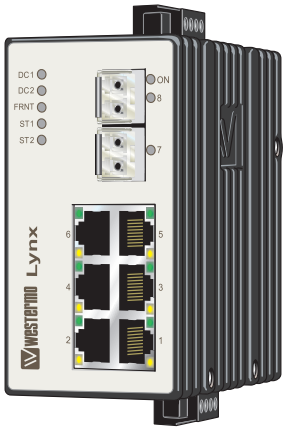
User Guide
6640-2205

Lynx
SERIES



Industrial Ethernet 8-port Switch

www.westermo.com

Legal information

The contents of this document are provided "as is". Except as required by applicable law, no warranties of any kind, either express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose, are made in relation to the accuracy and reliability or contents of this document. Westermo reserves the right to revise this document or withdraw it at any time without prior notice.

Under no circumstances shall Westermo be responsible for any loss of data or income or any special, incidental, and consequential or indirect damages howsoever caused.

More information about Westermo can be found at the following Internet address:

http://www.westermo.com

Safety

Before installation:

Read this manual completely and gather all information on the unit. Make sure that you understand it fully. Check that your application does not exceed the safe operating specifications for this unit.

This unit should only be installed by qualified personnel.

This unit should be built-in to an apparatus cabinet, or similar, where access is restricted to service personnel only.

The power supply wiring must be sufficiently fused, and if necessary it must be possible to disconnect manually from the power supply. Ensure compliance to national installation regulations.

This unit uses convection cooling. To avoid obstructing the airflow around the unit, follow the spacing recommendations (see Cooling section).

Before mounting, using or removing this unit:

Prevent access to hazardous voltage by disconnecting the unit from power supply. Warning! Do not open connected unit. Hazardous voltage may occur within this unit when connected to power supply.

Class 1 Laser Product

Do not look directly into fibre optical fibre port or any connected fibre although this unit is designed to meet the Class 1 Laser regulations.

Care recommendations

Follow the care recommendations below to maintain full operation of unit and to fulfil the warranty obligations.

This unit must not be operating with removed covers or lids.

Do not attempt to disassemble the unit. There are no user serviceable parts inside.

Do not drop, knock or shake the unit, rough handling above the specification may cause damage to internal circuit boards.

Do not use harsh chemicals, cleaning solvents or strong detergents to clean the unit.

Do not paint the unit. Paint can clog the unit and prevent proper operation.

Do not expose the unit to any kind of liquids (rain, beverages, etc). The unit is not water-proof. Keep the unit within the specified humidity levels.

Do not use or store the unit in dusty, dirty areas, connectors as well as other mechanical part may be damaged.

If the unit is not working properly, contact the place of purchase, nearest Westermo distributor office or Westermo Tech support.

Fibre connectors are supplied with plugs to avoid contamination inside the optical port.

As long as no optical fibre is mounted on the connector, e.g. for storage, service or transportation, should the plug be applied.

WARNING – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR DIVISION 2.

WARNING – DO NOT OPEN WHEN ENERGIZED.

WARNING – DO NOT DISCONNECT EQUIPMENT UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.

AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS DÉBRANCHER TANT QUE LE CIRCUIT EAT SOUS TENSION, Á MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.

SPECIAL CONDITION OF USE:

This equipment shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application, including a tool removable cover.

Note. Fibre Optic Handling

Fibre optic equipment needs special treatment. It is very sensitive to dust and dirt. If the fibre will be disconnected from the unit the protective hood on the transmitter/receiver must be connected. The protective hood must be kept on during transportation. The fibre optic cable must also be handle the same way.

Cleaning of the optical connectors

In the event of contamination, the optical connectors should be cleaned by the use of forced nitrogen and some kind of cleaning stick.

Recommended cleaning fluids:

Methyl-, ethyl-, isopropyl- or isobutyl-alcohol, Hexane, Naphtha

Maintenance

No maintenance is required, as long as the unit is used as intended within the specified conditions.

Agency approvals and standards compliance

Type	Approval / Compliance
EMC	EN 61000-6-2, Immunity industrial environments
	EN 55024, Immunity IT equipment
	EN 61000-6-3, Emission residential environments
	FCC part 15 Class B
	EN 50121-4, Railway signalling and telecommunications apparatus
	IEC 62236-4, Railway signalling and telecommunications apparatus
Safety	EN 60950-1, IT equipment
Marine	DNV Standard for Certification no. 2.4
EX	Class 1, Division 2

FCC Part 15.105 Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Declaration of Conformity

Westermo Teleindustri AB

Declaration of conformity

The manufacturer Westermo Teleindustri AB
SE-640 40 Stora Sundby, Sweden

Type of product	Model	Art no
Ethernet switch	LYNX family switches	Full series upto 60V supply voltage

is in conformity with the following EC directive(s).

