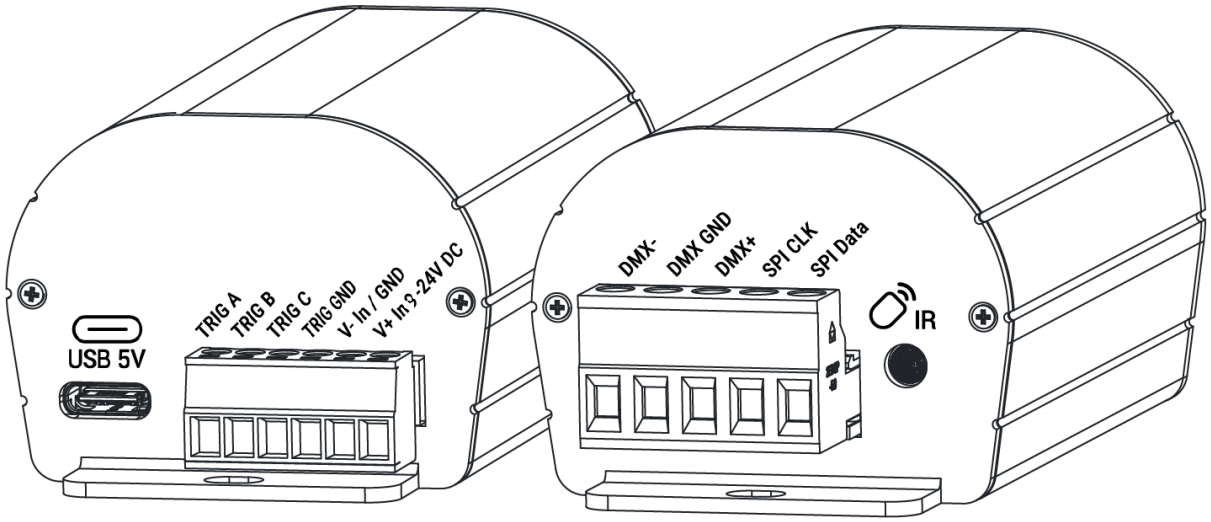
CHROMATEQ

DMX SPI – Installation and setup

Interface firmware: 23.1.0.0

Setup tool: DMX Device Tool

Edition: 11/2026



DMX SPI interface: rear panel (left) and front panel (right)

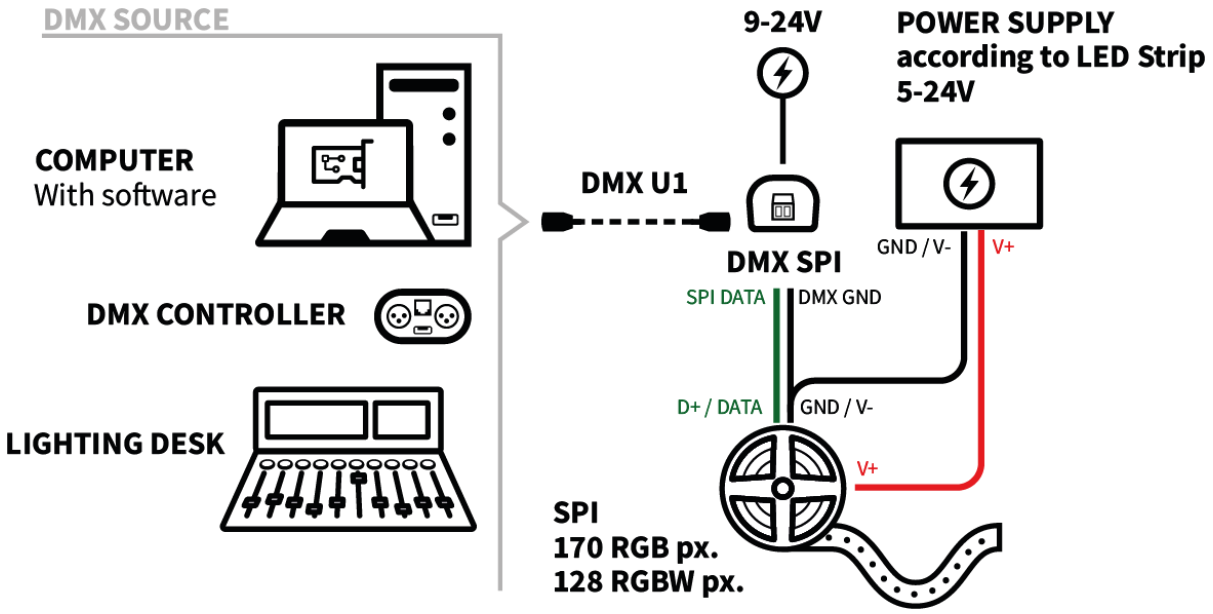
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1. About this manual

What the DMX SPI interface does

The DMX SPI interface connects a DMX console to an SPI LED strip. It receives the 512 channels of one DMX universe and sends them straight to the strip: each pixel of the strip follows the channels assigned to it. This way of working is called "LED Driver".



A DMX source (console, software or computer) controls the strip through the DMX SPI interface

The interface works without a computer. The computer is only used to set it up, once, with the **DMX Device Tool** software.

> **Note:** the DMX SPI interface does not store a show in memory. The strip only displays what the console sends.

What the interface does not do

- It does not work with PRO DMX 2: the software does not recognise the DMX SPI interface.
- It does not play a show on its own and has no DMX output.
- The **TRIG A**, **TRIG B** and **TRIG C** inputs and the **IR** infrared receiver are not used.

Converting the DMX SPI interface into a CLUB SPI interface (chapter 11) adds these functions: playing a show without a console, using the **TRIG A**, **TRIG B** and **TRIG C** inputs and working with PRO DMX 2.

What you are going to do

1. Install DMX Device Tool (chapter 2).
2. Connect the interface, the DMX line and the LED strip (chapter 3).
3. Open the interface in DMX Device Tool (chapter 4).
4. Choose the DMX start address, then set up the LED strip (chapters 5 and 6).
5. Check that the strip follows the console (chapter 7).

The following chapters explain how to set up the interface from an RDM console, everyday use, firmware updates, conversion to CLUB SPI and troubleshooting.

Conventions used in this manual

- Text displayed by the software is written in **bold**, exactly as it appears on screen.
- Warnings and useful information are shown in a box:

> **Caution:** indicates a risk of data loss or damage to equipment.
>
> **Note:** gives useful information.

2. Before you start

Equipment required

- The DMX SPI interface.
- The USB-C cable, supplied, to connect the interface to the computer.
- An SPI LED strip of one of the supported types (see the table below), with its own power supply, suited to the strip.
- A DMX source: console, DMX controller or computer running lighting software.
- Optional: a 9 to 24 V DC power supply. The interface can also be powered through its USB-C cable.
- A computer, for setup only.

The technical documentation is on the product page: https://www.chromateq.com/dmx-spi/

> **Note:** the interface does not power the LED strip. Provide a power supply for the strip, following its manufacturer's instructions.

Supported LED strips

The DMX SPI interface controls LED strips fitted with the following chips:

Strip chip	Data wires to connect
WS2811, WS2812, WS2813, WS2815, SK6812	**SPI Data** only
WS2801, LPD8806, LPD6803, APA102	**SPI CLK** and **SPI Data**

> **Note:** one DMX universe controls a maximum of 170 RGB pixels or 128 RGBW pixels. Chapter 6 explains how to light a longer strip.

