



## Introduction

This portable and free tool allows to monitor multiple Lightware devices (using LW3 protocol) at the same time on a PC or Mac. The HTML-based list can be customized to show the desired devices with the necessary information (device properties). The tool can be used to check the current state of numerous Lightware devices at once, e.g. showing the health status, crosspoint states or the installed firmware versions as shown on the following screenshot:

Building	Room	IP Address	Name	Device Label	Serial number	Fw package	Health
A1	Meeting room 1	172.24.5.11	MMX4x2-HDMI	LW_MMX4x2-HDMI_00004429	00004429	1.6.4b2 r89	N/A
A1	Meeting room 2	172.24.5.17	VINX-120-HDMI-ENC	ENC-0011AAE00010	E00010	v3.5.1b1 r1	N/A
A1	Meeting room 3	172.24.5.18	VINX-110-HDMI-DEC	DEC-0011AAE80002	E80002	v3.5.1b1 r1	N/A
A1	Meeting room 4	172.24.5.19	UMX-TPS-TX140-Plus	LW_UMX-TPS-TX140-Plus_00006074	00006074	1.5.1b2 r69	N/A
A1	Control room 1	172.24.5.23	MMX8x4-HT400MC	LW_MMX8x4-HT400MC_00005555	00005555	1.4.3b1 r2	N/A
B1	Meeting room 11	172.24.5.25	UMX-HDMI-140-Plus	LW_UMX-HDMI-140_00005023	00005023	1.3.1b2 r55	N/A
B1	Meeting room 12	172.24.5.26	HDMI-TPS-RX110AY-Plus	LW_HDMI-TPS-RX110AY-Plus_CA309359	CA309359	1.5.0b3 r65	N/A
B1	Meeting room 13	172.24.5.27	SW4-TPS-TX240-Plus	LW_SW4-TPS-TX240-Plus_00006334	00006334	1.3.6b2 r54	N/A
B1	Control room 2	172.24.5.29	MMX8x8-HDMI-4K-A	Test-MMX8x8_DHCPEN	00005487	1.4.3b1 r2	N/A
C1	Test room	172.24.5.43	UCX-4x2-HC30D	LW_UCX-4x2-HC30D_00006909	00006909	v1.5.0b7	OK
C1	Test room	172.24.5.12					
C1	Test room	172.24.5.37					
LW HQ	Docu room	192.168.0.110	MMX2-4x3-H20	LW_MMX2-4x3-H20_00007103	00007103	v2.3.0b1	OK

Showing 1 to 13 of 13 entries

Powered by Lightware

*Monitoring Webtool – The Main Screen*

**i** The Monitoring Webtool is an open-source software released under the MIT license (see the last page). Therefore, changes are allowed to be made to all of its parts (e.g. business logic, UI) as needed at the responsibility of the editor.

## How To Use

1. **Download** the ZIP package from <https://lightware.com/monitoring-webtool-software>.
2. **Extract** the content of the ZIP file into a folder on the computer.
3. **Run** the tool: open the **index.html** file with a browser.
4. **Configure** the list: edit the **template.js** JavaScript file with a text editor (see the provided examples and explanatory comments in the file).
5. **Reload** the html file in the browser to update the page.

## Configuration Options

The following data can be set in the **template.js** file:

### 1. Global Configuration

- The **IP address** of the device can be set to be **clickable**. The link can be the IP address itself or a custom URL.
- Setting the **number of the devices** shown on a page.
- Enable/disable the device **filter box**.
- Enable/disable an **animation** on a value to highlight if it has been changed.

### 2. Device List

- Specify the **IP address** of the device.
- Setting the **static properties** (e.g. building name, room name).
- Other **optional properties** (e.g. encryption, password and URL).

