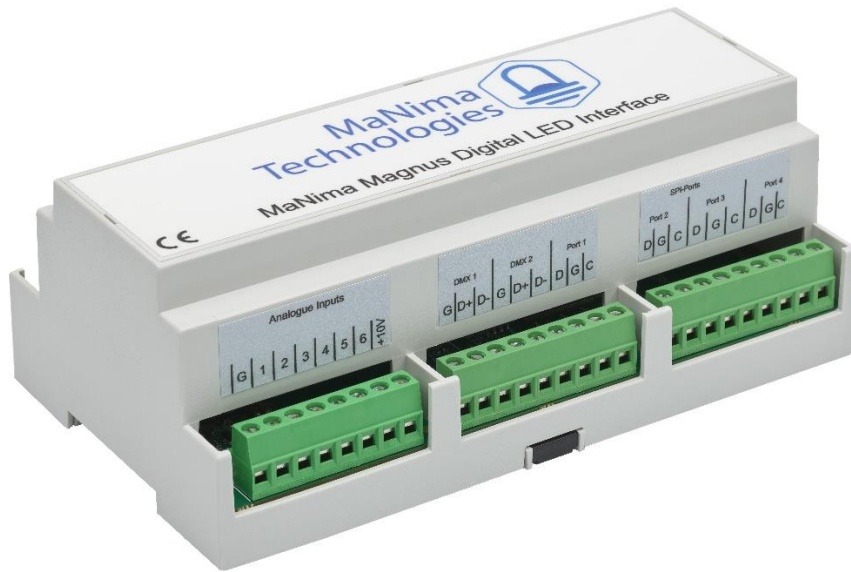


MaNima Interface

The State of the Art LED Interface



MaNima Magnus Manual V3.2

Recording and Playing

The MaNima Magnus is able to record and play up to 26 universes according to the WYSIWYG principle.

Reliable and Stable

The MaNima Magnus has been proven to be a reliable and stable product when used for high-end LED projects

EMC proof product

All of MaNima's products are EMC proof and are an ideal choice for use near EMC vulnerable systems.

Art-Net

The MaNima Magnus can be controlled via ArtNet V1.4. The interface is easy to find and use thanks to the ArtPoll system to configure.

Stackable

Connect dozens of MaNima Interfaces together to create huge LED projects with the least amount of parts.

Easy-to-use GUI

The settings of the MaNima Magnus can easily be changed by a user via the MaNima LED interface configurator.

External inputs

Scenes can be started via external inputs. These are digital inputs or analogue inputs; 4-20mA or 0-10V. And UDP commands.

Synchronization

Multiple MaNima Interfaces can synchronize when playing scenes through a master and slave setup.

Multiple protocols at once

Due to the available multiple ports, there is also the possibility of sending different protocols over different ports.



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Foreword

First of all, thank you for using the MaNima Magnus Digital LED Interface!

The MaNima Magnus Digital LED Interface is a very powerful product. With the ability of recording and playing up to 26 universes at once (depending on your license), it is the most powerful LED Interface on the market.

This manual has been made for the MaNima Magnus Digital LED Interface. It is important that anyone, who has to work with the MaNima Magnus Digital LED Interface, has read this manual.

MaNima Technologies



Safety Instructions

To make sure the product is properly handled, these precautions and safety instructions must be followed:

- Read the entire manual before installing the MaNima Magnus.
- These instructions should be handed out to the technicians/end-users responsible for installing and/or operating this product.
- The installations of this product should only be carried out by certified personal.
- Do not repair this device. Any unapproved modifications or reparations conducted by anyone other than MaNima Technologies B.V., will void product warranty.
- Do not connect the wiring to this product in any other manner than described in this manual.
- Never use this product when it is damaged, has visible damage, does not work correctly or when the product shows any other questionable behaviour that is out of the ordinary with electrical devices.
- Make sure the power source has no short-circuit.
- Make sure the input voltage is between 12-48VDC when power is turned on. Higher voltages might damage the product.
- Do not use more than one power source for the MaNima Magnus.
- To turn-off the MaNima Magnus, it must be disconnected from the power source.
- The MaNima Magnus must be protected against wet environments. Any moist will damage the product.



Technical Specifications

Weight	360 Gr
Dimensions	90 x 159 x 58 mm
Mounting	Din rail
IP class	IP10
Wiring	Max. 2.5mm ² 14 AWG
Connectors	Power: 12-48 VDC terminal connector, Art-Net terminal connector:RJ45 bus, IO port 5- input/ Output terminal connector, analogue 6-pin terminal connector, +1- volt terminal connector.
Input voltage	12-48V DC 200mA max
Max. power consumption	9.6W
Channels	13.312 Art-Net and/or up to 1024 DMX channels
Ethernet	RJ45 compatible, for 10/100 Base-TX Ethernet with Static IP address or DHCP
Input	DMX512 (2 Inputs) Art-Net MaNima Configurator 5 Digital Inputs 6 Analogue Inputs UDP commands
Output	47+ SPI protocols (supported ICs list) DMX512 (2 outputs) SPI (6 outputs) Art-Net
Directives	CE, RoHs
Operating temperature	10°C ~ 60°C
Storage temperature	10°C ~ 60°C
Warranty	5 Years
Gui	MaNima Configurator



The MaNima Configurator

In this chapter there will be everything you need to know about The MaNima Configurator.

The MaNima Configurator

The MC (MaNima Configurator) is the program used by the operator to configure the MaNima Magnus. The MC must be installed on a computer on the same network where the MaNima Magnus is connected to. To work with the MC it is recommended to first install and connect the MaNima Magnus to the network, since most (if not all) options won't be available without a connection between the computer and the MaNima Magnus.

