

Description: User Manual GigaCore 30i.
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Luminex
NETWORK INTELLIGENCE

GigaCore 30i USER MANUAL



GIGACORE PRODUCT FAMILY
GigaCore 30i

THANKS FOR CHOOSING LUMINEX

MADE IN BELGIUM

General information



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

L'éclair avec une flèche à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'une « tension dangereuse » non isolée à l'intérieur de l'appareil, pouvant être suffisamment élevée pour constituer un risque d'électrocution.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à attirer l'attention de l'utilisateur sur la présence d'instructions importantes sur l'emploi ou la maintenance (réparation) de l'appareil dans la documentation fournie.

CAUTION

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

AVERTISSEMENT

POUR RÉDUIRE LES RISQUES D'INCENDIE OU DE DÉCHARGE ÉLECTRIQUE, N'ÉPOSEZ PAS CET APPAREIL À LA PLUIE OU À L'HUMIDITÉ.

CAUTION

NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

AVERTISSEMENT

AUCUNE PIÈCE CONTENUE À L'INTÉRIEUR NE PEUT ÊTRE RÉPARÉE PAR L'UTILISATEUR, VEUILLEZ CONFIER TOUTE RÉPARATION À UN PERSONNEL QUALIFIÉ.

FCC Compliance Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.



IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Luminex Lighting Control Equipment nv may void your authority, granted by the FCC, to use the product.

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada compliance statement

This Class A digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Community Compliance Statement

This is a class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Disposal of Waste Equipment by users in the European Union

Information for Users on Collection and Disposal of Old Equipment.

This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery, and recycling of old products, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC. By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. For more information about collection and recycling of old products, please contact your local municipality, your waste disposal service, or the point of sale where you purchased the items.

[For business users in the European Union]

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

This symbol is only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Warranty information

Limited warranty

Unless otherwise stated, your product is covered by a two (2) years parts and labour limited warranty. It is the owner's responsibility to furnish receipts or invoices for verification of purchase, date, and dealer or distributor. If purchase date cannot be provided, date of manufacture will be used to determine the warranty period.

Returning under warranty

Please contact your dealer when products need to return to Luminex for repair. Luminex can only accept returns accompanied by a valid RMA number issued by Luminex and requested by your dealer or distributor.

Any product returned to Luminex must be packaged in a suitable manner to ensure adequate protection of the parts. This package shall be clearly and prominently marked to indicate that the package contains returned product. All returned products shall contain a written explanation of the alleged problem or malfunction including the RMA number.

Freight

All shipping will be paid by the purchaser. Items under warranty shall have return shipping paid by the manufacturer only in the European Union. Under no circumstances will freight collect shipments be accepted.

Prepaid shipping does not include rush expediting such as air freight. Air freight can be sent customer collect in the European Union. Warranty is void if the product is misused, damaged, modified in any way, or for unauthorized repairs or parts.

Important safety instructions



BEFORE USING THIS PRODUCT, CAREFULLY READ THE APPLICABLE ITEMS OF THE FOLLOWING SAFETY INSTRUCTIONS:

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way such as:
 - Power-supply cable or plug is damaged.
 - Liquid has been spilled into the apparatus.
 - An object has fallen into the apparatus.
 - The unit has been exposed to rain or moisture.
 - The unit does not operate normally.
 - The unit was dropped or the chassis is damaged.
- Do not remove the top cover. Removal of the top cover will expose hazardous voltages. There are no user serviceable parts inside and removal may void warranty.
- To prevent your product from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 50°C for the GigaCore 30i and for the GigaCore 30i with PoE.
- The equipment should be installed in an area that it is unlikely for children to have access to the equipment.
- The equipment must be installed and protected from rain and humidity.
- The equipment requires a building installation protection of maximum 25A or less.
- Apparatus with mains power connection must be earthed!



WARNING: Avoid electric shock and fire hazard! Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

VENTILATION OPENINGS:

The system heat vents, located at the front and rear, dissipate heat. Do not block these openings. Leave at least 12.7 centimeters of space at the front and rear of the switch for proper ventilation. Be reminded that without proper heat dissipation and air circulation, system components might overheat, which could lead to system failure or even severely damage components.

POWER CABLE:

Use only approved power cables. If you have not been provided with a power cable for your system or for any AC powered option intended for your system, purchase a power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product’s electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.

DISCONNECT DEVICE:

The plug-IEC socket combination must be accessible at all times, because it serves as the main disconnecting device. Disconnect the power cord during installation of the device.

SAFETY CLASSIFICATION OF MAINS POWER INPUT:

- Mains input - IEC connection has a safety status of PRIMARY CIRCUIT.

SAFETY CLASSIFICATION OF TRAFFIC PORTS:

- Serial port and LED extension port has a safety status of EARTHED SELV.
- 10/100/1000 Base-T ports have a safety status of UNEARTHED SELV.



CAUTION/ SHOCK HAZARD
 RISK OF ELECTRIC SHOCK DO NOT OPEN. THIS UNIT HAS MORE THAN ONE POWER SUPPLY.
 DISCONNECT ALL SUPPLIES BEFORE SERVICING TO AVOID ELECTRIC SHOCK

ATTENTION/ RISQUE D'ÉLECTROCUTION
 RISQUE DE CHOC ELECTRIC NE PAS OUVRIR. CET APPAREIL COMPORTE PLUS D'UN CORDON
 D'ALIMENTATION, AFIN DE PREVENIR LES CHOCS ELECTRIQUES, DEBRANCHER LES CORDONS
 D'ALIMENTATION AVANT LE DEPANNAGE.

WELCOME TO YOUR GIGACORE 30i.

Upon unpacking your new GigaCore 30i, the E-ink display will display a QR-code. After scanning this QR-code, the safety manual and quick start guide will be opened on the device used to scan the QR code.

Once the device has been powered up and booted, this QR-code will disappear and not come back on a next boot-up.

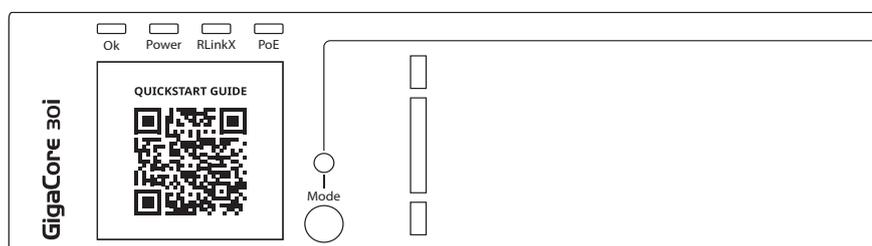


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1. Applications

The GigaCore 30i is an Ethernet switch dedicated to AV integration, installation and touring, designed to support the most advanced AV protocols.

In combination with the Araneo software platform, GigaCore 30i is the ideal solution to deploy an entire AV network with one click in any fixed installation.

Each GigaCore can be configured through an intuitive built-in AV Web-UI but also, System-wide consistent management across the Luminex network is possible with the Araneo network monitoring, planning and management software. Araneo will boost your productivity and confidence in the network and reduce commissioning times significantly.

GigaCore 30i is an indispensable part of any AV network where reliability and a quick and easy setup are needed.

As a user, you don't need to make choices nor trade-offs as GigaCore handles most AV protocols for you out of the box: Pre-defined QoS/DiffServ (Quality of Service) settings, optimized IGMP (Internet Group Management Protocol) per group (VLAN) and pre-defined yet editable groups (VLANs) to easily separate your network in different applications making converged networks obvious, easy and reliable. Also included out of the box is the advanced, automated redundancy protocol RLinkX that ensures redundant links and ring topology within your GigaCore network.

Bandwidth, connectivity, and port availability are not an issue anymore with 6 x independent SFP+ ports capable of data transfer speeds of up to 10 Gbps (depending on the model) and 24 x 1Gbps copper ports. Time synchronization is crucial in many applications and with GigaCore 30i you have a hassle free PTPv2 enabled switch which will work for most major audio protocols (e.g. AES67, ST2110, Dante , Q-sys/Q-lan, ...) without the need for making any complicated device settings.

Entertainment installations constantly push the limits, and the need to deploy PoE powered devices is continuously increasing. GigaCore 30i provides an answer to these scenarios by offering PoE++ on all ports (90W per port with a total PoE budget of up to 1000W) as an option.

With 2 available slots to accept optional hot swappable slide-in power supply units, the question of redundant power is solved in one and the same 1U rack space.