Computer

DMX Device Tool runs on Windows and macOS:

	Windows	macOS
Operating system	Windows 10, 11 (64-bit)	macOS 10.14 and later
USB port	1 free USB port	1 free USB port

Install DMX Device Tool

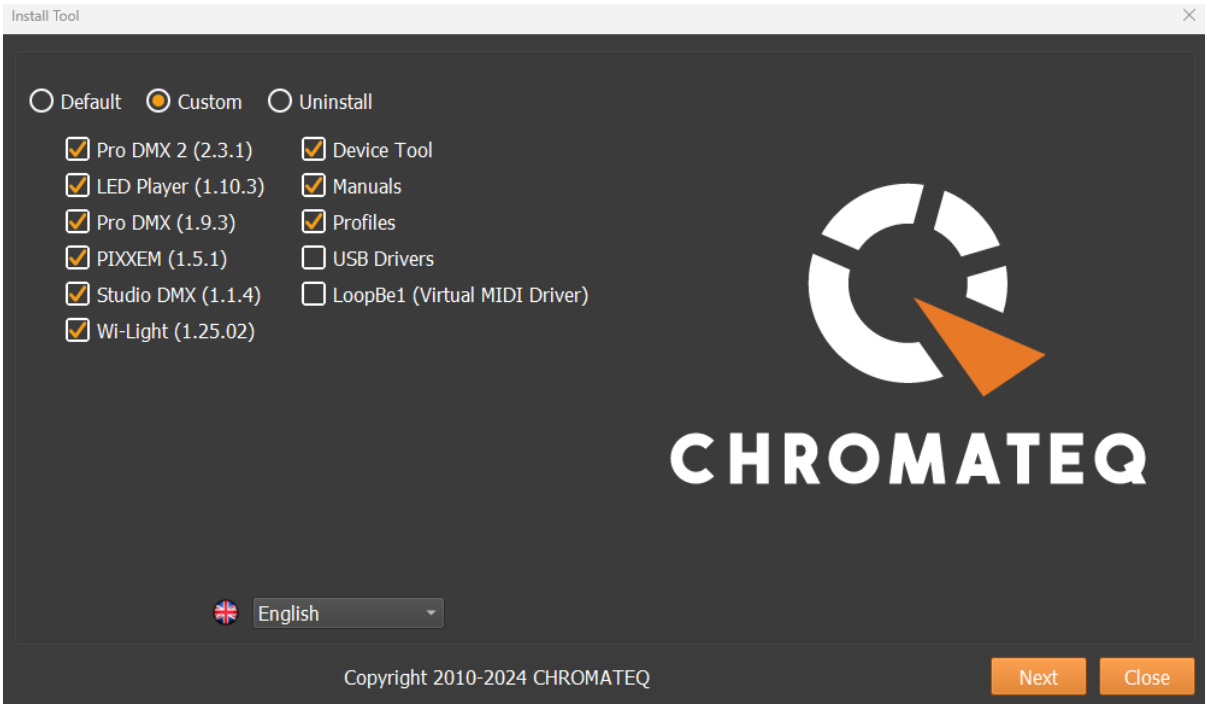
DMX Device Tool is supplied with the Chromateq software installer.

We recommend that you also install PRO DMX 2: it installs the firmware update files for the interface (chapter 10). DMX Device Tool installed on its own does not contain them. PRO DMX 2 is not used to control the DMX SPI interface.

Before you start: the computer must be connected to the Internet to download the software. You need administrator rights on the computer.

1. Open the download page: https://www.chromateq.com/dmx-software-downloads/
2. Download the installer for your operating system.
3. Run the installation program.

4. Accept the administrator rights request (on Windows, click **Yes**). The **Install Tool** window opens.
5. Choose the installer language from the list at the bottom of the window.
6. Choose **Custom**. The list of software to install is displayed.
7. Tick at least **Device Tool** and **Pro DMX 2**.
8. Click **Next**.
9. Choose the installation folder.
10. Complete the installation.



Custom installation: choosing the software to install (version numbers shown are examples)

Check

1. Start **DMX Device Tool**. The software starts and displays the **Open USB Device(s)** button.

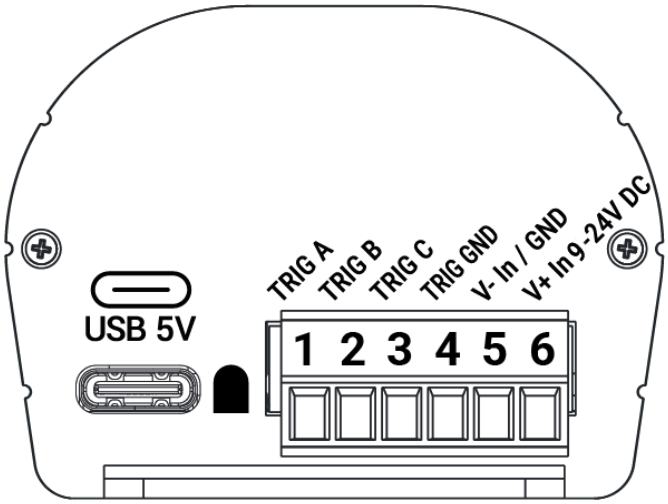
3. Connect the interface

Before you start:

- Switch off the LED strip power supply and disconnect the interface.
- Locate the two terminal blocks: 6 pins at the rear, 5 pins at the front.

Caution: always wire with the power off. A wiring mistake can damage the interface or the LED strip.

Rear panel: USB and power



Rear panel of the DMX SPI interface: USB-C socket, status LED and 6-pin terminal block

Marking	Function
USB 5V (USB-C socket)	Connection to the computer for setup. Also powers the interface (5 V, 0.3 A).
Status LED (to the right of the USB-C socket)	Green or red depending on the interface state (see below).
Terminal block, pins 1 to 4: **TRIG A**, **TRIG B**, **TRIG C**, **TRIG GND**	Not used on the DMX SPI interface. Do not connect anything.
Terminal block, pin 5: **V- In / GND**	Power supply, negative pole.
Terminal block, pin 6: **V+ In 9-24V DC**	Power supply, positive pole (9 to 24 V DC).

Status LED states

LED	Meaning
Off	The interface is not powered.
Red, fast flashing	The interface is receiving DMX and controlling the strip. Also during the 5 seconds after power-up.
Steady green	No DMX signal received for 5 seconds.
Green, fast flashing	The interface is open in DMX Device Tool. The strip no longer follows the DMX (chapter 4).
Green, 3 flashes	Preparing the firmware update.

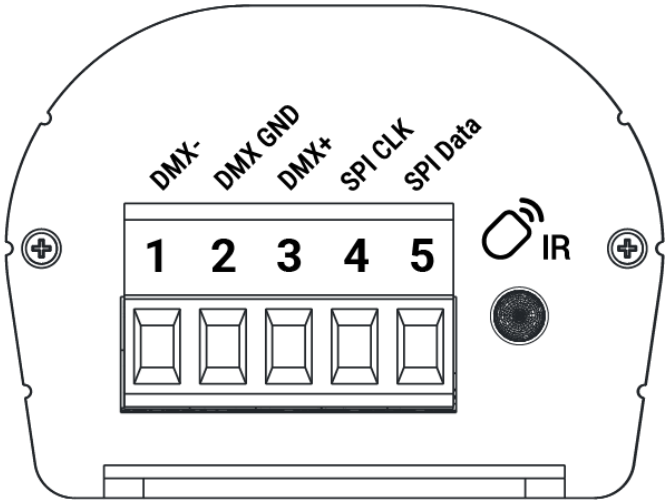
LED	Meaning
Alternating green and red	Firmware update in progress, or identification requested by an RDM console (chapter 8).
Green and red, fast flashing	Contact Chromateq support.

Power the interface

The interface can be powered in two ways. Choose one or the other:

- Through the USB-C socket: connect the USB-C cable to the computer or to a USB charger. For operation without a computer, a simple USB charger is enough.
- Through the terminal block: connect a 9 to 24 V DC power supply to the **V- In / GND** (negative) and **V+ In 9-24V DC** (positive) pins.