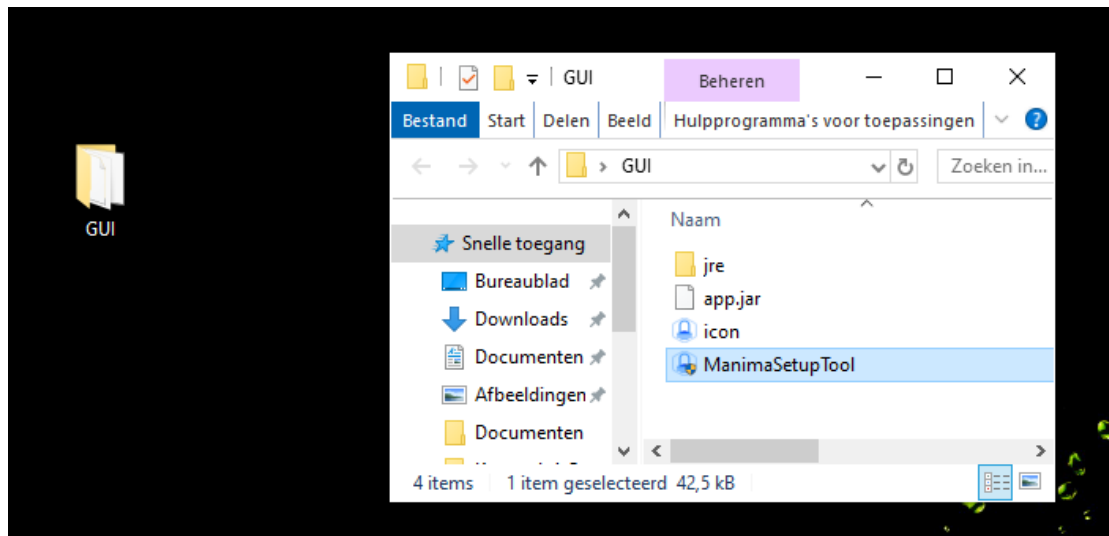


The MaNima Configurator - Opening the MC

The MC is opened by adding the “GUI” file to the computer. In this file the user will find all of the files needed to use this program. You can place the “GUI” in any file, but for this manual, the file will be placed in the desktop.

The computer on which the MC will be installed on, needs the newest version of Java. Java can be downloaded on: <https://www.java.com/en/>

- **Open the file with the left mouse button and double click on “ManimaSetupTool” (Highlighted blue on the image below)**



- **To open the MC directly from your desktop, you can create a shortcut using the right mouse button on the “ManimaSetupTool” file.** The “ManimaSetupTool” can’t be placed outside the file, if done so, the MC will have an error.

The MaNima Configurator- The UI (User Interface)

On the left side of The MC window there are multiple tabs which are used to configure the MaNima LED Magnus. A short explanation is given to each tab below:



The MaNima Configurator- Scanner

The Scanner is the tab used to search for different MaNima LED Interfaces. Follow the instructions below to configure your own device.

Make sure your computer and MaNima Magnus are connected to the same Ethernet/Wi-Fi network! The Interface should be in the scanner no matter what IP-adress it has.

Scanner

Currently editing: ManimaInterface (192.168.1.185)

Device name	IP Address	MAC	Version	Software Version	Identify
ManimaInterface	192.168.1.185	70:B3:D5:DD:90:30	Magnus 8	V 2.0.7	<input type="checkbox"/>
ManimaInterface	192.168.1.186	70:B3:D5:DD:90:22	Magnus 8	V 2.0.7	<input type="checkbox"/>

The IP-Address is the number given to a device. Using this address the user will know which device is which. ! Multiple devices can have the same IP!

This shows the version of the used hardware in the MaNima LED Interface.

If identify is switched on you can see which LED is controlled by that device.

Device name is the name given to a device. The user will know which device is which. You can change the device name in the "settings" Tab.

The MAC address is the name given to the MaNima LED Interface by the manufacturer. MAC addresses are, unlike IP addresses, never identical to each other.

This shows the software version of the connected MaNima LED Interface.

This shows which device is currently being edited.

To connect to The MaNima Magnus, Left click on the Interface. If the connection is successful, there should be "Currently editing: (IP-address)" instead of "Currently editing: None". Note that the MaNima Magnus cannot be configured without an SD-Card.

Failure to Connect

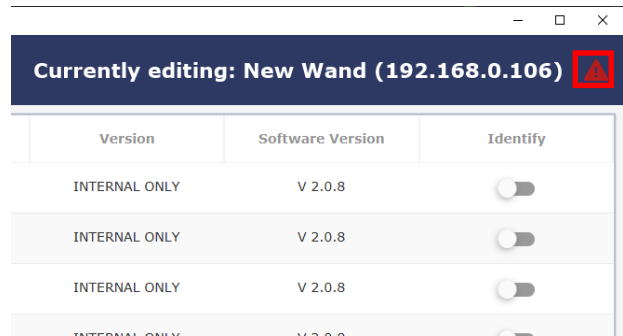
If the MC is unable to find the MaNima Magnus, there are multiple things that may have gone wrong. So, make sure the following are correct:

1. The Connected MaNima Magnus is connected to the same network as the computer.
2. The network has a DHCP.
3. The IP-address is in the IP-address range of The MC.
4. The MaNima Magnus is powered or has the correct voltage.



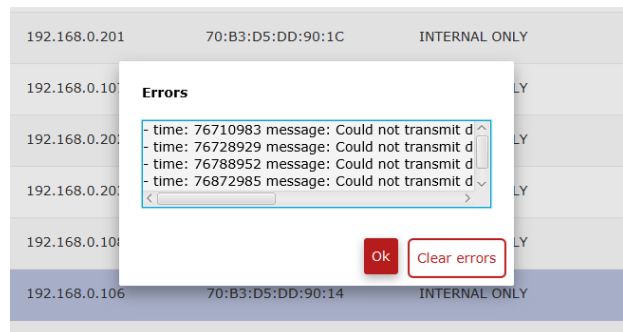
Error Warning

The error warning is shown when the Interface has encountered a problem. In the example given here, the Interface has encountered a problem where there are too many universes in a port. This can be fixed by lowering the FPS in the live playing software.