### 3. Further Columns (Device Properties)

- Device label (Name)
- Serial number, Firmware package, etc.
- Further device properties based on the LW3 path.

```

template - Notepad
File Edit Format View Help

// In order to configure the devices to be displayed in your table, you should add or remove entries in this array
// Every item is an object with the following properties:
//
// - IP (mandatory):           the IP address (or hostname) of the device
// - Static fields (optional): you can add any number of static fields. The name of the field shall be the
// - url (optional):           the URL to open when the user clicks on the IP address. If not specified, th
//                             used if enabled in the options
// - password (optional):     The password of the device. If not specified, no password will be used. Can
//                             devices only.
// - encrypted (optional):    Set it true if the connection is encrypted (using secure websocket). Default
//
// Note: With the Taurus family (UCX and MMX2 devices) you can not define the password here. You have to open the
//       web server in the same browser on a separate tab and enter the password there. The password will be store
//       The password field can be used with VINX devices when a password is set.

devices: [
  {'IP': '172.24.1.185', 'Building': 'HQ', 'Room': 'Meeting room 1', 'encrypted':true },
  {'IP': '172.24.5.53', 'Building': 'HQ', 'Room': 'Meeting room 1', 'password':'test'},
  {'IP': '172.24.5.54', 'Building': 'HQ', 'Room': 'Meeting room 2', 'url':'http://www.lightware.com' },
  {'IP': '172.24.1.87', 'Building': 'HQ', 'Room': 'Meeting room 3'},
  {'IP': '172.24.1.218', 'Building': 'LW', 'Room': 'Meeting room 4'},
  {'IP': '172.24.1.243', 'Building': 'LW', 'Room': 'Meeting room 6'},
  {'IP': '172.24.5.59', 'Building': 'LW', 'Room': 'Meeting room 7'},
  {'IP': '172.24.5.47', 'Building': 'LW', 'Room': 'Meeting room 8'},
  {'IP': '172.24.5.19', 'Building': 'LW', 'Room': 'Meeting room 11'},
  {'IP': '172.24.6.17', 'Building': 'LW', 'Room': 'VINX Test'},
  {'IP': '172.24.6.60', 'Building': 'LW', 'Room': 'VINX Test'},
  {'IP': '172.24.6.61', 'Building': 'LW', 'Room': 'VINX Test'}
]
Ln 46, Col 39      100%  Unix (LF)  UTF-8

```

*Configuration Options – The template.js File*

## Limitations

### Supported Lightware Products


The device type is automatically recognized after connection, you just need to provide the IP address/host name in the template.js devices section.


## Websockets








Lightware devices have a limitation in connection with the number of the websockets that can be established. This value is product-dependent, see the table below. If the number of the live websockets does not allow to build another connection, then red icon is shown next to the IP address. To avoid such problems it is recommended to close all Ethernet connections that are not necessary, e.g. Lightware Device Controller (LDC), web LDC or other external controller.

## Password-Protection of Lightware Devices

There are two types of security level in case of the supported Lightware devices:

 **Cleartext Login:** The device is protected with a password that can be stored in the **template.js** file.

 **Password Authentication:** The password of UCX, MMX2 and DCX devices cannot be stored in the **template.js** for security reasons. The workaround is to open the built-in webpage of the device on a separate tab (you can do it easily by clicking on the IP address) and log in there. You can close the tab after that, the browser will cache the credential data.

Product	Websockets	Security	Product	Websockets	Security
UCX-2x1-HC30	19		RAP-B511	6	
UCX-2x2-H30			RAC-B501		
UCX-4x2-HC30			MMX4x2-HDMI	6	
UCX-4x2-HC30D	MMX4x2-HDMI-USB20-L				
MMX2-4x1-H20	19		MMX4x2-HT200	3	
MMX2-4x3-H20			VINX-120-HDMI-ENC		
MX2 Standalone Matrix Switchers	15	–	VINX-110-HDMI-DEC		
WP-UMX-TPS-TX130-US-Plus	6		VINX-210AP-HDMI-ENC		
SW4-TPS-TX240-Plus			VINX-120AP-HDMI-ENC		
HDMI-TPS-RX220AK			VINX-110AP-HDMI-DEC		
UMX-HDMI-140	3		VINX-120AP-HDMI-ENC-DNT		
UMX-HDMI-140-Plus			WP-VINX-110P-HDMI-ENC		
UMX-TPS-TX140-Plus			FP-VINX-110P-HDMI-ENC		
UMX-TPS-TX140K					

*Supported Security Levels and the Available Websockets*


## Supported Browsers

The tool should run in any widespread, common browser, however, Google Chrome, Mozilla Firefox and Microsoft Edge are recommended. Please note that the number of the opened connections are limited by the browser, e.g. Google Chrome can not connect more than 255 hosts at the same time. This limitation is counted per browser window and not per tab, so if other connection-intensive web applications are opened on other tabs, this limit might be lower.



## UCX, DCX and MMX2 devices

Secure websocket, SSL, HTTPS and 802.1x support has been implemented in Taurus UCX, DCX and MMX2 devices for IT security. If the authentication is enabled (at HTTP or HTTPS) the **login** label is displayed at the IP address and you have to enter the user/admin data. After that a new page is opened (IP address/lw3) with HTTP 404 error - ignore that message, you can close that browser tab. The Monitoring Webtool page is updated automatically showing the information from the affected device.

 Please note that if the authentication is enabled, Firefox cannot open UCX, DCX and MMX2 devices with FW package v2.9.0b6 or newer, as well as in case of UCX-TPX devices with FW package v1.7.0b6 or newer.

## **MIT License**

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