DDW-200 Series

Wolverine

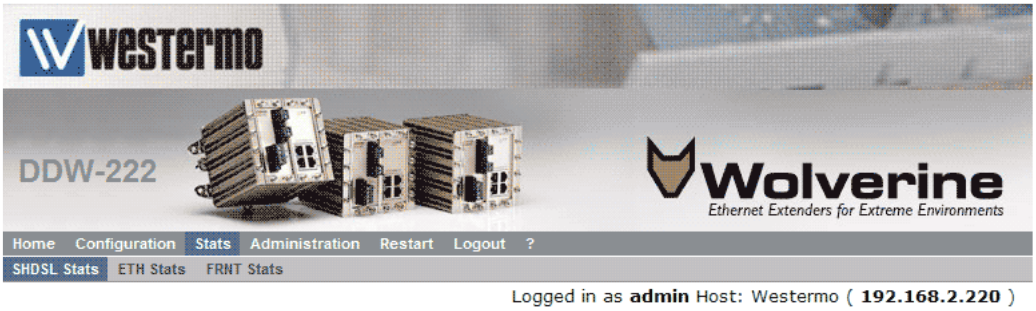
Diagnostic Information

LED indicators are useful diagnostic tools, before the DDW-200 Series can communicate with another unit the DSL link must be established.
This can be seen by looking at the DSL LED. During negotiation the DSL LED flashes and when the link is established it goes green.
The Ethernet connections in the integrated switch must also have to establish a link before they can operate. Therefore it is important to check the Ethernet link status of your unit. Note provided that at least one link is active it is possible to remotely connect and check the link status on the internal web server.

The DDW-200 Series provides comprehensive diagnostic information both for the internal Ethernet switch and for the two SHDSL connections. The internal web server will display the status of the unit you are logged in to. When all units are configured with different IP addresses you can log in to each one to check for instance the link status.

The available information about the SHDSL link covers speed and quality of the negotiated line. The available data on the Ethernet ports displays link status and traffic information, it is also possible to analyse port statistics e.g. inbound traffic, outbound traffic, errors and size analysis.

Diagnostic Information



SHDSL | Statistics

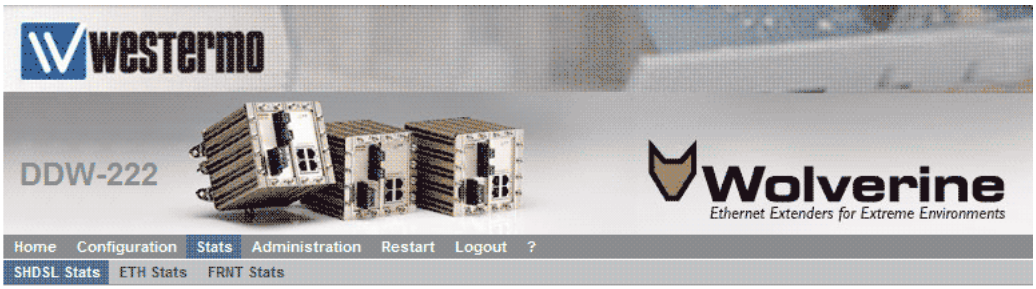
Port Nr	Link Status	Data rate	Total Bytes In	Total Bytes Out	More info
1	DOWN_READY	0	0	15292	Details for port 1
2	DOWN_NOT_READY	0	0	15292	Details for port 2

Refresh | Debug

Description of SHDSL basic statistic

Port no	Which DSL port	
Link status	Status of DSL port The following modes are possible	
	DOWN_NOT_READY	Port in CO mode, no line connected
	DOWN_READY	Port in CPE mode, ready for negotiation Port in CO mode, ready for negotiation
	INITIALIZING	Port is negotiating
	UP_DATA_MODE	Link up, ready to transfer data
Data rate	Negotiated data rate in bit/s. Field is active when a link is negotiated	
Total Bytes In	Total bytes received on this port	
Total Bytes Out	Total bytes transmitted on this port	

If button "Details for port X" is pressed detailed statistic on each port will be shown.