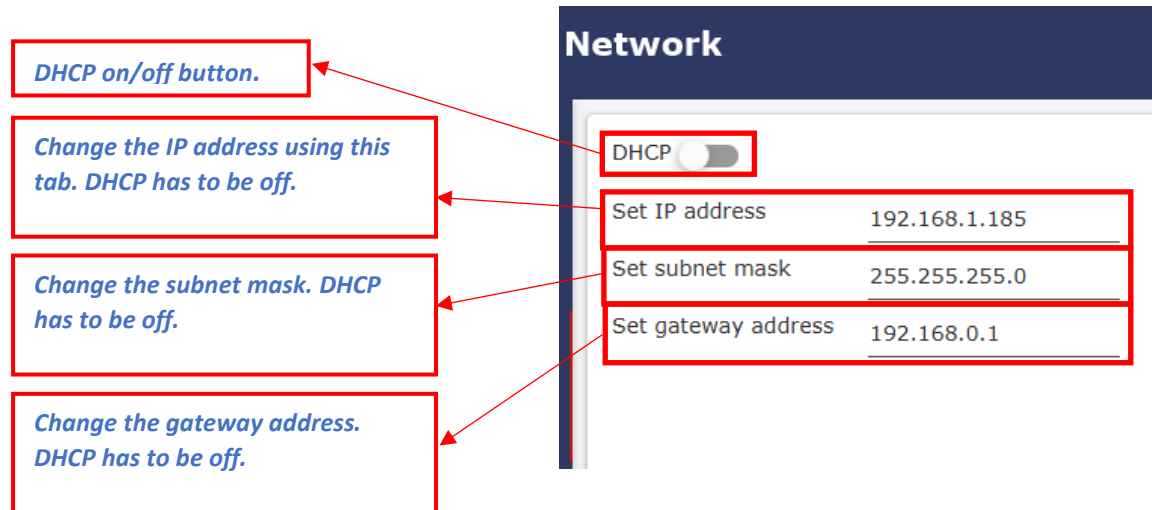
When such an error occurs, but it isn't noticeable in real life, you can press 'clear errors' and keep the program playing.

When the errors are noticeable in real life, follow the instructions in the 'Error window'.



The MaNima Configurator - Network Configurator

The Network tab is used to edit the IP-address of the device. The IP-address can be edited manually by disabling the DHCP, or automatically by enabling the DHCP.



The screenshot shows the 'Network' configuration tab. On the left, there are four red-bordered boxes with blue text annotations, each with a red arrow pointing to a specific UI element. The UI elements are: a 'DHCP' toggle switch, a 'Set IP address' field, a 'Set subnet mask' field, and a 'Set gateway address' field. The current values are 192.168.1.185, 255.255.255.0, and 192.168.0.1 respectively.

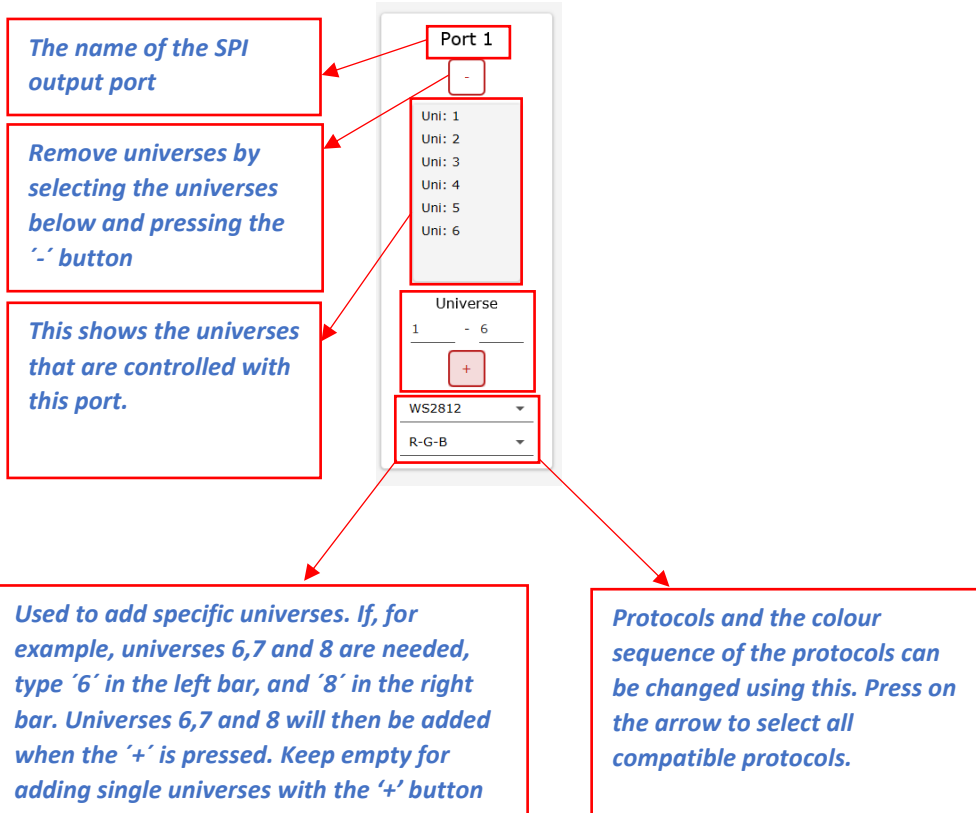
Network	
DHCP	<input type="checkbox"/>
Set IP address	192.168.1.185
Set subnet mask	255.255.255.0
Set gateway address	192.168.0.1

Annotations:

- DHCP on/off button.
- Change the IP address using this tab. DHCP has to be off.
- Change the subnet mask. DHCP has to be off.
- Change the gateway address. DHCP has to be off.

The MaNima Configurator – Port Configurator

The Mapping tab is used to configure the SPI-output ports on the MaNima Magnus.



The name of the SPI output port

Remove universes by selecting the universes below and pressing the '-' button

This shows the universes that are controlled with this port.

Used to add specific universes. If, for example, universes 6,7 and 8 are needed, type '6' in the left bar, and '8' in the right bar. Universes 6,7 and 8 will then be added when the '+' is pressed. Keep empty for adding single universes with the '+' button

Protocols and the colour sequence of the protocols can be changed using this. Press on the arrow to select all compatible protocols.

Multiple protocols at once

Due to the multiple available ports, there is also the possibility of sending different protocols over different ports. This is done by selecting a different protocol for each port.

Colour sequence

You have the possibility to change the colour sequence of the protocols.

SD-Card

The SD-Card saves all the mapping configurations. When there is no SD-Card, the MaNima Magnus cannot be configured.