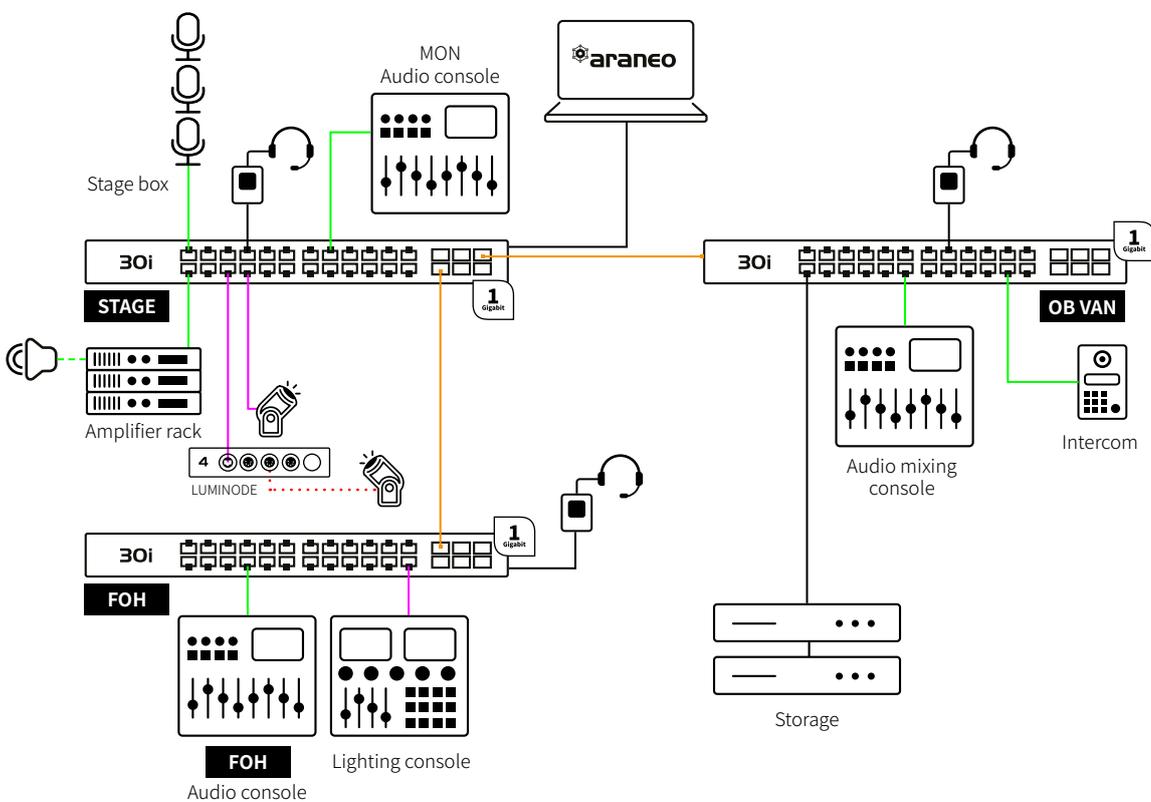
Great care has been taken to ensure silent operation by means of intelligent fan control, giving you more install options with peace of mind that no live audience or recording session would be disturbed. For installations where a clean front panel is required, an optional 19" flush mount LED panel can be connected to a rear-mounted GigaCore 30i.

A few examples of applications where the GigaCore 30i can be used:

- Large system integrations
- Theaters
- Concert halls
- Convention centers
- Sports arenas
- Broadcast and recording studios and OB vans
- Cruise ships
- Theme parks
- Hospitality installs (hotels etc)
- Houses of worship
- And other fixed installations

