

#### Accessing and Using the Web Interface

To access to all possible settings, the Lynx switch should be configured via the onboard web based configuration tool. This application note describes the web interface on the Lynx 1xx/4xx and Lynx 1xxx and how to use it. It is important that the unit has the latest firmware, which can be downloaded from Westermo website. All Lynx units with firmware 3.0 or later can be configured through the web interface. If the unit has to be updated, please read the release note on upgrading Lynx before proceeding.

Firmware release note on upgrading the lynx is found at:

www.westermo.com Choose download / firmware

## Accessing the Lynx Web Interface

The Lynx can easily be configured via the onboard Web based configuration interface or by using the Westermo IP Configuration utility.

From the IP Configuration utility a web browser can automatically be launched onto any desired switch in the same subnet, and a login box similar to figure 3 will be displayed.

Figure 3

Login
Username:
Password:
Login

Enter the following login details:

- User name: admin
- Password: westermo
- **Note!** This is the default login, but once logged in the administrator password can be changed. Default login will not work if the admin password has been changed.
- Note! This is the default password for all Lynx switches with Firmware 3.13 or later. For Lynx switches with older Firmware the default password is: otn
- **Note!** Information on supported software are found in the Firmware Release Note.

## Lynx Web Interface Structure

The administrator start page will be displayed and show a brief summary of the unit. It will be similar to figure 4. The menu bar is divided into a main menu, which is the top row tab, and a sub-menu, which is directly under the main menu, figure 5. The main menu tabs are used to select a group of pages, and the sub-menu is used to select a page within that group. Directly under the menu bar the content of the page will be displayed.

Figure	4
0	

Westermo		
Logged in as admi Lynx 1400	n Host: AE-8 ( 192.168.2.201 )	
Rome Configuration Administ	ration State RESTART EDG2517	
Welcome admin!		
You are currently connected to AE-8 Below you will find a brief summary of	(107.168.7.201). the urit.	
Property	Value	
Mac address	00:07:7c:80:1f:2e	
IP address	192.169.2.201	
No treack	255.255.255.0	
Gateway address	192.168.2.201	
Famware Version	3.12	
Database Version	default 7	
Serial Number	ix003540	
Type	Lynx 1400	
Hostname	ΔE-8	
Location	testhed	
Redundancy Protocol	None	
YLAN	Enabled	
1GMP	Disabled	
SNMP	Disabled	
Alarma	Norie	
Temperature	33	

Figure 5						_ Main menu	
Homa	Configuration	Administration	State	RESTART	LOGOIIT		
Start	Sub r	menu					

## Configuration

#### Network (IP)

Westermo	Jees 19 19	TARA CAL
Lynx 1400	admin Host: AE-B ( 192,16	8,2,201 )
Burne Cardynation A BCTVIORE (P) BURNEY ARTIS	denominianskom Stata MESE Rođeje Principe Stata Bada	ANY LONGER PLAN MARCH.199
Network (IP) Setti	ngs	
MAC	00:07:7c:80:11:2e	
19	192.168.2.201	]
No track	255.255.255.0	
Gateway	192.158.2.201	
	Apply	
If you wish to enable DHCP,		
please click the button>	Enable DHCP	

The Lynx switch IP-address can individually be changed via the Web Interface, another option is DHCP. These settings can be configured in the *Network (IP)* Settings.

MAC The Lynx switch MAC-address (can not be changed)

IP If it is desired to change the Lynx switch IP address, enter the new IP address and netmask. Once the changes have been applied, the IP address of the Lynx switch will change. The unit does not need to reboot after changes to the Network (IP) Settings.

**Netmask** The subnet netmask of the network.

**Gateway** The address of the gateway in the network.

Enable DHCP Enables DHCP protocol on the Lynx switch

Click the "Apply" button to confirm changes made to the Network (IP) Settings.

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

#### Identity

nx 1400	ged in as admin Host: AF-8 ( 192.168 2,201 )
Nome Contigue	ation Administration Stude #ESTARS LOGUE
dentity Setti	ngs
Hostname	Basterame
Location	Bocation
	Apply

The Lynx switch identity can be changed via the Web Interface.

These settings can be configured in the Identity Settings.