WS2812	WS2812	WS2812	WS2812	WS2812	WS2812
R-G-B	R-G-B	R-G-B	R-G-B	R-G-B	R-G-B



The MaNima Configurator – DMX Input / Output

The DMX tab is used to configure the MaNima Magnus between three different DMX-modes. These modes are:

Disabled: The Interface will not be or be affected by different Interfaces and will operate by itself.

Master: Master mode will enable the output of the DMX connections. This has to be enabled to send DMX protocols to devices.

Slave: This mode will enable the DMX input channels on the Interface. Using this, the interface can be commanded with DMX.

Master Mode:

The master mode sets the DMX port as an output to be connected to other devices.

Set the right universe in here.

Mode
Master ▾

Universe
1

Slave Mode:

Select the mode





Delete a Channel using this icon.

This is the selected action, that is currently paired with the channel.

This is the current channel. These can be changed by changing the number.

Dmx 2

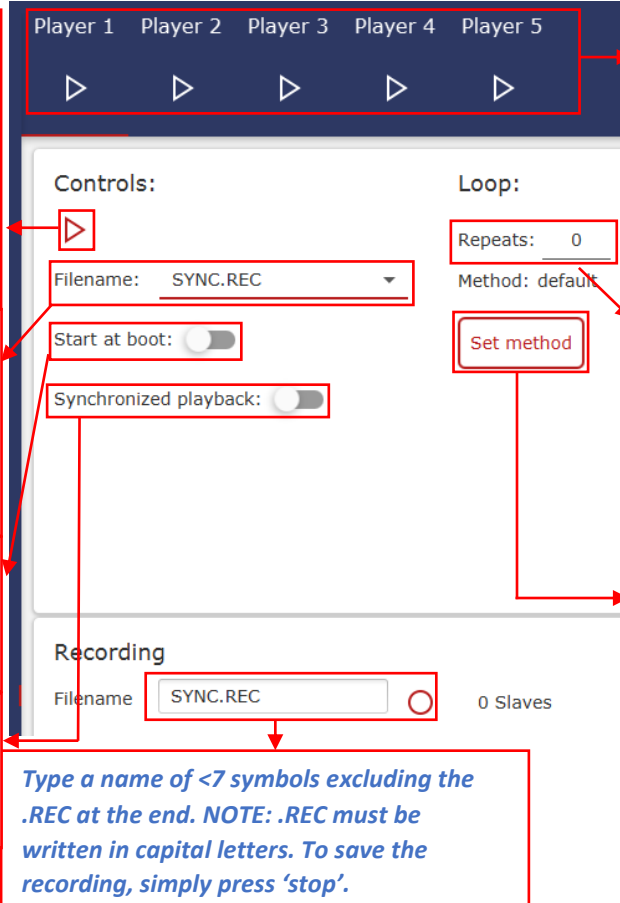
Mode
Slave ▾

Ch 1	Player 1 start ▾	
Ch 2	Player 1 stop ▾	
Ch 3	Player 2 start ▾	
Ch 4	Player 2 stop ▾	

Add channel

The MaNima Configurator - Scenes

With scenes .REC files can be recorded on the MaNima LED Interface.



Pressing the 'Play' button will activate the .REC file. If the MaNima Magnus is connected to LEDs, they should play the scene immediately. To stop the scene, press the "Stop" button.

Scenes that have been recorded with this tab will be saved on the SD-card on the MaNima Magnus and will show up in here. Scenes can be selected here.

Enable 'start at boot' if the scene needs to play when the MaNima Magnus turns on.

Enable the 'Synchronized playback' option when using grouped Interfaces.

Players are individual tabs of controls where the user can quickly switch between scenes.

Change the number of repeats of the scene. If "Repeat=0" the scene will play

This opens a menu in which you can select different loop methods.

Type a name of <7 symbols excluding the .REC at the end. NOTE: .REC must be written in capital letters. To save the recording, simply press 'stop'.

Recording scenes

If a scene must be recorded, there needs to be an output signal going through the SPI or DMX outputs of the MaNima Magnus. Universes must be added in the 'LED Output' or 'DMX' tab before sending data through the SPI or DMX ports. When a scene is playing, press record.

Live recording with 3rd party LED editing software

Using 3rd party software which is compatible with the MaNima Magnus is important. Follow the instructions of the LED editing software to 'live edit' the LEDs that are to be programmed. Make sure the used universes are in the mapping of the MC. All LED editing software that uses ART-NET is compatible with the MC and the MaNima Magnus.

If the LEDs are being controlled with the 3rd party software through the MaNima Magnus, you can name the file and press "record" on the MC and press 'Stop' to save the file.

The filename must be written with capital letters and cannot exceed 7 symbols.

The file is now saved on the SD-card of the MaNima Magnus and can be selected. To test if the file is working, select the file in the player and press 'Start'. (Instructions for synchronised recording and playing, visit the Master-Slave function chapter)



Loop Functions

The MaNima Configurator has built in 'loop functions', these functions are used to make smooth transitions between the start and end of a scene.

To use loop functions, click on 'Set method' when having a scene selected:

Loop:

Repeats:
Method: default

[Set method](#)

A window pops up in which you can select the effect you want to use:

Set loop effect

Select effect

☒ Default

☐ Autoloop

☐ Bounce

☐ Fader

☐ Fade and Bounce

[Previous](#) [Next](#) [Cancel](#) [Finish](#)

Autoloop:

Set loop effect

Enter effect parameters:

Duration

Minimum time to find loop

Equality

How equal must the frame be in percentage

[Previous](#) [Next](#) [Cancel](#) [Finish](#)

The autoloop effect is an effect where the MaNima Configurator searches for nearly identical frames. When the MaNima Configurator has found the nearly identical frames, it cuts the recording there. If the end frame and the start frame are the same, it is nearly impossible to spot the beginning of a new recording.

The duration parameter sets the time until the IF may start searching for an identical frame.

The equality parameter gives the minimum frame equality between the two frames. If the IF can't find an equal frame, set a lower parameter.

Bounce:

The bounce effect is an effect in which the recording will be reversed at the end of the scene.



Fade:

Set loop effect
Enter effect parameters:
Duration
Time for fade to complete
Fadein ☐
Fade at start of scene
Fadeout ☐
Fade at end of scene

Previous Next Cancel Finish

The fade effect is an effect which will slowly dim the recording at the beginning and/or end.