Front panel: DMX and LED strip



Front panel of the DMX SPI interface: 5-pin terminal block and infrared receiver

Marking	Function
Terminal block, pin 1: **DMX-**	DMX input, negative signal.
Terminal block, pin 2: **DMX GND**	DMX input, ground. Also receives the ground of the strip power supply.
Terminal block, pin 3: **DMX+**	DMX input, positive signal.
Terminal block, pin 4: **SPI CLK**	LED strip clock (for certain chips only).
Terminal block, pin 5: **SPI Data**	LED strip data.
IR	Not used on the DMX SPI interface.

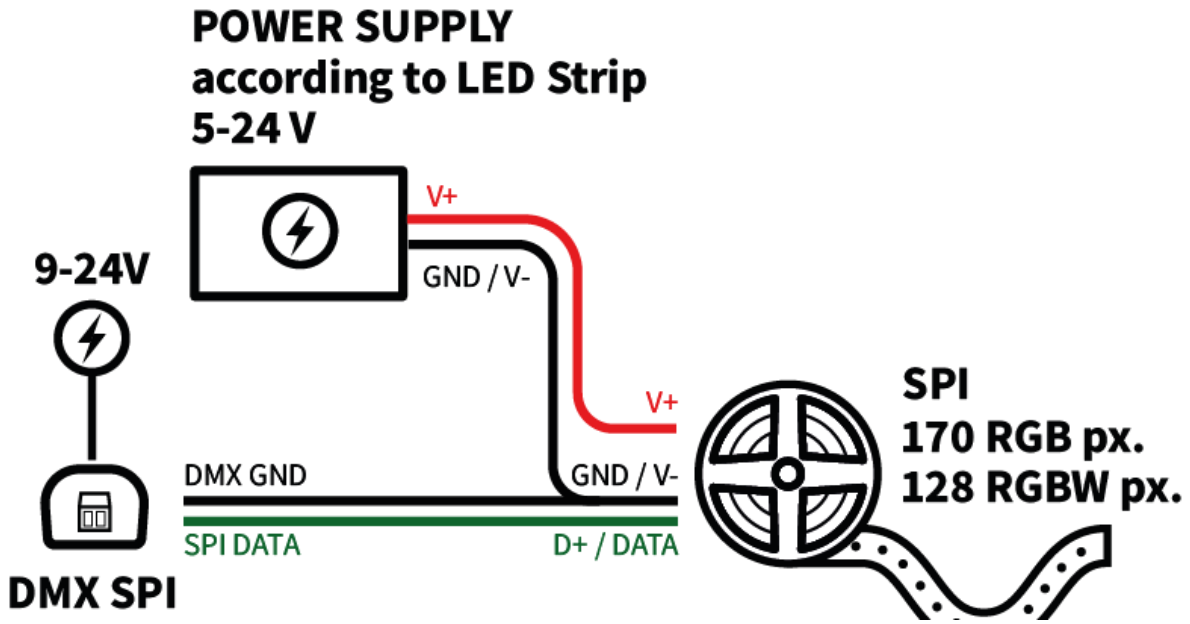
Connect the LED strip

1. Identify the chip type of your strip (given by the strip manufacturer).
2. Connect the data input of the strip to **SPI Data**.
3. If your strip uses a WS2801, LPD8806, LPD6803 or APA102 chip, also connect the clock input of the strip to **SPI CLK**.
4. Connect the ground (GND) of the strip power supply to the **DMX GND** pin of the interface.

5. Connect the strip power supply, following its manufacturer's instructions.

Strip chip	Wires to connect to the interface
WS2811, WS2812, WS2813, WS2815, SK6812	**SPI Data**
WS2801, LPD8806, LPD6803, APA102	**SPI CLK** and **SPI Data**

> **Note:** without a common ground between the strip power supply and the interface (**DMX GND** pin), the strip does not receive the data correctly.



Example wiring of an LED strip: SPI Data to D+ / DATA, strip ground on DMX GND, separate strip power supply

Connect the DMX line

Connect the DMX line coming from the console to the **DMX-**, **DMX GND** and **DMX+** pins.

> **Note:** the DMX line of the DMX SPI interface is an input. The interface does not send DMX on to other devices.

Check

1. Power up the interface (USB-C cable or terminal block).
2. Look at the status LED, next to the USB-C socket:
    - red, fast flashing for 5 seconds, then steady green: the interface is powered and waiting for DMX;
    - red, fast flashing continuously: the interface is already receiving DMX from the console.
3. If the LED stays off, check the power supply.

> **Note:** at power-up, the strip stays off until the DMX signal arrives.

4. Open the interface in DMX Device Tool

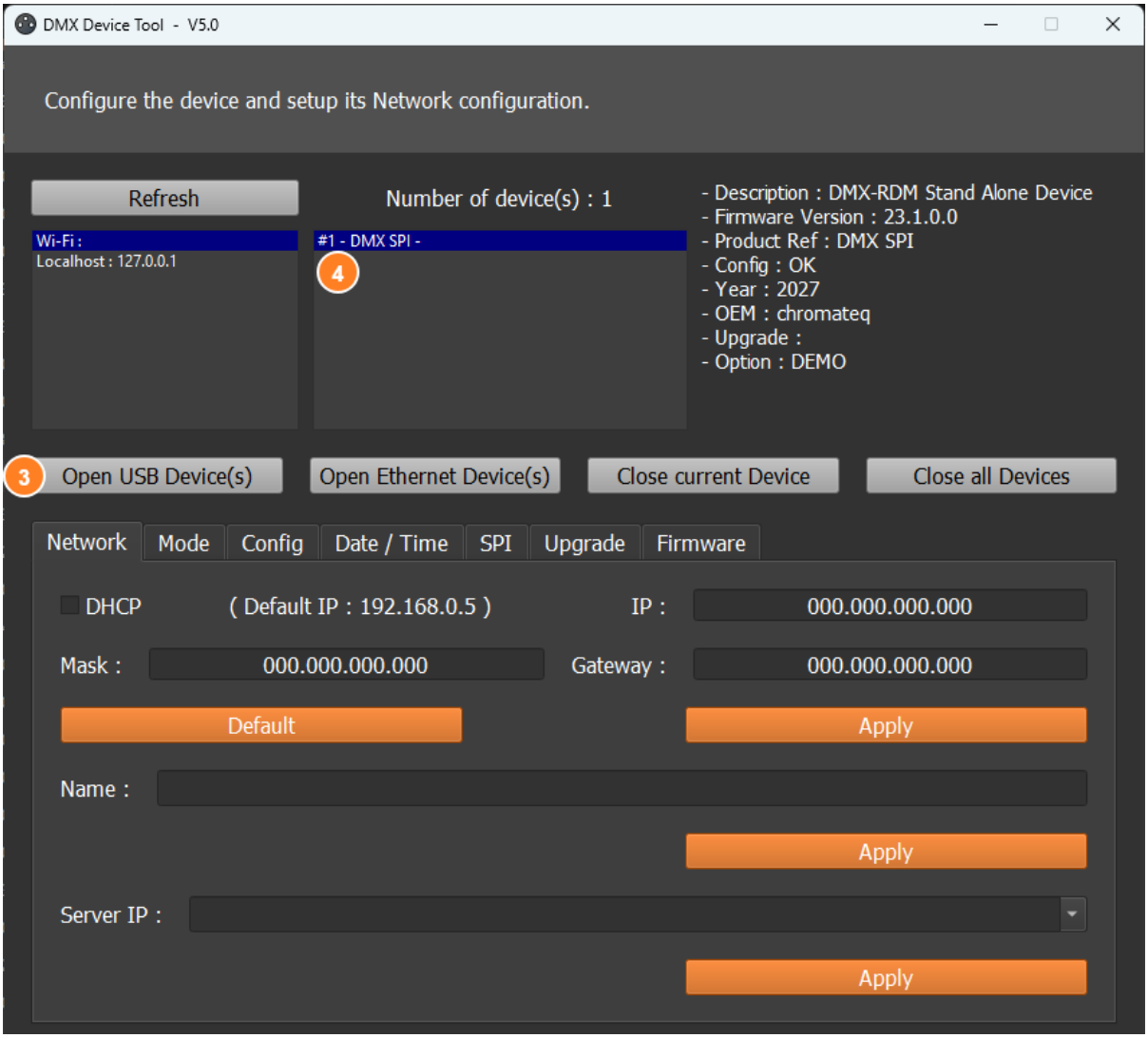
To set up the interface, you connect it to the computer and open it in DMX Device Tool.