1G APPLICATION EXAMPLES

AUDIO/LIGHTING



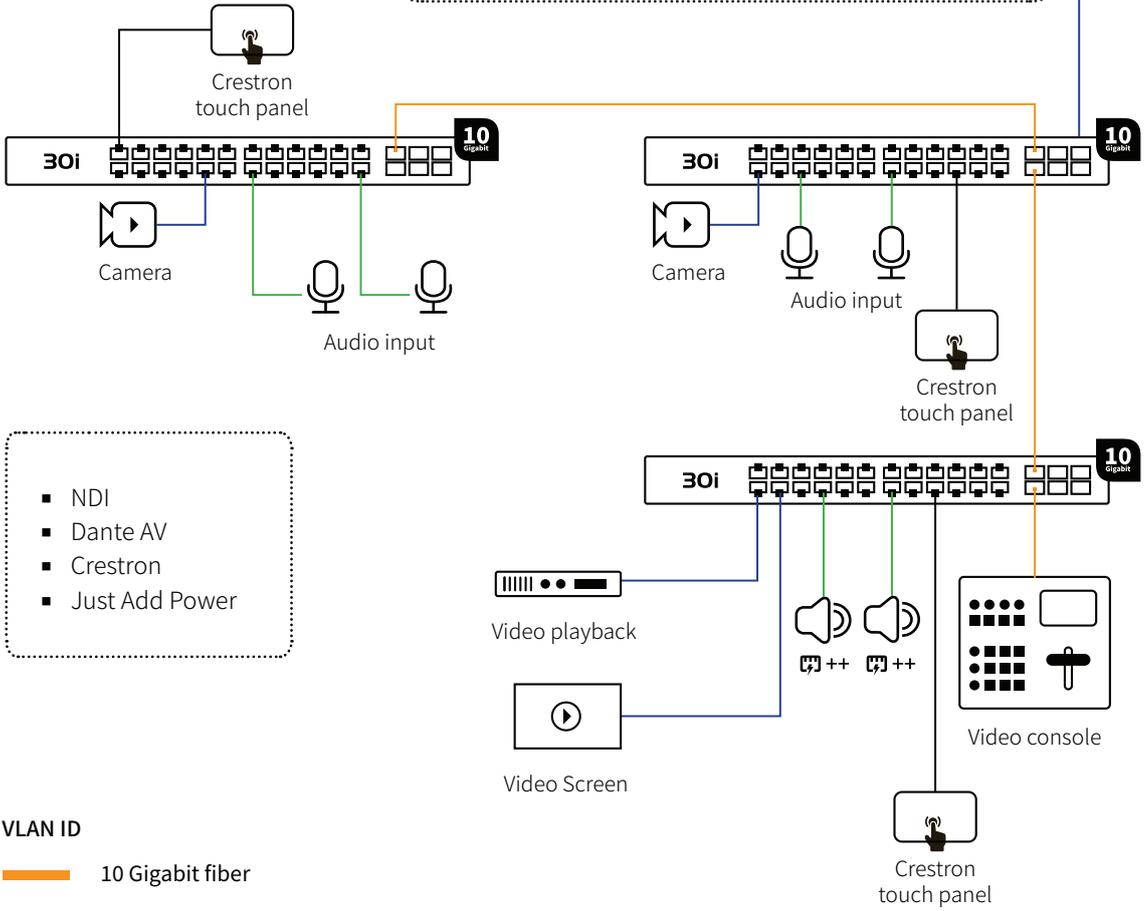
VLAN ID

- 1 Gigabit fiber
- Audio | Dante, AES67
- Light | sACN
- DMX
- ⚡ ++ PoE++

10G APPLICATION EXAMPLES

AV OVER IP

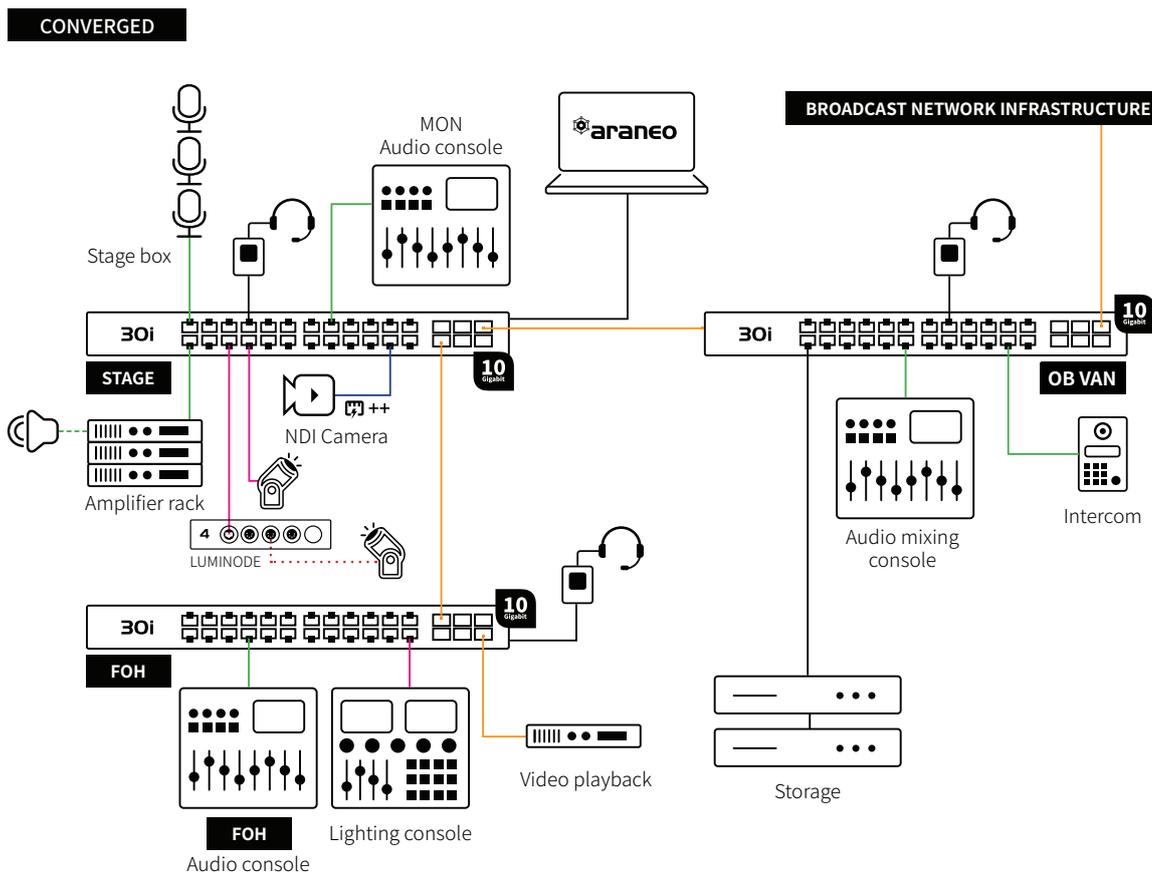
- One click deployment
- System wide management
- Fully optimized
- Tested & validated
- Redundant



- NDI
- Dante AV
- Crestron
- Just Add Power

VLAN ID

- 10 Gigabit fiber
- Audio | Dante, AES67
- Video | NDI
- PoE++



VLAN ID

- 10 Gigabit fiber
- Audio | Dante, AES67
- Video | NDI
- Light | sACN
- DMX
- PoE++

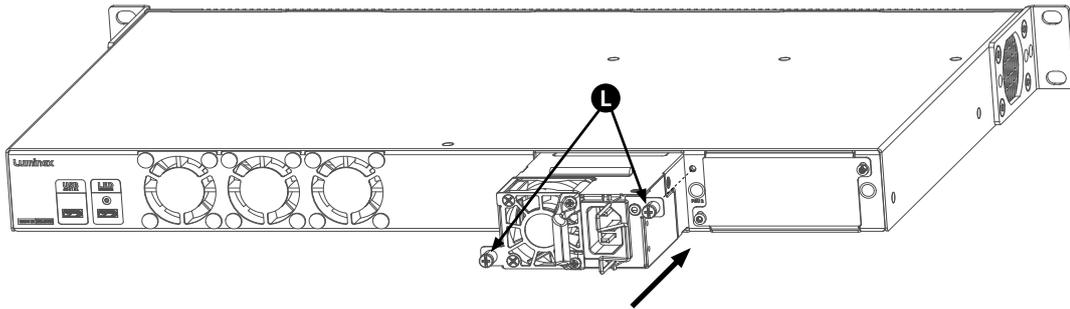
2. Installation

2.1 Installing/removing PSU's

The GigaCore 30i is equipped with two slots for slide-in power supply units (PSU).

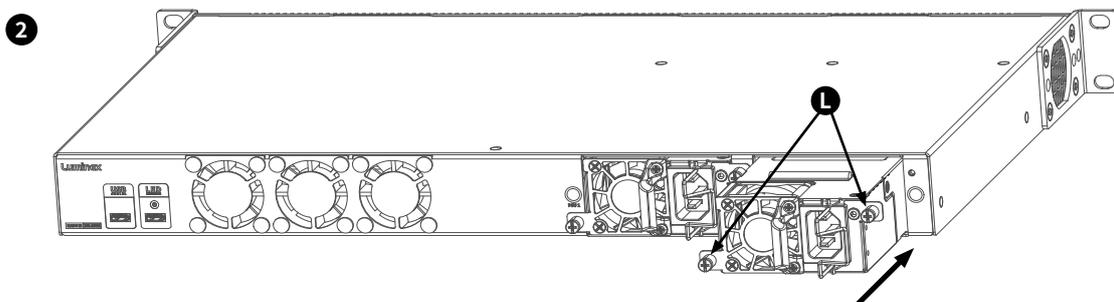
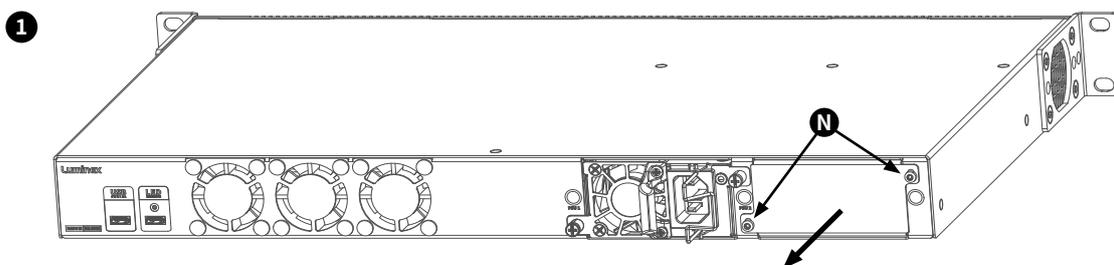
MOUNTING A PSU

- Slide a PSU suitable for your setup in PSU slot 1 (left-hand slot). **Make sure the label is at the top!**
- Secure the PSU with the thumb screw fasteners (**L**).



MOUNTING A SECOND PSU

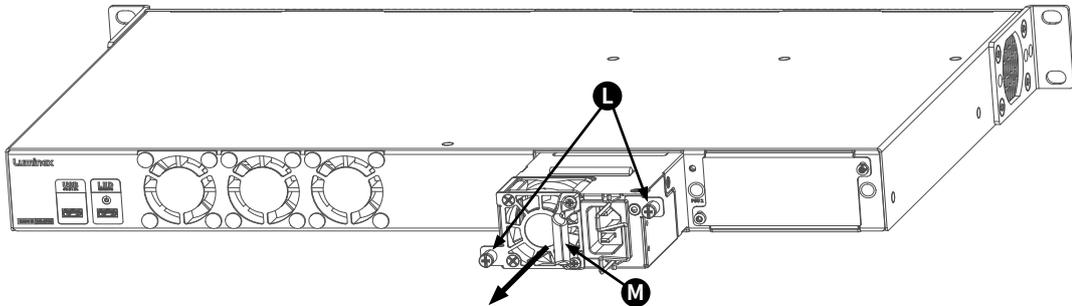
- Remove the M3x10 TX10 screws (**N**) holding the blind-plate.
- Remove the blind-plate.
- Slide the second PSU in PSU slot 2 (right-hand side). **Make sure the label is at the top!**
- Secure the PSU with the thumb screw fasteners (**L**).



LUMINEX RECOMMENDS TO ALWAYS USE TWO IDENTICAL MODELS OF PSU WHEN A SECOND PSU IS FITTED!

REMOVING A PSU

- Unscrew the thumb screw fasteners (**L**) by turning them anti-clockwise.
- Use the bracket (**M**) to slide the PSU out of the main device as shown in the image below.