No	Short name
2004/108/EC	Electromagnetic Compatibility (EMC)
2006/95/EC	Low Voltage Directive - LVD

References of standards applied for this EC declaration of conformity.

No	Title	Issue
EN 61000-6-1	Immunity for residential, commercial and light-industrial environments	1 (2007)
EN 61000-6-2	Immunity for industrial environments	2 (2005)
EN 61000-6-3[1]	Emission standard for residential, commercial and light-industrial environments	2 (2007)
EN 61000-6-4	Emission standard for industrial environments	2 (2007)
EN 50121-3-2	Railway applications - Electromagnetic compatibility	2 (2006)
EN 60950-1	Safety of information technology equipment	2 (2006)

The last two digits of the year in which the CE marking was affixed: 08

Signature

Pierre Öberg
R&D Manager
30th October 2008

[1] Fast Ethernet products only

Postadress/Postal address	Tel.	Telefax	Postgiro	Bankgiro	Org.nr/ Corp. identity number	Registered office
S-640 40 Stora Sundby Sweden	016-428000 Int+46 16428000	016-428001 Int+46 16428001	52 72 79-4	5671-5550	556361-2604	Eskilstuna

Type tests and environmental conditions

Environmental phenomena	Basic standard	Description	Test levels
EMC			
ESD	EN 61000-4-2	Enclosure contact	± 6 kV
		Enclosure air	± 8 kV
RF field AM modulated	EN 61000-4-3	Enclosure	10 V/m 80 – 800 och 1000 – 2100 MHz 20 V/m 800 – 1000 MHz 5 V/m 2100 – 2500 MHz 1 V/m 2500 – 2700 MHz
Fast transient	EN 61000-4-4	Signal ports	± 2 kV
		Power ports	± 2 kV
Surge	EN 61000-4-5	Signal ports	± 2 kV line to earth, ± 2 kV potential difference
		Power ports	± 2 kV line to earth, ± 2 kV line to line
RF conducted	EN 61000-4-6	Signal ports	10 V 80% AM (1 kHz), 0.15 – 80 MHz
		Power ports	10 V 80% AM (1 kHz), 0.15 – 80 MHz
Power frequency magnetic field	EN 61000-4-8	Enclosure	1000 A/m, 50 Hz
Pulse magnetic field	EN 61000-4-9	Enclosure	300 A/m
Voltage dips and interruption	EN 61000-4-29	DC power ports	Voltage interruption - 3 x 30 s within 5 minutes: 19V to 0 V & 62.4 V to 0V Power supply variation - 3 x 1 minute 30% increase and 25% reduction
Radiated emission	EN 55022	Enclosure	Class B
	FCC part 15		Class B
	IEC 60945		Complying with the limit line
Conducted emission	EN 55022	Signal ports	Class B
	EN 55022	DC power ports	Class B
	IEC 60945		Complying with the limit line
Dielectric strength	EN 60950-1	Signal port to other isolated ports	1.5 kVrms 50 Hz 1 min
		Power port to other isolated ports	1.5 kVrms 50 Hz 1 min
Environmental			
Temperature		Operating	–40 to +70°C
		Storage & Transport	–50 to + 85°C
Humidity		Operating	5 to 95% relative humidity
		Storage & Transport	5 to 95% relative humidity
Altitude		Operating	2 000 m / 70 kPa
Service life		Operating	10 year
Vibration	IEC 60068-2-6	Operating	1 mm, 3 – 13.2 Hz 0.42 mm, 30 – 50 Hz 0.7 g, 13.2 – 100 Hz 4.2 g, 50 – 500 Hz 1.5 g, 5.5 – 30 Hz
	IEC 60068-2-64	Operating	0.23 g, 3 – 2000 Hz
Shock	IEC 60068-2-27	Operating	All directions: 2 g, 11 ms Z-axis: 30 g, 11 ms
Bump	IEC 60068-2-29	Operating	2 g, 11ms
Packaging			
Enclosure	UL 94	Aluminium	Flammability class V-1
Dimension W x H x D With connectors			52.5 x 100 x 101 mm 52.5 x 119 x 101 mm
Weight			0.6 kg
Degree of protection	IEC 529	Enclosure	IP 40
Cooling			Convection
Mounting			Horizontal on 35 mm DIN-rail

Description

Lynx is a range of Fast Ethernet (100Mbit) or Gbit Ethernet switches consisting of three different function levels and four different type approvals, giving you the ability to select the perfect switch for your application providing optimum functionality at the best value.

