EN

PoE Switch 8p FLX M+, PoE Switch 16p FLX M+

PoE switch and powersupply with battery backup

350-251
Publication date 2023-11-09

Table of Contents

1. Before you begin 4
    1.1. Information 4
        1.1.1. Support 5
        1.1.2. Link to the latest information 5
        1.1.3. Link to technical specifications 5
        1.1.4. Help us make better products 5
2. About PoE from Milleteknik 5
3. How PoE powers devices connected to the power supply 6
4. Component overview PoE FLX M 6
5. Console for FLX M and FLX L 7
    5.1. Mounting on a wall or in a 19 "rack 7
6. Batteries - placement and connection 8
    6.1. Connection of batteries in FLX S, FLX M and FLX L 8
7. Motherboard description 9
    7.1. Connect in this order 9
    7.2. Connect alarm on P3 10
    7.3. Connect load 10
    7.4. Connect mains 11
    7.5. Control alarm limit 12
    7.6. Fuses 12
8. The differences between PoE switches 12
9. Short description for PoE switch 4p 12
10. Commissioning - how to start the unit 13
11. How the PoE switch software is accessed 13
    11.1. How the software is accessed in the PoE Switch 13
    11.2. Log in to the PoE switch 16
    11.3. Configuration 17
        11.3.1. System, configuration 17
        11.3.2. Ports, configuration 18
        11.3.3. VLAN configuration 20
        11.3.4. Aggregation, configuration 20
        11.3.5. IGMP Snooping, configuration 21
        11.3.6. Mirroring, configuration 22
        11.3.7. LLDP configuration 23
        11.3.8. QoS, configuration 25
        11.3.9. PoE, configuration 26
    11.4. Monitoring 27
        11.4.1. Statistics, overview 27
        11.4.2. Statistics, detailed 28
        11.4.3. IGMP status 29
        11.4.4. LLDP statistics 30
        11.4.5. LLDP table 31
        11.4.6. Ping 32
    11.5. Maintenance 32
        11.5.1. Reboot 33
        11.5.2. Factory reset 34
        11.5.3. Upload new software 35
        11.5.4. Load and save configuration file 36
        11.5.5. Log out 37
12. Alarm displayed on cabinet door 37
13. Maintenance 38
    13.1. battery change 38
14. Product sheet - power supply / battery backup 39

14.1. Product sheet - power supply from Milleteknik 39
14.1.1. Name, article number and e-number 39
14.1.2. PoE 39
14.1.3. Description 39
14.1.4. Area of use 39
14.1.5. Voltage, current and power 39
14.1.6. Backup operating time on batteries 40
14.1.7. Battery and battery type 40
14.1.8. Load outputs 40
14.1.9. Alarm 40
14.1.10. Protection 40
14.1.11. Fuses 40
14.1.12. Indications and communication 40
14.1.13. Enclosure 41
14.1.14. Weight 41
14.1.15. Installation requirements 41
14.1.16. Requirements that the product meets 41
14.1.17. Guarantee 41
14.1.18. Expandable, options and accessories 41
14.1.19. Manufacturing, lifespan, environmental impact and recycling 41
14.1.20. Link to the latest information 42
14.1.21. Link to technical specifications 42
14.1.22. Miscellaneous 42
14.1.23. About this information 42
15. Product life cycle, environmental impact and recycling 42
16. Address and contact details 43

1. BEFORE YOU BEGIN

1.1. Information

READ THIS FIRST!

Electronics, regardless of enclosure, are intended for use in a controlled indoor environment.

Ventilation must not be covered.

Only authorized persons should install and maintain the system.

It is the installer's responsibility to ensure that the system is suitable for its intended use.

Documents accompanying the system must be kept in or in its immediate vicinity.

Mains voltage should be disconnected during installation.

All information subject to change.

Upon installation of this product, the installer acknowledges and accepts the limitations of this product as described in this manual.

Instruction manual in Swedish in original[1].

1.1.1. Support

Phone: +46 31-340 02 30

You will find answers to many questions at: www.milleteknik.se/support

Telephone: +46 31- 340 02 30, e-mail: support@milleteknik.se.

Support is open: Monday-Thursday 08:00-16:00, Fridays 08:00-15:00. Closed 11:30-13:15.

1.1.2. Link to the latest information

Products and software are subject to updates, you will always find the latest information on our website.

PoE

1.1.3. Link to technical specifications

PoE M-switch 8p FLX M+ Swedish

PoE M-switch 8p FLX M+ English

PoE M-switch 16p FLX M+ Swedish

PoE M-switch 16p FLX M+ English

1.1.4. Help us make better products

With your help we can develop and produce better products, please fill in our form customer satisfaction survey.

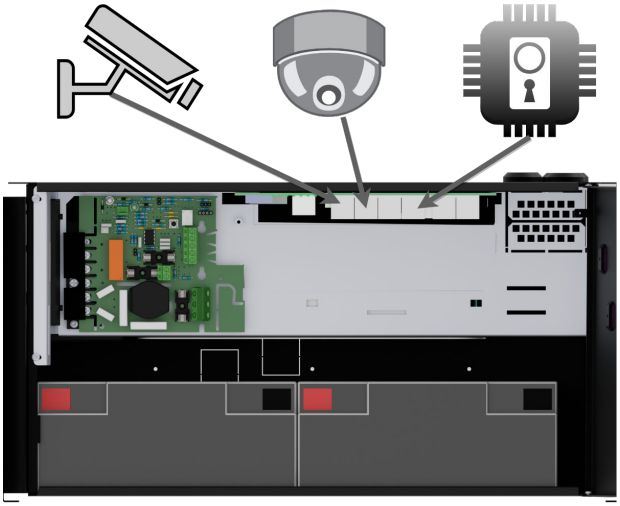
2. ABOUT POE FROM MILLETEKNIK

The series is designed to power PoE devices such as access systems, surveillance cameras and other equipment that can be operated with Power over Ethernet.

PoE M-switch 4p FLX M, PoE M-switch 8p FLX M and PoE M-Switch 16p FLX M meet 802.3at type2 class 4. The PoE switch is managed, i.e. it is possible to control the switch via its software interface. The products have something we call "controlled charging", which is a safety function that means that batteries are not charged with more than 4.5 A. By controlling the charging of batteries, the lifespan of batteries is significantly extended. The product has 24 V battery voltage which is boosted up to 48 V to power the PoE switch. There is a load output on the motherboard that provides 24V, this allows the device to be used to power other applications such as door locks, etc on the one load output. It is important to accurately calculate the load so that the unit's specifications are not exceeded. Battery box can be connected for extended backup drive time.

[1]Translations in languages other than Swedish are only indicative and have not been verified. Translation must always be checked against the Swedish original to ensure correct information.

3. HOW POE POWERS DEVICES CONNECTED TO THE POWER SUPPLY



PoE can power, for example, surveillance cameras.

Connect external devices to be powered via PoE in PoE ports.

Connect other devices that do not need to be power supplied in LAN ports.

4. COMPONENT OVERVIEW POE FLX M

Figure 1. PoE M-switch 8p FLX M+

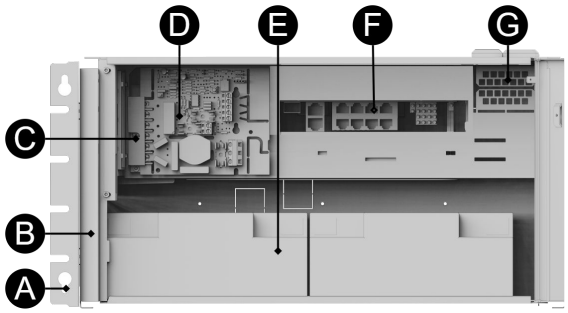


Figure 2. PoE M-switch 16p FLX M+

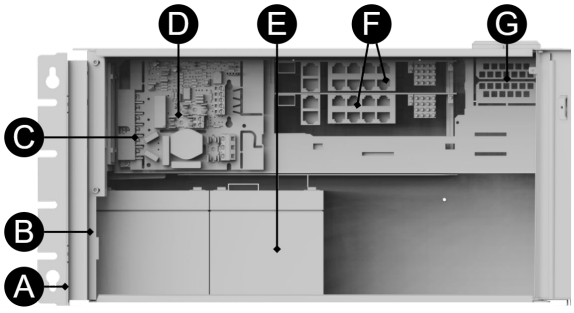
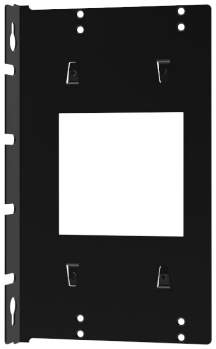


Table 1. Component overview

Symbol	Explanation
A	Brackets, reversible.
B	Casing in powder-coated sheet metal.
C	Power supply, (placed under the motherboard).
D	Motherboard.
E	Room for batteries.
F	Eight PoE ports are clustered together and two LAN ports are clustered together.
G	Cable entries.

5. CONSOLE FOR FLX M AND FLX L

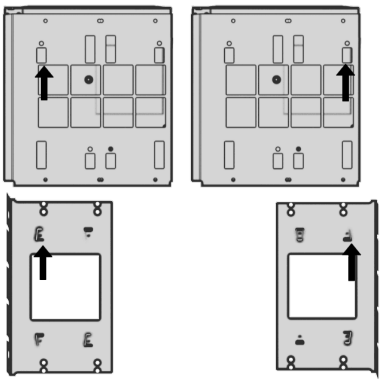
Bracket is reversible and can be mounted in two ways. It comes with brackets in to the device.



5.1. Mounting on a wall or in a 19 "rack

The unit can be mounted in a 19 ”rack or on a wall. The included brackets can be attached in two ways: When mounting on a wall, the brackets must sit backwards, against the wall. When mounting in a 19 ”rack, the console must be at the front edge of the unit.

Figure 3. FLX M - mount brackets



Left bracket facing the front for mounting in a 19 "rack.

Right bracket facing the back for wall mounting.

IMPORTANT
Leave 100 mm free around the air vents.

6. BATTERIES - PLACEMENT AND CONNECTION

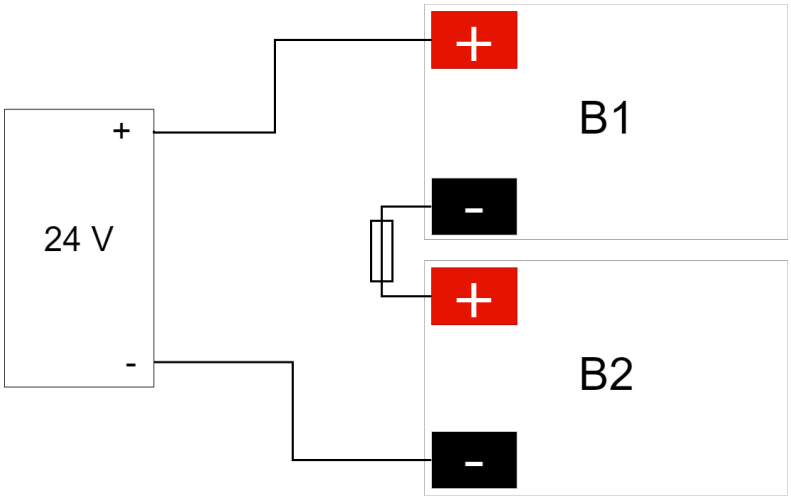
6.1. Connection of batteries in FLX S, FLX M and FLX L

Battery wiring is mounted on the circuit board upon delivery. Pictures below only show how to connect wiring.

1. Place the batteries in the cabinet with the battery terminals facing outwards.
2. Connect the battery cable. Red cable on + and black cable on -.

- If possible, disconnect mains voltage when replacing the battery.

Figure 4. Wiring diagram for batteries in battery backup



Connect the terminals correctly so that you do not damage the equipment.

7. MOTHERBOARD DESCRIPTION

7.1. Connect in this order

To minimize the risk of errors that may occur in connection with a short circuit, connections to the motherboard must be made in this order.

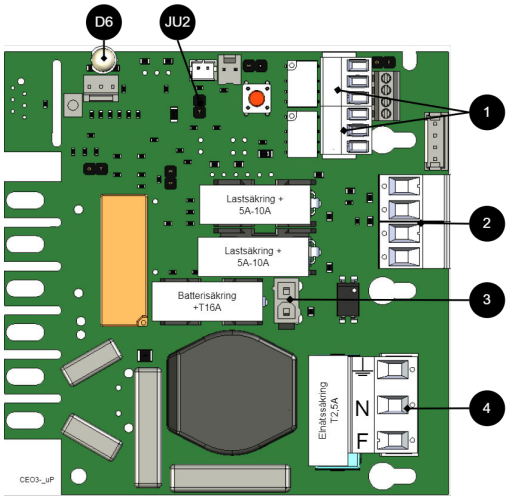
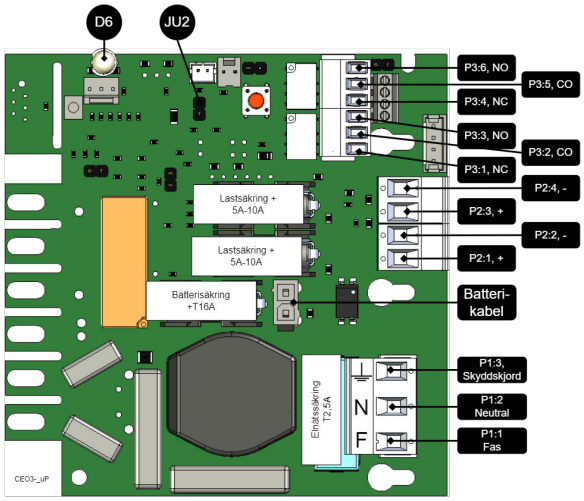


Table 2. Connect in this order

Nr	Explanation
1	Connect alarm.
2	Connect load.
3	Connect batteries
4	Connect mains.