DSL1 | Statistics

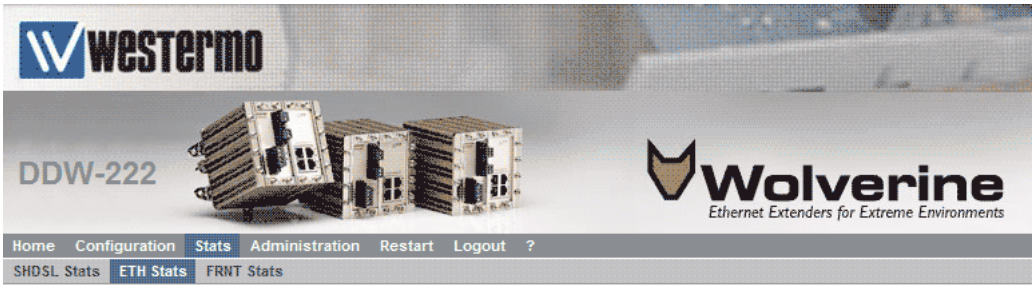
Link Status	DOWN_READY
Data rate	0
Total Bytes In	0
Total Bytes Out	15292
Signal to Noise Ratio (dB)	0
Negotiations	0
Link Uptime	0
BPS (Avg. thrup. since page refresh)	0(0s)

Port 1 | Port 2 | Back

Description of detailed SHDSL statistic

Link Status	Status of DSL port. The following modes are possible	
	DOWN_NOT_READY	Port in CO mode, no line connected
	DOWN_READY	Port in CPE mode, ready for negotiation
	Port in CO mode, ready for negotiation	
	INITIALIZING	Port is negotiating
	UP_DATA_MODE	Link up, ready to transfer data
Data rate	Negotiated data rate in bit/s. Field is active when a link is negotiated	
Total Bytes In	Total bytes received on this port	
Total Bytes Out	Total bytes transmitted on this port	
Signal to Noise Ratio	Received signal level compared to noise level	
Negotiations	Number of negotiations since power up	
Link Uptime	Link up time since last link negotiation	
BPS (average throughput since page refresh)	Average data throughput since last time the page was refreshed.	

Observe! This parameter will show correct value with 10 seconds refresh interval.
With faster refresh rate the internal BPS counters may not be correct.



Ethernet | Statistics

Port Nr	Link Status	Total Bytes In	Total Bytes Out	FCS Error In	FCS Error Out	More info
1	LINK	50523	81268	0	0	Details for port 1
2		0	0	0	0	Details for port 2
3		0	0	0	0	Details for port 3
4		0	0	0	0	Details for port 4

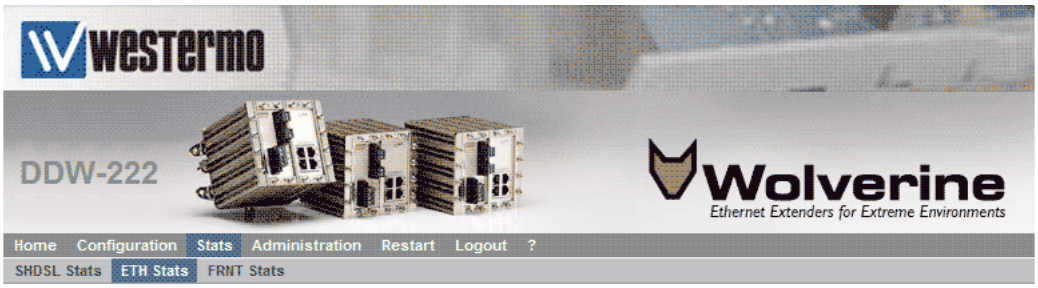
Refresh | Debug

Description of Ethernet basic statistic

Port no	Which Ethernet port
Link status	No indication = no link on this port
	LINK = link negotiated
Total Bytes In	Total bytes received on this port
Total Bytes Out	Total bytes transmitted on this port
FCS Error In	Total bytes with frame check errors received
FCS Error Out	Total bytes with frame check errors transmitted*

*Whenever a frame is modified internally in the switch a new FCS is computed for the frame. Before the new FCS is added to the frame the old FCS is inspected. If an error is detected in the old FCS the new FCS is added with a bad FCS and the FCS Error Out counter is incremented.

If button "Details for port X" is pressed detailed statistic on each port will be shown.



