WESTERMO

Industrial PoE Gigabit Switch

Lynx 3510 PoE

- **Powerful Industrial Power over Ethernet (PoE) switch**
  - Reduce complexity with one cable for both power and connectivity
  - All 8 copper ports supporting up to 30 W 802.3at (PoE+)
  - Total PoE power budget up to 240 W
- **High performance and flexibility**
  - Available both as layer 2 and layer 3 model
  - All ports supporting up to gigabit speeds
  - Advanced WeOS support
- **Robust for long service life**
  - -40 to +70 °C without ventilation holes
  - Industrial, marine and trackside type tested
  - Ultra-robust IP40 metal housing

CE   DNV·GL TYPE APPROVED PRODUCT MARITIME

EN 50121-4 Railway Trackside   **EN 61000-6-2** Industrial Immunity   **EN 61000-6-4** Industrial Emission

Product Description

The Lynx 3510 PoE is a series of compact high performance industrial Power over Ethernet switches. They combine outstanding performance with capability to supply power to high-power devices over long distances. With all 8 copper ports providing up to 30 W output per port and a total budget of 240 W, the possibilities for lean and simple installations are ideal, only one cable is needed for both connectivity and power. In addition, the flexibility is further increased by the advanced PoE management functions.

The switches are designed with the harshest industrial environments in mind and are capable to withstand extreme temperatures, vibrations, humidity and electrical environments. The use of only industrial grade components contributes to ensure market leading mean time between failure (MTBF), maximized service life and reduced operational and life cycle costs.

The switches are thoroughly tested both by Westermo and external test institutes to meet a rich selection of EMC, isolation, vibration and shock standards, all to the highest levels suitable for heavy industrial environments and rail trackside applications.

Powered by the next generation WeOS operating system, ensuring robust operation and support for an expanding range of protocols and features. The Lynx 3510 PoE features intuitive setup and configuration, removing the need for specialized IT support or training, and enabling easy and cost-efficient installation. In addition, recognizing the growing sophistication of cyberattacks, an extensive suite of cybersecurity tools is available including hardware support for secure boot. These tools can be used to build networks in compliance with the IEC 62443 standard, which defines technical security requirements for data communication network components.

The Lynx 3510 PoE switches are the ideal switches for handling big data and high bandwidth requirements typically found within transportation, manufacturing, energy, smart cities and other applications.