PART NUMBERS FOR PSU'S

LU 70 00639: GigaCore Slide-in PSU 100W

LU 70 00640: GigaCore Slide-in PSU 550W

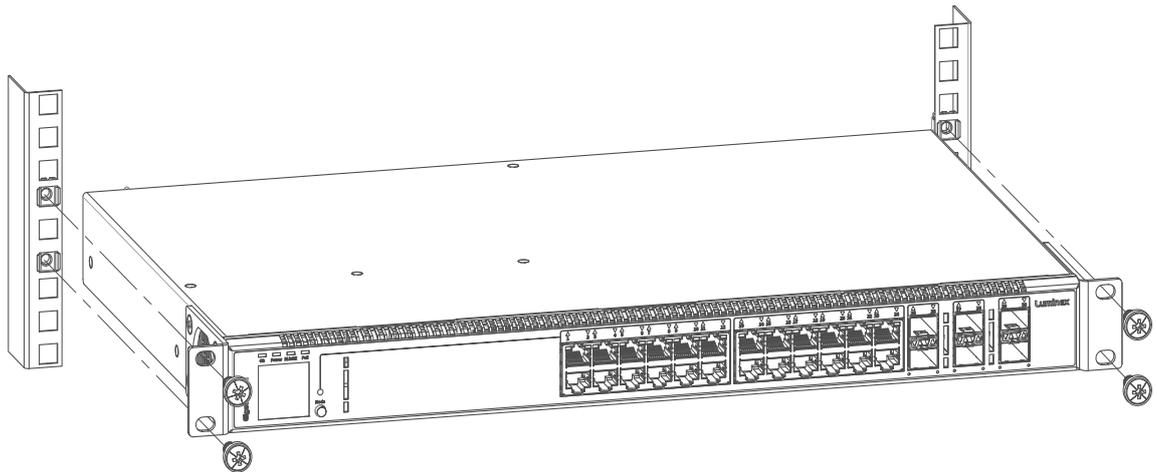


2.2 Mounting the device

GigaCore 30i is designed to be rack mounted. Please read the following instructions to make sure the device is mounted and secured correctly.

RACK MOUNT

The GigaCore 30i is designed to be fitted in a standard 19-inch rack, you need 4 rack screws to mount the device.



2.3 Power up the device

Power-up the device with a power cable with IEC connection (K) (please contact your local dealer if you do not have a suitable power cable at hand). The device will automatically switch on. To shut it down after use, just unplug the power cable again.



The GigaCore 30i requires standard AC power distribution from 100-240 VAC, 50/60Hz. Current required depends on the model.

Please use an IEC plug compliant cable to power the device. When installing a new connector, please refer to the following wire colour code reference:

Wire*	Connection
Green/Yellow	AC Ground
Blue	AC Neutral
Brown	AC Line

* International (Harmonised) Standard

2.4 Description

FRONT PANEL

(A) Status LEDs:

- OK: indicates the general status of the switch.
- Power: indicates the status of the power supply.
- RLinkX: indicates the RLinkX status.
- PoE: indicates the status of the PoE functionality and the PoE supply (GigaCore 30i with PoE only).

(B) E-ink Display:

- E-ink display: indicates the options the switch has and the IP address (unless disabled in the settings).

(C) Mode:

- Mode LED: indicates the selected state for the port Mode LEDs (see the “LED indicators” section in this manual for more details).
- Mode button: use this button to cycle through the different states for the port Mode LEDs.

(D) Port LEDs:

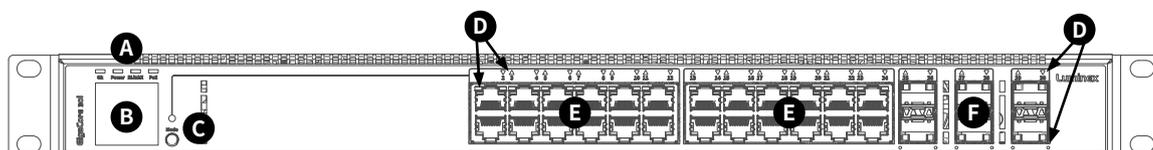
- Port Mode: According to the selected state, the LED will show different colours.
- Port Link/Speed: Shows the current speed and link activity of a port.

(E) RJ45 Ports:

- 24x RJ45 10/100/1000Mbps port.

(F) SFP+:

- 6x SFP+ cage for SFP+ transceiver.



REAR PANEL

(G) Serial Port:

- 1x RS232 console port on USB-C.

(H) LED Extension Port:

- 1x LED extension port for optional LED panel on USB-C.

(I) Fans:

- 3x Fan.

(J) Power:

- Options for up to 2x slide-in power supply.



2.5 LED indicators

There are various LEDs on the GigaCore 30i. Here is a list of the LEDs, the possible colours, and the meaning of each colour:



Switch LED	Status	Meaning
OK (General status LED)		
		Green All OK.
		Green flashing Unit is writing to the flash. Do not disconnect power.
		Orange Temperature warning.
		Red flashing Temperature of Fan error.
		Red/Green flashing The unit is flashing new firmware. Do not disconnect power.
Power LED		
		Green 2x PSU inserted.
		Orange Only 1x PSU inserted. 2x different type PSU inserted.
		Red flashing PSU inserted but no cable connected (Only when two PSU are inserted). PSU error.
RLinkX LED		
		Green RLinkX active.
PoE LED (GigaCore 30i with PoE only)		
		Green Redundant mode with 2x PoE capable PSU inserted. Shared mode with 1x PoE capable PSU inserted.
		Orange Redundant mode with only 1x PSU inserted. Redundant mode with only 1x PoE capable PSU inserted.
		Orange Shared mode with 1x PoE capable PSU and 1x non PoE capable PSU inserted.
		Red PSU error. PoE port error.
		OFF No PoE capable PSU's inserted.
Port LED		
		Off No link.
		Green Gigabit connection.
		Orange 10/100 Mbps connection.
		Blink Activity.

With the use of the mode button, the user can get all the necessary information immediately. Press the mode button to cycle through the different states.

State	Mode LED	Port Mode LED	Meaning
Groups			Group Colour The LED colour indicates the group assignment of the port.
PoE			Yellow PoE is available on this port.
			Orange Port is supplying PoE to a device.
			Red Error with PoE.
Dark Mode	Off	Off	All port LEDs are switched off. Switch status LEDs remain available.

2.6 Connection to the web interface

- The GigaCore 30i IP address can be found at the rear of the unit or on the E-ink display.
- Set your computer with a compliant IP address (do not use the same IP address!).
- Connect your computer to the GigaCore with a network cable.
- Launch your favourite web browser.
- Type the IP address of the GigaCore in the address field followed by enter.
- Use admin in the user field and leave the password field blank.



PLEASE KEEP IN MIND THE WEB INTERFACE OF A SWITCH CAN ONLY BE REACHED THROUGH A PORT ASSIGNED IN THE MANAGEMENT GROUP (FROM THE SWITCH YOU'RE CONNECTED TO, OR FROM ANOTHER SWITCH THROUGH AN ISL PORT). YOU NEED AT LEAST ONE PORT ASSIGNED TO THE MANAGEMENT GROUP IN YOUR ENTIRE NETWORK TO REACH THE WEB INTERFACE OF ALL YOUR GIGACORE SWITCHES.

FACTORY DEFAULT ALL PORTS ARE ASSIGNED TO THE MANAGEMENT GROUP.

2.7 Reset

Sometimes it can come in handy to reset the device. The following methods are available to reset the GigaCore 30i:

RESET VIA THE FRONT PANEL

- Press and hold the mode button for 5 seconds.
- When the four status LEDs are blinking red, release the mode button.
- The device will reset to factory default settings.

RESET VIA ARANEO

Araneo is available for Windows and MacOS and can be found in the download section of our website: <https://www.luminex.be/download-araneo/>

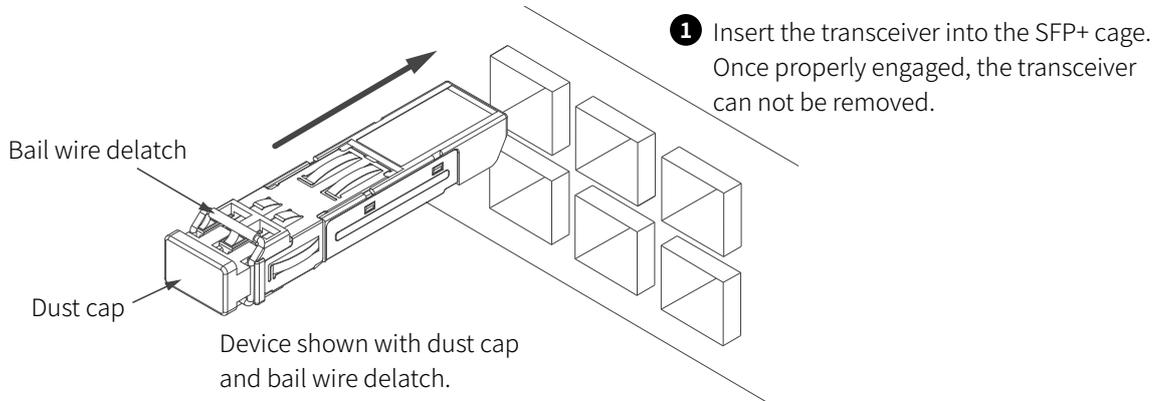
How to reset your GigaCore 30i through Araneo:

- With a computer connected to the device, open Araneo (version 1.5.0 or above).
- Select the GigaCore you wish to reset.
- The Reset option becomes available on the Utilities section of the system tray at the bottom of your screen in Araneo:
- Choose if you want to keep the IP settings.
- Choose if you want to keep the profiles.
- Click reset.