Figure 5. Description: CEO3 uP



On PCB	Explanation
D6	Indicator diode.
JU2	Jumper for alarm control. When the jumper is mounted, the alarm limit is lowered.
P1:1-3	Mains connection.
P2:1-2	Load output, + / -.
P2:3-4	Load output, + / -.
P3:1-3	Alarm output, NC, CO, NO.
P3:4-6	Alarm output, NC, CO, NO.

7.2. Connect alarm on P3

Alarm is connected to terminal P3

Table 3. Connect alarm P3

P3:1-6	Explanation
Sum alarm	
P3:1	NC
P3:2	Com
P3:3	NO
Sum-alarm*	
P3:4	NC
P3:5	Com
P3:6	NO

Total alarm: Broken fuse on load, broken fuse from external distribution board, broken battery fuse, low battery voltage in battery operation, batteries not connected, overvoltage.

7.3. Connect load

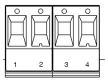


Table 4. Load connections

Circuit board number	Explanation
P2: 1	Connection for load 1 +
P2: 2	Connection for load 1 -
P2: 3	Connection for load 2 +.
P2: 4	Connection for load 2 -.

MAX CURRENT

The maximum current must not be exceeded. Max current is indicated on nameplate on the device.

DANGER

Mains voltage must be disconnected when working with stripped cables. It is the installer's responsibility to ensure that the correct skills are available for connecting 230 V to the unit. Maximum cable area is 4 mm^2

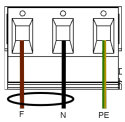
7.4. Connect mains

Pull wiring through the cable entry on the cabinet.

If possible, secure the mains cable with cable ties where possible.

Electrical network cabling shall be kept separate from other cabling to avoid EMC interference.

Figure 6. Connect the mains to the motherboard



Connect the mains cable to the terminal before it is put back on the motherboard. Secure F and N with cable ties for electrical safety.

Table 5. Electrical network connections

Letter	Explanation
F	Phase
N	Neutral
PE	Protective earth

ELECTRICAL MAINS CONNECTION 230 V AC ON CIRCUIT BOARD

Check that the marking on the circuit board matches the cable arrangement on the terminal block.

7.5. Control alarm limit

Alarm for low battery voltage in battery operation can be controlled.

By jumpering JU2, the limit for when the unit should give an alarm can be lowered.

Alarms are given when the battery voltage in battery drops below the limit.

Table 6. Alarm limits

Alarm limit at low battery voltage	12 V	24 V
JU2 with jumper*	10.2 V	24.0 V
JU2 without jumper *	13.2 V	26.5 V
*The unit is delivered with jumper on JU2		

7.6. Fuses

Unit	Fuse	Type	Explanation
All units	F1	T2,5A	Mains fuse
	F2, F6	T10A	Load fuse +
All units	F7	T16A	Battery fuse

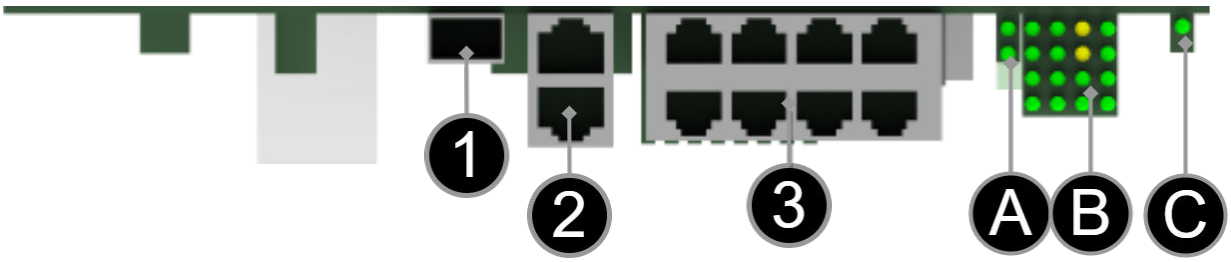
FUSE REPLACEMENT WARNING (A)
There is a risk of damage if the fuse is changed to a larger one than what the unit is delivered with. The function of the fuse is to protect the connected load and cables against damage and fire. It is not possible to change the fuse to a larger one to increase the power output.

8. THE DIFFERENCES BETWEEN POE SWITCHES

Product	PoE switch installed	Can additional PoE switches be installed?
PoE M-switch 8p FLX M	An eight port PoE Switch	No, use PoE M-switch 16p FLX M.
PoE M-switch 16p FLX M	Two eight-port PoE switches	No.

9. SHORT DESCRIPTION FOR POE SWITCH 4P

NOTE
The PoE M-Switch 16p FLX M+ has two 8 port cards installed.



No	Explanation
1	Not used.
2	2 pcs RJ-45 ports for data, not PoE, (powered).
3	8 pcs RJ-45 powered ports for connecting PoE devices.
A	Indication, green LED lights up when device is plugged in. This is only an indication that the port is connected and not the connected device's status.
B	Indication, green LED lights up when PoE device is plugged in. This is only an indication that the port is connected and not the connected device's status. Illuminates yellow during data transfer.
C	Lights up green when the card has voltage.

10. COMMISSIONING - HOW TO START THE UNIT

1. Connect batteries.
2. Connect fuses.
3. Plug in PoE and other loads.
4. Screw the mains cable into the terminal and attach the terminal to the motherboard.
5. Switch on mains voltage.

The unit works normally when the indicator LED on the outside of the cabinet door lights up with a solid green light. See front panel for other status indications.

It may take up to 72 hours before the batteries are fully charged.

11. HOW THE POE SWITCH SOFTWARE IS ACCESSED

11.1. How the software is accessed in the PoE Switch

This section shows how to log in to the switch's configuration web page.

In order to configure the software in the switch, access to the switch requires the correct IP address to be set on the computer.

Access to the switch's software is through a browser (Chrome, Edge, Firefox).

Follow the steps to access the switch's settings.

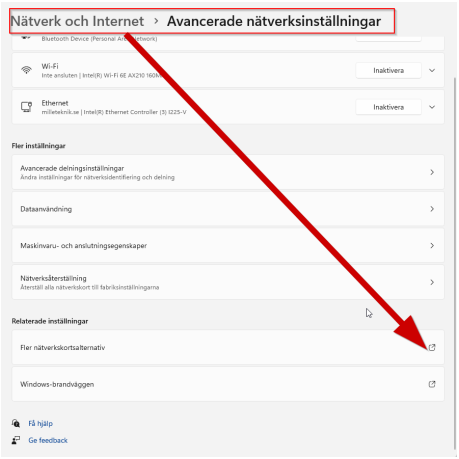
NOTE

The settings shown are settings for PC, (Windows 7 - Windows 11). Windows and names may vary between different versions of Windows. Unfortunately, we cannot provide support for settings of your computer.

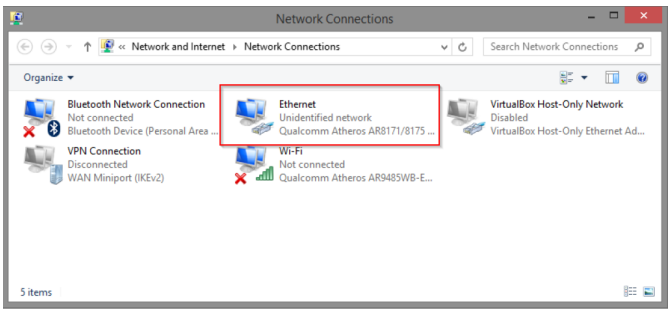
NOTICE

The address of the PoE switch is: **192.168.2.1** and username and password are: **admin/admin** The IP address in the switch is static (fixed) and therefore the computer's IP address and subnet mask must be static.

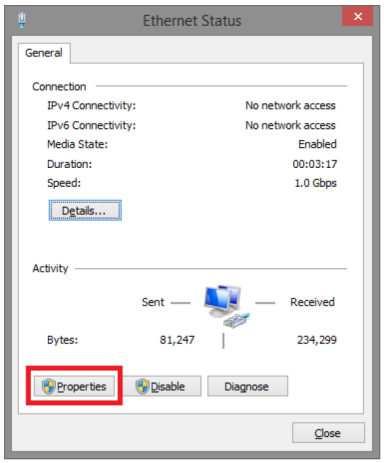
1. Open settings and go to **Network and Internet** -> **Advanced network settings**. Open **more network card options**.



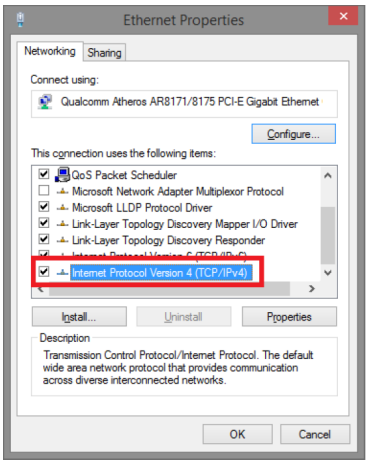
2. A Network Connections window will appear showing all available network connections on the computer. Double-click the network connection you use to connect to the switch.



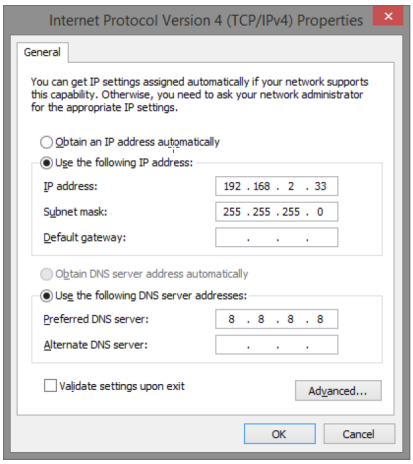
3. Ethernet status window appears. click the button **Characteristics** as shown in the figure below.



4. Double-click Internet Protocol Version 4 (TCP / IPv4).



5. Set the computer's IP address and subnet mask as shown in the figure below. By default, the product's **IP address be 192.168.2.1.** You can set any IP address as long as it is not the same as your switch's IP address and is in the same network segment as your switch's IP address. Press **OK** to apply the TCP/IPv4 settings you just made. Now you can connect to your switch using a web browser (Chrome, Edge or Firefox).



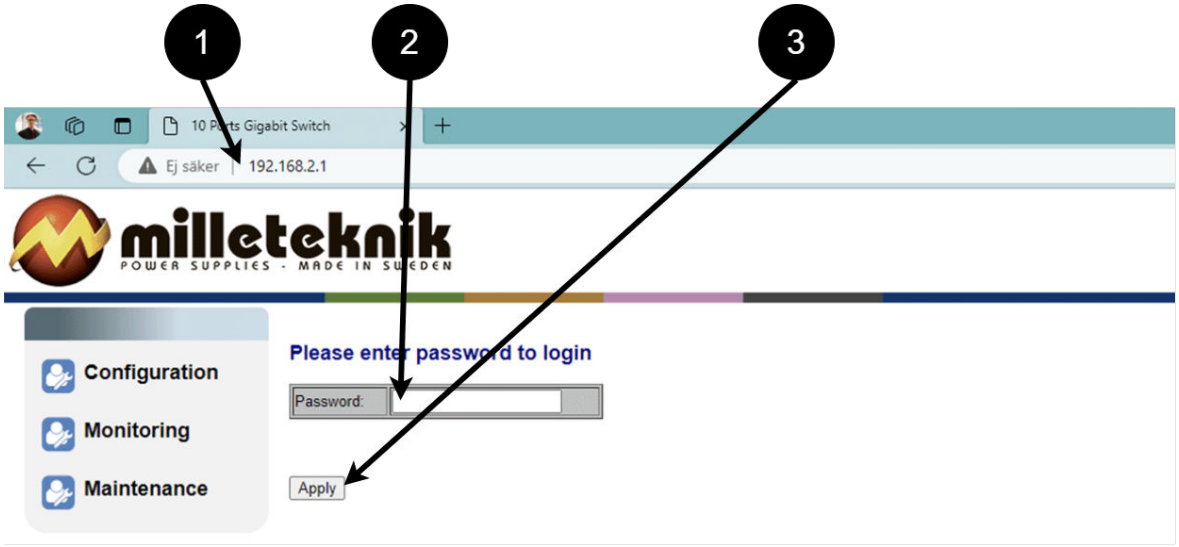
6. Connect an RJ-45 cable and connect to the PoE switch.