Before you start:

- DMX Device Tool is installed (chapter 2).
- The interface is connected (chapter 3).
- Close PRO DMX 2 if it is open: only one program can communicate with the interface at a time.

Open the interface

1. Connect the interface to the computer with the USB-C cable.
2. Start **DMX Device Tool**.
3. Click **Open USB Device(s)**. The list of connected interfaces is displayed.
4. If it is not already selected, click the interface in the list, for example "#1 - DMX SPI - <serial number>". Its information is displayed to the right of the list.



DMX Device Tool: the DMX SPI interface is open

For the DMX SPI interface, only four tabs are used:

Tab	Use
Mode	DMX start address (chapter 5).
SPI	LED strip setup (chapter 6).
Firmware	Firmware update (chapter 10).
Upgrade	Conversion to CLUB SPI (chapter 11).

The **Network**, **Config** and **Date / Time** tabs, as well as the **Open Ethernet Device(s)** button, do not apply to the DMX SPI interface.

> **Note:** if the message **No connected device(s)** is displayed, the computer cannot see the interface. Check the USB-C cable, then click **Open USB Device(s)** again.
>
> **Note:** while the interface is open in DMX Device Tool, the strip no longer responds to the DMX from the console.

Close the interface

When setup is finished:

1. Click **Close current Device**. The interface returns to normal operation: the strip follows the console again.
2. Close DMX Device Tool.
3. You can unplug the USB-C cable. If the interface is powered through this cable, connect it to a USB charger or to a 9 to 24 V DC power supply afterwards.

> **Note:** unplugging the USB-C cable has the same effect as **Close current Device**: the strip follows the console again.

Check

- To the right of the list, the **Product Ref** line shows **DMX SPI**, and the **Firmware Version** line shows the firmware version of the interface.
- While the interface is open: the status LED is green, fast flashing.
- After **Close current Device**: if the console is sending DMX, the LED is red, fast flashing; otherwise, it is steady green.

5. Choose the DMX start address

The DMX start address is the first console channel that controls the strip. The following channels control the following pixels, in order.

How many channels are needed?

Each pixel uses one channel per colour:

- RGB pixel (red, green, blue): 3 channels;
- RGBW pixel (red, green, blue, white): 4 channels.

The strip therefore uses the channels from the start address up to channel:

start address + number of pixels × channels per pixel − 1

This last channel must not exceed 512. Pixels beyond channel 512 stay off.

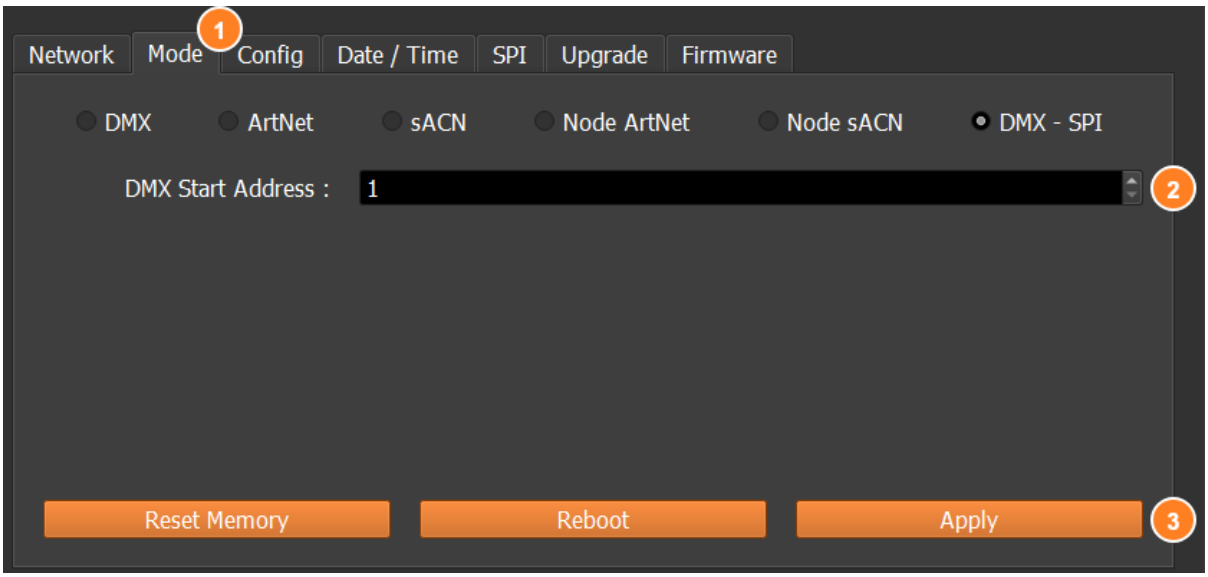
Example	Channels used	Result
170 RGB pixels, address 1	1 to 510	All pixels are controlled.
128 RGBW pixels, address 1	1 to 512	All pixels are controlled.
50 RGB pixels, address 101	101 to 250	All pixels are controlled. Channels 1 to 100 remain free for other devices.
170 RGB pixels, address 400	400 to 512	Only the first 37 pixels are controlled correctly. The 38th receives only some of its colours; the following ones stay off.

> **Note:** to control more than 170 RGB pixels or 128 RGBW pixels, see chapter 6 (grouping and repetitions).

Set the address

Before you start: the interface is open in DMX Device Tool (chapter 4).

1. Click the **Mode** tab. **DMX - SPI** is already selected: it is the only mode available on the DMX SPI interface.
2. In the **DMX Start Address :** field, enter the start address (1 to 512).
3. Click **Apply**. The address is saved in the interface.
4. Click **Close current Device** (chapter 4).



DMX Device Tool Mode tab: DMX start address

> **Note:** the address applies immediately. There is no need to click **Reboot**. The interface keeps the address when it is switched off.
>
> **Caution:** do not use the other options of the **Mode** tab. They do not apply to the DMX SPI interface.

Check

- After **Apply**, no error message is displayed. If the message **Writing Node Config Failed** is displayed, check the USB-C cable, reopen the interface (chapter 4) and try again.
- The full test with the console is described in chapter 7.

