	100%	100%	100%
Screen position	0%	0%	0%	0%	0%

Table 11: Standard scenes and their defaults

#### Standard pattern

The following values are stored for the 10 standard patterns.

Pattern	Left	Centre	Right	Indirect	Curve
 All off	0%	0%	0%	0%	–
 Direct light	100 %	100 %	100 %	0%	Wave-like
 Informal meeting	0%	0%	0%	100 %	Wave-like
 Conference	0%	100 %	0%	100 %	Wave-like
 Concentrated work	100 %	100 %	100 %	100 %	Wave-like
 Orientation left	100 %	0%	0%	0%	Wave-like
 Orientation right	0%	0%	100 %	0%	Wave-like




Pattern	Left	Centre	Right	Indirect	Curve
 Presentation left	100 %	50%	0%	0%	Wave-like
 Presentation right	0%	50%	100 %	0%	Wave-like
 Tablet PC	100 %	0%	100 %	100 %	Wave-like

Table 12: Standard patterns and their default values

## 10.2 Icons

This section contains an overview of all icons shown on the web application.

### “Scenes” app



















Icon	Description
	Intensity
	Colour
	Tunable White
	Light balance
	Blind position
	Slat position
	Window position
	Screen position
	Different settings are stored for this setting at room, group and device level
	Setting is controlled via daylight linking
	A show is stored for this setting; the settings can only be changed in the <b>Shows</b> app
	Configuration unknown
	Locate device
	Zone
	Blind position: no movement with scene recall
	Window position: no movement with scene recall
	Slat position: no movement with scene recall
	Screen position: no movement with scene recall

Table 13: Icons in the “Scenes” app

## “System image” app



















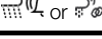
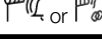
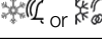






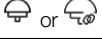
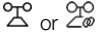
Icon	Description
	Luminaire
	RGB luminaire
	TW luminaire
	Balance luminaire
	Relay (luminaire)
	Blinds (type 3, type 3+4)
	Blinds (type 4)
	Window
	Screen
	<i>SEQUENCE infinity</i>
	Momentary-action switch/standard switch
	CIRCLE control unit
	<i>LM-CIRIA</i>
	Remote control
	Presence detector
	Light sensor
	General contact
	Signalling contact, e.g. <i>LM-4RUKS</i>
	Rain (input contact or linked input contact)
	Wind (input contact or linked input contact)
	Ice (input contact or linked input contact)
	Emergency luminaire/escape-sign luminaire
	Emergency luminaire/escape-sign luminaire (lighting management)
	Rocker switch (2x)
	Rocker switch (3x)
	Rocker switch (4x)
	<i>ONLITE BRI</i>
	Sky scanner or linked sky scanner
	Weather station or linked weather station

Table 14: Icons in the “System image” app

## “Blind control” app





Icon	Description
	Glare protection position
	Slat position
	Transmittance
	Facade alignment

Table 15: Icons in the “Blind control” app

### 10.3 Glossary

Term	Explanation
CMD-Multicast address	IP address that is needed together with the CMD-Multicast port in order to forward commands to the correct LITECOM CCD(s).
CMD-Multicast port	Port number that is needed together with the CMD-Multicast address in order to forward commands to the correct LITECOM CCD(s).
Device designation	Short form of device name that is used in an Infinity system in order to uniquely assign the RGA address of a device (e.g. luminaire) to a control device.
Device name	Name of a device (e.g. <b>LITECOM CCD</b> ). The <i>LITECOM-Touchpanel TCI</i> and the <i>LITECOM Mobile App</i> use this device name to establish a connection to the <i>LITECOM CCD</i> .
Infinity ID	Number that is used to check the licence number of the basic licence (Infinity) and for apps that are only available in Infinity mode.
Infinity mode	Requirement for creating an Infinity system; Infinity mode must be enabled separately for each <i>LITECOM CCD</i> . Several <i>LITECOM CCDs</i> can then be combined in one Infinity system. Users are also given access to apps that are only available in Infinity mode.
Infinity system	Several <i>LITECOM CCDs</i> can be combined in one Infinity system. This makes it possible for all <i>LITECOM CCDs</i> in an Infinity system to communicate with each other and for the overall <i>LITECOM infinity</i> system to be operated.
LITECOM platform	Basic <i>LITECOM</i> technology (e.g. Java and security updates for the operating system)
OM-Multicast address	IP address that is needed together with the OM-Multicast port to synchronise the system image on all <i>LITECOM CCDs</i> .
OM-Multicast port	Port number that is needed together with the OM-Multicast address to synchronise the system image on all <i>LITECOM CCDs</i> .



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