Our unique FRNT (Fast Recovery of Network Topology) technology is the fastest protocol on the market to re-configure a network in the event of any link or hardware faliure. That is why the Lynx-series is used in safety critical applications such as tunnels, traffic signal control and railway systems.

Installations in harsh environments and places with heavy electrical interference require the use of a reliable media. The Lynx-series provides a number of solutions using fibre optic transceivers. Multi- or singlemode transceivers can be used to build point-to-point or redundant ring networks with ranges up to 120 km between each switch. Our BIDI transceiver, which transmits and receives data on a single fibre can be used in applications where the number of fibre cores are limited.

Real-time properties are implemented in the Lynx-series in order to achieve determinism for real time critical applications. The Lynx-switches supports QoS (Quality of Service) with four priority queues and strict priority scheduling as well as HoL (Head of Line Blocking Prevention). All to assure that the data network is deterministic.

Interface specifications

Power	
Operating voltage	Rated: 24 to 48 VDC Operating: 19 to 60 VDC
Rated current	277 mA @ 24 VDC 145 mA @ 48 VDC
Rated frequency	DC
Inrush current, I^2t	$49 \cdot 10^{-4}$ A^2s @ 48 VDC
Startup current*	350 mA @ 24 VDC
Polarity	Reverse polarity protected
Redundant power input	Yes
Isolation to	All other
Connection	Detachable screw terminal
Connector size	0.2 – 2.5 mm^2 (AWG 24 – 12)
Shielded cable	Not required

* External supply current capability for proper startup

Ethernet TX	
Electrical specification	IEEE std 802.3. 2005 Edition
Data rate	10 Mbit/s, 100 Mbit/s, manual or auto
Duplex	Full or half, manual or auto
Circuit type	SELV
Transmission range	150 m, according to long cable specification
Isolation to	Power
Connection	TX connectors: RJ-45 shielded, auto MDI/MDI-X
Shielded cable	Not required, except when installed in Railway applications as signalling and telecommunications apparatus and located close to rails.
Conductive housing	Yes
Number of ports	6

Ethernet SFP pluggable connections (FX or TX)	
Electrical specification	IEEE std 802.3. 2005 Edition
Data rate	100 Mbit/s, 1000 Mbit/s manual or auto
Duplex	Full or half, manual or auto
Transmission range	Depending on tranceiver
Connection	FX connectors:LC Copper connectors (CX) can not be used in combination with FRNT
Shielded cable	Not required
Conductive housing	Isolated to all other circuits
Number of ports	1 or 2

Status relay	
Contact resistance	Max 30 Ω
Isolation to	All other
Connection	Detachable screw terminal
Connector size	0.2 – 2.5 mm^2 (AWG 24 – 12)
Maximum voltage / current	60 VDC / 80 mA

Optical Power Budget

The allowed link length is calculated from the optical power budget (OPB), the available optical power for a fibre-optic link, and the attenuation of the fibre, comprising losses due to in-line connectors, splices, optical switches and a margin for link ageing (typical 1.5 dB for 1300 nm). The worst-case optical power budget (OPB) in dB for a fibre-optic link is determined by the difference between the transmitter's output optical power (min) and the receiver input sensitivity (max).

FX100 Mbit (Fibre)	Bi-di LC2	Bi-di LC20	SM-LC120	SM-LC80	SM-LC40	SM-LC20	MM-LC2
Connector	LC	LC	LC	LC	LC	LC	LC
Distance km ***	2	20	120	80	40	20	2
Fibre type µm	Multimode 62.5/125 and 50/125	Single-mode 9/125	Singel-mode 9/125	Single-mode 9/125	Single-mode 9/125	Single-mode 9/125	Multi-mode 62.5/125 and 50/125
Wavelength nm	Connector 1 Tx 1310 Rx 1550 Connector 2 Tx 1550 Rx 1310		1550	1550	1310	1310	1310
Transmitter Output optical power min/max dBm	–10 *	–14 **	0	–5 **	–5 **	–15 **	–19 *
Receiver Input sensitivity, max dBm	–28	–32	-35	–34	–34	–34	–31
Optical power budget dB	18	18	35	29	29	19	12
Zero cable length	Yes	Yes	No	Yes	Yes	Yes	Yes
Transceiver type	LC Small Form Factor Pluggable (SFP)						
Laser class	Class 1, IEC 825-1 Accessible Emission Limit (AEL)						