Specifications - Lynx 3510 PoE

Dimensional drawing
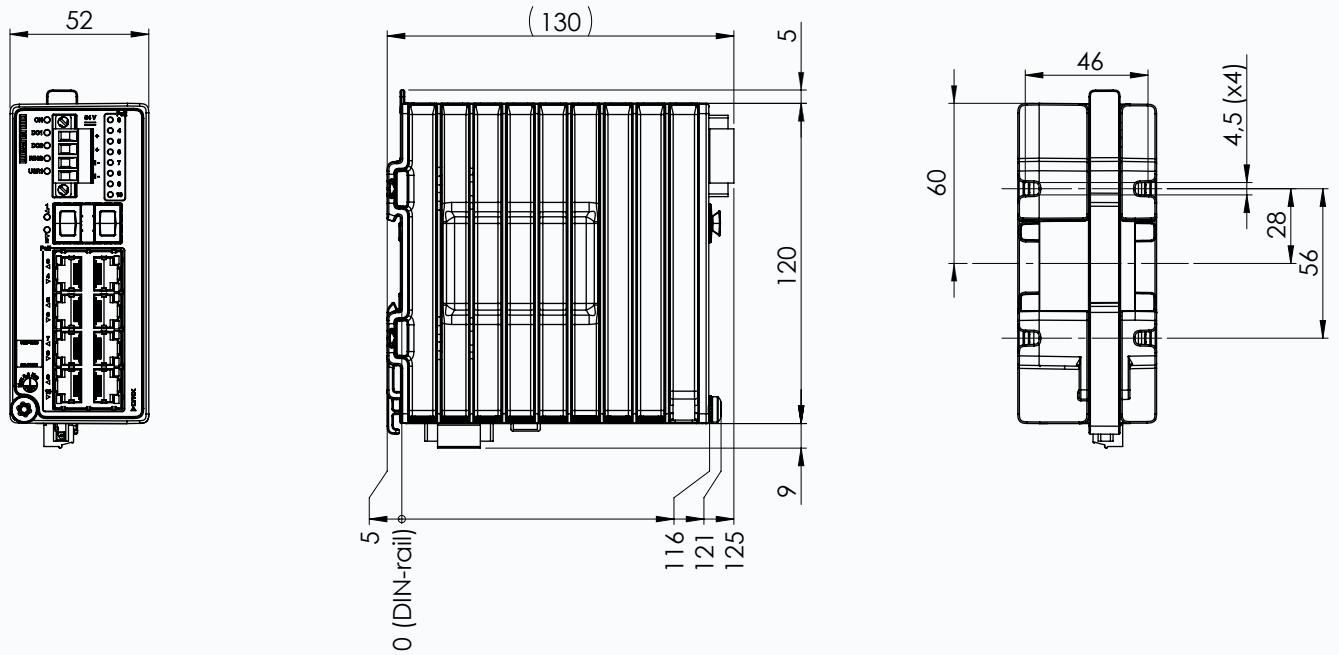
Housing

Dimensions (W x H x D)[a]	52 x 134 x 130 mm (2.05 x 5.28 x 5.19 inches)
Housing	Full metal
Weight	1100 gr

[a]Including contact and DIN-rail fastener

Power parameters

Rated voltage	54 VDC
Operating voltage	802.3at (PoE+): 53 to 57 VDC 802.3af: 48 to 57 VDC No PoE usage: 12 to 57 VDC
Rated current	0.1 to 4.8 A
Power budget	Max. 240 W total PD consumption Max. 30 W per PoE port

Environmental

Operating temperature	-40 to +70°C (-40 to +158°F) -10 to +70°C (14 to +158°F) for CT models
Storage and transport temperatures	-40 to +85°C (-40 to +185°F)
Ingress protection	IP40
Humidity (operating)	5-95% relative humidity
Corrosive gases	IEC 60068-2-60
Altitude	2000 m/80 kPa
MTBF Telcordia	638,000 hours
MTBF MIL-HBDK-217F	583,000 hours

Interface

SFP ports	2 × 1 Gbit/s, SFP
Ethernet ports	802.3at/af (PoE+/PoE): 8 × 10/100/1000BaseT(X), RJ45 connector
Console	USB-C (emulate serial port, 115200 bps)
Micro SD	Secure Digital 2.0
Digital input	1 pcs, screw terminal
Digital output	1 pcs, screw terminal

Approvals

EMC	EN/IEC 61000-6-2, Immunity industrial environments EN/IEC 61000-6-4, Emission industrial environments
Trackside	EN 50121-4/IEC 62236-4, Railway signalling and telecommunications apparatus
Marine	DNV GL rules for classification - Ships and offshore units

Switch properties

Number of VLAN	64
Priority queues	8

Software

WeOS	WeOS 5; https://www.westermo.com/solutions/weos
WeConfig	https://www.westermo.com/solutions/weconfig

Warranty

Validity	5 years

Ordering information

Art. no.	Description
3627-0500	Lynx-3510-F2G-P8G-LV
3627-0502	Lynx-3510-F2G-P8G-LV-CT
3627-0510	Lynx-3510-E-F2G-P8G-LV[a]
3627-0512	Lynx-3510-E-F2G-P8G-LV-CT[a]

[a]Lynx-3510-E is the same as Lynx-3510, with addition of layer 3 WeOS Extended functionality.

Accessories

1 Gbit transceivers	https://www.westermo.com/products/accessories/sfp-transceivers/1gbit-sfp-transceivers

Specification WeOS 5

The WeOS operating system has been developed by Westermo for its current as well as future range of Ethernet hardware products. This layer 2 and layer 3 switching solution enables Westermo to create complex multimedia ring networks and routing solutions. WeOS not only provides solutions to many challenging industrial networking issues, but also helps to protect investments by ensuring the future availability of fully compatible solutions. WeOS is the core of our latest ranges of Ethernet hardware allowing complex multimedia ring networks and routing solutions to be created.