Available options are:

- Hostname Set desired hostname for the Lynx switch. Accepted characters are 0-9, a-z, A-Z, \_ (underscore) and (minus).
- **Location** Set desired location for the Lynx switch. Accepted characters are 0-9, a-z, A-Z, \_ (underscore) and (minus).

Click the "Apply" button to confirm changes made to the Identity Settings.

#### Redundancy protocol – FRNT

Westermo	Jacob B.
Looged in a	is admin Host: AE-8 ( 192,168,2,201 )
Name Califyration	ADYNING MARAN MARAN HEATFART LOOCUT MARAN FRONTOCIL BORT MARAN HEATTEORING ALAR MARTIN THI
Redundancy Proto	col
Current protocol	FRNT
Focalpoint	
FBNT port 1	72
FRMT port 2	0.2
	Apply
If you wish to disable FINT or enable RSTP,	
please click the button ····>	Disable FRNT

The Lynx switch supports the redundancy protocol FRNT (Fast Re-configuration of Network Topology, FRNT version 0).

For more information on FRNT, please read the Whitepaper found on the enclosed Lynx CD or at the Westermo website.

Available options are:

- Focal point If this unit should be the Focal Point, tick the check box. If this unit should act as a member in the ring, leave the check box unticked.
- FRNT port 1 Selection of redundant port for FRNT
- FRNT port 2 Selection of redundant port for FRNT
- Disable FRNT This option disables FRNT.

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

Note! Only one unit in a redundant ring using FRNT can be set as Focal Point.

Note! If the redundant ring is created with **copper cables**, selected FRNT ports should be 5 and 6.

#### Redundancy protocol – RSTP

Westermo	THE AR CITY	
Lynx 1400	as admin Host: AE-8 ( 192.168.2.201 )	
STIMAK (P) BRITTY ALCO	Administration State BESTART LOGUET INDUICT RECTORED, JOINT BIBBY FORT COMMC VILLA INACTSTICE	
Redundancy Prote	ocol	
Current protoco	I: RSTP	
Eridge Pric	32763 -	
Dynamic Trunking		
Edge Ports	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
If you wish to disable RSTP	Apply	
please click the button ····	> Disable RSTP	

The Lynx switch support the Rapid Spanning Tree Protocol (RSTP) according to IEEE802.1w with fallback to the Spanning Tree Protocol (STP - IEEE802.1D). The STP fallback feature means that the Lynx switches can be used together with switches that only have support for STP.

For more information on RSTP, please read the Whitepaper found on the enclosed Lynx CD or at the Westermo website.

Available options are:

Bridge Prio	The switch with the lowest priority will become the root switch.
Dynamic	Dynamic trunking is enabled when RSTP is used in a VLAN to eliminate failure
Trunking	due to an incorrectly configured VLAN. If every unit in the ring has enabled Dynamic trunking, all VLANs will be granted access on the ring.
Edge Ports	Selection of edge ports for RSTP.
Disable RSTP	This option disables RSTP.

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

#### IGMP (Internet Group Management Protocol)

Westermo	The second se
Lynx 1400	admin Həst: 4E-8 ( 192.168.2.201 )
Nome Configuration All	onvietnation Naria IESTART LUCCOT vietna Petersonia, solar anticontrollaria publication de la controllaria de la controllaria de la controllaria
IGMP Enabled	
If you wish to disable ISMP,	
please click the button>	Disable /OMP
Enable Multicast Stopfiter Enable IGMP Automode Enable IGMP Querier	2 2 2
Querier intervel (Secunds) Brable IGMP Fast Reconnect Trunk Ports	
	12365678 FFFFFFF

The Lynx switch supports IGMP (Internet Group Management Protocol) Snooping based on IGMP v1, IGMP v2 and IGMP v3. To enable IGMP Snooping, click *Enable IGMP*.

For more information on IGMP, please read the Whitepaper found on the enclosed Lynx CD or at the Westermo website.