Fade and Bounce:

The fade effect is an effect where the ending and/or beginning of a scene are fading in/out. After the fading, the scene will be reversed.



Controlling scenes

The recorded scenes can be started by external inputs or DMX channels configured as an DMX port input.

ArtNet

The MaNima Magnus can be controlled via ArtNet V1.4. The interface is easy to find and use thanks to the ArtPoll system.

Live Playing

The MaNima Magnus is able to instantly receive Art-Net and send an SPI protocol to the Digital LEDs.

Playing recorded scenes

The MaNima Magnus is capable of recording Live data and playing this back later. The recorded files are saved on the SD-card.



Group configuration

Use a group to make several interfaces work together. This is used when using synchronised recording and synchronised playback.

If you want to work with multiple interfaces at the same time, you can do this via the “Group” tab. In the box “Group Number” you fill in the number at the devices you want to use together. Also enter the number you entered in the other device that you want to use together.

Group

Currently editing: ManimaInterface (192.168.1.185)

Use a group to make several interfaces work together. This is used when using synchronized recording and synchronized playback.

Interfaces in group 0 Identify group

IP Address	Name	GroupNumber
192.168.1.185	ManimaInterface	0
192.168.1.186	ManimaInterface	0

Set a group here. Only grouped Interfaces are able to see each other

Synchronized master-slave groups

If you want multiple groups of master-slave setups, and don’t want to interfere with other groups of Interfaces when using synchronised recording or playing, use the ‘group’ function. When a certain set of Interfaces is set under a certain group, a synchronised recording won’t allow for other Interfaces (outside the group) to be recording.



The MaNima Configurator – Analog/digital Inputs/Outputs

Scenes can be started via external inputs. There are digital or analogue inputs; 4-20mA or 0-10V.

The Digital and Analog inputs can be configured with the inputs tab.

Digital Inputs:

To set the Digital Inputs, follow the steps below:

1. Set the Digital inputs mode to 'Enabled'.
2. Press 'Add channel' on the bottom of the screen.
3. Set the channel to the corresponding connector. (see chapter 'Installation and wiring - port descriptions')
4. Select the action you want to happen when the input is triggered.
5. Done.

Digital Inputs

Mode
Enabled

Functions:

Ch	1	Player 1 start	
Ch	2	Player 1 stop	
Ch	3	Player 2 start	
Ch	4	Player 2 stop	

Add channel



Analog Inputs

There are three different modes for the Analog Inputs. These are:

Disabled: This disables the Analog Inputs. Set this mode to disabled when not using the analog inputs.

Functions: With functions, you can set the required input signal to a voltage signal or a current signal for the required channel.





Channels can be added at the bottom of the screen by pressing 'Add channel'.

The channels can be configured by changing the number. The action of the channel can be changed by pressing the arrow, which will show a dropdown menu with all the possible actions.

Analog Inputs

Mode	Functions	
Channel 1	0 - 10V	▼
Channel 2	0 - 10V	▼
Channel 3	0 - 10V	▼
Channel 4	0 - 10V	▼
Channel 5	0 - 10V	▼
Channel 6	0 - 10V	▼

Functions:

Ch	1	Player 1 start	▼	
Ch	2	Player 1 stop	▼	
Ch	3	Player 2 start	▼	
Ch	4	Player 2 stop	▼	

Add channel

LED Data:

When mode 'LED data' is selected, the analog inputs will be coupled with a universe. When this has happened, you can control digital LEDs with the SPI or DMX ports (depending on the configurations of the universe)

Every input corresponds with one channel. This means that 6 channels or 2 RGB LEDs can be controlled with all the Analog Inputs together.

The amount of light depends on the amount of volt or ampere, with 0V being 0% light (0/255) and 7V being 70% (179/255) light.

Analog Inputs

Mode	LED data	
Channel 1	0 - 10V	▼
Channel 2	0 - 10V	▼
Channel 3	0 - 10V	▼
Channel 4	0 - 10V	▼
Channel 5	0 - 10V	▼
Channel 6	0 - 10V	▼

Universe

5

Offset

0

The MaNima Configurator - Update

Because MaNima Technologies B.V. is constantly improving their products, there is an update tab available which allows the user to update the software version of the Interface without needing access to the physical Interface. This is only possible if there is an ethernet connection to the Interface.

Step by step:

1. Download the latest (or required) update from the MaNima website: <http://manima-technologies.com/software>.
2. Select the downloaded file by pressing the 'Select file' button.
3. Make sure the correct file is selected, then press 'Start update'.



The screenshot shows the 'Update' tab in the MaNima Configurator. The title bar indicates 'Currently editing: ManimaInterface (192.168.1.185)'. The main content area contains the following text: 'To update the firmware of the interface, please download the latest firmware from our website: <http://manima-technologies.com/software>'. Below this, it states 'Current firmware version: V 2.0.7' and 'Licence: Magnus 8'. There is an 'Update' label next to a file selection input field. To the right of the input field are two buttons: a red 'Select file' button and a grey 'Start update' button.

When encountering problems during your use of the MaNima Interface, make sure the latest update of the software is downloaded on the MaNima Interface. Also make sure the latest version of the MaNima Configurator is installed.

Make sure that the downloaded update file has the correct license. A Magnus 2 update file is not compatible with a Magnus 8 update file.