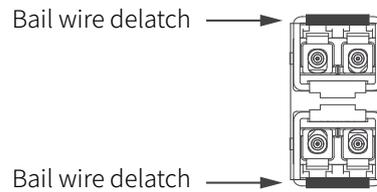


2.8 Installing SFP+ transceivers

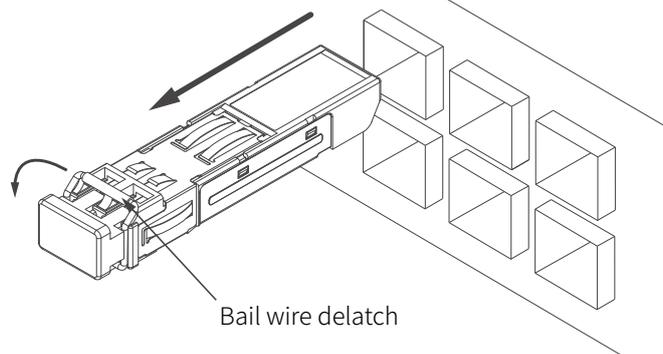
The GigaCore 30i is equipped with six SFP+ cages.



- 2** Be aware of the insertion direction:
- port 25, 27 and 29 must have the bail wire delatch on the top.
 - port 26, 28 and 30 must have the SFP+ transceiver upside-down.



- 3** Open the bail wire delatch to disengage and remove the SFP+ transceiver



In order to get the best performance, Luminex recommends the use of the following transceivers:

LU 90 01116	Luminex 10GBase-SR SFP+ MMF Transceiver 850nm, 300m, LC, DMI.
LU 90 01117	Luminex 10GBase-LR SFP+ SMF Transceiver 1310nm, 10km, LC, DMI.
LU 90 01118	Luminex 10GBase-TX SFP+ Copper Transceiver 30m, RJ45, Fast loss.
LU 90 00871	GigaCore 1.25Gd Multi-Mode Fiber Transceiver.
LU 90 00872	GigaCore 1.25Gd Single-Mode Fiber Transceiver.
LU 90 00874	GigaCore 1.25Gd Copper RJ45 Transceiver.



This list is not exhaustive, please visit <https://www.luminex.be/products/accessories> for the latest offerings in SFP+ modules.

3. Configuration

In the next paragraphs we will describe how to configure your GigaCore switch via the build-in web interface. Alternatively, you can configure your switch using Araneo. Araneo is available for Windows and MacOS and can be found in the download section of our website: <http://www.luminex.be/download-araneo/>.



PLEASE KEEP IN MIND, THE WEB INTERFACE OF A SWITCH CAN ONLY BE REACHED THROUGH A PORT ASSIGNED IN THE MANAGEMENT GROUP (FROM THE SWITCH YOU ARE CONNECTED TO, OR FROM ANOTHER SWITCH THROUGH AN ISL PORT). YOU NEED AT LEAST ONE PORT ASSIGNED TO THE MANAGEMENT GROUP IN YOUR ENTIRE NETWORK TO REACH THE WEB INTERFACE OF ALL YOUR GIGACORE SWITCHES.

FACTORY DEFAULT, ALL PORTS ARE ASSIGNED TO THE MANAGEMENT GROUP.

WEB INTERFACE PRESENTATION

Launch your favourite web browser and type the IP address of your GigaCore. Press enter to validate. Use **admin** in the user field and leave the password field **blank**.



3.1 Status Page

(A) Identify: Clicking on the Luminex logo will identify your GigaCore in the network. The switch LEDs will flash green for 5 seconds. In the web-UI, the text “Identified” will be displayed under the logo.

(B) Drawing of your GigaCore: This product image gives you a quick overview of the switch port status. Active ports are filled with the following colours:

- Orange: 100Mbps link 
- Green: 1000Mbps (1Gbps) link 
- Green SFP+: 10000Mbps (10Gbps) link 

(C) E-Ink display: showing all the active options the switch has to offer:

- 1Gb 
- 10Gb 
- PoE 

(D) **PSU's:** On the right-hand side of the switch image, two icons indicate the status of the installed PSU's.

Here is a list of the icons, the possible colours, and the meaning of each colour:

Non PoE models			
		Green	PSU present and online.
		Orange	PSU present but not powered (only when 2x PSU are fitted).
		Red	PSU error.
		Green	PSU redundancy configured and active.
		Orange	PSU redundancy configured but not available.
		Orange	Warning.
		Grey	No PSU present.
PoE models			
		Green	PSU present and online.
		Orange	PSU present but not powered.
		Red	PSU error.
		Green	PSU redundancy configured and active.
		Orange	PSU redundancy configured but not available.
		Green	PSU sharing configured and active.
		Orange	PSU sharing configured but not available.
		Orange	Warning.
		Grey	No PSU present.
		Green	Non PoE capable PSU present and online.
		Orange	Non PoE capable PSU present but not powered (only when 2x PSU are fitted).
		Red	PSU error.

(E) **Navigation menu**

(F) **Theme and language:** Select here if you want to use the dark or light theme.

Interface supported languages are English, Japanese and Chinese for now.

(G) **Help:** In case you need help, here you find an on-board help file.

(H) **Port status:** This table gives you a quick overview of the port settings.

(I) **IP Settings:** Find here all the network settings of the switch. These parameters can be modified in the device settings menu.

(J) **System info:** Find here all the information of the device such as system identifier, device name, system description, MAC address, serial number, and current firmware version. This information can be modified in the device settings menu.

(K) **Active profile:** In this area, the current active profile of the GigaCore is being displayed.

3.2 Groups/Trunks

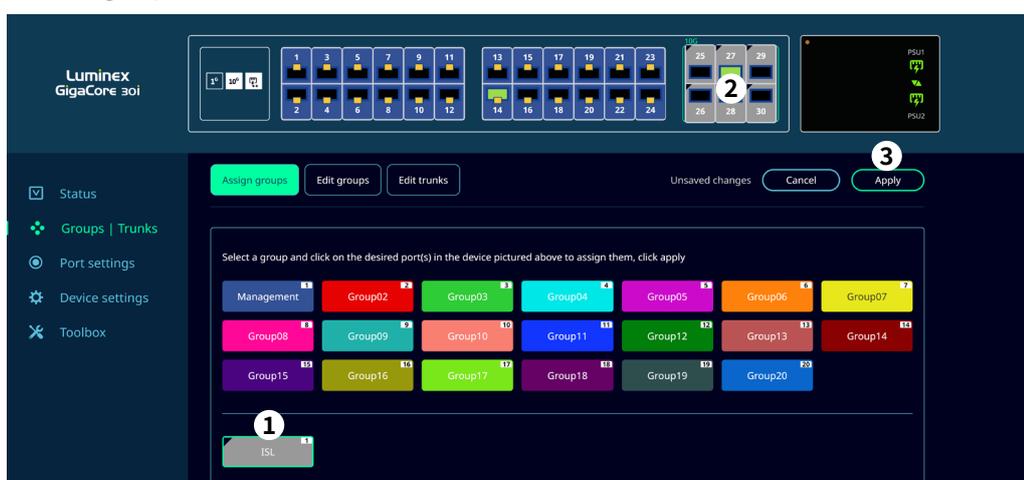
Groups is a technology which offers the user to easily segment the network into several virtual networks (VLANs). This menu allows the user to assign ports to one of the 20 embedded groups of the switch. A group is a combination of ports and the user can assign as many ports to a group as they require.