Available options are:

Disable/Enable IGMP	This option disables/enables IGMP.
Enable Multicast Stopfilter	Enable this option if the switch should deny unwant- ed Multicast broadcasts.
Enable IGMP Automode	Options according to possible combinations below:

Enable IGMP Querier	Auto mode enabled + Querier disabled: This unit will always act as a member in the network. Auto mode disabled + Querier enabled: This unit will always act as Querier in the network. (IGMP focal point) Auto mode enabled + Querier enabled: This unit can act as a Querier in the network. If more than one unit in the network is configured
	with this setting, the unit with the lowest IP-address will automatically be selected as Querier. If that unit should fail, the unit with the second lowest IP-address becomes the Querier, then the third low- est and so on.
Querier interval (seconds)	Indicates the interval between two IGMP query packets. Four intervals are possible. 12, 30, 70 or 150 seconds.
Enable IGMP Fast Reconnect	The IP multicast filter implementation is integrated with the Fast Reconfiguration of Network Topology (FRNT) protocol. This means that the multicast filters will be updated as fast the FRNT implementa- tion handles a topology change, i.e. approx. 20 ms.
Trunk Ports	The IGMP Queriers will be forwarded on selected ports.

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

#### **SNMP (Simple Network Management Protocol)**

Westermo	The state of the s	
Lynx 1400	admin Het: 4E-8 ( 192.168.2.201 )	
Norre Coefficiention	Administration Italia III START LEDGOUT IIILGING Paggiocos Adapt Latalo post Charling Pulsa Intechn. (10)	
SNMP Enabled		
If you wish to disable SNMP please click the button	Disable DHMP	
Community: Read >>	public	
Write >	[prhvate	
	Apply	

The Lynx has support for SNMP v2c with a range of MIBs, which are listed and explained in the Lynx White paper.

The Lynx MIB's are divided into groups allowing the SNMP manager to poll the SNMP agents for information.

For more information on SNMP and MIB's, please read the Whitepaper found on the enclosed Lynx CD or at the Westermo web page.

Available options are:

Disable/Enable SNMP	This option disables/enables SNMP.
Read	$\ensuremath{SNMP}\xspace$ password to be able to read $\ensuremath{SNMP}\xspace$ values.
Write	SNMP password to be able to write SNMP values.

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

### **Port Configuration**

-	Configure	tion Adminis	iration State	RESTART	LOGOIT			
	SEATURY.	HOURS ARE F	PROTOCOL 1049	-1405	PORT CORPG	10.00 804	- 10, 11, 11	
t C	onfigu	ration						
		No. of Concession, Name	and the second s		No. of Concession, Name	No. of Concession, Name	None of Concession, Name	
ort Nr	Status	Config	New Config	Made	Limit	Limit	Fortalarm	Cable
1	LINK	10M FOX	10M FDX	Note 🛩	0	0 💌		2
2		10M FOX	10M FDX	Note 🛩	0 -	0 🔫		E
3		10M FOX	10M FEX	None 👻	0 -	0 🛩		2
4		10M FDX	TOM FEX	Note =	0	0 💌		2
6		10M FOX	10M FEX. 🛩	Note 🛩	8 🛩	0 ~		2
0		10M FDX	10M FEX	Note 🖻	0 💌	0 -		E
2		100M FDK	100M FDX 💌	None M	0 💉	0 .		0
_		and the second second second second	Personal division of the local division of t	a second second		1 0 00	1	200

All ports can be configured individually in the *Port Configuration*. To confirm changes made to the *Port Configuration* click the *Apply* button. The unit needs to be restarted before changes can take affect.

Parameter	Options	Description
Port Number	N/A	Port number correspond to the port number on the actual switch
Link Status	LINK	Indicates Link status
Current Config	Disabled Auto 10M HDX 10M FDX 100M HDX 100M FDX 1000M FDX (Port 7-8 only)	Current port settings
New Config		Configuration of new setting
	Disabled	Port disabled
	Auto	Port automatically set to same capacity as receiver
	10M HDX	10 Mbit half duplex
	10M FDX	10 Mbit full duplex
	100M HDX	100 Mbit half duplex
	100M FDX	100 Mbit full duplex
	1000M FDX (Port 7-8 only)	1 Gbit full duplex (Port 7-8 only)
Special Mode	None	Normal mode
	Mirror	A port set to mirror mode will receive data from ports set to sniff mode.
	Sniff	Data sent on a port set to sniff mode can be received from ports set to mirror mode.
Ingress Limit 1)	0-8192	Bandwidth limit into the port
Egress Limit	0-8192	Bandwidth limit out of the port
Port Alarm	ActivatedNot Activated	Port alarm activatedPort alarm deac- tivated