Installation & Wiring

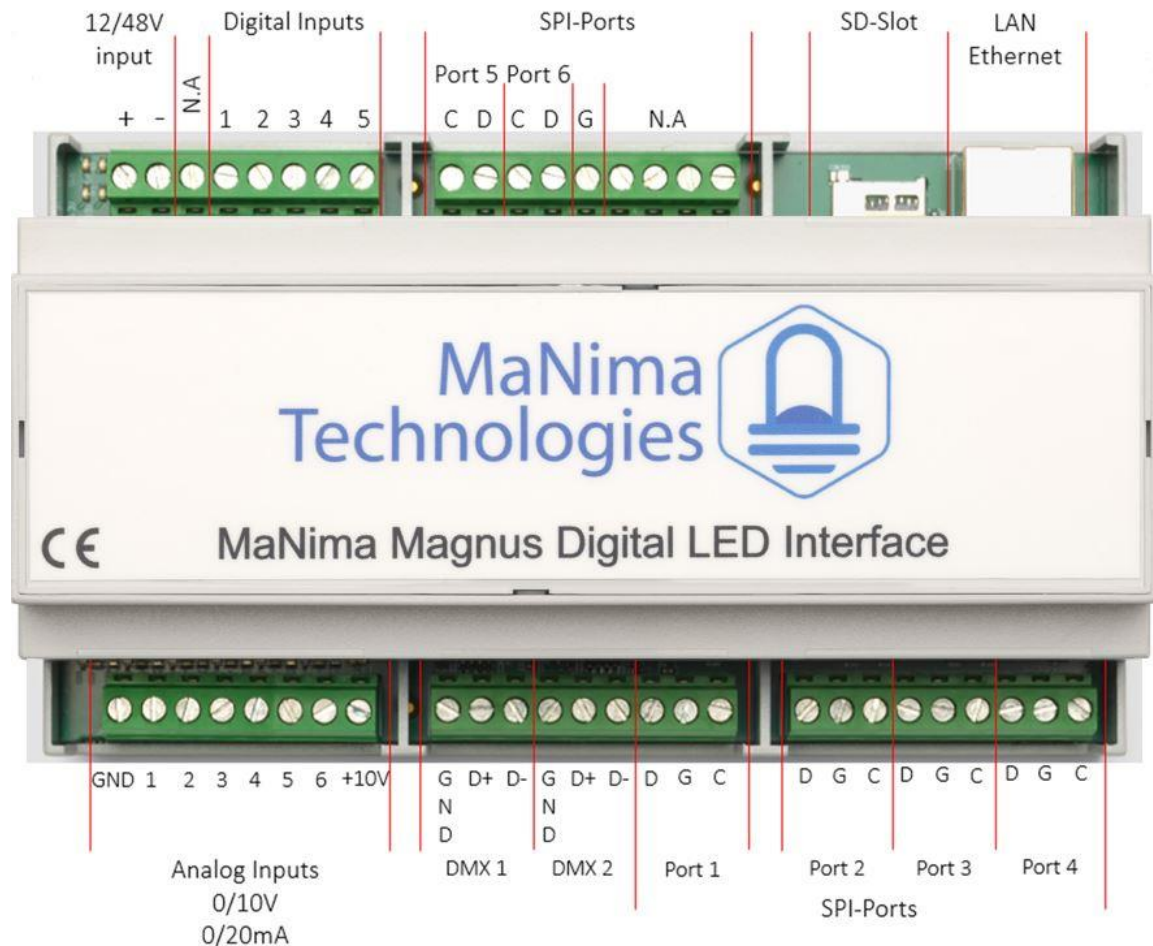
In this chapter there will be a description about every available port on the MaNima Magnus.

For additional wiring diagrams, visit the MaNima website → [support](#) and download the wiring diagrams.



Installation & Wiring - Port Descriptions

Descriptions of ports from top left to bottom right:



12/48V Input: Connect 12/48 Volts to this connector to power the MaNima Magnus.

Digital Inputs: Digital Inputs are inputs used to control the MaNima LED Magnus with voltages between +3,3V and +12V. Inputs can be configured using the 'Inputs' tab.

SPI-ports (1-6): These ports are used as outputs for the Data (D) Ground (G) and the Clock (C). Every port has a D, G and a C output. These ports make sure the LEDs will receive the Digital Signal.

SD-Slot: An SD card can be placed inside this slot. All scenes and configurations are saved here.

LAN/Ethernet: To connect to a network, a LAN or Ethernet cable must be connected to the MaNima LED Interface, using this port.

Analog Inputs: These inputs are used as Analog Channels. The +10V is used for these connections (It can also be used for the Digital inputs).

DMX 1-2: These ports are used for devices that need DMX signals.

Installation & Wiring – SPI-Ports

There are six SPI-ports on the MaNima Magnus. These ports are used as outputs for the Data (D) Ground (G) and the Clock (C). Every port has a D, G and a C output. These ports make sure the LEDs will receive the Digital Signal. If the device is using an SPI-protocol, these connectors should be used. These ports should be directly and correctly connected to the device. If there are any mistakes made, the MaNima Magnus could be damaged.

Notice that ports 5-6 are different from ports 1-4. This is because the ports 5 and 6 have no Grounds in between the Clock and Data. The Ground of 5 and 6 is marked on the previous chapter with a G. Keep this in mind while connecting the ports.

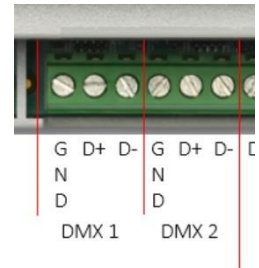


Installation & Wiring – DMX-Ports

There are two different DMX-ports on the MaNima Magnus.

Each DMX port has three different connections:

- GND: Ground
- D+: Data +
- D-: Data –



DMX connections should only be used for devices that can receive the DMX-protocol.

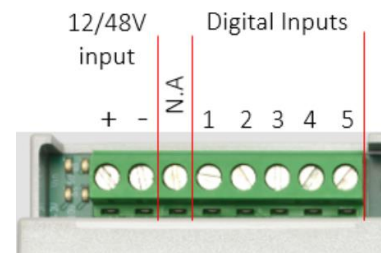
Installation & Wiring – Setting Digital/Analog Inputs

Digital Inputs

Digital Inputs are used to trigger certain actions. These actions are defined in The MC (See MC Inputs).

These Digital inputs need the same positive voltage from the same power supply as the MaNima Magnus. Or you can use the +10V from the Analog Input side, which is recommended.

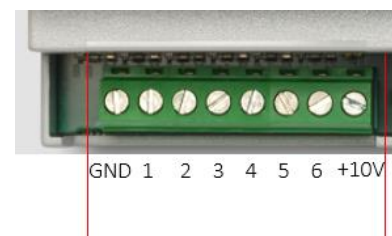
There are five Digital inputs, all of which are configurable in The MC.



Analog Inputs

The Analog Inputs can (just like the Digital Inputs) perform certain actions when triggered. These actions are defined in the MC. There is a total of six Analog Inputs, all of which are accessible through the MC

The Analog Inputs are activated by a voltage of 0 - +10V or by a current of 0-20 mA. Make sure to define this in the MC. The +10V can be used as a supply of +10V for the analog or digital inputs, this is also recommended.