FX 1Gbit (Fibre)	SM-LC80	SM-LC50	SM-LC10	MM-LC2	MM-LC550
Connector	LC	LC	LC	LC	LC
Distance km ***	80	50	10	2	0.5
Fibre type µm	Singlemode 9/125	Singlemode 9/125	Singlemode 9/125	Multimode 62.5/125 and 50/125	Multimode 62.5/125 And50/125
Wavelength nm	1550	1550	1310	1310	850
Transmitter Output optical power min/max dBm	–2 **	–4 **	–9.5 **	–9 *	-9.5
Receiver Input sensitivity, max dBm	–24	–24	–20	–19	-18
Optical power budget dB	22	20	10.5	10	8.5
Zero cable length	No	No	Yes	Yes	Yes
Transceiver type	LC Small Form Factor Pluggable (SFP)				
Laser class	Class 1, IEC 825-1 Accessible Emission Limit (AEL)				

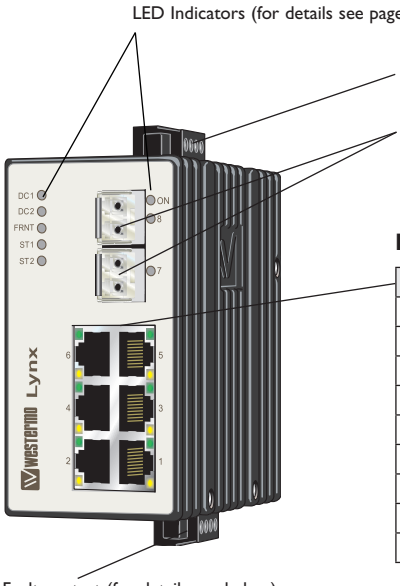
For other transceivers, contact Westermo

* Output power is power coupled into a 62.5/125 µm multimode fibre

** Output power is power coupled into a 9/125 µm singlemode fibre

*** Other distances are also available, please contact Westermo

Location of interface ports and LED's



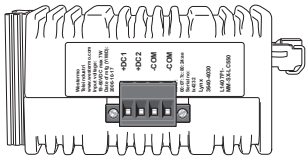
Ethernet connection TX (6 ports)

Contact	Signale	Direction	Description
No.1	TD+	In/Out	Transmitted/Received data
No. 2	TD–	In/Out	Transmitted/Received data
No. 3	RD+	In/Out	Transmitted/Received data
No. 4	–		Not Connected
No. 5	–		Not Connected
No. 6	RD–	In/Out	Transmitted/Received data
No. 7	–		Not Connected
No. 8	–		Not Connected
Shield			HF-connected

NOTE! Railway installation close to the rails.

For a cable located inside 3 m boundary and connected to this port, the use of shielded cable is recommended, this is to minimise the risk of interference. The cable shield should be properly connected (360°) to an earthing point within 1 m from this port. This earthing point should have a low impedance connection to the conductive enclosure of the apparatus cabinet, or similar, where the unit is built-in. This conductive enclosure should be connected to the earthing system of an installation and may be directly connected to the protective earth.

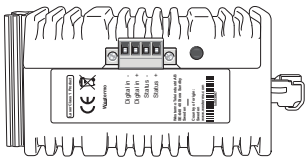
Power connection screw terminal



4-position	Description
No. 1	+DC1
No. 2	+DC2
No. 3	Common
No. 4	Common

The Lynx series supports redundant power connection. The positive inputs are +DC1 and +DC2, the negative input for both supplies is –COM. Connect the primary voltage (e.g. +24 VDC) to the +DC1 pin and ground to one of the –COM pins on the power input on the Lynx switch by using the enclosed power.

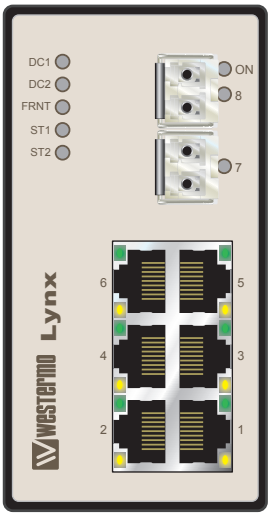
Fault contact



4-position	Description
No. 1	Alarm relay (status) +
No. 2	Alarm relay (status) –
No. 3	–
No. 4	–

LED indicators

LED	Status	Description
ON	OFF	Unit has no power
	GREEN	Unit is working / No alarm
	RED	Initialisation progressing / Alarm
	FLASH	Connected to IP Configuration tool
DC1	RED	Unit has no power on +DC1
	GREEN	Internal DC1 power is ok
	OFF	Unit is unconnected
DC2	RED	Unit has no power on +DC2
	GREEN	Internal DC2 power is ok
	OFF	Unit is unconnected
FRNT	OFF	FRNT is not enabled or not supported
	GREEN	FRNT is running and the switch is configured as member switch in the ring.
	GREEN FLASH	FRNT is running and the switch is configured as Focal Point
	RED	FRNT Error on Member
	RED FLASH	FRNT Error on Focal Point
ST 1	GREEN	Indicates STP/RSTP root
ST 2	NC	
1 to 8	OFF	No Link
	GREEN	Good link
	GREEN FLASH	Data is transmitted
	YELLOW ON	Port larm and no link. If RSTP/FRNT mode is activated, port is blocked



Configuration

The units can easily be configured via the onboard Web based configuration tool. Local IP addresses can also be configured by using the Westernmo IP Configuration tool, from the IP Configuration tool it is then possible to browse into the unit for further configuration.