Note 1. Works only for UDP packets, not TCP/IP

#### VLAN

Nore C	nfgund	ton Adm	naturion	State	HISTART	LOGEN	All and a second			
india line			Sec. Hills	a land	1104.0	a la la la compañía de la compañía d	-	Sector Con		
N Conf	igur	ation								
CONTRACT OF	-		_		ort Nr	_	_		Conception of the	
Name	1	2	1				7		Vian Id	Pri I
WHITE	<b>R</b>	R	P.	P	₽.	되	R	F	1	F
RED	п	R	п	E	E		17	P	2	(p
RUE	5	.0	P		0	E	9	F	3	3
GREEN	17	Г	11	P.	C	n	12	P	4	5
TELLOW	•				P	E .	P7	P	6	17
BROWN	0	17	0	<b>D</b> .		R	R	P	6	10
PDNK	0			n	- E	п	P.	P	1	10
Default	white	the 💌	and 💌	olue 💌	D&re ·	great 💌	utite 💌	utite 🗶		
Remove Tag	*	17	P	P	17	5	12	P		
					4					
				Acety						

The Lynx has support for VLAN, and each trunk port can be individually granted different levels of access. In the VLAN Configuration each VLAN ID is named as a different colour. The colour White is static and set as management VLAN with VLAN ID 1, this can not be changed.

All other predefined VLANs are fully manageable, and necessary settings are made in the VLAN Configuration.

For more information on VLAN, please read the Whitepaper found on the enclosed Lynx CD or at the Westermo web page.

Parameter	Options	Description
Name	White	White is set as management VLAN.VLAN ID 1
	Red Blue Green Yellow Brown Pink	Red-Pink VLAN are 6 predefined VLAN that can be managed.
Port Nr	1-8	Configure which VLAN colour should be allowed on each port
	Drop down menu	Defines colour (VLAN ID) port Nr should have
	Check box	VLAN allowed on this port
Vlan Id	1-4094	VLAN id for each VLAN
Pri	0-7	Priority for traffic on each VLAN. 0 equals lowest priority. 7 equals highest priority.

#### **MAC** Filter

Westermo
Logged in se admin Host: A5-8 ( 193.168.2.301 ) Lynx 1400
None Configuration Advantation State INSTART LINCOIT INTEGRE AN INFORMATIVE RELINCOMENT PORTOCOL, KALING INSTART CONTING VEHICLE ANALYSISTER
MACFILTER DISABLED
If you wish to enable Naclilter,
please click the button > Enable MacRier
Add the approved MAC-addresses by using the input-box helow. The address need to be in the "standard" format - e.g. 00:07:27C:00.07:2E . You can also use a "" in a indicard - i.e. to allow all Westerno CeTime-addresses you would input the string 00:07:2C:***********************************
If you want to add multiple addresses at the same time you can input them as a semi-colon separated fat in the test-box balaw. For example : 00:07:7C:00:00:03_00:07:7C:00:00:02;00:07:7C:10:**:**
Add Addresses

If the MAC filter is enabled, only approved MAC addresses will be granted access through the switch. To approve MAC addresses, add them according to the methods below.

# Note that this function should be used with care. An incorrect configuration could result in total denied access, and a factory reset of the unit would then be needed.

MAC addresses can be added to the MAC filter by different methods:

1) One by one by adding a single MAC address in the small input-box.

The MAC address should be typed in the standard format - e.g. 00:07:7c:12:34:56

2) As a range of addresses using an asterisk, \*, as a wild card. E.g. 00:07:7c:12:34:\*\* This will allow addresses between 00:07:7c:12:34:00 to 00:07:7c:12:34:ff.

3) As a sequence of single MAC addresses divided by a semi colon. Example: 00:07:7c:00:00:00;00:07:7c:00:01:00;00:07:7c:00:0\*:\*\*;00:07:7c:00:00:02;

MAC addresses can be added according to method 1 and method 2 in the sequence. Available options are:

**Input-box small** Input-box if a MAC address is added according to method 1) or 2)

**Input-box large** Input-box if a MAC address is added according to method 3)

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

**Note!** Once the MAC filter has been enabled on a unit, the units own MAC address must be added to the MAC filter.

## Administration

#### Password

Wwestermo		
Lynx 1400	in as admin Host: AE-8 ( 192,168,2,201 )	
Nome Configuration Password Entine Entire	n Administration State #ESTART LOGUE	
User Configurat	ion	
Uppr Papeword	password	
	Apply .	