Analog Inputs
0/10V
0/20mA

Installation & Wiring – Reset & Indications

In this chapter, there will be an explanation about the various buttons and indications that are present on the PCB of the IF. To access most indications and buttons, remove the top from the casing of the IF. **ONLY OPEN THE MANIMA MAGNUS DIGITAL LED INTERFACE WHEN YOU HAVE BEEN GRANTED PERMISSION BY MANIMA TECHNOLOGIES B.V.**



Use a tool like a screwdriver to remove the top by inserting it in between the top and side and lift the top off.

Reset:

To restart the IF, press the RESET button once for <1 sec. Only use when restarting from the MC is not possible.

Factory Reset:

To perform a Factory Reset of the IF. Hold the reset button down for 20 sec, until all LEDs on the right side of the RESET button are turned on.

The factory reset will return all settings (except the licence, MAC-address and recorded scenes) back to the original settings. Only use when a factory reset from the MC is not possible.



Error LED:

The Error LED is the 1st LED of the row of indication LEDs. The LED is turned off when the MaNima Magnus is functioning normally. This LED is red (or starts flashing red) when the frame rate will be too high, or when the amount of data is too much for the IF to handle.

HB LED:

The HB (HeartBeat) LED is the 4th LED. If the HB LED is slowly blinking (like a heartbeat), the MaNima Magnus is healthy. If the HB doesn't blink, perform a factory reset.

Power LEDs:



The four LEDs next to the power supply, indicate if the IF is turned on. All four LEDs must be green if the IF is powered.

Master-Slave Function

Synchronised Recording

If multiple MaNima Magnusses must play the same scene at the same time, it is recommended that all Interfaces are synchronised. This means that there is one scene that has recorded all interfaces.

Step by step guide:

1. Open the 'Scenes' tab.
2. Connect more than 1 MaNima Magnus on the same network.
3. Go to the 'Group' tab and change the Groupnumber to anything above 0. To synchronise 2 Interfaces, they need to have the same Groupnumber.
4. Start the recording as usual, make sure the LEDs are working.
5. Stop recording to save the recording.

There should now be a file on every MaNima Magnus that is on the same network and group as the master.

Synchronised Playing

To start a scene on multiple MaNima Magnus at once, it is easy to use the synchronised playing option. This is done by having the synchronised recording in the player and pressing the synced playback option. If all connected devices have the same filename in their player, all of them will play the scene at the same time.

Step by step guide:

1. Open the 'Groups' tab and change the Groupnumbers according to your specifications.
2. Open the 'Scenes' tab.
3. Press Synced playback and select the correct recording.
4. Press Play, now the LEDs should play out the recording. If there are no errors, every MaNima Magnus with the same filename in its SD-card should play the scene.
5. Press Stop to stop the scene.

Synchronised Playing with groups

If you need groups of interfaces working together on the same network, visit the 'groups' tab



List of Supported ICs

In the list below you can find every supported IC.

APA102, APA102_8bit, APA104, APA106, HD107S

BS0901

CX808

DM412

GW6205_400kHz, GW6205_800kHz, GS8208

INK1003

LD1510, LPD6803

MBI6024, MB16120, MY9221, MY9231, MY9291

PC5XS301V0500

SK6812, SK6812RGBW, SK6822, SK8922

SM16703, SM16716, SM16726

TM1803, TM1804_400kHz, TM1804_800kHz, TM1809, TM1812, TM1814, TM1914A

UCS1903_400kHz, UCS1903_800kHz, UCS1904, UCS2903, UCS2904, UCS2912, UCS512B3, UCS5603A, UCS8904, UCS9812

WES9412, WES943

WS2803, WS2811_400kHz, WS2811_800kHz, WS2812, WS2812B, WS2812S, WS2813, WS2818



MaNima Interface Models

	Models	MaNima Magnus	MaNima Ignis	MaNima Nexus	MaNima Pollux
Functions					
SPI outputs	✓	✓	✗	✗	✗
DMX	✓	✓	✗	✗	✗
SPI recording and playing	✓	✗	✗	✗	✗
Segments	✗	✓	✗	✗	✗
Digital Triggers	✓	✓	✗	✓	✓
Analog Triggers	✓	✓	✗	✓	✓
Sensor Inputs	✗	✗	✗	✓	✓
PWM output	✗	✗	✗	✓	✓
Wi-Fi**	~	~	✓	~	~
DALI	✗	✗	✓	✗	✗
Ethernet	✓	✓	✓	✓	✓
Art-Net / sACN	✓	✗	✓	✗	✗
UDP	✓	✓	✓	✗	✗
Custom API	✗	✓	✓	✗	✗
MaNima Cloud	✗	✗	✓	✗	✗
Redundant setup	✗	✗	✗	✓	✓

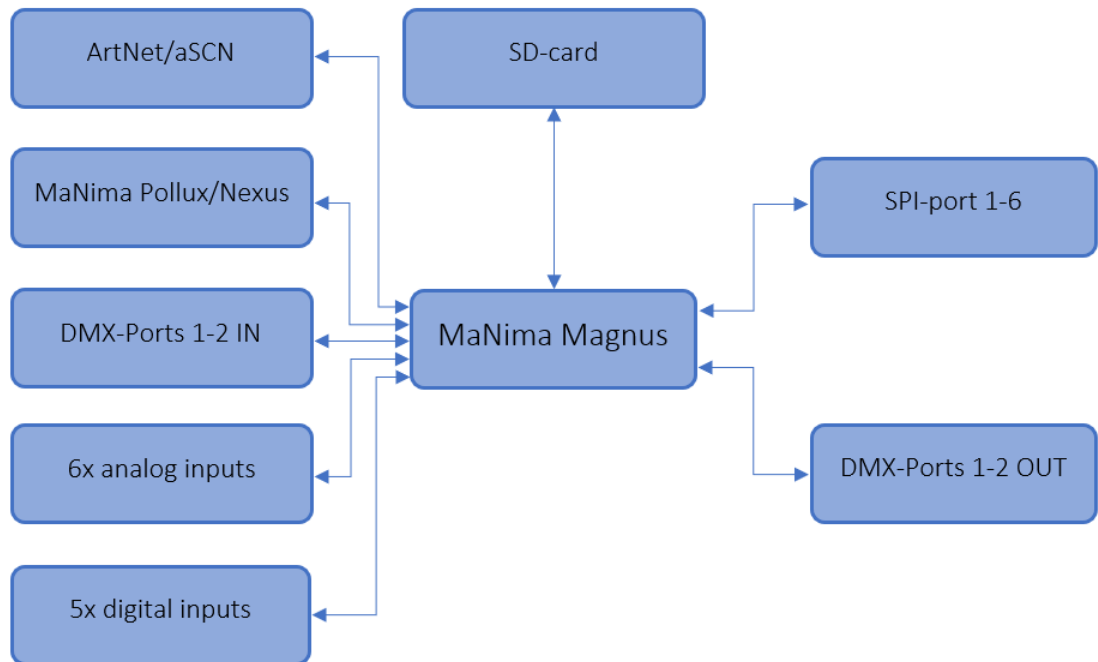
*The amount of universes depend on the licence