IP Address

When delivered, the default IP address of the Lynx is 192.168.2.200.

Default gateway 192.168.2.200

If the default address of the unit is valid in the connected network it is possible to access the unit directly from a web browser.

Change local IP address

The local address of Lynx can be configured using the IP Configuration tool, then it is possible to browse into the unit for further configuration. The IP Configuration program is available on the CD or for download from the WESTERMO web page: http://www.westermo.com, choose Downloads/Software/Ethernet/Ethernet switches
Name: IP config Westermo.zip
Install the software and start the application from a PC on the network connected to the same network as the Lynx. Make sure that the Default IP of the configuration software (see figure below) is in the same subnet as your PC.
Note! If you are not sure about the subnet – consult your network administrator.
Note! IP Config version must be 10.0.0 or higher.

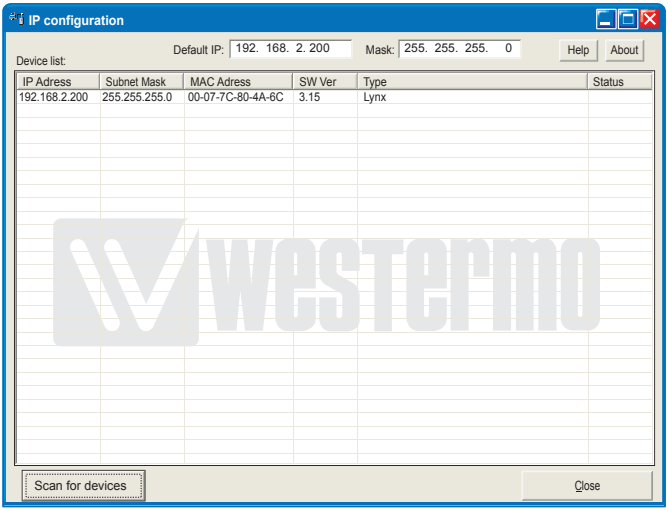


Figure 1

By clicking the "Scan for Devices" button the IP Configuration tool will detect the switches/routers in the network. The software will list all Westermo managed switches or routers connected to the network. Information as in the figure 1 will appear for each detected unit connected to the same network as your PC.

If you only want to change the IP address and the subnet mask, this can be done within the IP config tool.

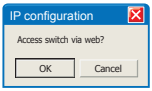
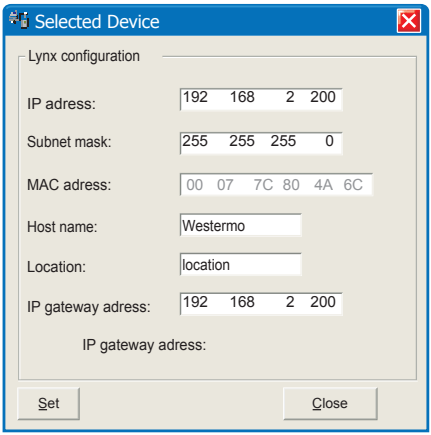


Figure 2

By clicking the listed Lynx that you wish to be re-configured you will be asked if you would like to access it via the web, see figure 2. Click the cancel button, enter the preferred IP address, Subnet mask and IP gateway address and click the Set button to confirm the settings in the unit (see figure 3).

Note! If you are not sure about the settings – consult your network administrator.



Click the Close button to get back to main view. You will then be asked if you would like to quit. Click the OK button, figure 4, and you will be back to the main view of the IP Configuration program(see figure 1).

Figure 3

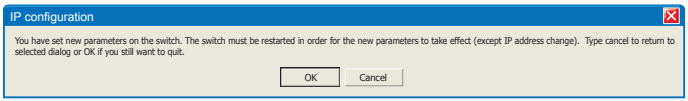
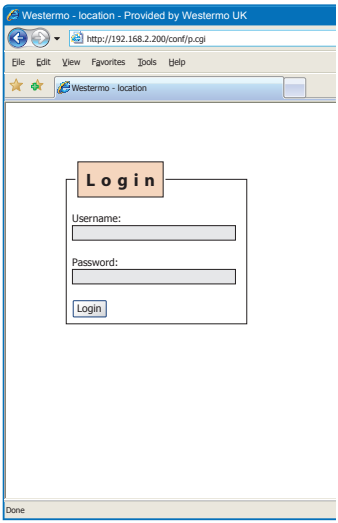


Figure 4

Click the Scan for switches button again and the settings you configured will appear in the list. Now you can access the Lynx via the browser for further configuration by clicking the unit with an IP address that fits your subnet. Figure 2 will appear and when you click the OK button and a web browser will be opened and redirected to the Lynx unit log in page (see figure 5).