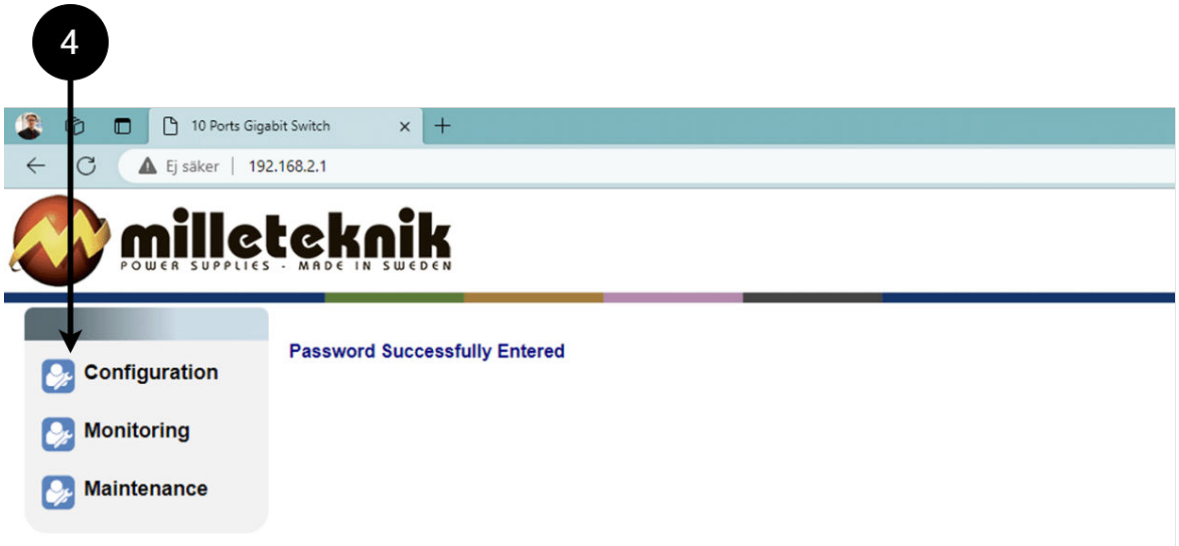
11.2. Log in to the PoE switch

NOTE
IP address of the switch (factory setting): **192.168.2.1**

Password (factory setting): **admin**

1. Start the browser on your computer.
2. Login to PoE switch.

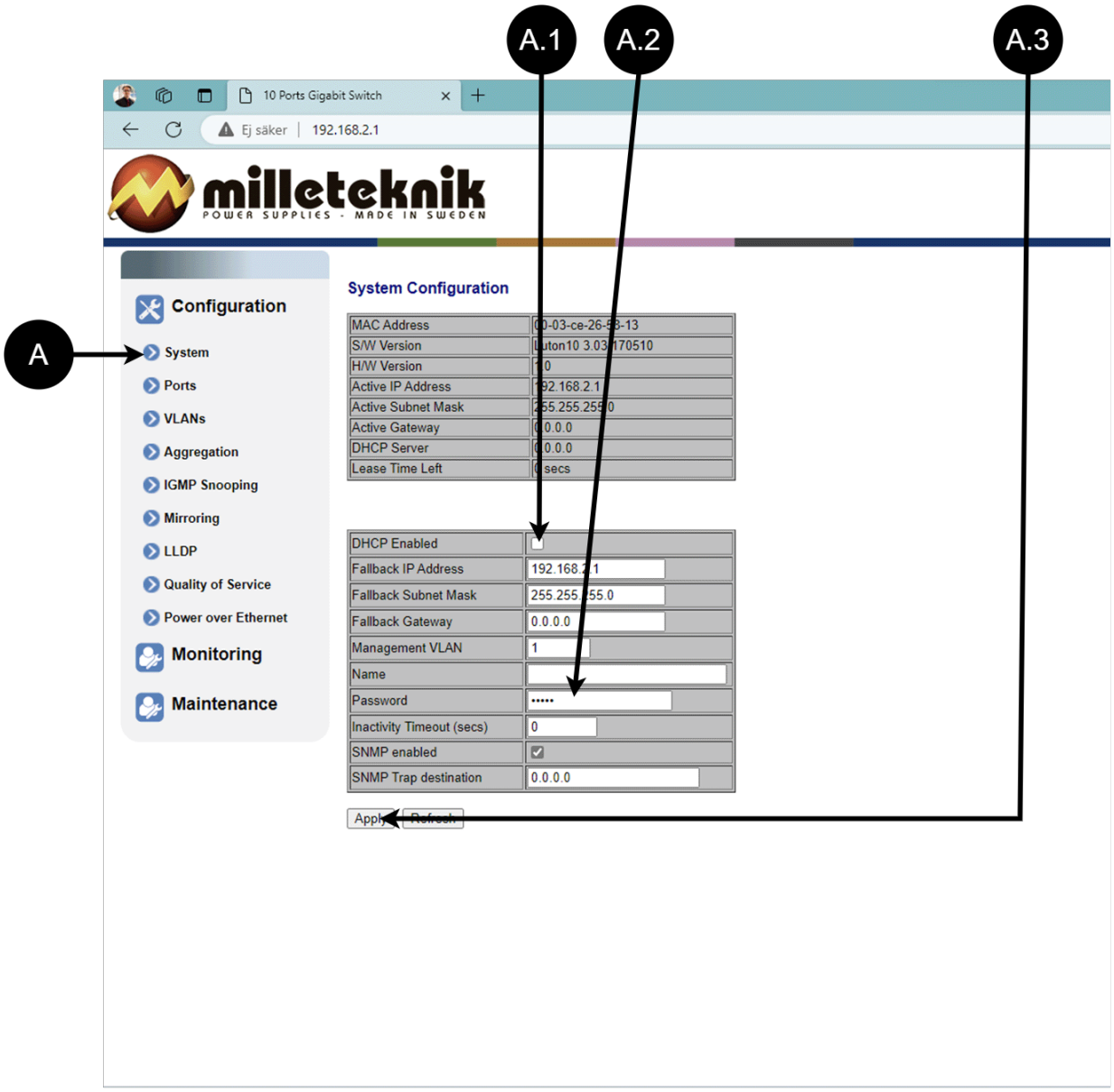




Number	Explanation
1	IP address of the PoE switch: 192.168.2.1
2	Password: admin
3	Apply = Ok
4	Menu in the PoE switch

11.3. Configuration

11.3.1. System, configuration



Letter, number	Explanation
A	PoE switch system configuration page
A.1	Tick here if you are going to use DHCP, see warning below.
A.2	Changes the factory default password, (admin).
A.3	If you have made any changes, you need to click "Apply" to save the changes.

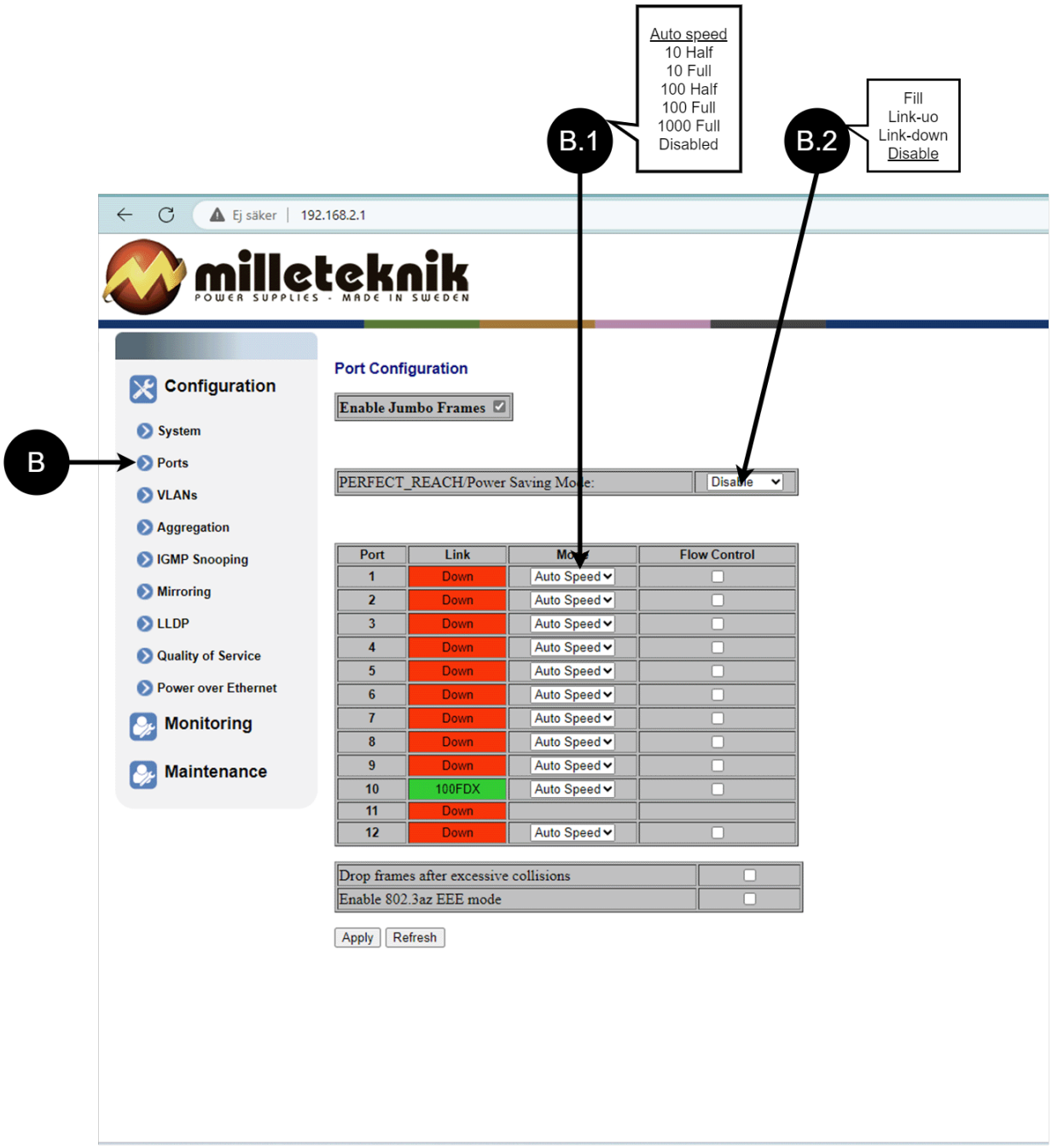
WARNING
The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

11.3.2. Ports, configuration

WARNING
The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



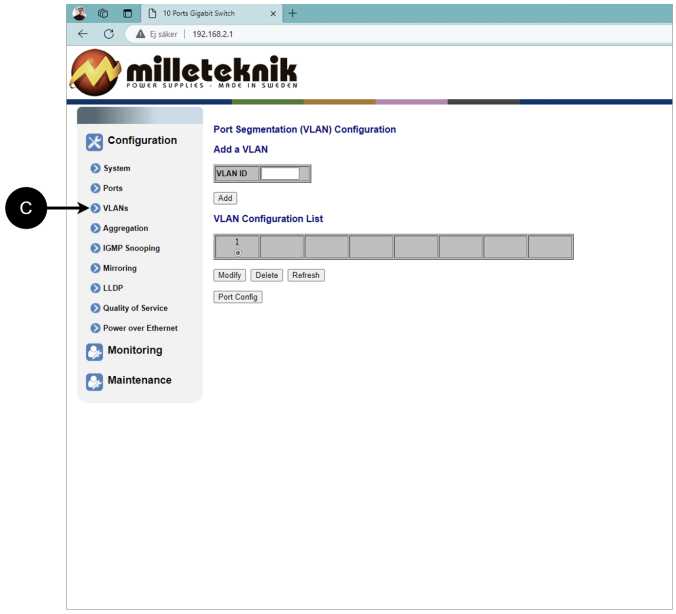
Letter, number	Explanation
B	Gates
B.1	This setting normally does not need to be changed. Select the speed of the PoE switch's ports.
B.2	This setting normally does not need to be changed.

11.3.3. VLAN configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



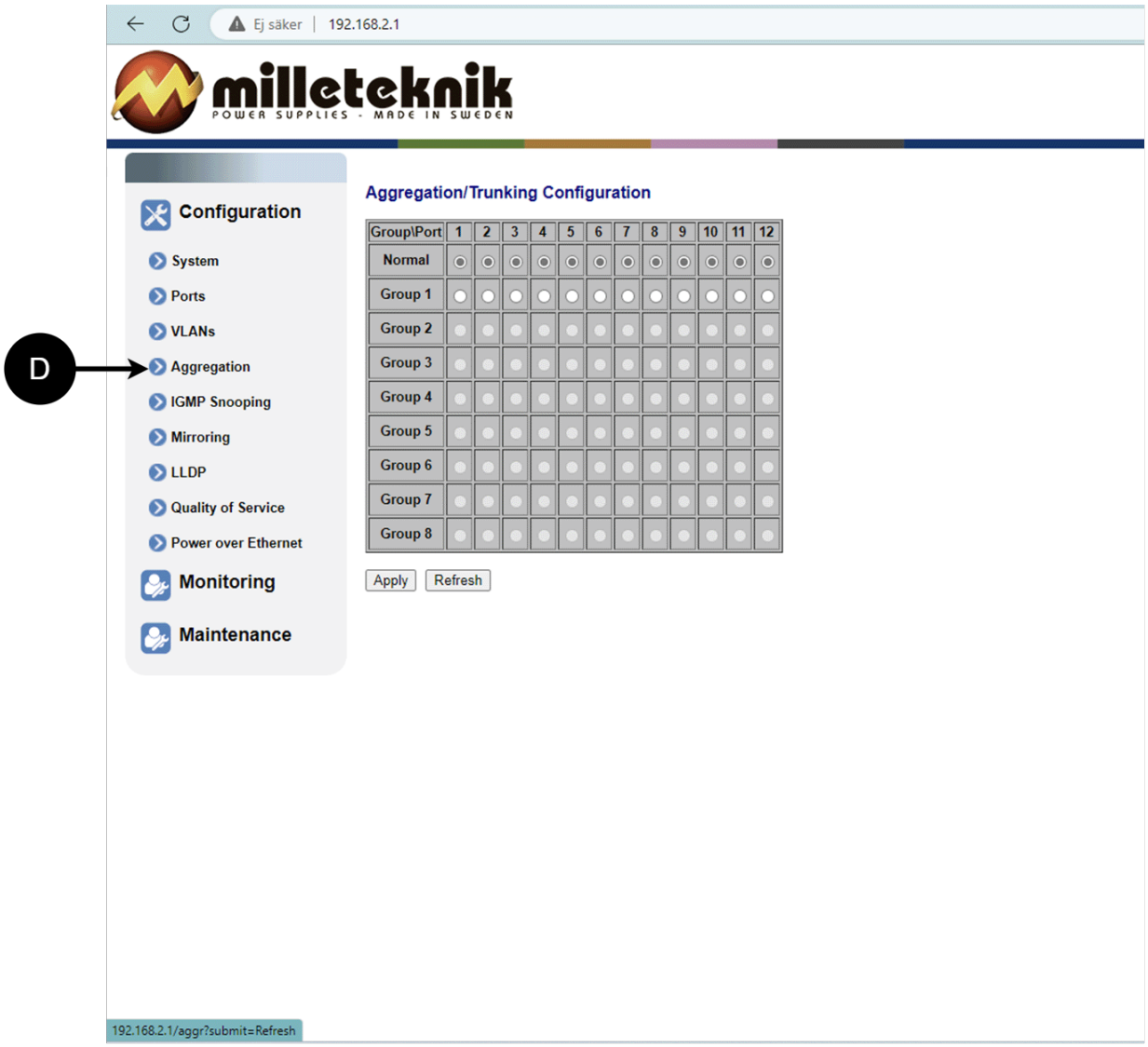
Configuration of Virtual LAN.