**When yellow; WiFi is available with an additional module

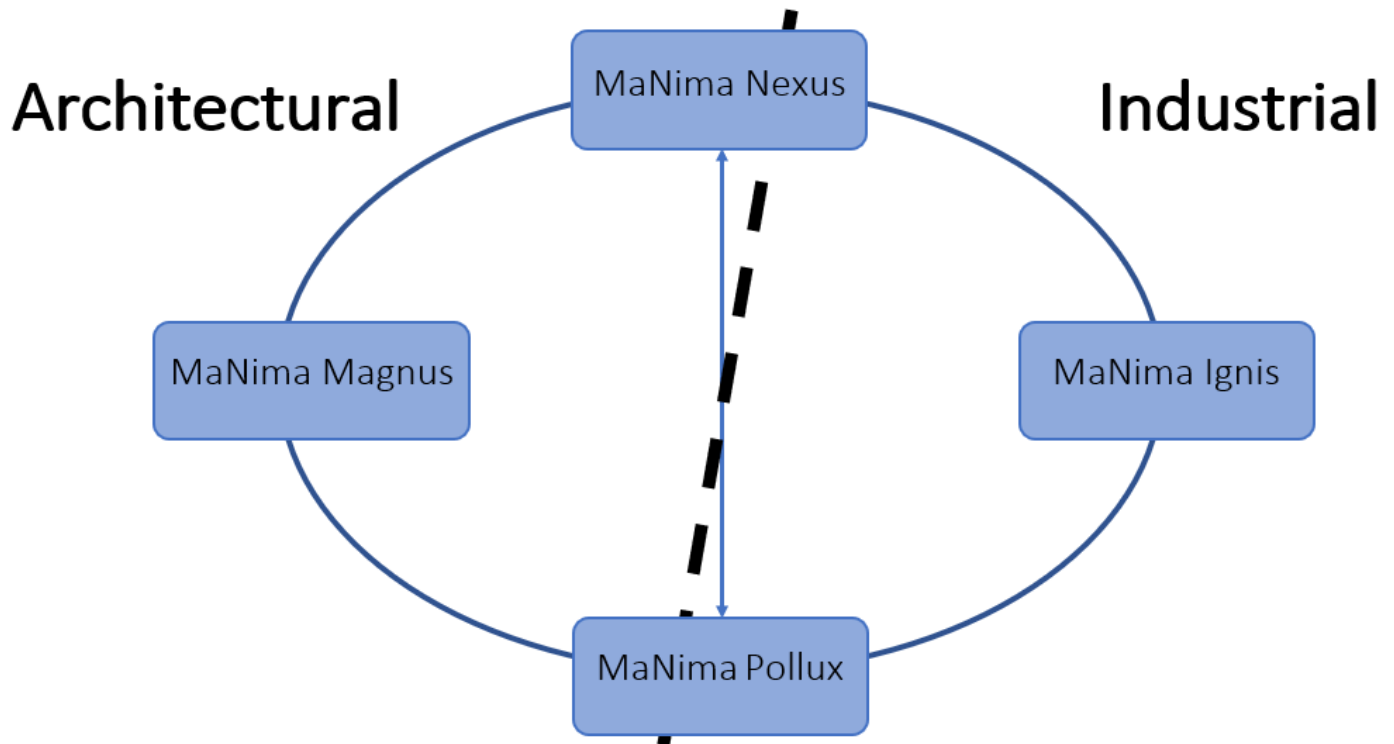
Overview

MaNima Magnus

Overview



MaNima Network Overview



MaNima Magnus Interface: The MaNima Magnus Architectural LED Interface is a professional LED controller with an industrial design made for operating digital LED installations. The Interface is also able to control multiple protocols at once.

MaNima Ignis Interface: The MaNima Ignis Industrial Interface is a LED Interface designed for the Industrial market. The MaNima Ignis is a stable and reliable platform that is used in the process industry for operating LEDs. The MaNima Ignis can communicate with existing systems.

MaNima Nexus Module: The MaNima Nexus is a module used for connecting advanced and complex systems to a network of MaNima products.

MaNima Pollux Module: The MaNima Pollux is an Industrial PWM and LED Monitoring Module made for the professional market. The MaNima Pollux must be combined with a MaNima Ignis/Magnus in order to function. The MaNima Pollux is a versatile device which can fulfil many different tasks. The MaNima Pollux had been designed to be reliable, stable and fail-safe.

YouTube Tutorials

YouTube Tutorial links:

[MaNima Tutorial 1 Connecting the Interface - YouTube](#)

[MaNima Tutorial 2 Mapping and Recording digital LEDs - YouTube](#)

[MaNima Tutorial 3 Synchronized recording and playing - YouTube](#)

[MaNima Tutorial 4 DMX Functions - YouTube](#)

[MaNima Tutorial 5 Digital Triggers - YouTube](#)

[MaNima Tutorial 6 Analog Triggers - YouTube](#)

[MaNima Tutorial 7 Loop Functions - YouTube](#)

[MaNima Tutorial 8 Updating with Ethernet - YouTube](#)

[MaNima Tutorial 9 Using Segments - YouTube](#)



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