Log in via Web

You will be prompted with a Login screen where the default settings for Username and Password are:

Username: admin
Password: westermo

Figure 5

The unit can be easily configured via the on-board Web based configuration tool. The network interface and switch properties can be configured and stored. The Web tool also has an extended integrated help function describing all configuration options.

Note! Max 10 characters can be used in the login.

Note! For login the following characters are not valid.

ASCII 34 = "
ASCII 35 = #
ASCII 39 = ’
ASCII 40 = (
ASCII 92 = \

Note! Information on supported software are found in the Firmware Release Note.

Fast Re-configuration of Network Topology (FRNT)

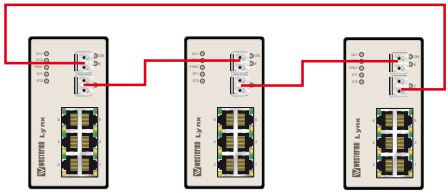
The Lynx 300/1300 and 400/1400 have support for redundant ring protocols. The Fast Reconfiguration of Network Topology (FRNT) protocol handles fast reconfiguration in switched ring topologies. When rapid convergence in case of link or switch failure is required, FRNT becomes the protocol of choice when it comes to layer-2 resilience and robustness.

To set-up a FRNT ring, all switches must be connected according to one of the possible configurations stated below. When the switches are connected each switch must be configured through the web interface.

Connecting the switches in a FRNT ring

There are three possible ways of configuring a FRNT ring:

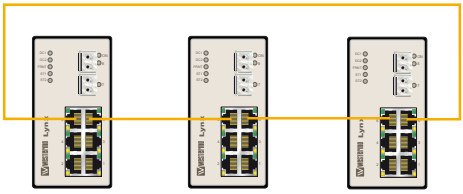
1. Ring using fibre cables only
2. Ring using copper cables only
3. Ring using fibre and copper cables alternately



1. FRNT ring using fibre cables

The rules are as follows:

- Switch port 7 and 8 are FRNT fibre ports
- Always connect port 7 to 8, 7 to 8, 7 to 8... throughout the ring
- Do not connect 7 to 7 or 8 to 8!



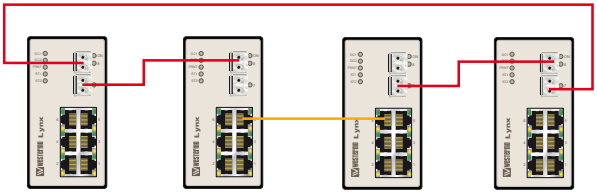
2. FRNT ring using copper cables

The rules are as follows:

• Switch port 5 and 6 are FRNT copper ports

• Always connect switch port 5 to 6, 5 to 6, 5 to 6... throughout the ring

• Do not connect 5 to 5 or 6 to 6!



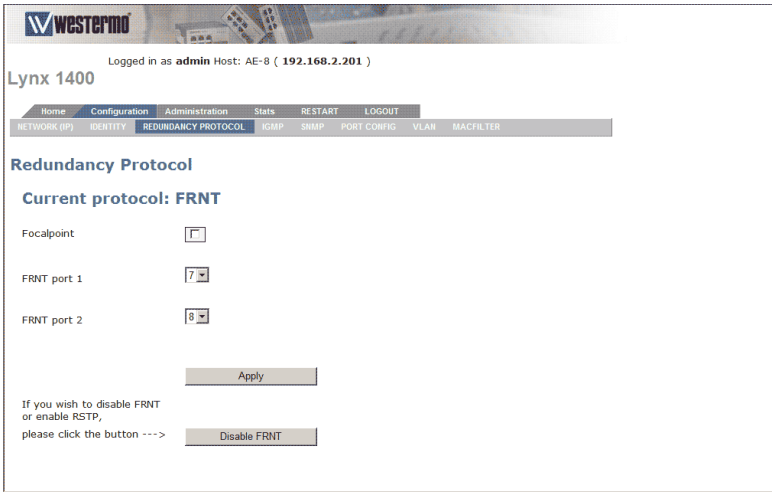
3. FRNT ring using fibre and copper cables

The rules are as follows:

• Switch port 7 and 8 are FRNT fibre ports. Switch Port 5 and 6 are FRNT copper ports

• Always connect switch port 7 to port 8 where you are using fibre cable. Always connect switch port 5 to 6 where you are using copper cable.