The Lynx switch administrator password can be changed via the Web Interface. These settings can be made in the User Configuration.

Available options are:

**User Password** Insert new password. Once the changes have been applied, the administrator password of the Lynx switch will change.

Click the "Apply" button to confirm changes made to the User Configuration.

#### **Backup & Restore**

Wwestermo	The state of the s	11251	
Lynx 1400	in as admin Host: AE-8 ( 192,168.2	.301 ]	
None Configuration	Administration State HISTAR	LDGOUT	
Backup Config	uration		
To save the current cer	figuration to your computer click the	Backup button. Backup	
Restore Config	juration		
To restore a configurati has been uploaded and	on, browse to the previously saved fil installed the Lyns will be rebooted.	e and click <b>Upload</b> . After the file	
File path:	Badidra	Upload	

The configuration of the Lynx switch can be saved as a file to a PC. The file can then be used to restore the configuration later on, or used to configure another switch with identical configuration.

Available options are:

Backup	To save current configuration, click Backup and save file to a suitable location.
Upload	To load a saved configuration, insert path and filename into <i>File path</i> table or click Browse to browse the loca- tion of the saved file.When file path is valid, click <i>Upload</i> .

The unit needs to be restarted before loaded settings can take affect.

## Firmware Upgrade

Westermo	Jeen H B -	14711		
Lynx 1400	as admin Host: AE-8 ( 192.168	2.201 )		
None Configuration	Administration State #ESTA FW lipprade	RT LOGOUT		
F/W Upgrade To upgrade the firmware Imagename (T)FTP Server Use TFTP7	enter filename and (TJFTP serve 1922-160.2.160	r IP-adoress to get file from, t ] ]	then press <b>Upgrade</b> .	

Lynx switches with firmware 3.12 and latter can be updated via the Web Interface. To accomplish a firmware update a TFTP or FTP server must be available on the network.

For more information on updating the Lynx switch, please refer to proper TechNote provided by Westermo Technical Support or at the Westermo Intranet.

Available options are:

Imagename	Insert file name to the new Firmware	
(T)FTP Server	Insert IP address to the TFTP/FTP	
Use TFTP	Tick check box if a TFTP server should be used, otherwise leave the check box unmarked.	

Click the "Upgrade" button to confirm changes made to the FW Upgrade. The unit needs to be restarted before a firmware update can take affect.

## Statistic

#### **Port statistics**

Westermo	1	- F.( )	ALC: NOT THE REAL PROPERTY OF	
Logged in as adm	in Host: A	-8 ( 197.168.7.201 )		
x 1400				
hame Configuration Admin	NATURAL OF	Sats RESTART EDGEDT		
Care -				
ort 1 Statistics				
Link Status	LINK			
Inbound Traffic		Outboard Traffic		
lotal Bytes In	29891	Total Bytes Out	164015	
Broadcasts In	47	Broadcasts Out	0	
Multicasts In	D	Multicasts Out	153	
Unicasts In	175	Unicasts Out	223	
Errors				
Collisions	0	Fragments	0	
Oversize	0	Undersize	0	
Fabluer	0	Late	0	
Frame Checksum Errors In	0	Frame Checksum Errors Out	0	
Froffic Size Anolysis				
64 Octobs	691	256 -> 511 Octats	16	
65->127 Octets	172	512 -> 1023 Octets	70	
128 -> 255 Octets	3	1024 -> 1518 Octets	56	
Previous Part	Re	Fesh Caw Port	Next Pot	

A overview of the Lynx port statistics

Available options are:

- Details Get a more detailed specification on a specific port
- **Refresh** Refresh statistics
- Clear all Clear all statistics

Parameter	Options	Description
Port Number	N/A	Port number correspond to the port number on the actual switch
Link Status	LINK (White)LINK (Green)LINK (Red)	Indicates established linkIndicates established redundant linkIndicates failed redundant link
Speed / Duplex	N/A	Current port settings
Total Bytes in	N/A	Total Bytes received on port
Total Bytes out	N/A	Total Bytes sent from port
In Bytes/ s	N/A	Bytes received each sec- ond on port
Out Bytes/ s	N/A	Bytes transmitted each second on port
FCS Errors	N/A	Total frames received with a CRC error not counted in InFragments, InJabber or InRxErr.