11.3.4. Aggregation, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



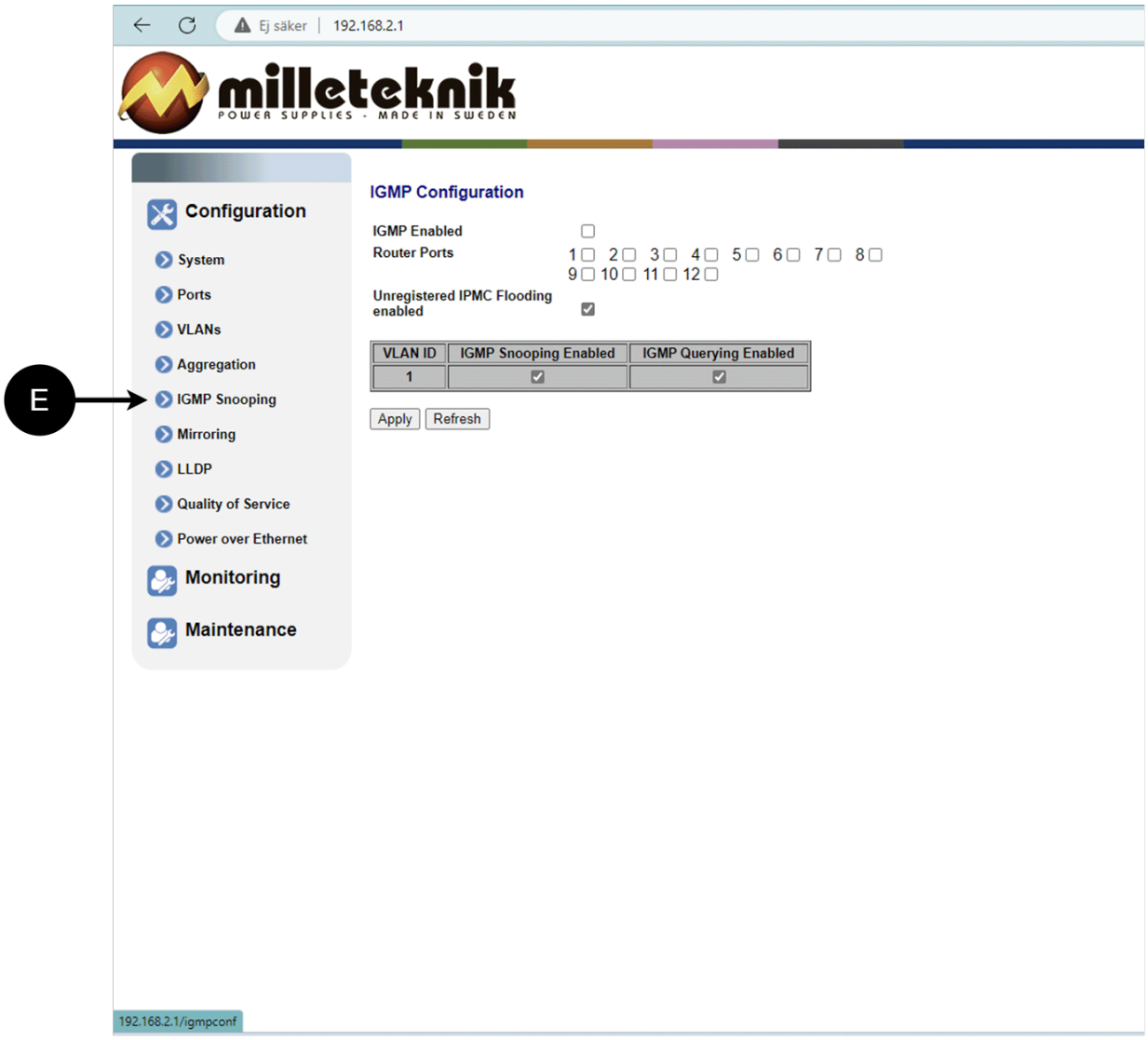
Load balancing between the ports.

11.3.5. IGMP Snooping, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



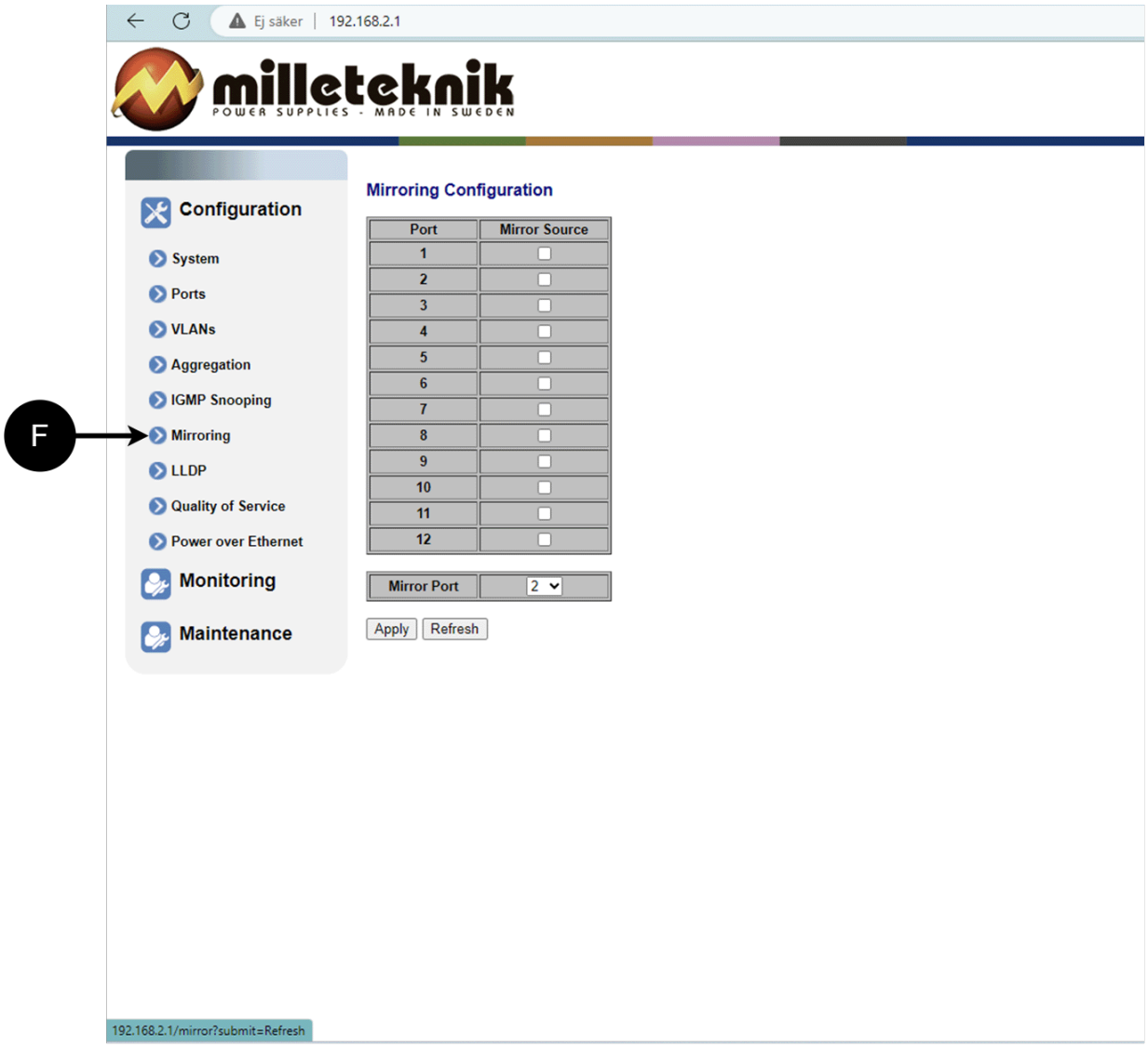
Switch that controls reception.

11.3.6. Mirroring, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



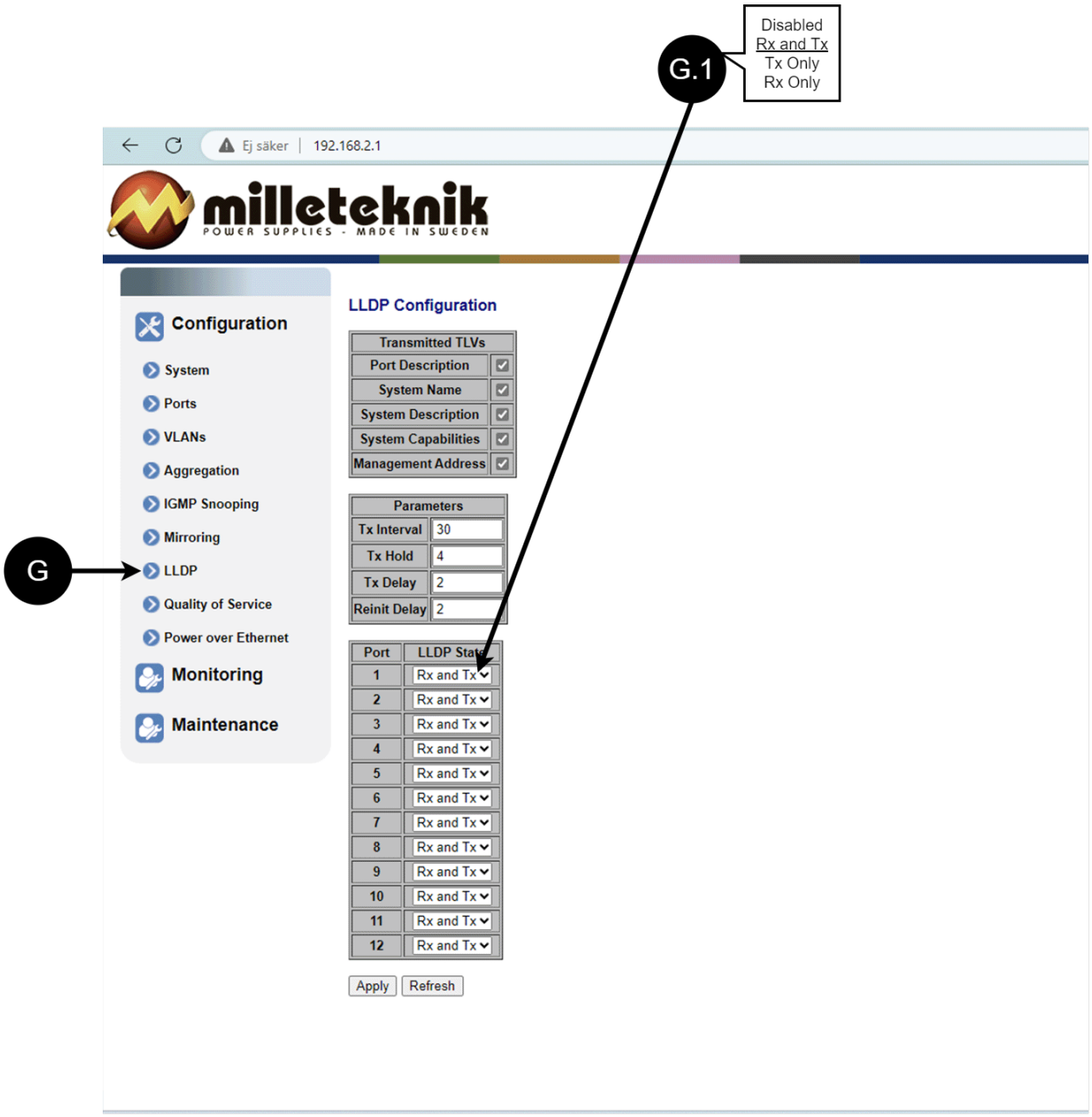
Mirroring of ports.