The GigaCore range offers several types of groups:

- **Trunk 1 (ISL):**
This group is dedicated to the Inter Switch Link (Trunk). This is the name given to the interconnection links between GigaCore switches in a network. The ISL links are meant to forward the group-based packets for the default 20 pre-defined groups.
- **Custom Trunk:**
The GigaCore 30i offers the user to create custom trunks.
- **Group 1 (Management):**
This group is dedicated to the management of the switch (web interface). You need to have at least one port of the switch assigned to the management group in order to be able to reach the web interface. In a star, ring or mesh network topology comprised of GigaCore switches, you need to have at least one port on one of the switches set to this group in order to be able to reach the web interface of any of the switches.
- **Group 2 onwards:**
These are the generic groups to be used for any purpose such as sound, lighting, intercom, video....
The GigaCore 30i offers 20 pre-defined groups but if required, the user can add more groups in the Edit groups section.

To assign ports to a group, please follow the following steps:

1. **Select the group** you wish to assign ports to.
2. **Select the ports** you wish to assign to the group. Selected ports will be highlighted.
3. **Click Apply** to assign the ports to the group. The selected ports will now change to the colour of the selected group.



PLEASE KEEP IN MIND, THE WEB INTERFACE OF A SWITCH CAN ONLY BE REACHED THROUGH A PORT ASSIGNED TO THE MANAGEMENT GROUP (FROM THE SWITCH YOU ARE CONNECTED TO, OR FROM ANOTHER SWITCH THROUGH AN ISL PORT). YOU NEED AT LEAST ONE PORT ASSIGNED TO THE MANAGEMENT GROUP IN YOUR ENTIRE NETWORK TO REACH THE WEB INTERFACE OF ALL YOUR GIGACORE SWITCHES.

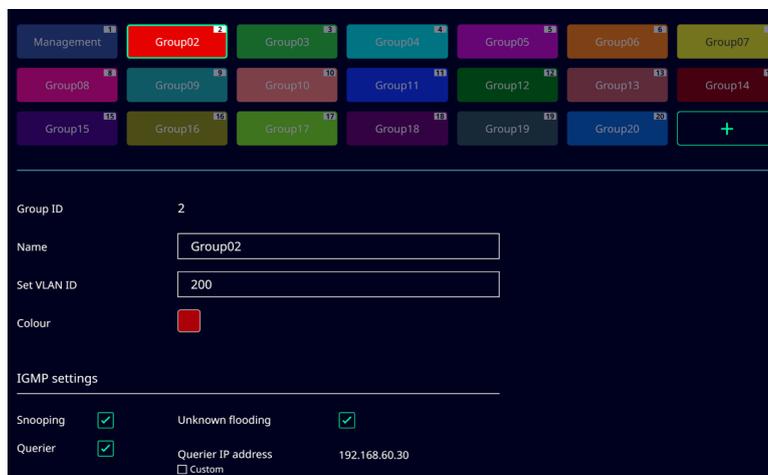
GROUP/VLAN ADVANCED SETTINGS

To change the settings for a group, click on the Edit groups option.

With the group selected you can:

- Change the name for ease of identification.
- Set the VLAN ID (default is group number x 100).
- Enable/disable IGMP Snooping (default is ENABLED).
- Enable/disable IGMP Querier (default is ENABLED).
- Enable/disable IGMP unknown flooding (default is DISABLED).
- Set a IGMP Querier IP address (by default the querier IP is an automatic calculated IP. 10.x.y.z Based on the model (x = speed) and the IP address (y.z) of the switch).

Once all the settings are correct, click **Apply** to confirm the changes.



ADD OR EDIT A TRUNK

To Add or Edit a trunk, click the Edit trunks option.

To Add a custom trunk:

- Click the + to add a trunk.
- Enter a trunk ID.
- Give the new trunk a name in the name field.
- Assign a colour to the trunk by clicking on the coloured square. After selecting the colour, click anywhere outside the colour picker window to close it.
- Click on all the groups/VLANs you wish to include in this trunk.
- If needed, use the drop-down menu for Untagged to select which group should be untagged on the trunk. An untagged port connects to hosts. The host is unaware of any VLAN configuration.

Once all the settings are correct, click **Apply** to confirm the changes. Your custom trunk is now available in the Assign groups tab to be assigned to ports.

If you wish to change the trunk ID, you can use the Move button to assign a new trunk ID.

DELETE A TRUNK

To delete a custom trunk, select the trunk you wish to delete in the Edit trunks window and click the delete button. All ports that were assigned to the custom trunk are automatically re-assigned to the Management group.

3.3 Port settings

This menu allows you to change the following settings:

- **RLinkX:** enable/disable RLinkX per port (default is ENABLED).
- **Legend:** add a legend for easy identification.
- **Port speed:** set the port speed (default is Auto).
- **PoE:** enable/disable PoE (if the switch doesn't support PoE this feature is greyed out).
- **PoE Priority:** set the PoE priority.
- **Disable link:** when disabled, the port is displayed greyed out and a red cross is shown in front of the port on the status page.
- **Protect:** when enabled, the port settings can not be changed. A padlock icon is displayed on the port at the top of the page and in front of the port on the status page.

When all settings are as you wish, click **Save** to apply the changes.

Port	RLinkX	Legend	Port speed	PoE	PoE Priority	Disable link	Protect
1		<input type="text" value="Port 1"/>	<input type="text" value="Auto"/>	<input checked="" type="checkbox"/>	<input type="text" value="low"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2		<input type="text" value="Port 2"/>	<input type="text" value="Auto"/>	<input checked="" type="checkbox"/>	<input type="text" value="low"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

AVAILABLE PORT SPEEDS FOR PORT 1-24

- Auto: The port automatically detects the speed of the connected device (default).
- 1Gbps FDX: 1000Mbps Full Duplex.
- 100Mbps FDX: 100Mbps Full Duplex.
- 100Mbps HDF: 100Mbps Half Duplex.
- 10Mbps FDX: 10Mbps Full Duplex.
- 10Mbps HDX: 10Mbps Half Duplex.

AVAILABLE PORT SPEEDS FOR PORT 25-30

- Auto: The port automatically detects the speed of the connected device (default).
- 10Gbps: 10000Mbps Full Duplex.
- 1Gbps FDX: 1000Mbps Full Duplex.
- 100Mbps FDX: 100Mbps Full Duplex.
- 100Mbps HDF: 100Mbps Half Duplex.
- 10Mbps FDX: 10Mbps Full Duplex.
- 10Mbps HDX: 10Mbps Half Duplex.

3.4 Device settings

The device settings page is divided in eight sub menus:

IP SETTINGS

Assign here the IP mode and IP address of your switch. This IP address will be used to reach the switch's web interface. The default IP address can be found at the rear of the device or on the E-ink display.

There is one IP mode available:

- **Static** (default)
Enter your preferred IP address and the subnet mask. Enter your default gateway IP address if your switch needs to be reached from a routed network. Press apply to save your setting.

Other options available in the IP Settings menu are to enable or disable mDNS discovery (default is enabled) and to show or hide the IP address on the E-ink display (default is enabled).

ID SETTINGS

Here you can set the ID number of the switch and give the device a name and description to easily identify your switch in the network.

SECURITY

The user can use this feature to set a password to protect the access to the web interface. The default login for the web interface is:

Username: admin

Password: No password

DEVICE INFO

The device info window shows:

- Model.
- MAC address.
- Serial number of your device.

GENERAL POE SETTINGS

The general PoE settings allow you to set:

- Power allocation:
Consumption, the actual consumed power is being used to determine the maximum output power.
Reserved, the class is used to reserve the maximum allowed power for that class to determine the maximum output power.

- Power mode:
 - Redundant**, the second PSU is used as redundancy in case an error occurs with the first PSU.
 - Shared**, the output power of both PSU's is combined to offer a higher total output power available across all the switch ports.

If the switch does not support PoE, this section is greyed out.

SNMP

Enable/disable SNMP (Simple Network Management Protocol). Here you can configure whether you want to use SNMP. By default SNMP is disabled.

DEFAULT PROFILE

By clicking the check-box, the user can protect the profile stored in slot #1 from being deleted or overwritten.

When the user performs a Reload Defaults from the front panel mode button (see Reload Default in the Reset chapter of this manual), the device will reboot into profile #1. This is a handy tool to quickly recall your favourite profile.

Once the first profile is protected and set as default, a padlock will appear on slot 1 on the profile tab.