### **Port Statistics – Details**

Logged in as adm	in Host: Al	E-8 ( 192,168,2.201 )		
c 1400				
	and the second second			
nome Configuration Admin	astration	State RESIDENT LOSSOF	1	
at 1 Ctatistics				
art 1 Statistics				
ink Status	LINK			
nbound Traffic		Outbound Traffic		
otal Bytes In	29891	Total Bytes Out	164016	
roadcasts In	47	Broadcasts Out	0	
fullicasts In	0	Multicasts Out	553	
nicasts In	175	Unicasts Out	223	
rrors				
ollisions	ė.	Fragments	0	
Iversize	0	Undersize	0	
abber	0	Late	0	
rame Checksum Errors In	0	Frame Checksum Errors Out	0	
roffic Size Applysis				
4 Octots	681	256 -> 511 Octets	16	
5 -> 127 Octats	172	512-> 1023 Octets	70	
28 -> 255 Octets	3	1024 -> 1518 Octets	56	
	100	the second second	the second second	

A detailed overview of a specific port.

Available options are:

Previous port	Display detailed specifics of previous port
Refresh	Refresh statistics
Clear all	Clear all statistics
Next port	Display detailed specifics of next port

Parameter	Description		
Link Status	Indicates link status		
Inbound traffic	Description	Outbound traffic	Description
Total bytes In	Total Bytes received on port	Total bytes Out	Total Bytes trans- mitted on port
Broadcasts In	The number of good framed received that have a Broadcast destination MAC address.	Broadcasts Out	Total Broadcasts received on port
Multicasts In	The number of good framed received that have a Multicast destination MAC address.	Multicasts Out	Total Multicasts received on port
Unicasts In	The number of good framed received that have a Unicast destination MAC address.	Unicasts Out	Total Unicasts received on port

Errors	Description	Errors	Description
Collisions	The number of collision events seen by the MAC not includ- ing those counted in Single, Multiple, Excessive or Late. This counter is applicable in half-duplex.	Fragments	Total frames received with a length of less than 64 octets and an invalid FCS
Oversize	Total frames received with a length of more than MaxSize octets but with an invalid FCS.	Undersize	Total frames received with a length of less than 64 octets but with a valid FCS.
Jabber	Total frames received with a length of more than MaxSize octets but with an invalid FCS.	Late	The number of times a collision is detected later than 512 bits-times into the transmission of a frame. This counter is applicable in half-duplex only.
Frame checksum errors	Total frames received with a CRC error not counted in InFragments, InJabber or InRxErr.	Frame checksum errors Out	The number of frames transmitted with an invalid FCS. Whenever a frame is modified during transmis- sion (e.g., to add or remove a tag) the frame's original FCS is inspected before a new FCS is added to a modified frame. If the origi- nal FCS is invalid, the new FCS is made invalid too and this counter is incremented.

Traffic Size Analysis	Description	Traffic Size Analysis	Description
64 Octets	Total frames received (and/or transmit- ted) with a length of exactly 64 octets, including those with errors.	256 -> 511 Octets	Total frames received (and/or transmitted) with a length of between 256 and 511 octets, including those with errors.
65 -> 127 Octets	Total frames received (and/or transmit- ted) with a length of between 65 and 127 octets, including those with errors.	512 -> 1023 Octets	Total frames received (and/or transmitted) with a length of between 512 and 1023 octets, including those with errors.
128 -> 255 Octets	Total frames received (and/or transmit- ted) with a length of between 128 and 255 octets, including those with errors.	1024 -> 1518 Octets	Total frames received (and/or transmitted) with a length of between 1024 and 1518 octets, including those with errors.



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.se Westermo Web site: www.westermo.com

#### **Subsidiaries**

Westermo Data Communications AB Svalgången 1 SE-724 81 Västerås Phone: +46 (0)16 42 80 00 • Fax: +46 (0)21 35 18 50 info.sverige@westermo.se

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

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 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

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: earnestphua@westermo.com.sg **REV.A 6640-3202** 2008.05 Mälartryck AB, Eskilstuna, Sweden

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