Managing FRNT settings via the web interface



Menu path: Configuration > Redundancy Protocol

On the FRNT configuration page you will be presented to the current settings for FRNT on your switch, see below. You may change the settings by editing the page.

Focal Point

The focal point is the unit in the ring which is responsible for making decisions on topology change. Check this box if this unit should take the role as focal point in the FRNT ring. If not checked, the unit will act as a member unit.

Port 1/Port 2

FRNT requires two ports to be assigned FRNT-ports. These are connected to peer units participating in the FRNT ring. Select the two ports connected to other units in the FRNT ring. Switch port 7 are defined as FRNT port 1 and switch port 8 are defined as FRNT port 2 by default. The FRNT ports setting must be configured to connect alternately. FRNT port 1 on one switch should always connect to FRNT port 2 on next switch throughout the ring. Never connect FRNT port 1 to FRNT port 1 or FRNT port 2 to FRNT port 2.

Click the "Apply" button to confirm changes made to the Redundancy Protocol settings. The unit needs to be restarted before changes can take affect.

Setup examples:

1. FRNT ring using fibre cables

The rules are as follows:

- The switches should be connected by switch port 7 to 8, 7 to 8, 7 to 8... throughout the ring
- Define switch port 7 as FRNT port 1 and switch port 8 as FRNT port 2 on all switches.
- One switch in the ring must be configured as "Focal Point"

2. FRNT ring using copper cables

The rules are as follows:

- The switches should be connected by switch port 5 to 6, 5 to 6, 5 to 6... throughout the ring
- Define switch port 5 as FRNT port 1 and switch port 6 as FRNT port 2 on all switches.
- One switch in the ring must be configured as "Focal Point"

3. FRNT ring using fibre and copper cables

The rules are as follows:

- The switches should be connected by switch port 7 to port 8 where you are using fibre cable and switch port 5 to 6 where you are using copper cable.
- Define switch port 7 as FRNT port 1 and switch port 8 as FRNT port 2 on all switches where you are using fibre cable. Define switch port 5 as FRNT port 1 and switch port 6 as FRNT port 2 on all switches where you are using copper cable.
- One switch in the ring must be configured as "Focal Point"

Factory Reset

The factory reset option restores the switch to its original factory condition. The switch will be restored using the following settings.

· IP address 192.168.2.200
· Subnet mask 255.255.255.0
· Gateway 192.168.2.1
· All ports are enabled
· FE ports are in auto negotiate
· FX are in 100 Mbit/s on Lxxx and Auto Negotiate on L1xxx
· All applications are disabled
· Password reset to westermo

To perform a Factory Reset follow the procedure below, read all steps before performing. If you have any doubts wherer the reset is performed or not, do NOT unplug the power supply, wait for confimation according to step 5.

1. Disconnect the power
2. Connect cables between port 1-6 and port 2-5.
3. Apply power
4. Wait for approx 90 seconds. (Some LED will flash during start up)
5. When the Green LED's on port 1-6 are constantly on remove the cables connected to port 1-6 and 2-5.
6. It is now safe to remove the power and restart the switch.
7. When the switch has started up it will have the default settings.

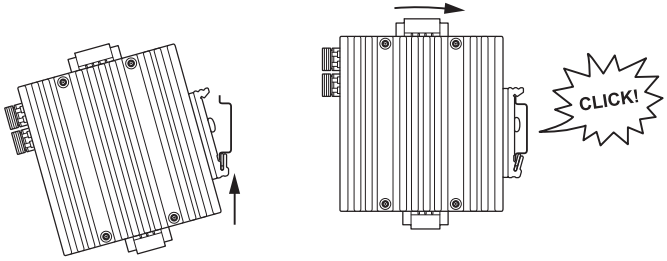
NOTE!

If the power is removed before the factory reset has finished, the switch can be unusable.

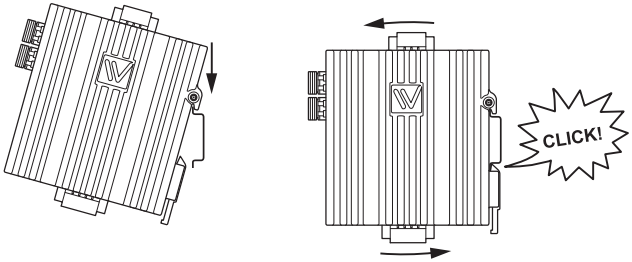
Mounting

This unit should be mounted on 35 mm DIN-rail, which is horizontally mounted inside an apparatus cabinet or similar. Snap on mounting, see figure.