11.3.7. LLDP configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



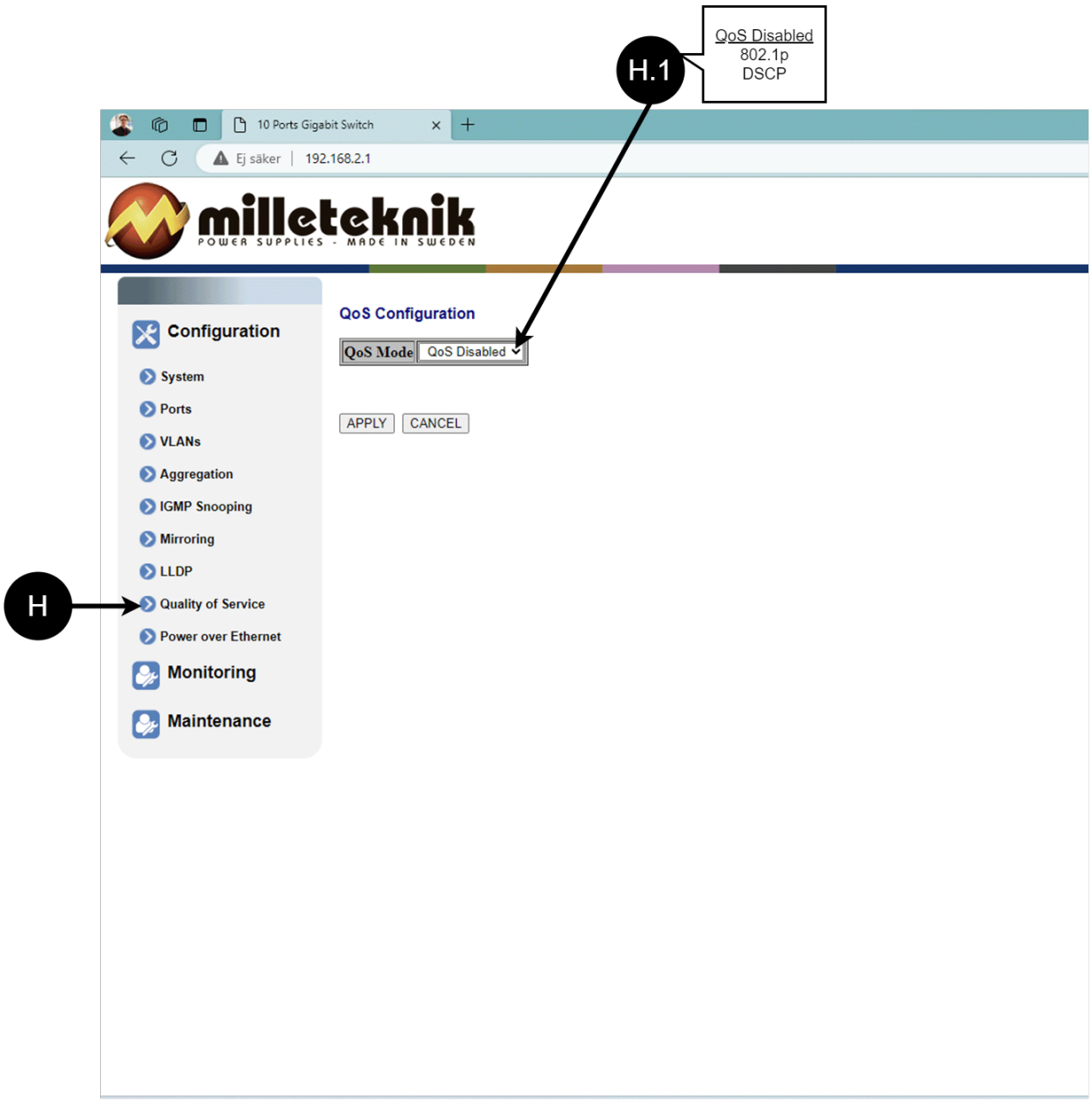
Letter, number	Explanation
G	LLDP stands for "Link Layer Discovery Protocol", which is a network protocol standard used to discover and communicate information about network devices connected to the same Ethernet network. The protocol allows devices such as switches and routers to send and receive messages containing information about the device's identification, capabilities, and connection topology.
G.1	RX and TX are abbreviations used in electronics, communications, and computer networking to indicate the direction of data flow between devices. RX: The abbreviation "RX" stands for "Receive" or "Reception". It indicates that the device is receiving data or signals from another device. When a device has an RX input, it means that it is designed to receive data or information from a transmitting device. TX: The abbreviation "TX" stands for "Transmit" or "Transmission". It indicates that the device is transmitting data or signals to another device. If a device has a TX output, it means that it is designed to transmit data or information to a receiving device. These abbreviations are especially common when it comes to data communication, such as in the context of network cables where there are specific RX and TX wires that allow for two-way communication between devices.

11.3.8. QoS, configuration

WARNING

The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.



Letter, number	Explanation
H	QoS gives different network traffic different priority depending on its importance and requirements, helping to ensure that important services are delivered with sufficient bandwidth and minimal delay even when the network is under load.
H.1	Sets whether QoS is active.

11.3.9. PoE, configuration

WARNING

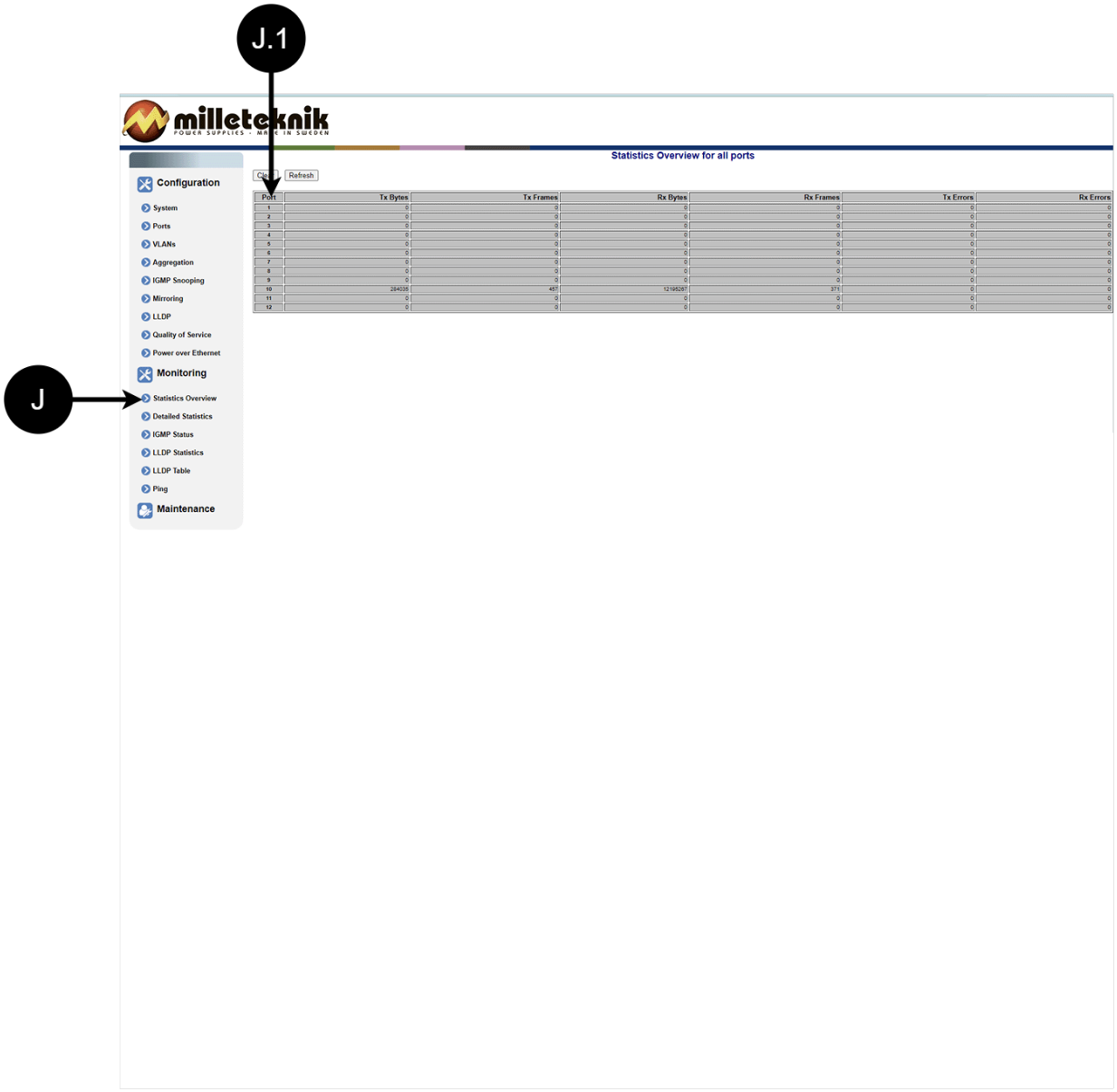
The settings on this page normally do not need to be changed. Only change the settings if you absolutely know what you are doing.

Factory reset the PoE device if it does not behave as expected after adjusting settings on this page.

Letter, number	Explanation
I	Power over Ehternet
I.1	Turns PoE port on or off. Don't forget to press "Apply" to save changes.