Westermo has many years of experience developing products for industrial applications. At the heart of all Westermo networking solutions is the need for ease of use. By standardising on a single operating system for all Westermo Ethernet products this helps to simplify the installation, operation and maintenance of individual devices and complete networks. Once a user is familiar with a Westermo product, that knowledge can be readily applied to all our other devices. A web screen simplifies the configuration of many functions, whilst a command line interface allows for fine tuning.

WeOS Standard - Layer 2 protocols and functionality
Resilience and High Availability
FRNTv0 ring topologies (rings, ring coupling and horseshoe topologies), IEEE 802.1D/802.1w (RSTP), IEEE 802.1AX/802.3ad Link Aggregation (LACP and Static), IEC 62439-2 Media Redundancy Protocol (MRP; single instance or dual instances at MRP master)[a]
Layer 2 Switching
IEEE 802.1D MAC Bridges, IEEE 802.1Q Static VLAN and VLAN Tagging, IEEE 802.1AB LLDP, IGMPv1/v2/v3 Snooping, Static Multicast MAC filters
Layer 2 QoS
IEEE 802.1p Class of Service with flexible classification (VLAN tag priority, IP DSCP/ToS, Port ID), Ingress and Egress Rate limiting
IP Host Services
Static IP Address, DHCP Client, DNS Client, DDNS, ZeroConf (mDNS and SSDP), NTP Client (NTPv4), IP Interfaces (Ethernet, VLAN, Loopback and Blackhole)
Network Servers
DHCP Server (including options 1, 3, 6, 7, 12, 15, 42, 61 and 82), DHCP Relay Agent (including options 54 and 82), DNS Proxy Server (DNS forwarder and Host records), NTP server (NTPv4), IEEE 1588/PTP Transparent Clock (including Power Profile v1/v2)
Management Tools
Westermo configuration tool WeConfig, Web interface (HTTP and HTTPS), Command Line Interface (CLI) via console port, SSHv2 and Telnet, Local and Central Authentication (RADIUS/TACACS+), Role Based Access Control (RBAC), Password Compliance Policy, SNMPv1/v2c/v3, Secure Copy (SCP) for remote file upload and download, Local file management (via HTTP, FTP, TFTP and SCP), Load/save files from/to external memory, Configuration and Deployment using external memory, Tech support button, Flexible alarm and event handling system, RFC5424/RFC3164 Syslog (log files and remote syslog server), Port monitoring
SNMP MIB Support (read-only)
RFC 1213 MIB-2, RFC 2819 RMON MIB, RFC 2863 Interface MIB, RFC 3433 Entity Sensor MIB, RFC 3635 Ether-like Interface MIB, RFC 4133 Entity MIB, RFC 4188 Bridge MIB, RFC 4318 RSTP MIB, RFC4363 Q-BRIDGE MIB, RFC 4836 MAU MIB, IEEE 802.1AB LLDP MIB, IEEE 802.1AX LAG MIB, IEC 62439-2 MRP MIB, WESTERMO-DDM MIB (SFP), WESTERMO-EVENT MIB, WESTERMO-FRNT MIB, WESTERMO-INTERFACE MIB, WESTERMO-TCN MIB

[a]Available as add-on-function. Please see your local Westermo sales contact to purchase a license for your product.

WeOS Extended - Layer 3 protocols and functionality[a]
IP Host Services
IP Interfaces (SSL, VPN, GRE)
IP Routing and VPN
Static IP Routing, Floating Static Routes, Multinetting, Proxy ARP, Dynamic IP routing (OSPFv2 , RIPv1/v2), VRRPv2/v3, Static Multicast Routing, Stateful Inspection Firewall, Firewall Hit Counters, IP Masquerading (NAT/NAPT), Port Forwarding, Stateless NAT (1-1 NAT), SSL VPN (Client and Server, Certificate Authentication, Pre-shared Key (PSK) Point-to-Point Mode, Layer-2 and Layer-3 VPN, Layer-2 VPN bridging, Address pool and address per CN, TLS Authentication), Generic Routing Encapsulation (GRE)
SNMP MIB Support (read-only)
RFC 2787 VRRPv2 MIB, RFC 6527 VRRPv3 MIB

[a]Products with software level WeOS Extended include all functionality listed for WeOS Standard