Mounting Lynx with screwed on DIN-clip:

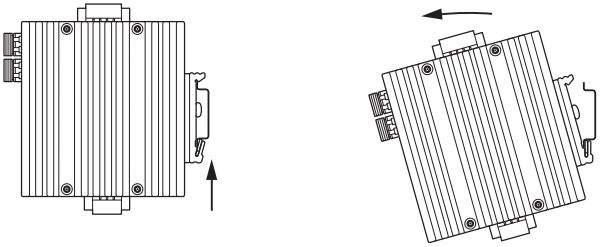


Mounting Lynx with integrated DIN-clip:

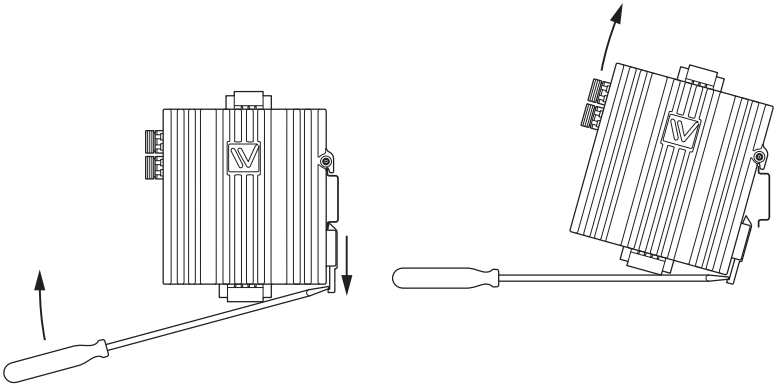


Removal

Removing Lynx with screwed on DIN-clip: Press the device upwards to compress locking spring, tilt forward to unhook device from DIN-rail.

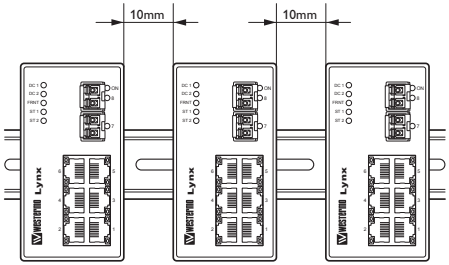


Removing Lynx with integrated DIN-clip:
Press down the support at the back of the unit using a screwdriver. See figure.



Cooling

This unit uses convection cooling. To avoid obstructing the airflow around the unit, use the following spacing rules. Minimum spacing 25 mm (1.0 inch) above / below and 10 mm (0.4 inches) left / right the unit. Spacing is recommended for the use of unit in full operating temperature range and service life.



Westermo Teleindustri AB • SE-640 40 Stora Sundby, Sweden
Phone +46 16 42 80 00 Fax +46 16 42 80 01
E-mail: info@westermo.com
Westermo Web site: www.westermo.com

Sales Units

Sweden
Westermo Data Communications AB
Svalgången 1
SE-724 81 Västerås
Phone: +46 (0)21 548 08 00 • Fax: +46 (0)21 35 18 50
E-Mail: info.sverige@westermo.se

United Kingdom
Westermo Data Communications Ltd
Talisman Business Centre • Duncan Road
Park Gate, Southampton • SO31 7GA
Phone: +44(0)1489 580-585 • Fax.:+44(0)1489 580586
E-Mail: sales@westermo.co.uk

Germany
Westermo Data Communications GmbH
Goethestraße 67, 68753 Waghäusel
Tel.: +49(0)7254-95400-0 • Fax.:+49(0)7254-95400-9
E-Mail: info@westermo.de

France
Westermo Data Communications S.A.R.L.
9 Chemin de Chilly 91160 CHAMPLAN
Tél : +33 1 69 10 21 00 • Fax : +33 1 69 10 21 01
E-mail : infos@westermo.fr

Singapore
Westermo Data Communications Pte Ltd
2 Soon Wing Road #08-05
Soon Wing Industrial Building
Singapore 347893
Phone +65 6743 9801 • Fax +65 6745 0670
E-Mail: sales@westermo.com.sg

North America
Westermo Data Communications
939 N. Plum Grove Road, Suite F
Schaumburg
Chicago
Phone: +1 847 619 6068
Fax: +1 847 619 66 74
E-mail: info@westermo.com

Taiwan
Westermo Data Communications Co
F2, No. 188, Pao-Chiao Rd.
Shing-Tien City
Taipei 23145
Phone:+886 2 8911 1710
E-mail: info@westermo.com

Westermo Teleindustri AB have distributors in several countries, contact us for further information.

REV.B 6640-2205 2012-01 Westermo Teleindustri AB, Sweden – A Beijer Electronics Group Company