6. Set up the LED strip

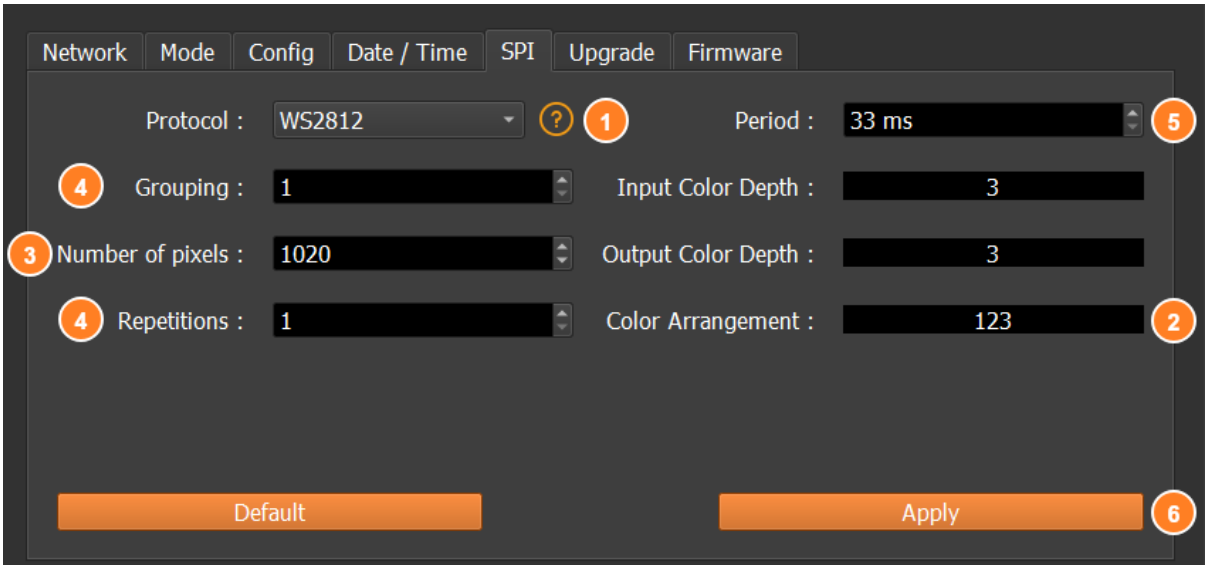
These settings tell the interface which LED strip is connected: chip type, colour order and number of pixels. They are saved in the interface and kept when it is switched off.

Before you start:

- The interface is open in DMX Device Tool (chapter 4).
- You know the chip type of your strip, the order of its colours and its number of pixels (given by the strip manufacturer).
- You know in which order the console sends the colours of each pixel (for example red, green, blue).

Open the strip settings

Click the **SPI** tab. The current strip settings are displayed.



DMX Device Tool SPI tab: LED strip settings

Set up the strip

Make the settings in this order:

1. In **Protocol :**, choose the chip type of your strip. The help button, to the right of the list, displays the supported chips.
2. Click the value shown next to **Color Arrangement :** (for example 123). The **Color arrangement** window opens (see "Set the colour order" below).
3. In **Number of pixels :**, enter the number of pixels controlled by the console (at most 170 RGB pixels or 128 RGBW pixels, see chapter 5).
4. If your strip is longer, set **Grouping :** and **Repetitions :** (see "Control a longer strip" below). Otherwise, leave them at 1.
5. If needed, set **Period :** (see the table below). Otherwise, keep 33 ms.
6. Click **Apply**. The settings are written to the interface.
7. Click **Close current Device** (chapter 4).

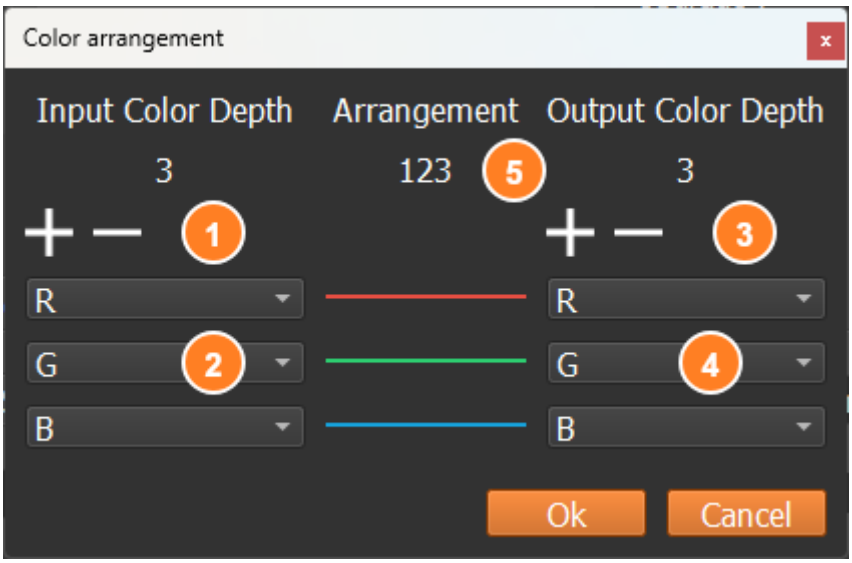
> **Caution:** confirming the **Color arrangement** window resets **Number of pixels :** and **Repetitions :** to their basic values. So always set the colour order **before** the number of pixels and the repetitions.

Setting	Function	Factory value
Protocol :	Chip type of the strip: WS2812, WS2811_SLOW, WS2811_FAST, WS2813, WS2815, SK6812, WS2801, LPD8806, LPD6803 or APA102.	WS2812
Input Color Depth :	Number of colours sent by the console for each pixel: 3 for RGB, 4 for RGBW. Set in the **Color arrangement** window.	3
Output Color Depth :	Number of colours of each strip pixel: 3 for an RGB strip, 4 for an RGBW strip. Set in the **Color arrangement** window.	3
Color Arrangement :	Colour order of the strip, calculated by the **Color arrangement** window. For example **123** for an RGB strip, **213** for a GRB strip.	123
Number of pixels :	Number of pixels controlled by the console.	1020: replace it with the actual number of pixels controlled.
Grouping :	Number of strip pixels lit together, as a single pixel. 1 = each pixel is controlled separately.	1
Repetitions :	Number of times the sequence of pixels is repeated along the strip.	1
Period :	Interval between two strip updates: from 33 ms (about 30 frames per second, the smoothest) to 1,000 ms. For a **WS2811_SLOW** chip, the minimum is 66 ms.	33 ms

Note: the **Default** button resets the chip type, the period, the grouping and the colour order to their factory value. It does not change the number of pixels or the repetitions. Then click **Apply** to write these values to the interface.

Set the colour order

The **Color arrangement** window links the colours sent by the console to the colours of the strip.



Color arrangement window: console colours on the left, strip colours on the right

1. In the **Input Color Depth** column (on the left), set the number of colours sent by the console with the **+** and **−** buttons.
2. In this column, choose the colours in the order in which the console sends them. For example **R**, **G**, **B**.
3. In the **Output Color Depth** column (on the right), set the number of colours of the strip with the **+** and **−** buttons.
4. In this column, choose the colours in the strip order, given by its manufacturer. For example **G**, **R**, **B** for a GRB strip.
5. Check the result under **Arrangement**, for example **213**.
6. Click **Ok**. To close without changing anything, click **Cancel**.

The colours offered are **R** (red), **G** (green), **B** (blue), **CW** (cool white), **WW** (warm white) and **UV** (ultraviolet). For the white of an RGBW strip, choose the same name on the left and on the right, for example **CW**.

> **Note:** a strip colour that does not exist in the left-hand column stays off.

Control a longer strip

One DMX universe controls at most 170 RGB pixels or 128 RGBW pixels. To light a longer strip, the interface can repeat the pixels:

- **Grouping :** each pixel controlled by the console lights several neighbouring pixels of the strip, in the same colour.
- **Repetitions :** the whole sequence of pixels is reproduced several times in a row along the strip.

The number of pixels lit on the strip is:

Number of pixels × Grouping × Repetitions

Strip	Number of pixels	Grouping	Repetitions	Result
150 RGB pixels	150	1	1	Each pixel is controlled separately.
600 RGB pixels	150	4	1	The pixels light up in blocks of 4.

Strip	Number of pixels	Grouping	Repetitions	Result
450 RGB pixels	150	1	3	The same 150-pixel pattern appears 3 times.

> **Note:** the interface lights at most 1,024 RGB pixels or 768 RGBW pixels. Beyond that, the pixels stay off.

Check

1. Reopen the interface in DMX Device Tool (chapter 4), then click the **SPI** tab.
2. The values displayed are the ones you set.
3. Click **Close current Device**.

The strip test with the console is described in chapter 7.

7. Check with the DMX console

This test confirms that the strip follows the console: address, colour order and number of pixels.