LED BRIGHTNESS

The LED slider allows you to change the brightness of the port mode LEDs and the status LEDs on the GigaCore. The port mode LEDs can be dimmed to OFF but the status LEDs will always stay visible. The brightness of the link LEDs is not affected.

3.5 Toolbox

The toolbox page is divided in four sub menus:

PROFILE MANAGER

The profile manager allows the user to save, recall, export or import a configuration.

A profile contains the following parameters:

- Device settings.
- Port settings.
- RLinkX settings.
- Group settings.
- PoE settings.

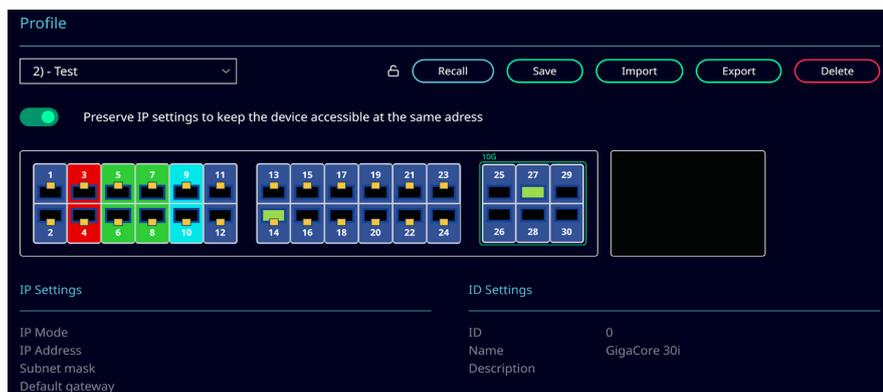
This way, the user can create a comprehensive configuration for a switch, save it as a profile, and recall it later when needed.

A maximum of forty profiles can be saved on a GigaCore 30i switch. The switch also offers to export or import a profile through a computer, providing the user with an easy way to exchange profiles between switches.

RECALL A PROFILE

Select the profile with the drop-down menu. Once a profile is selected, a preview of the configuration is shown below the drop-down in graphic form.

With the slider, the user can choose to preserve the current IP settings of the switch or to reload the IP settings stored in the profile. By default the current IP address is preserved.



FIRMWARE

In the firmware section, two versions of firmware are shown:

- **Active firmware:** is the one currently running on the device.
- **Alternate firmware:** is the previously installed firmware.

If you would like to downgrade the device to the previously installed firmware, click on the activate button. The device will reboot in this firmware.

FIRMWARE UPGRADE

You can upgrade the GigaCore 30i with our latest firmware. The quickest and most convenient way to upgrade your device(s) is with the Araneo software.

Alternatively, you can upgrade the device via the build-in web-UI. To upgrade the device, please apply the following procedure:

- Download the latest firmware from the support section of our web site. <http://www.luminex.be/support-2/product-downloads/>
- Extract the downloaded archive and have a look at the release notes included.
- Click on the firmware upgrade button in the web-UI of your device.
- Select the file you have extracted.
- The GigaCore will start the firmware upgrade. The device will reboot after the upgrade is completed.

RESET

In this panel, you can reset the GigaCore, with two separate options:

- Preserve IP address, all settings get restored to factory default apart from the IP address set to reach the device. All saved profiles will be lost.
- Preserve profiles, during the reset the custom stored profiles are being kept.

Click on the Reset button to perform the selected reset.

Performing a reset with these two options disabled will bring the GigaCore to its factory settings.

REBOOT

Press the “Reboot” button to reboot the device. All settings will be preserved.

4. Reset

In the case you need to reset the unit without the web interface or Araneo, the GigaCore 30i offers different levels of reset, based on the ones you can find in the web interface or Araneo.

- **Reset:** The unit is brought back to its default configuration, with the default IP address that can be found on the rear of the device or on the E-ink display. Profiles stored in the device are preserved.

Default login: admin

Default password: No password

- **Reload Defaults:** The profile stored in slot one is reloaded. The “Reload Default” is available only if the profile stored in slot one has been locked through the utility menu. If this profile is set with a password, then the user will need to enter it through the web interface to access the switch’s menu.

Default login: admin

Default password: No password

- **Factory Reset:** With a factory reset the device is fully reset to the state it left Luminex and ALL data will be erased.

Default login: admin

Default password: No password



RESETTING THE DEVICE WITH THE MODE BUTTON IS AVAILABLE IF THE MODE BUTTON HAS NOT BEEN DISABLED IN DEVICE SETTINGS OR, IF DISABLED IN DEVICE SETTINGS, WITHIN 2 MINUTES AFTER BOOTING THE SWITCH.

The different reset options in more detail:

4.1 Reset

Condition 1: The device is currently running.

Condition 2: There is no profile set as default profile.

Hold the mode button for at least five seconds until the four status LEDs are flashing red. Releasing the mode button whilst the status LEDs are flashing will reset the unit.

Be aware, releasing the mode button before the status LEDs start flashing red, or after the LEDs have stopped flashing red, will cancel the operation.

Hold the mode button



Release the button = Reset



Release the button = Cancel



Function



4.2 Reload defaults

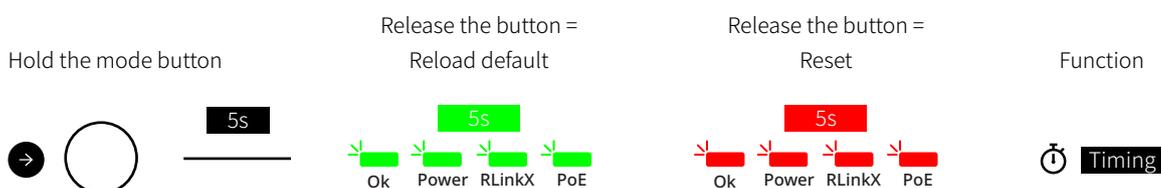
Condition 1: The device is currently running.

Condition 2: The profile stored in slot one needs to be locked through the device settings menu.

Hold the mode button for at least five seconds until the four status LEDs start flashing green. Releasing the mode button whilst the status LEDs are flashing green will reboot the switch into the profile stored in slot one.

If you keep the mode button pressed for another 5 seconds, the status LEDs will start flashing red to provide you with a reset.

Be aware, releasing the mode button before the status LEDs start flashing green, or after the LEDs have stopped flashing red, will cancel the operation.



4.3 Factory Reset

Condition 1: The device is switched off.

Hold the mode button while connecting the device to mains power. After approx. 42 seconds, the four status LEDs will start flashing red. Releasing the mode button whilst the status LEDs are flashing red will factory reset the device. All customer stored profiles will be erased.

Be aware, releasing the mode button before the status LEDs start flashing red, or after the LEDs have stopped flashing red, will cancel the operation.



5. Technical Support

Sometimes it is required to get more help with your device or application. There is a knowledge base available online that gets updated on a regular basis at: <https://support.luminex.be>

If you need to ask our team for more help or you need to return a device to Luminex for diagnostics or repair, you can also find the option on this page to request an RMA or start a support ticket.

Alternatively, you can send an email to support@luminex.be or for United States of America and Canada to: support@luminexamerica.com

6. Technical Specifications

GIGACORE 30I - 1G

MECHANICAL		
Enclosure	Robust all metal housing	
Dimensions (W x D x H)	482 x 283.1 x 43.2 mm (482 x 308.8 x 43.2 mm with inserted PSU)	
Material thickness	2 mm	
Mounting type	Rack mount	
Weight (no PSU inserted)	3.92 kg	
Weight PSU	0.78 kg (550W) / 0.64 kg (100W)	
Packaging dimensions	545 x 335 x 125 mm	
Packaged weight	5.86 kg (1x 100W PSU), 6.5 kg (2x 100W PSU), 6.0 kg (1x 550W PSU), 6.78 kg (2x 550W PSU)	
CONNECTIVITY		
Network	6x 1 Gbps SFP+ cages on front panel, independent from other ports	
	24x Gigabit (10/100/1000 BASE-T) copper RJ45 on front panel	
Serial	1x USB-C	
Extension	1x LED extension port	
Power	IEC (C14) 1x for each inserted power supply (max 2)	
Backup power	IEC (C14) 1x for each inserted power supply (max 2)	
Backup PoE	IEC (C14) 1x for each inserted power supply (max 2)	
TEMPERATURE MANAGEMENT		
Intelligent control	Yes	
Number of fans	3x + 1x for each inserted power supply (max 5 fans)	
Position of fans	Rear panel	
Airflow direction	Front to rear	
USER INTERFACE		
Device status	4x RGB LED	
	• Device	
	• Power	
	• RLinkX	
Dynamic labelling	E-ink display	
	2x RGB LED	
	Port Speed/Activity	
	Port Status	
Fiber port status	• Group indication	
	2x RGB LED	
	Port Speed/Activity	
	Port Status	
RJ45 port status	• Group indication	
	2x RGB LED	
	Port Speed/Activity	
	Port Status	
FIBER PORT SPECIFICATIONS	• PoE	
	Port speed	1000 BASE-X
	Port sensing	Fixed speed
	Port speed	10/100/1000 BASE-T
Port sensing	Auto Negotiation	
Auto crossover	MDI/MDIX (allows use of straight or cross wired cable)	
Auto sensing	Full or Half Duplex (Gigabit is Full Duplex)	

