Westermo

WeOS 4

Westermo Operating System

- **Future proofed solution from Westermo**
  - Available on current and future platforms
  - Layer 2 and Layer 3 functionality
  - Constant validation and update releases
- **Resilient secure multiple media network solutions**
  - Ethernet, Fibre, xDSL and serial support
  - Layer 2 and 3 ring solutions for network resilience
  - Built-in firewalls
- **Easy to use**
  - Easy to use web screens + CLI
  - Advanced diagnostic capability
  - Simplified cross product training
- **Industrial application solutions**
  - Legacy support for serial and IP applications
  - Allows a switch to become a security device
  - Secure remote access functionality

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 incorporates unique functions that allow Westermo solutions to provide integration paths for legacy equipment. WeOS also enables Westermo to deliver a range of unique network security solutions, utilising elements such as stateful inspection firewalls and the IEEE 802.1X standard. Remote secure access can be provided using encrypted VPN tunnels. The WeOS Management Guide, 6101-3201, explains how many of these functions can be set up.

Specification WeOS4

WeOS Standard - Layer 2 protocols and functionality
Resilience and High Availability
FRNTv0/v2 flexible ring topologies (multiring, subrings and ring coupling), Multilink dual homing, IEC 62439-2 Media Redundancy Protocol (MRP)[a], IEEE 802.1AX/802.3ad Link Aggregation (LACP and static), IEEE 802.1D Spanning Tree Protocol (STP) and IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
Layer 2 Switching
IEEE 802.1Q Static VLAN and VLAN Tagging, VLAN Q-in-Q tunnelling, VLAN transparency, IEEE 802.3x Flow Control, IGMPv2/v3 Snooping, AVT Dynamic VLAN (Adaptive VLAN Trunking), Management VLAN (Management Interface concept), Static Multicast MAC filters, IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
Layer 2 QoS
IEEE 802.1p Class of Service, Ingress/inbound rate limiting, Egress/outbound traffic shaping
Layer 2 Security
IEEE 802.1X Port Access Control, MAC Authentication, IP/MAC address conflict detection, Port Auto-Disable
Serial Port Technologies[b]
Serial over IP (Serial Extender, Virtual Serial Port and Server-Multipoint), Modem replacement, Modbus Gateway, Microlok II Gateway
Manageability
WeConfig, Web interface (HTTP and HTTPS), Command Line Interface (CLI) via console port, (SSHv2 and Telnet), Local and central user authentication (RADIUS and TACACS+), SNMPv1/v2c/v3. Secure Copy (SCP), USB configuration and backup[c], BOOTP client, flexible alarm/event handling system, Syslog (log files on RAM/USB and remote syslog server), Digital I/O, Persistent Port Monitoring, NTPv4 Client/Server, DHCP client (including options 60 and 61), DHCP server (including options 1, 3, 6, 7, 12, 15, 42, 61, 66, 67, 82, 121 and 249), DHCP relay agent (including options 54 and 82), DDNS
SNMP MIB Support
RFC1213 MIB-2, RFC 2819 RMON MIB, RFC 2863 Interface MIB, RFC 3411 SNMP Framework MIB, RFC 3433 Entity Sensor MIB, RFC 3621 Power Ethernet MIB[d], RFC 3635 Ethernet-like MIB, RFC 4133 Entity MIB, RFC4188 Bridge MIB, RFC4318 RSTP MIB, RFC4363 Q-BRIDGE MIB, RFC4836 MAU MIB, RFC4319 HDSL2/SHDSL MIB[e], IEEE 802.1AB LLDP MIB, IEEE 802.1AX LAG MIB, IEC 62439-2, MRP[a], UCD SNMP MIB, WESTERMO-WEOS MIB, WESTERMO-FRNT MIB, WESTERMO-INTERFACE MIB

[a] Available as add-on-function. Please see your local Westermo sales contact to purchase a license for your product.
[b] Available in products with serial ports
[c] Available in products with USB port
[d] Available in products with PoE ports
[e] Available in products with xDSL/SHDSL ports

WeOS Extended - Layer 3 protocols and functionality[a]
IP Routing, Cyber Security and VPN
Static IP routing, Floating Static Routes, Dynamic IP routing (OSPFv2, RIPv1/v2), VRRPv2/v3, Static Multicast Routing, Stateful Inspection Firewall, Modbus Firewall (DPI), NAT, 1-1 NAT, Proxy ARP for 1-1 NAT, Port Forwarding, DSCP/TOS modification, IPsec VPN (IKEv1 certificates and PSK, ESP, VPN failover), SSL VPN (Client and Server, Local and central authentication with RADIUS, address pool and address per CN, TLS authentication, WeConnect), GRE, Multinetting
Train Protocols
IEC 61375-2-5 Train Topology Discovery Protocol (TTDP)[b]
Serial Port Technologies[c]
PPP dial in/dial out
SNMP MIB Support
RFC 2787 VRRPv2 MIB, RFC 6527 VRRPv3 MIB, IEC 61375-2-5 TTDP MIB[b]

[a] Products with software level WeOS Extended include all functionality listed for WeOS Standard
[b] Available in RFR-212-FB
[c] Available in products with serial port

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