Before you start:

- The DMX start address and the strip are set up (chapters 5 and 6).
- The interface is closed in DMX Device Tool (**Close current Device**, chapter 4), or the USB-C cable is unplugged from the computer.
- The DMX line from the console is connected to the interface, and the strip is powered (chapter 3).

Test

1. Send DMX from the console. The status LED is red, fast flashing.
2. Set all channels to 0.
3. Set the start address channel to full (255). The first pixel of the strip lights up **red**.
4. Set the next channel (address + 1) to full, and set the previous one back to 0. The first pixel lights up **green**.
5. Set channel address + 2 to full, and set the previous one back to 0. The first pixel lights up **blue**.
6. For an RGBW strip: set channel address + 3 to full, and set the previous one back to 0. The first pixel lights up **white**.
7. Set all the strip channels to full. All the expected pixels light up, up to the last one.

> **Note:** if you have set **Grouping :** or **Repetitions :** (chapter 6), it is the first group of pixels that lights up in steps 3 to 6, and the same pattern is repeated along the strip.

If the result is not right

What you see	What to do
The LED is not red, fast flashing.	The interface is not receiving DMX: check the DMX line and the console output. Also check that the interface is no longer open in DMX Device Tool.
The LED is red, fast flashing, but the strip stays off.	Check the chip type (chapter 6), the strip wiring and its ground on **DMX GND** (chapter 3), and the start address (chapter 5).
The colours are swapped (for example green instead of red).	Correct the colour order (chapter 6).
A pixel other than the first one lights up.	Check the start address (chapter 5) and the one used on the console.
The end of the strip stays off.	Check **Number of pixels :**, **Grouping :** and **Repetitions :** (chapter 6), and that the last channel does not exceed 512 (chapter 5).

Other cases are described in chapter 12 (Troubleshooting).

Check

- Steps 3 to 7 give the expected colours.

- The strip then follows the console commands with no visible delay.

Note: at power-up, the strip stays off until the DMX from the console arrives.

8. Set up from an RDM console (optional)

If your DMX console supports RDM, you can set up the interface from the console, without a computer. This chapter is optional: DMX Device Tool offers the same settings (chapters 5 and 6).

Before you start:

- The console supports RDM and is connected to the DMX input of the interface (chapter 3).
- The interface is not open in DMX Device Tool: while it is open, it does not respond to the RDM console.
- See your console manual: the way RDM settings are displayed and changed depends on the console.

Find and identify the interface

1. Run RDM discovery on the console. The interface appears under the name **DMX SPI**, manufacturer **Chromateq**.
2. If several interfaces are connected, use the console's identify function. The status LED of the interface concerned flashes green and red alternately.
3. Stop the identify function on the console.
4. If you wish, give the interface a name from the console (for example "Bar – strip 1"). This name is saved in the interface.

Available settings

The console displays the strip settings with the following names:

Name displayed by the console	Function	Equivalent in DMX Device Tool
DMX start address (standard console setting)	First channel that controls the strip, from 1 to 512 (chapter 5).	**DMX Start Address :**
LED protocol	Chip type of the strip: a number from 0 to 9 (table below).	**Protocol :**
LED color order preset	Colour order: a number from 0 to 61 (table below).	**Color Arrangement :**
Pixel count	Number of pixels controlled by the console.	**Number of pixels :**
Pixel grouping	Number of strip pixels lit together (chapter 6).	**Grouping :**
Output repetitions	Number of times the sequence of pixels is repeated (chapter 6).	**Repetitions :**
LED refresh period (ms)	Interval between two strip updates, in milliseconds: 33 minimum, at least 66 for a WS2811_SLOW chip.	**Period :**

The settings are saved in the interface and kept when it is switched off.

LED protocol numbers

Number	Chip	Number	Chip
0	WS2812	5	SK6812
1	WS2811_SLOW	6	WS2801
2	WS2811_FAST	7	LPD8806
3	WS2813	8	LPD6803
4	WS2815	9	APA102

LED color order preset numbers

The console always sends the colours of each pixel in the order red, green, blue, then white. Choose the number that matches the colour order of your strip:

RGB strip, RGB console	Number	RGBW strip, RGBW console	Number
RGB	0	RGBW	12
RBG	1	RBGW	13
GRB	2	GRBW	14
GBR	3	GBRW	15
BRG	4	BRGW	16
BGR	5	BGRW	17

For an RGBW strip controlled with 3 channels per pixel (white off), use numbers 6 to 11, in the same order: 6 = RGBW, 7 = RBGW, 8 = GRBW, 9 = GBRW, 10 = BRGW, 11 = BGRW.

Numbers 18 to 61 correspond to less common colour orders. If the order of your strip is not in this table, set it with DMX Device Tool (chapter 6).

> **Note:** if the colour order was set with DMX Device Tool and does not match any number in the list, the console displays a value that is not in the list (255).

In which order should you set the values?

The interface rejects any setting that would make the strip go beyond channel 512 (see the rule in chapter 5). The console then displays an error, and the previous setting is kept.

To avoid this, start with the value that reduces the number of channels used by the strip:

- **New interface:** first set **Pixel count** (at most 170 for an RGB strip, 128 for an RGBW strip), then **LED color order preset**, then the start address.
- **Moving the start address up:** first set **Pixel count**, then the address.
- **Moving the address down and lengthening the strip:** first set the address, then **Pixel count**.
- **Changing from an RGB strip to an RGBW strip:** first set **Pixel count** (128 at most), then **LED color order preset**.

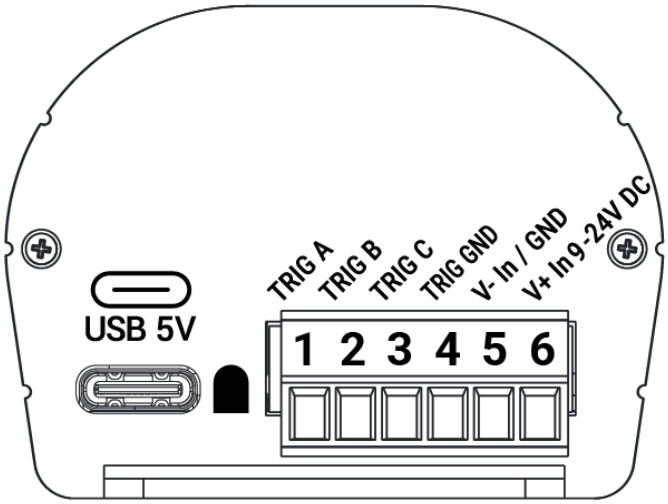
> **Note:** on a new interface, until **Pixel count** has been set, the console rejects any change of address or colour order.

Check

- The console reads back the values set, without error.
- The test with the console is described in chapter 7.

9. Everyday use

Once set up, the interface works on its own. The computer is no longer needed. This chapter describes how it behaves in everyday situations.



Rear panel of the DMX SPI interface: USB-C socket and status LED

The status LED, next to the USB-C socket, shows at all times what the interface is doing. Its different states are described in chapter 3.

Situation	Interface behaviour	LED
Power-up	The strip stays off until the DMX from the console arrives.	Red, fast flashing for 5 seconds, then steady green if no DMX arrives.
The console sends DMX	The strip follows the console immediately.	Red, fast flashing.
The DMX stops (console switched off, cable unplugged)	The strip keeps the last image received.	Steady green after 5 seconds.
The DMX comes back	The strip follows the console again.	Red, fast flashing.
Power cut	The settings (address, strip, name) are kept. When the power returns, the interface behaves as at power-up.	Off during the power cut.
Interface open in DMX Device Tool	The strip no longer follows the console (chapter 4).	Green, fast flashing.

Note: to switch the strip off, set the strip channels to 0 on the console. Stopping the console or unplugging the DMX line does not switch it off: the strip keeps the last image.