POWER OVER ETHERNET	
Standards	802.3af
	802.3at
	802.3bt
PoE Ports	802.3af, 802.3at, 802.3bt
	On ports 1-24
Total PoE power budget	500 W (1x slide in PSU)
	1000W (2x slide in PSU)
LLDP Support	Yes
Power allocation	User configurable:
	<ul style="list-style-type: none"> • Priority per port • Consumption vs Class/LLDP based
Power limit	• Total power budget firmware limit - port shutdown at overload based on port priority
	• Per port hardware and firmware power limits based on classification - port shutdown at overload
SWITCH FEATURES	
Boot time	45 s
Redundant links	Yes
Group function	Yes
Ethernet compliance	IEEE 802.2
	IEEE 802.3
	IEEE 802.3u
	IEEE 802.3x Flow Control
	IEEE 802.3ab Gigabit Ethernet
	IEEE 802.3af PoE
	IEEE 802.3at PoE+
	IEEE 802.3bt PoE++ 90W
	IEEE 802.1p CoS
	IEEE 802.1d Spanning Tree
	IEEE 802.1w Rapid Spanning Tree
	IEEE 802.1s Multiple Spanning Tree
	IEEE 802.1Q VLAN
	IEEE 802.1ad LACP
	IEEE 802.1ab LLDP
	IEEE 1588-2008 PTPv2
IEEE 802.1 BA-2011	
IEEE 802.1 Q-2011	
IEEE 802.1 AS-2011	
Jumbo frames	Yes, supported up to 12000 MTU (with restrictions when using AVB)
Supported protocols	Avnu AVB/Milan (Available in future FW update)
	Dante
	RAVENNA/AES67
	Ethersound
	Q-SYS/Q-LAN
	REAC
	sACN
	ArtNet
	MANet
	HogNet
RTTrPL (BlackTrax)	
...	

Audio protocol compliance	Yes, low jitter and hardware timestamping (IEEE 1588-2008)
Ethernet switch type	Full non-blocking wire-speed switching performance
Memory	Flash 1 Gb RAM - 8 Mb NOR flash 4 Gb EMMC storage
MAC Address table	16384 entries
Address learning / aging	Self learning, Auto aging
Switching throughput	60 Gbps
IGMP Querrier	Yes (V1, V2)
IGMP Snooping	Yes, enabled by default (V1, V2, V3)
MANAGEMENT	
Configuration	Built-in WebUI (easy/advanced)
Network wide configuration	Yes, with Araneo software
Firmware upgrades	Via WebUI or network wide with Araneo - contingency option with second firmware file stored
POWER	
Power input	100-240 VAC
Backup power	Yes, with 2nd slide in PSU
Backup PoE	Yes, with 2nd slide in PSU 550W
Power consumption	Max 50W - Max 1050W (Depending on PoE and PSU configuration)
ENVIRONMENTAL	
Operating temperature	0 to +50 °C
Storage temperature	-10 to +70 °C
APPROVALS	
Electromagnetic emissions and immunity	FCC Part 15 CFR 47 class A
	CAN/ICES-003
	EN 61000
	EN 55032
Safety	EN 55024
	IEC 62368-1
	EN 62368-1
	UL 62368-1
Certificates and approvals	CAN/CSA-C22.2 No. 62368-1
	cSGSUS Mark (UL)
	CE Mark
	UKCA Mark
Green	CB Certificate
	RoHS
	REACH

GIGACORE 30I - 10G

MECHANICAL	
Enclosure	Robust all metal housing
Dimensions (W x D x H)	482 x 283.1 x 43.2 mm (482 x 308.8 x 43.2 mm with inserted PSU)
Material thickness	2 mm
Mounting type	Rack mount
Weight (no PSU inserted)	3.92 kg
Weight PSU	0.78 kg (550W) / 0.64 kg (100W)
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Packaged weight	5.86 kg (1x 100W PSU), 6.5 kg (2x 100W PSU), 6.0 kg (1x 550W PSU), 6.78 kg (2x 550W PSU)
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Backup power	IEC (C14) 1x for each inserted power supply (max 2)
Backup PoE	IEC (C14) 1x for each inserted power supply (max 2)
TEMPERATURE MANAGEMENT	
Intelligent control	Yes
Number of fans	3x + 1x for each inserted power supply (max 5 fans)
Position of fans	Rear panel
Airflow direction	Front to rear
USER INTERFACE	
Device status	4x RGB LED
	• Device
	• Power
	• RLinkX
Dynamic labelling	E-ink display
	2x RGB LED
	Port Speed/Activity
	Port Status
Fiber port status	• Group indication
	2x RGB LED
	Port Speed/Activity
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RJ45 port status	• Group indication
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Port speed	10G BASE-X or 1000 BASE-X
Port sensing	Fixed speed
RJ45 PORT SPECIFICATIONS	
Port speed	10/100/1000 BASE-T
Port sensing	Auto Negotiation
Auto crossover	MDI/MDIX (allows use of straight or cross wired cable)
Auto sensing	Full or Half Duplex (Gigabit is Full Duplex)

POWER OVER ETHERNET	
Standards	802.3af
	802.3at
	802.3bt
PoE Ports	802.3af, 802.3at, 802.3bt
	On ports 1-24
Total PoE power budget	500 W (1x slide in PSU)
	1000W (2x slide in PSU)
LLDP Support	Yes
Power allocation	User configurable:
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Power limit	• Total power budget firmware limit - port shutdown at overload based on port priority
	• Per port hardware and firmware power limits based on classification - port shutdown at overload
SWITCH FEATURES	
Boot time	45 s
Redundant links	Yes
Group function	Yes
Ethernet compliance	IEEE 802.2
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	IEEE 802.1w Rapid Spanning Tree
	IEEE 802.1s Multiple Spanning Tree
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IEEE 802.1 Q-2011	
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Supported protocols	Avnu AVB/Milan (Available in future FW update)
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	RAVENNA/AES67
	Ethersound
	Q-SYS/Q-LAN
	REAC
	sACN
	ArtNet
	MANet
	HogNet
	RTTrPL (BlackTrax)
...	

Audio protocol compliance	Yes, low jitter and hardware timestamping (IEEE 1588-2008)
Ethernet switch type	Full non-blocking wire-speed switching performance
Memory	Flash 1 Gb RAM - 8 Mb NOR flash 4 Gb EMMC storage
MAC Address table	16384 entries
Address learning / aging	Self learning, Auto aging
Switching throughput	168 Gbps
IGMP Querrier	Yes (V1, V2)
IGMP Snooping	Yes, enabled by default (V1, V2, V3)
MANAGEMENT	
Configuration	Built-in WebUI (easy/advanced)
Network wide configuration	Yes, with Araneo software
Firmware upgrades	Via WebUI or network wide with Araneo - contingency option with second firmware file stored
POWER	
Power input	100-240 VAC
Backup power	Yes, with 2nd slide in PSU
Backup PoE	Yes, with 2nd slide in PSU 550W
Power consumption	Max 50W - Max 1050W (Depending on PoE and PSU configuration)
ENVIRONMENTAL	
Operating temperature	0 to +50 °C
Storage temperature	-10 to +70 °C
APPROVALS	
Electromagnetic emissions and immunity	FCC Part 15 CFR 47 class A
	CAN/ICES-003
	EN 61000
	EN 55032
Safety	EN 55024
	IEC 62368-1
	EN 62368-1
	UL 62368-1
Certificates and approvals	CAN/CSA-C22.2 No. 62368-1
	cSGSUS Mark (UL)
	CE Mark
	UKCA Mark
Green	CB Certificate
	RoHS
	REACH

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