Port 1 | Statistics

Link Status	LINK		
Inbound Traffic		**Outbound Traffic**	
Total Bytes In	51609	**Total Bytes Out**	84950
Broadcasts In	147	**Broadcasts Out**	6
Multicasts In	3	**Multicasts Out**	0
Unicasts In	221	**Unicasts Out**	226
Errors			
Collisions	0	**Fragments**	0
Oversize	0	**Undersize**	0
Jabber	0	**Late**	0
Frame Checksum Errors In	0	**Frame Checksum Errors Out**	0
Traffic Size Analysis			
64 Octets	232	**256 -> 511 Octets**	43
65 -> 127 Octets	211	**512 -> 1023 Octets**	24
128 -> 255 Octets	54	**1024 -> 1518 Octets**	39

Previous Port | Refresh | Next Port

Fore more details, see next page.

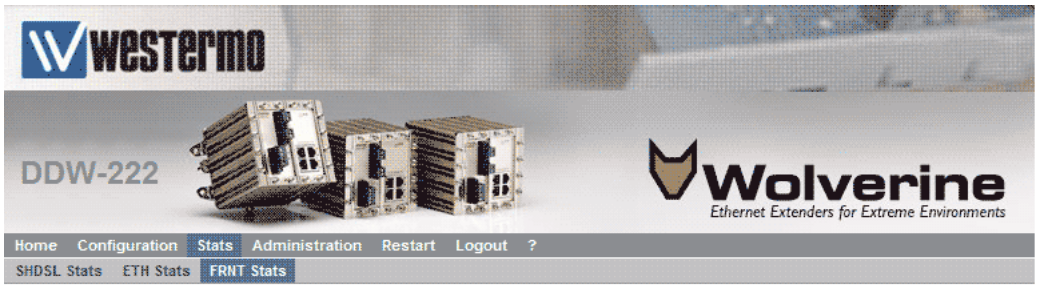
Description of detailed Ethernet statistic

Link status	DOWN = no link
	LINK = link negotiated
Total Bytes In/Out	Total valid bytes received / transmitted on this port
Broadcasts In/Out	Total valid frames received / transmitted with a destination address equal to FF:FF:FF:FF:FF:FF
Multicasts In/Out	Total valid frames received / transmitted with a multicast address
Unicasts In/Out	Total valid frames received / transmitted with a unicast address
Collisions	Total number of collisions during frame transmission
Oversize	Total frames received with a length of more than 1518 bytes and a valid frame check
Jabber	Total frames received with a length of more than 1518 bytes and an invalid frame check
Fragments	Total frames received with a length of less than 64 octets and with an invalid frame check
Undersize	Total frames received with a length of less than 64 octets and with a valid frame check
Late	Total number of times a collision is detected later then 512 bit-times into the transmission of a frame
Frame checksum errors in/out	Total frames received / transmitted with a valid length but an invalid frame check*

*Whenever a frame is modified internally in the switch a new FCS is computed for the frame. Before the new FCS is added to the frame the old FCS is inspected. If an error is detected in the old FCS the new FCS is added with a bad FCS and the FCS Error Out counter is incremented.

Traffic analysis

64 octets	Total frames received with of exactly 64 octets, including those with errors
65 -> 127 octets	Total frames received with a length between 65 and 127 octets, including those with errors
128 -> 255 octets	Total frames received with a length between 128 and 255 octets, including those with errors
256 -> 511 octets	Total frames received with a length between 256 and 511 octets, including those with errors
512 -> 1023 octets	Total frames received with a length between 512 and 1023 octets, including those with errors
1024 -> 1518 octets	Total frames received with a length between 1024 and 1518 octets, including those with errors



FRNT | Statistics

Ring mode	MEMBER
Ring status	BROKEN
Ring port 1	UP (0)
Ring port 2	UP (0)
Ring state changes counter	0
Ring state change time	0 hours 16 minutes 19 seconds

Refresh

Description of FRNT statistic

Ring mode	Current ring configuration of this unit, MEMBER or FOCAL POINT.
Ring status	Current ring status, OK or BROKEN
Ring port 1	Current status of ring port 1, UP or DOWN
Ring port 2	Current status of ring port 2, UP or DOWN
Ring state changes counter	Number of ring topology changes since power up
Ring state change time	Time since last topology change