Note: the DMX SPI interface has no reset button. To return to the basic strip settings, use the **Default** button of the **SPI** tab in DMX Device Tool (chapter 6).

Check

- At power-up, the LED lights up; as soon as the console sends DMX, it is red, fast flashing.

- The strip follows the console.

10. Update the firmware

The firmware is the internal program of the interface. A new version may bring improvements. The update file is installed with PRO DMX 2: install the latest version of the Chromateq software, with **Device Tool** and **Pro DMX 2** ticked, to get the latest firmware (chapter 2).

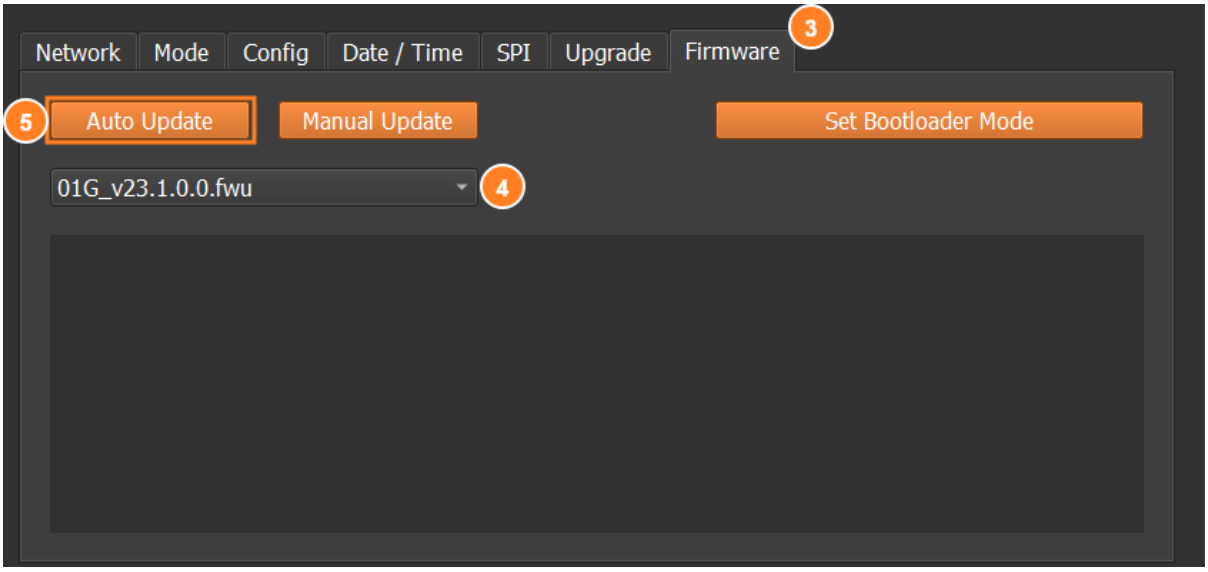
> **Note:** the firmware of the DMX SPI interface can only be updated with DMX Device Tool. PRO DMX 2 supplies the file, but cannot perform the update.

Before you start:

- The latest versions of DMX Device Tool and PRO DMX 2 are installed (chapter 2).
- The interface is connected to the computer with the USB-C cable. The update is done over USB only.
- Close PRO DMX 2 if it is open.

Start the update

1. Open the interface in DMX Device Tool (chapter 4).
2. Note the current version, shown in **Firmware Version**, to the right of the list of interfaces.
3. Click the **Firmware** tab.
4. Check the file offered in the list, for example **01G_v23.1.0.0.fwu**: the name contains the firmware version. If the list is empty, install PRO DMX 2 (chapter 2), then start again.
5. Click **Auto Update**. The file chosen in the list is installed.
6. Wait for the update to finish. The interface LED flashes green 3 times, then flashes green and red alternately.
7. Wait for the message **Successfully downloaded to device**. DMX Device Tool then closes the connection with the interface.



DMX Device Tool, Firmware tab

> **Caution:** do not unplug the interface or close DMX Device Tool during the update.
>
> **Caution:** do not use the **Manual Update** and **Set Bootloader Mode** buttons. They are reserved for troubleshooting, at the request of Chromateq support.

If the update was interrupted

If the update stopped (cable unplugged, power cut), the list of interfaces shows **#1 - Error : BOOTLOADER...** when opened.

1. Click the **Firmware** tab.
2. Click **Auto Update**, then follow steps 6 and 7 above.

If the problem continues, contact Chromateq support.

Check

1. Reopen the interface in DMX Device Tool (chapter 4).
2. **Firmware Version** shows the new version.
3. Click **Close current Device**.
4. Check that the strip follows the console (chapter 7).

> **Note:** after the update, check the address and the strip settings in the **Mode** and **SPI** tabs (chapters 5 and 6).

11. Convert the DMX SPI to CLUB SPI

The DMX SPI interface can be converted into a CLUB SPI interface, without changing the hardware. The upgrade adds the CLUB SPI functions:

- a show programmed in PRO DMX 2 and played by the interface on its own, without a computer (stand-alone mode);
- scenes triggered by the **TRIG A**, **TRIG B** and **TRIG C** contacts;
- use with PRO DMX 2.

Order the upgrade

Before you start:

- Connect the interface to the computer with the USB-C cable.
- Check that DMX Device Tool is installed (chapter 2).

1. Open the interface in DMX Device Tool (chapter 4).
2. Click the **Upgrade** tab. It shows the information to provide.
3. Contact your reseller, or Chromateq through the chromateq.com website, and provide:
    - the serial number of the interface (shown in the list of interfaces, after "DMX SPI");
    - the current reference: DMX SPI;
    - your e-mail address;
    - the new reference required: CLUB SPI.
4. You receive an upgrade file (.cfg extension). Save it to the computer.

> **Note:** the upgrade file is only valid for the interface whose serial number you provided.

Check

- The upgrade file (.cfg) is saved on the computer.
- The serial number you provided is that of the interface you are going to upgrade.

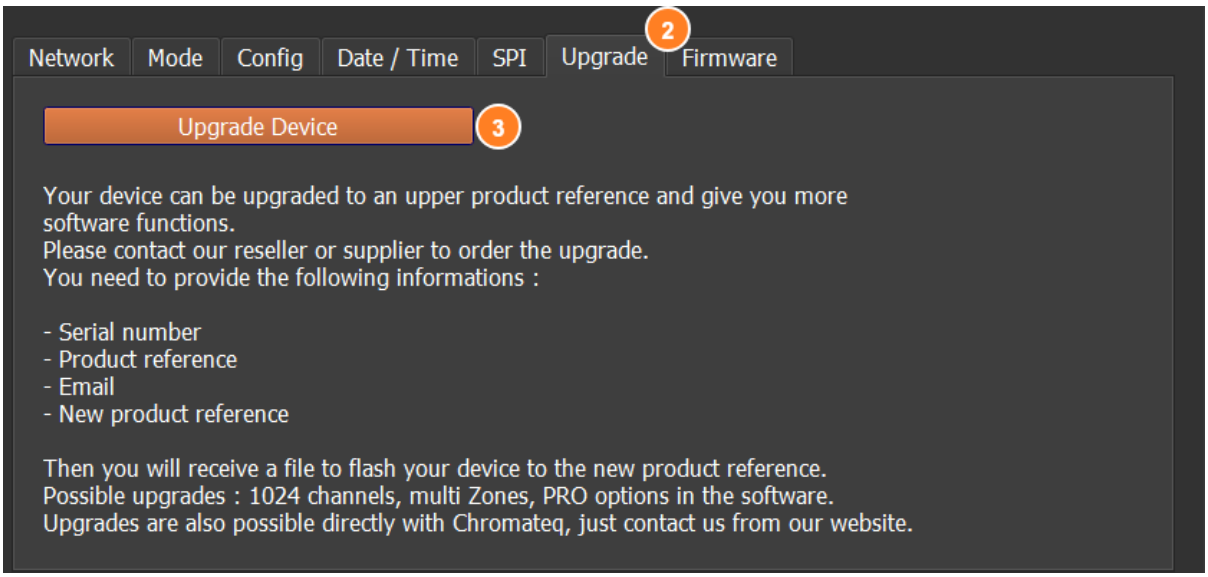
Install the upgrade

Before you start:

- Note the DMX start address and the strip settings (**Mode** and **SPI** tabs): they will be erased by the upgrade.
- Check that the computer's date and time are correct.
- Connect the interface to the computer with the USB-C cable, and close PRO DMX 2 if it is open.