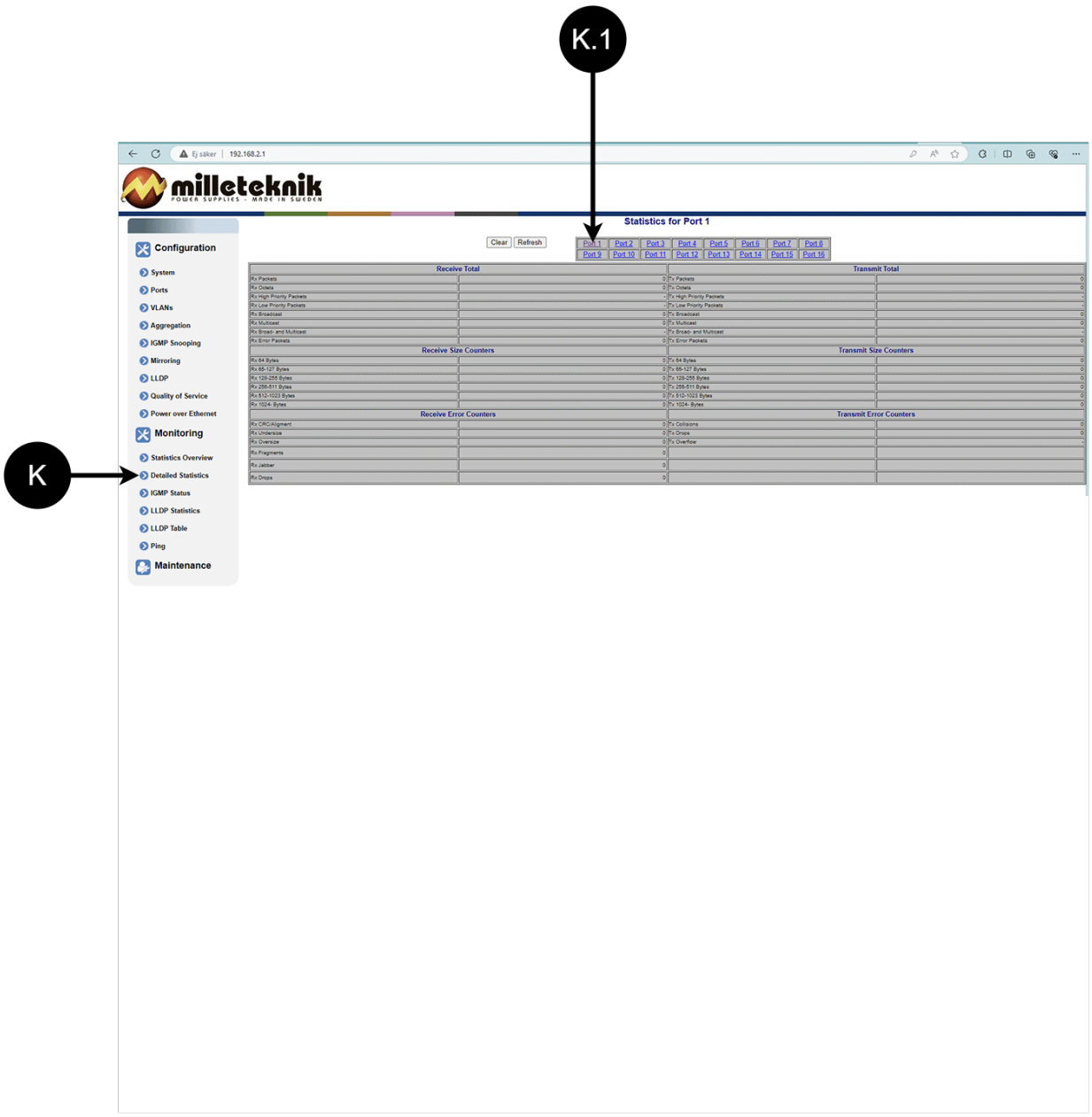
11.4. Monitoring

11.4.1. Statistics, overview



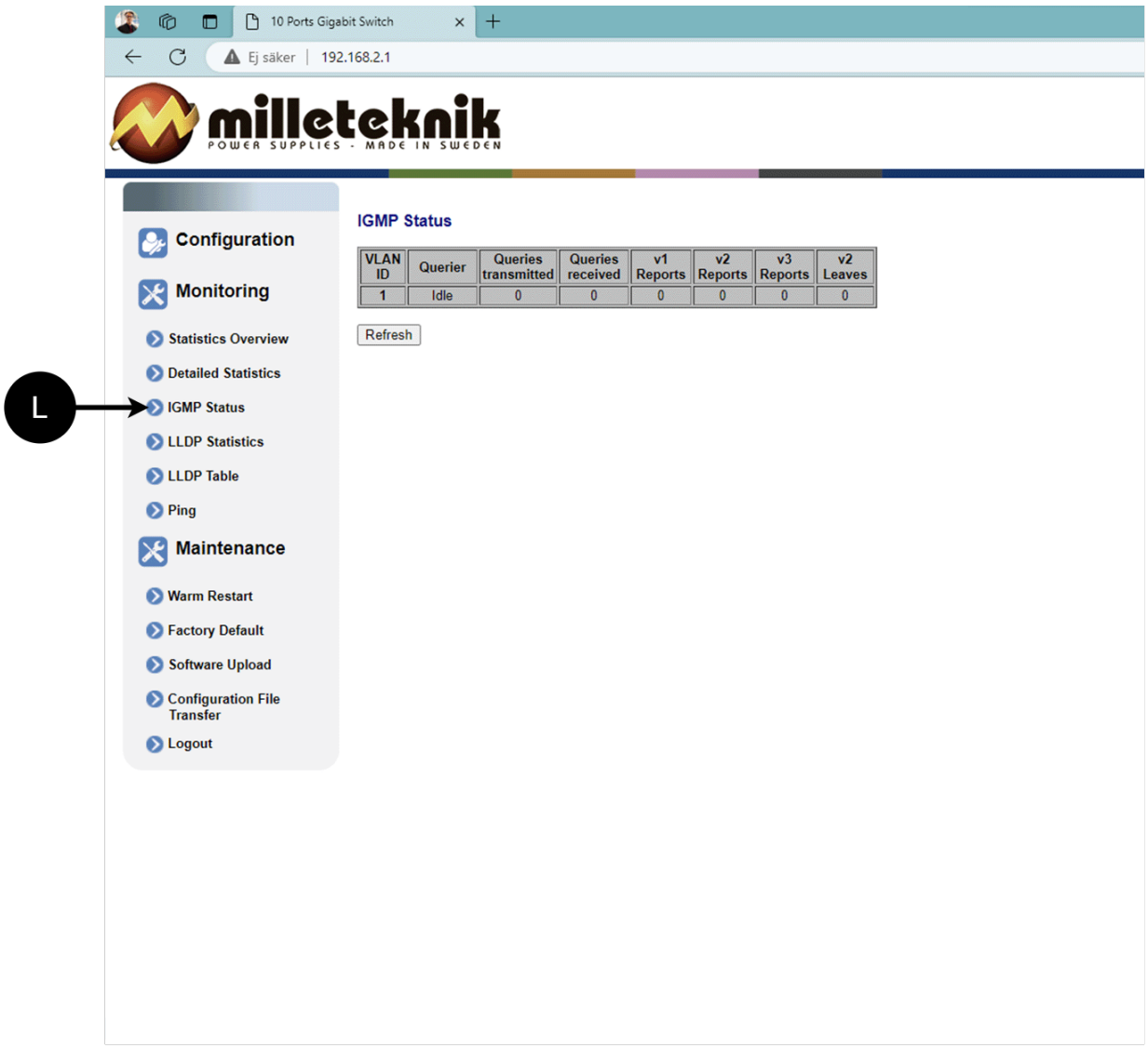
Letter, number	Explanation
J	Statistics, overview
J.1	Traffic per port.

11.4.2. Statistics, detailed



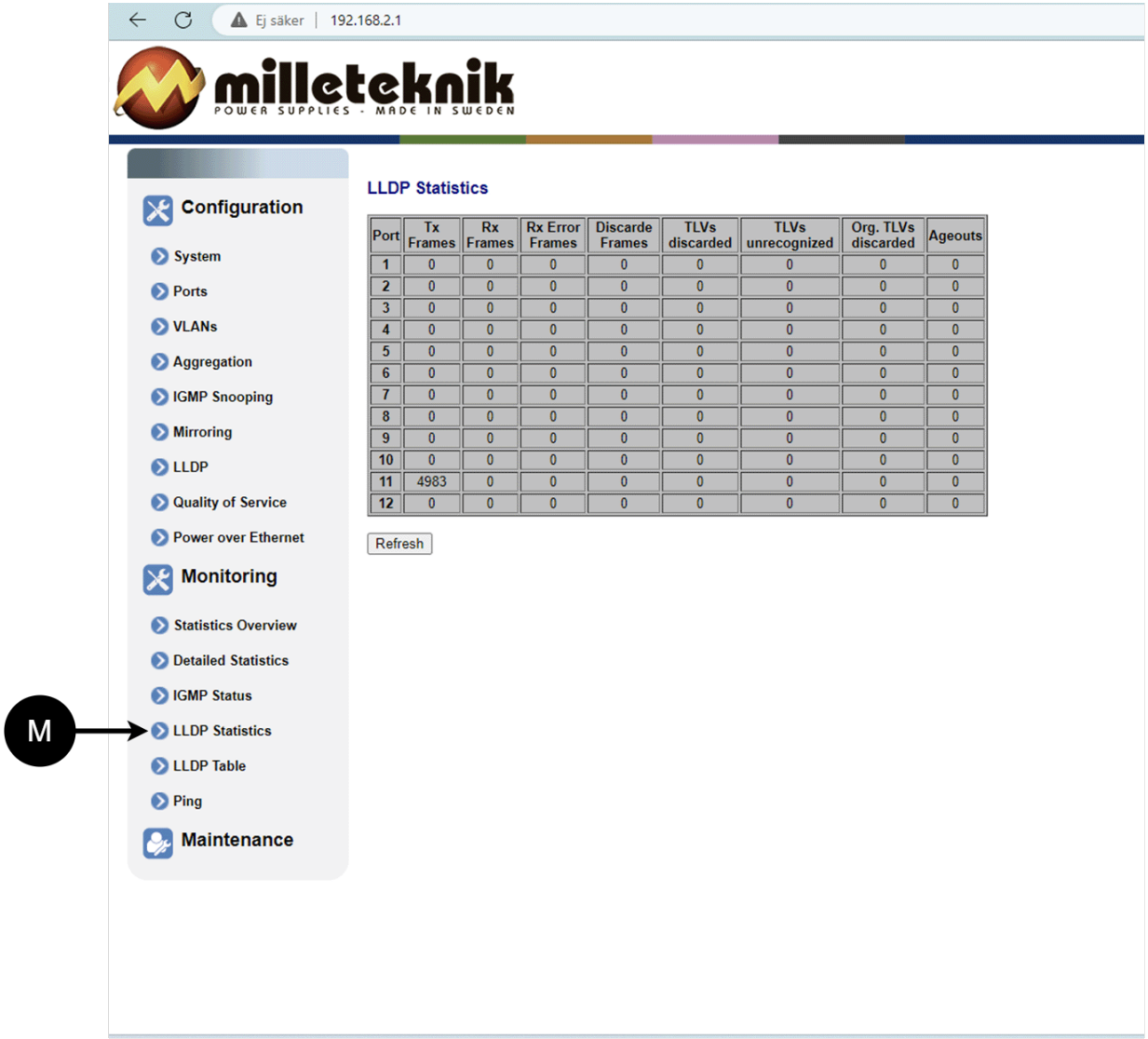
Letter, number	Explanation
K	Detailed statistics
K.1	Select the port for which you want statistics.

11.4.3. IGMP status



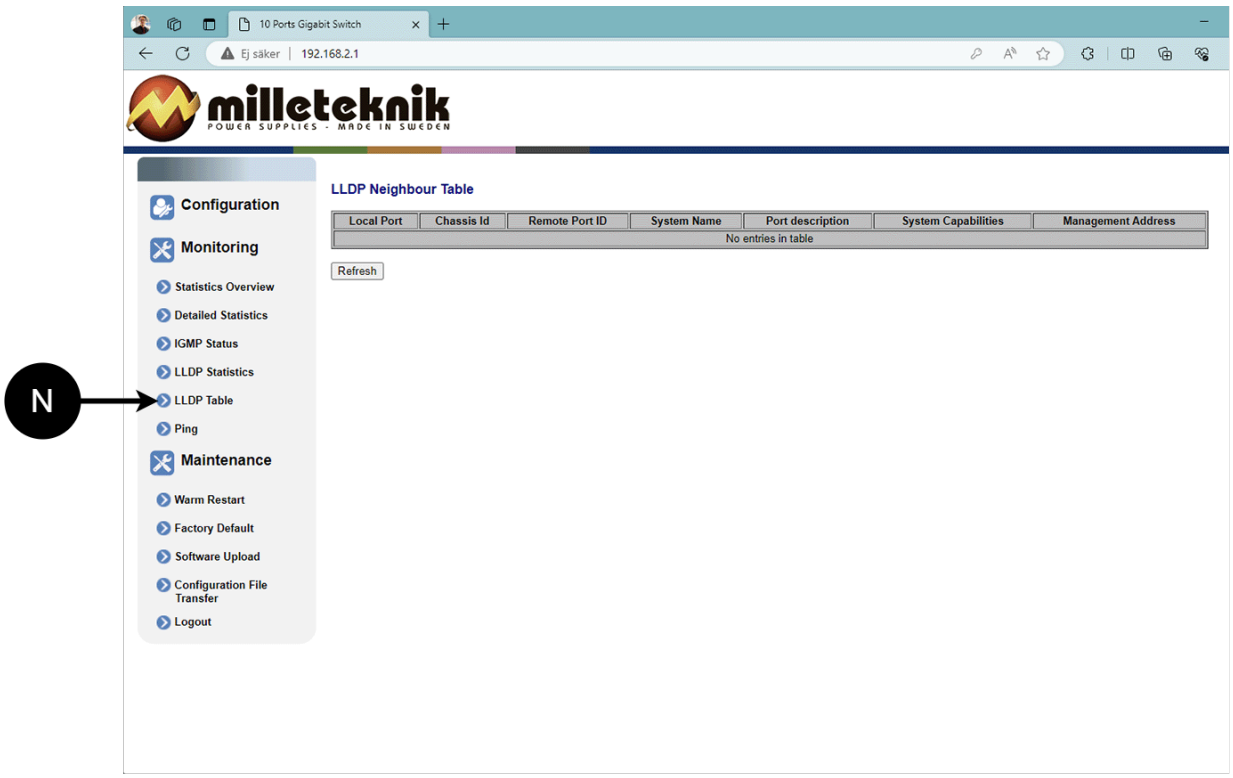
L: Status of IGMP

11.4.4. LLDP statistics



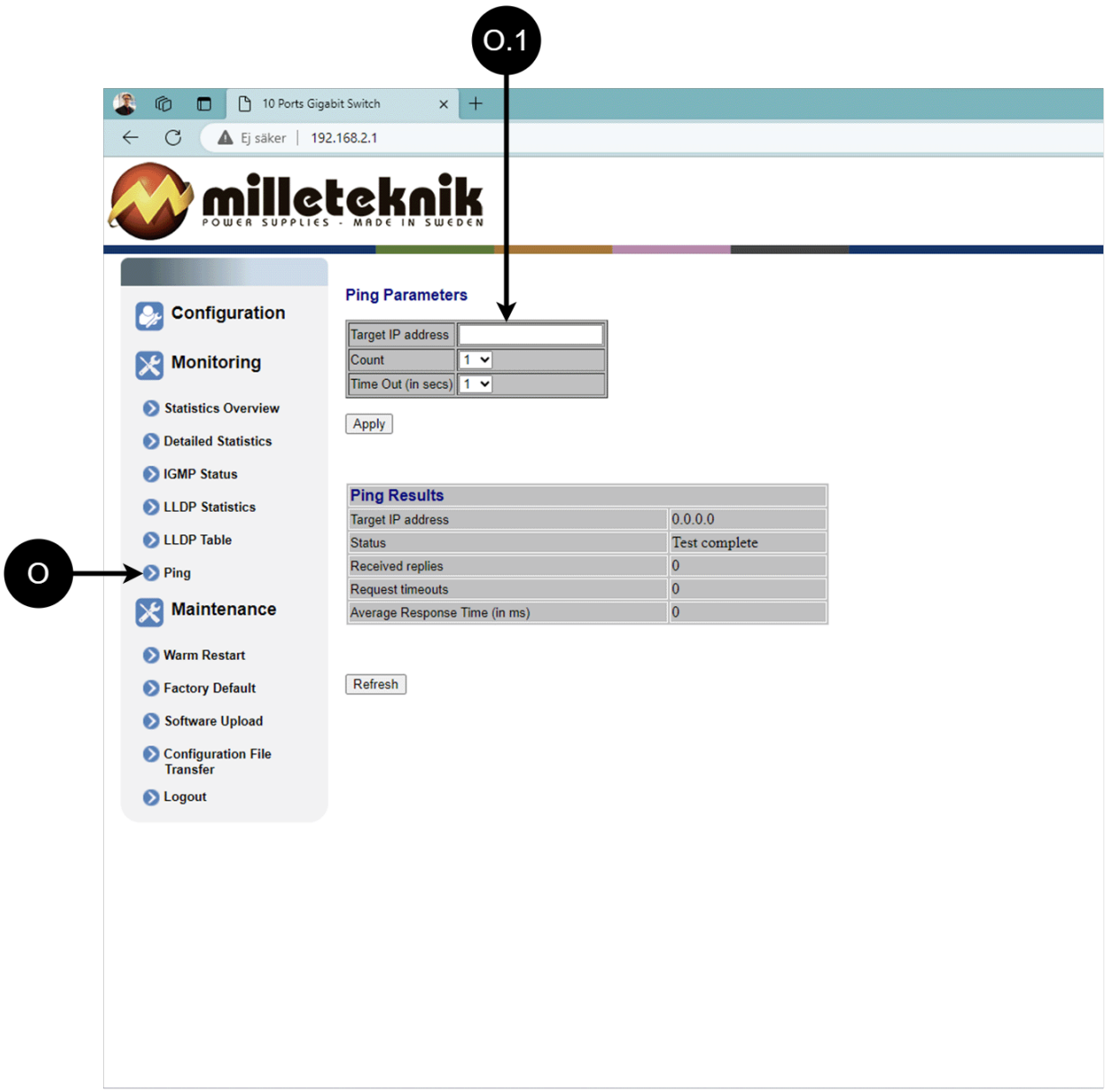
M: LLDP statistics

11.4.5. LLDP table



N: LLDP overview.

11.4.6. Ping



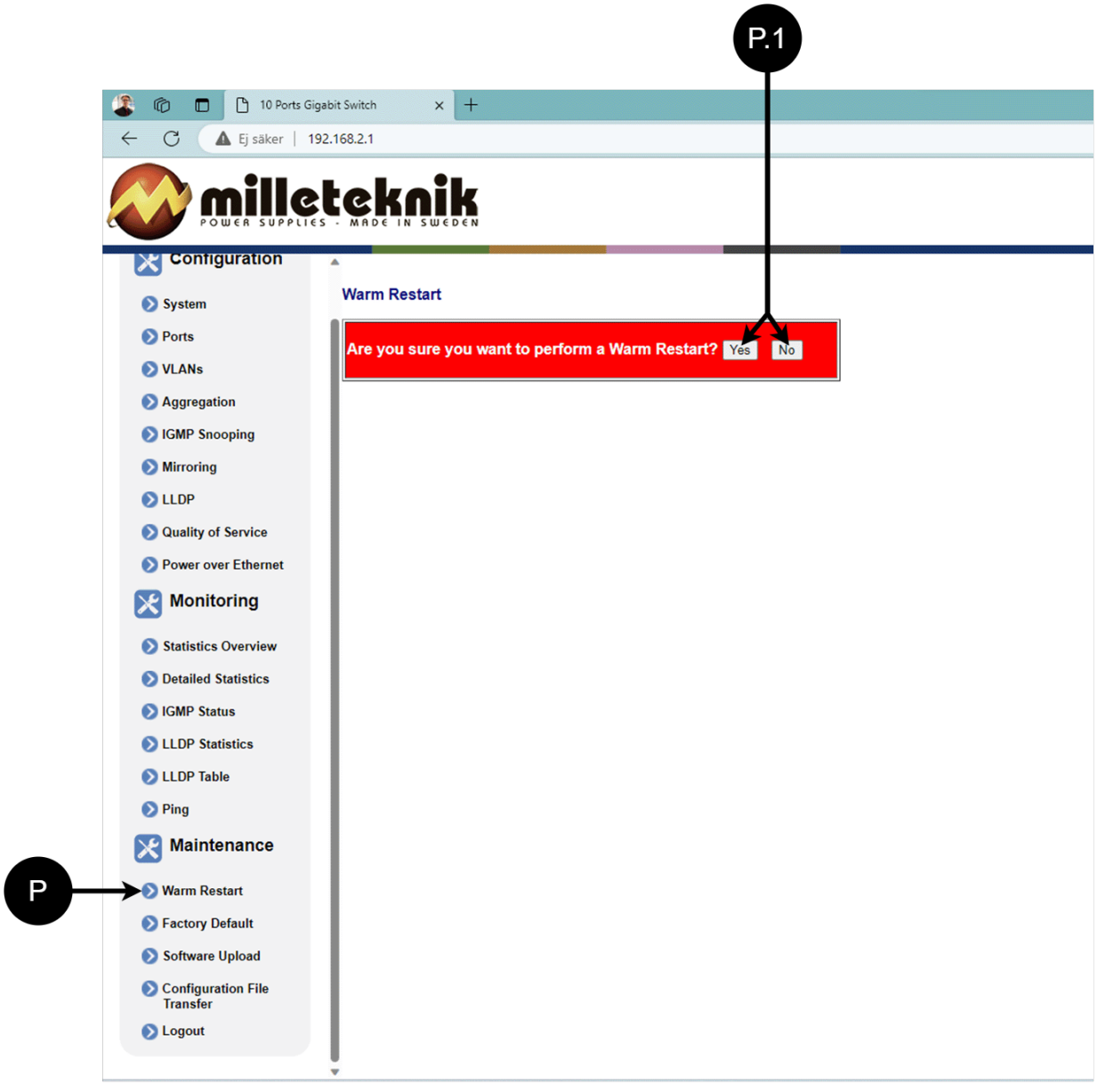
Letter, number	Explanation
O	Ping
0.1	Input address to test the connection and response time.

11.5. Maintenance

11.5.1. Reboot

WARNING

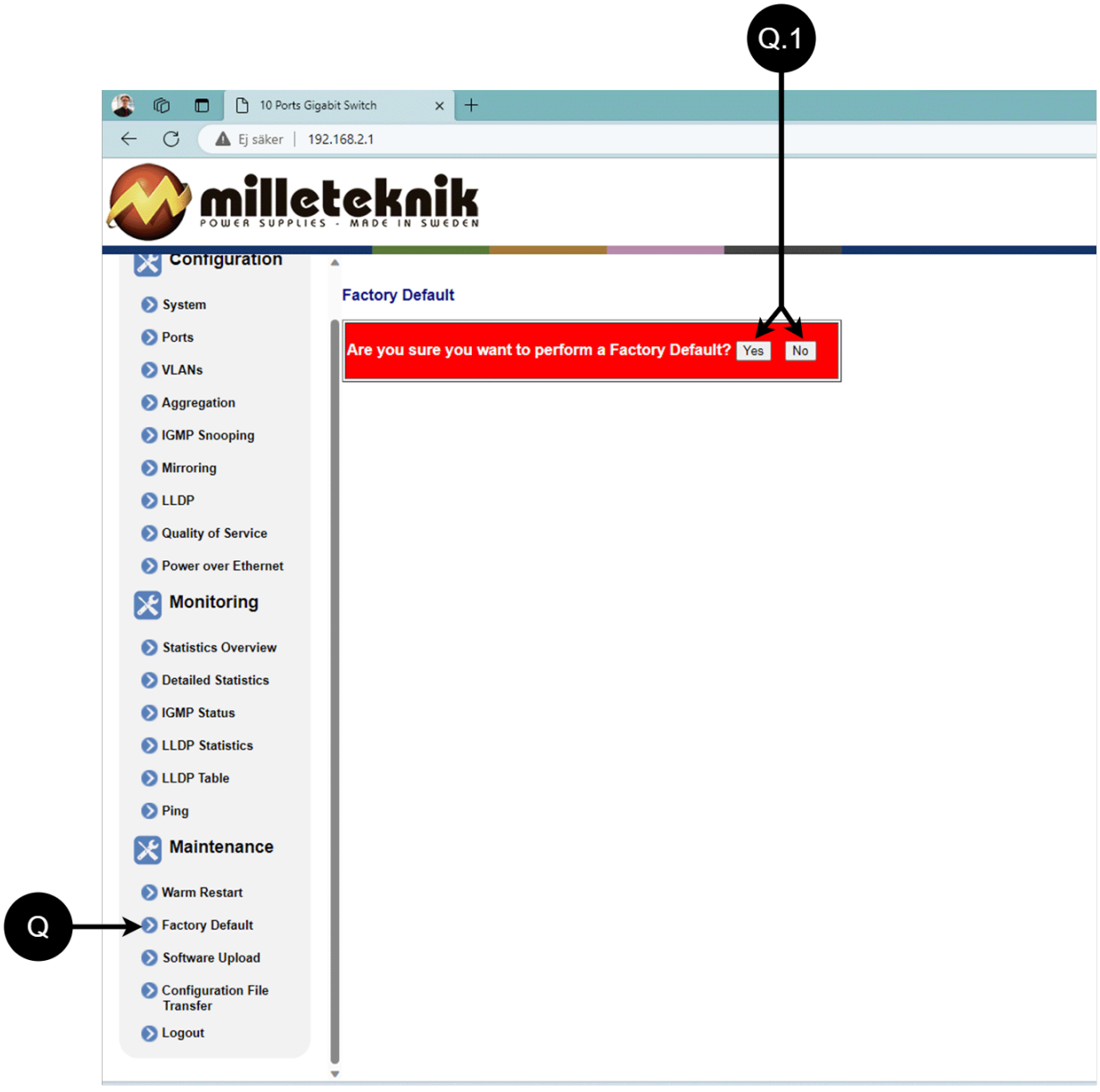
Restart is done by PoE switch, battery backup is not restarted. Upon reboot, connected devices will lose connection. Alarm can be set to battery backup, but it disappears when the PoE switch is back on.



Letter, number	Explanation
P	Rebooting the PoE switch.
P.1	Select "Yes" to reboot the switch.

11.5.2. Factory reset

WARNING
Factory reset is done by PoE switch. Battery backup is not restored. On reset, connected devices will lose connection. Alarm can be set to battery backup, but it disappears when the PoE switch is back on.

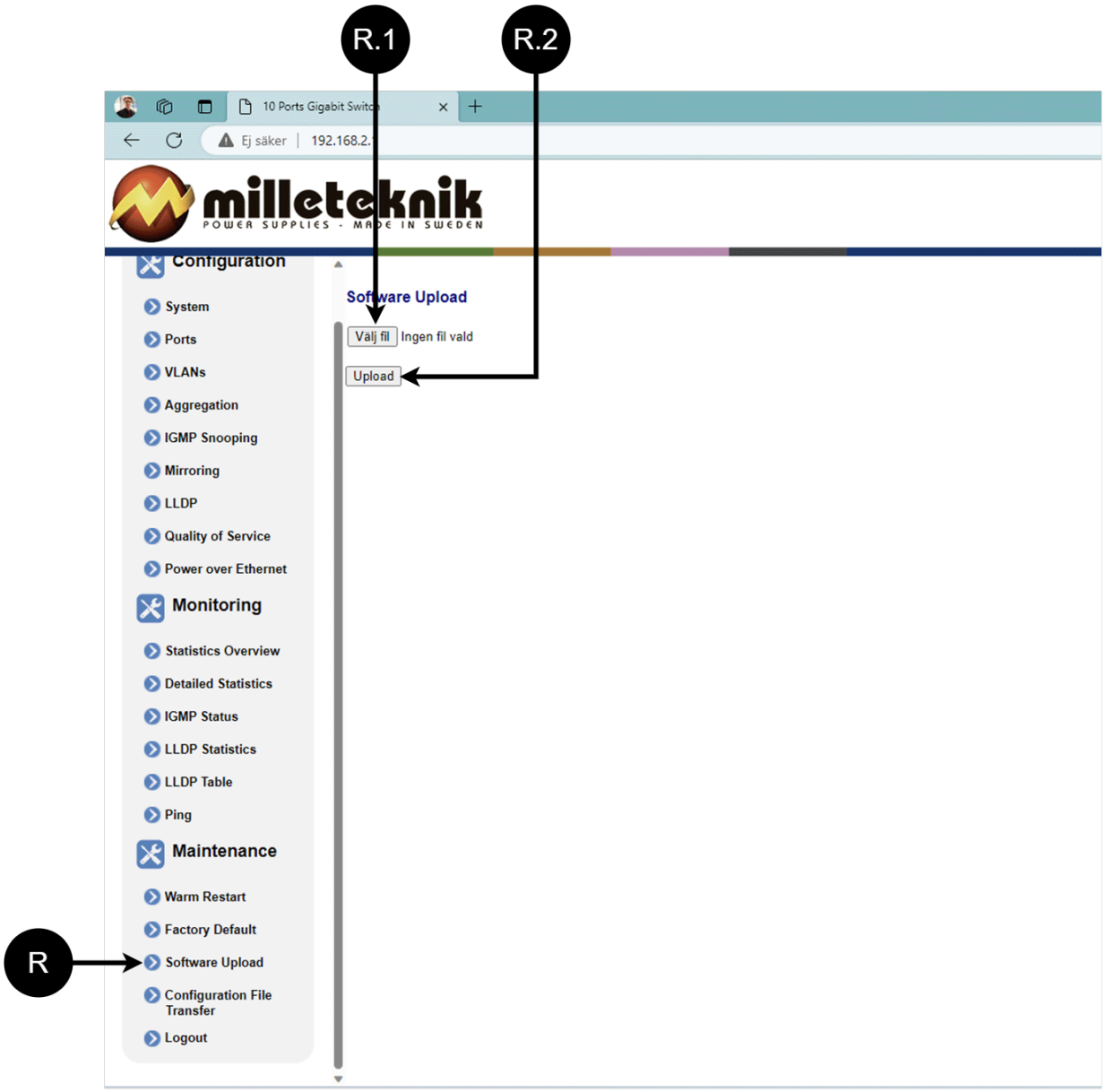


Letter, number	Explanation
Q	Factory reset the PoE switch.
Q.1	Select "Yes" to factory reset the PoE switch.