> **Caution:** the upgrade erases all the interface settings and switches it to stand-alone mode. The strip no longer follows the console until you have redone the settings (see "After the upgrade").

1. Open the interface in DMX Device Tool (chapter 4).
2. Click the **Upgrade** tab.
3. Click **Upgrade Device**. The **Open config** window opens.
4. Select the upgrade file (.cfg), then open it.
5. Wait for the message **Program Device successfull !**, then close the message.
6. Click **Close current Device**.



DMX Device Tool, Upgrade tab

Message	Meaning	What to do
Program Device successfull !	The upgrade is installed.	Go to "After the upgrade".
Program Device failed : Invalid config !	The file does not match this interface, or the computer date is wrong.	Check the serial number of the interface and the computer date. If the problem continues, contact the supplier of the file.
Program Device failed : Error while writting !	Writing to the interface failed.	Check the USB-C cable, reopen the interface and try again.

After the upgrade

The interface is now a CLUB SPI interface. Choose how you want to use it.

Continue controlling the strip from the console

1. Open the interface in DMX Device Tool. It now appears as "#1 - CLUB SPI - <serial number>".
2. Click the **Mode** tab.
3. Choose **DMX - SPI**.
4. In the **DMX Start Address :** field, enter the start address noted before the upgrade.
5. Click **Apply**.
6. Click **Reboot**. The interface restarts in this mode, and DMX Device Tool closes the connection.
7. Reopen the interface, then redo the strip settings in the **SPI** tab (chapter 6).

Program a stand-alone show

Follow the CLUB SPI interface manual, available on the product page:
https://www.chromateq.com/club-spi/

PRO DMX 2 now recognises the interface.

Check

- In DMX Device Tool, to the right of the list of interfaces, **Product Ref** shows **CLUB SPI**.
- If you chose to continue with the console: the strip follows the console (chapter 7).

12. Troubleshooting

Look for your problem in the tables below. If the suggested solution is not enough, contact Chromateq support.

Connection to the computer

Problem	Possible cause	Solution
PRO DMX 2 does not recognise the interface	This is normal: the DMX SPI interface does not work with PRO DMX 2	Use DMX Device Tool (chapter 4). To use PRO DMX 2, convert the interface to CLUB SPI (chapter 11).
The message **No connected device(s)** is displayed	USB-C cable badly connected or faulty	Check the cable, then click **Open USB Device(s)** again (chapter 4).
The message **No connected device(s)** is displayed	PRO DMX 2 is open	Close PRO DMX 2: only one program can communicate with the interface at a time.
The list shows **#1 - Error : BOOTLOADER...**	A firmware update was interrupted	Finish the update (chapter 10, "If the update was interrupted").
The list of files in the **Firmware** tab is empty	PRO DMX 2 is not installed	Install PRO DMX 2 (chapter 2).
The message **Writing Node Config Failed** is displayed after **Apply**	USB connection interrupted	Check the cable, reopen the interface and try again (chapter 5).

LED strip

Problem	Possible cause	Solution
The strip does not respond to the console	The interface is still open in DMX Device Tool (LED green, fast flashing)	Click **Close current Device**, or unplug the USB-C cable (chapter 4).
The strip does not respond to the console	The DMX is not arriving (LED steady green)	Check the DMX line (**DMX-**, **DMX GND**, **DMX+**) and the console output (chapter 3).
The strip does not respond to the console, LED red, fast flashing	The console is not sending on the right channels	Check the start address (chapter 5) and the one used on the console.
The strip stays off or flickers	Wrong chip type	Choose the right chip in **Protocol :** (chapter 6).
The strip stays off or flickers	Incomplete wiring	Check **SPI Data**, **SPI CLK** for the chips that need it, and the strip ground on **DMX GND** (chapter 3).

Problem	Possible cause	Solution
The colours are wrong	Colour order set incorrectly	Set the **Color arrangement** window (chapter 6), then test with the console (chapter 7).
The end of the strip stays off	The last channel exceeds 512	Lower the start address or the number of pixels (chapter 5).
The end of the strip stays off	**Number of pixels :**, **Grouping :** or **Repetitions :** too low	Correct these settings (chapter 6).
The end of the strip stays off	The strip exceeds 1,024 RGB pixels or 768 RGBW pixels	The interface cannot control more pixels. Use a second interface for the rest of the strip.
The strip stays lit when the console is switched off	Normal behaviour: the strip keeps the last image	Set the strip channels to 0 on the console before switching it off (chapter 9).
After the conversion to CLUB SPI, the strip no longer follows the console	The interface has switched to stand-alone mode, settings erased	Select the **DMX - SPI** mode again and redo the settings (chapter 11, "After the upgrade").

RDM console

Problem	Possible cause	Solution
The interface does not appear in the RDM search	The interface is open in DMX Device Tool	Click **Close current Device** (chapter 4).
The console rejects the address or the colour order	The strip would go beyond channel 512	First set **Pixel count** (chapter 8, "In which order should you set the values?").

Status LED

Problem	Possible cause	Solution
The LED stays off	The interface is not powered	Check the USB-C cable or the 9 to 24 V DC power supply (chapter 3).
The LED is green and red, fast flashing	Interface problem	Contact Chromateq support.

13. Specifications

Operation

Specification	Value
Function	DMX to SPI LED strip converter (LED Driver), no computer needed during operation
DMX input	1 universe (512 channels), RDM compatible
Output	1 SPI output for LED strip (data and clock)
Pixels controlled by the console	up to 170 RGB pixels or 128 RGBW pixels
Pixels on the strip	up to 1,024 RGB pixels or 768 RGBW pixels, with grouping or repetitions
Chip types (**Protocol :** setting)	WS2812, WS2811_SLOW, WS2811_FAST, WS2813, WS2815, SK6812, WS2801, LPD8806, LPD6803, APA102. Full list of compatible chips: https://www.chromateq.com/dmx-spi/
Strip settings	DMX start address, chip type, colour order, number of pixels, grouping, repetitions, refresh period
Setup	DMX Device Tool over USB, or RDM console
Upgrade	to CLUB SPI, on site, with DMX Device Tool (chapter 11)
Not available	show in memory, stand-alone playback, **TRIG A/B/C** contacts, **IR** infrared receiver, DMX output, use with PRO DMX 2

Hardware

Specification	Value
Computer connection	USB-C (cable supplied)
Power supply	through USB-C (5 V, 0.3 A) or through the terminal block (9 to 24 V DC); power supply not included
Power consumption	0.7 W
Dimensions	103 × 50 × 37.5 mm
Weight	0.10 kg
Housing	aluminium, IP40
Mounting	free-standing or screw-mounted; on DIN rail with the optional "DIN Kit - Universal Rail Mounting"
Operating temperature	−45 °C to +85 °C
Certifications	CE, FCC, RoHS, UKCA

Specification	Value
Warranty	1 year

Software

Specification	Value
Setup software	DMX Device Tool (installed with the Chromateq software)
Firmware update files	installed with PRO DMX 2
Firmware described in this manual	23.1.0.0
Computer	Windows 10, 11 (64-bit); macOS 10.14 and later