11.5.3. Upload new software

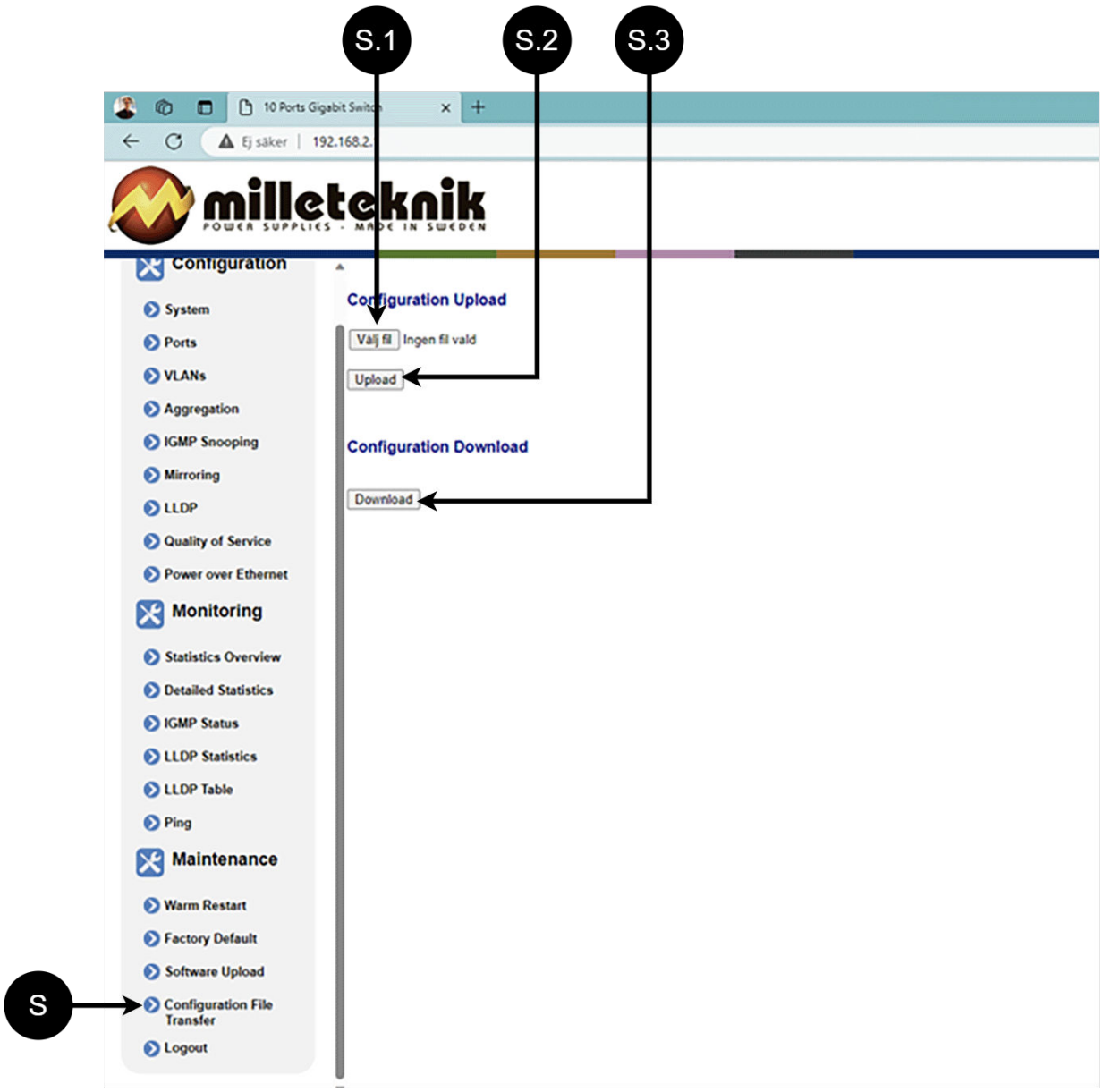
WARNING

Only use software you received from Milleteknik's support. Milleteknik assumes no responsibility for software or consequences such as damage to the device or peripherals or other damage that may arise from uploading unapproved software.



Letter, number	Explanation
R	Upload new software to the Switch.
R.1	Navigate to the computer where you saved the file.
R.2	Click "Upload" to upload the software.

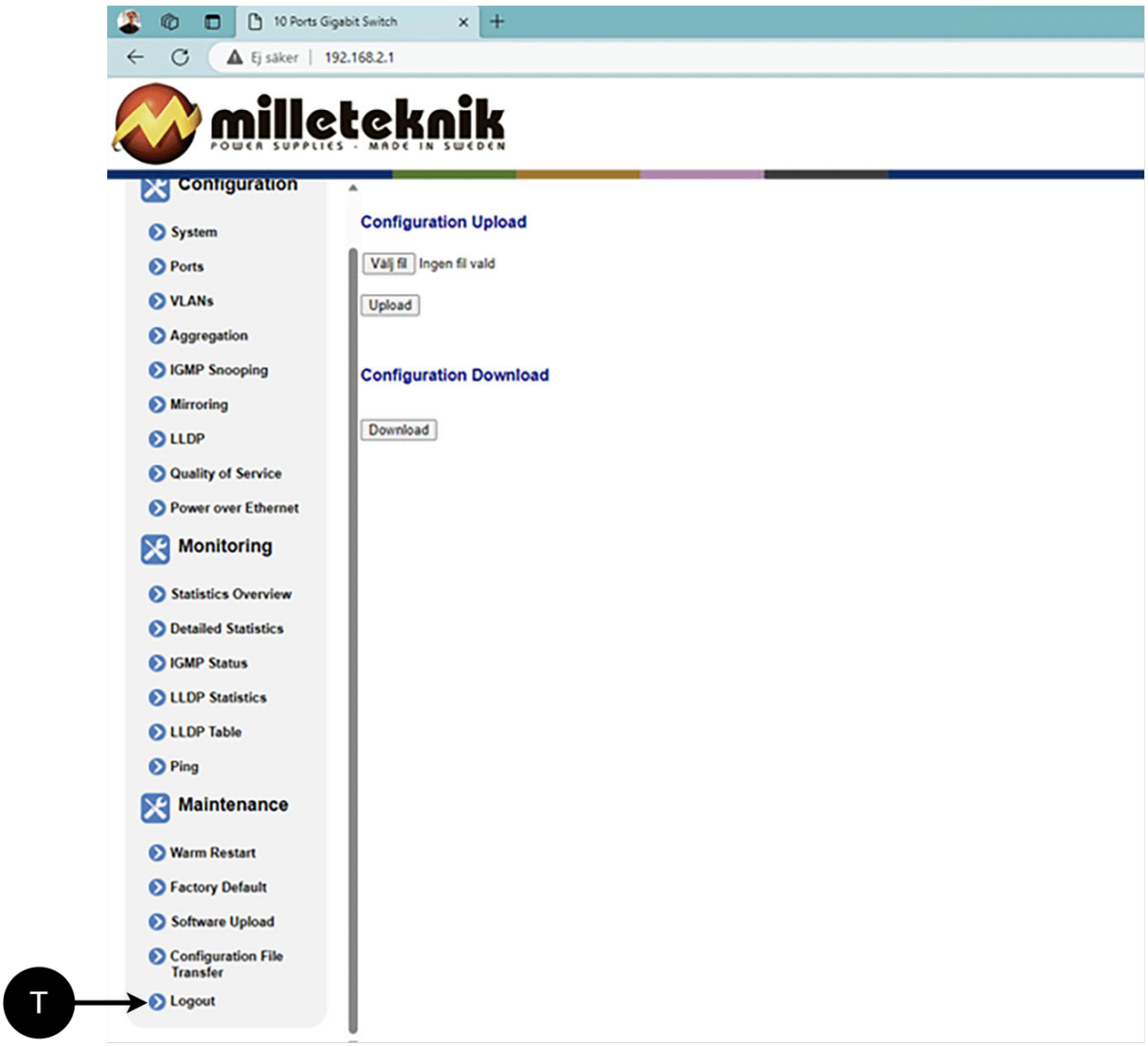
11.5.4. Load and save configuration file



Letter, number	Explanation
S	Upload or download the switch's configuration.
S.1	Select new configuration file.
S.2	Upload new configuration file.
S.3	Download configuration file to computer[a.].

[a.]Newer Windows computers do not allow *.cfg files to be downloaded without additional approval in the browser when downloading. Antivirus programs may delete the file during download.

11.5.5. Log out



T: Log out of the switch. This does not affect the operation of the switch.

12. ALARM DISPLAYED ON CABINET DOOR

In normal mode, the indicator LED shows a solid green light.

The indicator diode shows	Explanation
Solid green light	Normal operation.
Solid yellow glow	Mains failure.
Solid red light	Battery not connected / blown fuse.

When operating system: If the indicator LED is off, deep discharge protection has come into force.

13. MAINTENANCE

The system with the exception of batteries is maintenance-free when installed in an indoor environment.

13.1. battery change

- If possible, disconnect mains (voltage) when replacing the battery.
- Disconnect battery cables. Note how battery cables are mounted before removing them.
- Remove battery fuse between batteries.
- Insert and fasten the new batteries.
- Connect the battery cables in the same way as before.
- Connect battery fuse between batteries.
- Switch on mains voltage. The indicator LED may not be green (up to 72 hours), until the batteries are charged.
- Test the system by briefly disconnecting the mains voltage, (= the load is driven by the batteries), and then switch on the mains voltage again.

14. PRODUCT SHEET - POWER SUPPLY / BATTERY BACKUP

14.1. Product sheet - power supply from Milleteknik

14.1.1. Name, article number and e-number

Name	Article number	E-number (SV)
PoE Switch 8p FLX M	FM01N10224P01008PM	51 728 97
PoE Switch 16p FLX M	FM01N10224P01016PM	51 728 98

14.1.2. PoE

Figure 7. PoE Switch 4p FLX M+

PoE switch with 8 PoE ports.

PoE switch with 16 PoE ports.

14.1.3. Description

Primary switched four, eight or 16 PoE-ports, power supply with battery backup 24 V, 30.8 W/port, with room for two 20 Ah batteries.

14.1.4. Area of use

Power supply with backup power to power PoE devices such as surveillance cameras and other PoE powered devices.

Batteries drive, for example, the access system, when the power grid goes down.

Long life, energy efficient and support is available if something goes wrong, now or in 10 years.

14.1.5. Voltage, current and power

Voltage out: 27.3 VDC, (24 V).

Charging current: 10 A. 13.5 A

Power outlet: 30.8 W/ PoE port, 5 A on 24 V load output.

14.1.6. Backup operating time on batteries

The reserve operating time in battery operation depends on how large a load is connected to the power supply. If the load varies, as with frequent opening of door locks, the time that batteries can continue to power the security system decreases. To get an estimate of reserve operating times see: www.milleteknik.se/Manualer/FaQ/Reservdrifttider/

14.1.7. Battery and battery type

PoE M-switch 8p FLX M: two 20 Ah batteries.

PoE M-switch 16p FLX M: two 14 Ah batteries.

Battery type: 12 V, AGM lead-acid battery, maintenance-free. Batteries not included.

14.1.8. Load outputs

PoE switch can drive load to PoE devices and motherboard can drive one (1) 24V load output to drive other applications.

14.1.9. Alarm

Alarms are given for: Delayed power failure alarm or low battery voltage, disconnected batteries, fuse failure and overcharging of batteries.

Alarms are given for: Delayed mains failure alarm or low battery voltage, disconnected batteries at start-up and fuse failure.

14.1.10. Protection

Protection against overload, overvoltage, overtemperature, short circuit and deep discharge.

Controlled charging of batteries protects against overcharging and extends the life of batteries. Batteries are charged with a maximum of 4.5 A.

14.1.11. Fuses

Mains fuse: 2.5 A.

Load securing: Fuse on supply to PoE switch: 5 A. Fuse on load output: 5 A.

Battery fuse: 16 A and 30 A.

14.1.12. Indications and communication

LED displays information and alarms on the circuit board and on the enclosure door.

PoE power supply cannot communicate via protocol (RS-485/I^2C) to UC.

14.1.13. Enclosure

Sheet metal cabinet for wall mounting or in a 19" rack cabinet (5 HE). Powder-coated black. Four cable entries on the top and outlet holes on the back. Cable tie holder in enclosure.

Dimensions, height x width x depth	IP class
224 x 437 x 212 mm	IP32

14.1.14. Weight

Name	Net weight	Weight incl. packaging
PoE M- switch 16p FLX M+	8.2 kg	8.95 kg
PoE M- switch 8p FLX M+	8 kg	8.75 kg

14.1.15. Installation requirements

The device is intended for fixed installation.

14.1.16. Requirements that the product meets

EMC:	EMC Directive 2014 / 30EU
Electricity:	Low voltage directive: 2014/35 / EU
PoE:	IEEE 802.3af, IEEE 802.3at/30.8 W Note that 802.3at type2 is not supported, as the PoE card lacks a handshake function for type 2. IEEE 802.3af, IEEE 802.3at/30.8 W up to Type2, Class 4.
CE:	CE directive according to: 765/2008

CE

14.1.17. Guarantee

The product has a two-year warranty against manufacturing defects. Batteries and wearing parts are not covered by warranty.

14.1.18. Expandable, options and accessories

Tamper switch

14.1.19. Manufacturing, lifespan, environmental impact and recycling

Manufactured by Milleteknik in Partille, Sweden.

The product is designed and constructed for a long service life, which reduces the environmental impact. The life of the product (except wearing parts) depends on, among other things, environmental factors, mainly ambient temperature, unforeseen load on components such as lightning strikes, external impact, handling errors, etc. Products are recycled, simply because they are modular, by being left

at the nearest recycling station or sent back to the manufacturer.[2]Contact your distributor for more information.

14.1.20. Link to the latest information

Products and software are subject to updates, you will always find the latest information on our website.

PoE

14.1.21. Link to technical specifications

PoE M-switch 8p FLX M+ Swedish

PoE M-switch 8p FLX M+ English

PoE M-switch 16p FLX M+ Swedish

PoE M-switch 16p FLX M+ English

14.1.22. Miscellaneous

The difference between PoE, PoE+ and PoE++.

-	PoE	Poe+	PoE++
Official name	IEEE 802.3af	IEEE 802.3at	IEEE 802.3bt
Maximum power	13 W	25 W	71 W
Compatible[a.]	-	PoE	PoE, PoE+

[a.]The power supply follows "up", but not "down". A PoE can never power a PoE+/PoE++ device that requires more than 13 W.

14.1.23. About this information

All information is published subject to possible errors. This document is updated without notice.

15. PRODUCT LIFE CYCLE, ENVIRONMENTAL IMPACT AND RECYCLING

The product is designed and constructed for a long service life, which reduces the environmental impact. The product's service life depends on, among other things, environmental factors, mainly ambient temperature, unforeseen load on components such as lightning strikes, external damage, handling errors, and more. Products are recycled by being handed over to the nearest recycling station or sent back to the manufacturer. Contact your distributor for more information. Costs that arise in connection with recycling are not reimbursed.

[2]Costs incurred in connection with recycling are not reimbursed.

16. ADDRESS AND CONTACT DETAILS

Milleteknik AB
Ögärdesvägen 8 B
S-433 30 Partille
Sweden
+46 31 340 02 30
info@milleteknik.se
www.milleteknik.com

This page is intentionally left blank.