Windbit ESW0L3 Switch Series

ESW0L3: Layer 3 Managed Access Switch

Introduction

The ESW0L3 series are Layer 3 Gigabit Ethernet switches launched by Teldat and designed in line with its philosophy of security, high efficiency, energy saving and constant innovation. This family of equipment can provide full gigabit access and flexibly extendable 10G uplink data interfaces. With a new hardware architecture and the latest modular operating system, the ESW0L3 series is capable of providing more functionalities, faster hardware processing and a better user experience.

All models in the ESW0L3 family can be operated through its console/GUI and also integrated into centralized cloud management.

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- **Various interface types and 10GE uplinks**
- **L3 access switch with RIP/BGP/OSPF, VRFs and QoS**
- **PoE/PoE+ models**
- **Enterprise-class high reliability for corporations**
- **High-bandwidth, low-latency and flexibility**
- **Rectifies faults with non-stop services**
- **Energy Efficiency and 802.3az IEEE**

Interfaces

12x10/100/1000Eth, 4x10 SFP+ ports	ESW0L3-12GE4XS-P
24x10/100/1000, 4x10 SFP+ ports,	ESW0L3-24GE4XS-E / ESW0L3-24GE4XS-P
48x10/100/1000Eth, 4x10 SFP+ ports	ESW0L3-48GE4XS-E / ESW0L3-48GE4XS-P
1 x USB 2.0 port	All models
1x Console port	All models
1x Management port	All models

Competitive Advantage

Full gigabit access to LANs	Ready for large enterprises, institutions, and campuses, such as the LANs in government buildings, universities, and big manufacturing/energy/other organizations
10Gbps interfaces for uplink	The interconnection between switches/routers cannot be a bottleneck, high-speed interfaces avoid this problem, satisfying high-bandwidth requirements.
Low requirements for the installation	Multiple configuration methods make these switches the optimal LAN solution for offices, offering IT managers an agile and fast installation.
High scalability and simplified topology	User devices can be added to or removed from a virtualized network in a "hot swap" manner, without affecting the normal operation of other devices

Key Features

- **Security Protection Policies** The ESW0L3 adopts the Network Foundation Protection Policy (NFPP) technology to rate-limit ARP packets, ICMP request packets, DHCP Request messages, etc ensuring network stability.

- **High reliability** The ESW0L3 supports STP, RSTP, and MSTP to achieve fast convergence, improve the fault tolerance capability, ensure stable network operation(with RLDP), and link load balancing.

- **Software-Defined Networking (SDN)** ESW0L3 is compatible with OpenFlow 1.3 as the times require, and will collaborate with SDN controller to easily build large-scale L2/L3 networks. The switches allow you to smoothly upgrade to an SDN network

- **Virtual Switching Unit(VSU)** VSU enables multiple physical devices to be connected through aggregate links and virtualized into one logical device, using the same IP address and enhancing network management.

- **IPv4/IPv6 Dual-stack Multi-layer Switching** The ESW0L3 includes a wide range of IPv4 protocols: IPv4 static routing, RIP, OSPFv2, IS-ISv4, and BGP4. Additionally, it also supports IPv6 protocols such as IPv6 static routing, RIPng, OSPFv3, IS-ISv6, and BGP4+.

- **Easy Network Maintenance** The ESW0L3 permits routine network diagnosis based on SNMP, RMON, Syslog, and USB based backup log and configuration. Customers can use various management modes such as CLI, web-GUI, Telnet, and CWMP-based zero-touch.

CARACTERíSTICA TéCNICA DEL HARDWARE

Data Interfaces
4 x 1GE/2.5GE/ 10GE SFP+ uplink ports
12 or 24 or 48 x 10/100/1000M adaptive electrical ports

Power over Ethernet support(Some models)
IEEE 802.3af and 802.3at power supply standards
Scheduled powering on /off PoE ports on the basis of time policy
Maximum PoE output power: 405-460W

Packet forwarding rate
12x/24x/48x access ports: 78/96/132 Mpps
System switching capacity
12x/24x/48x access ports: 104/128/176 Gbps

Dimensions and Weight
442 mm x 220 mm x 43.6mm, 1RU
Approximate weight: 3,1kg to 4,90kg
12x model no fans. Fan speed regulating and alarm function in 24x/48x model

Environmental specifications
Operating temperature: 0°C to 45°C
Operating humidity: 10% to 90% RH
Storage temperature: –40°C to 70°C

Internal Power supply
Rated voltage range: 100 V to 240 V
Maximum voltage range: 90 V to 264 V
Frequency: 50 Hz to 60 Hz

CARACTERíSTICA TéCNICA DEL SOFTWARE

L2 Switching-1
IEEE 802.1Q(4K VLANs),Voice VLAN, Super VLAN and private VLAN
MAC address-based, port-based, protocol-based, and IP subnet-based VLAN
GVRP, Basic QinQ and selective QinQ

L2 Switching-2
STP (IEEE 802.1.d), RSTP (IEEE 802.1w), and MSTP (IEEE 802.1s)
Auto errdisable recovery, BPDU filter, BPDU guard, Port fast, Root guard
ERPS (G.8032 v1/v2), sing/tangent/intersecting ring, and load balancing

L2 Switching-3
LLDP/LLDP-MED, LLDP IPv6, and LLDP-POE
MAC address filtering

L3
IPv4/v6 DHCP client, DHCP relay, DHCP server, and DHCP snooping
DNS client, DNS proxy, and DNSv6 client. Neighbor Discovery (ND), ND proxy
Static and dynamic ARP, ARP proxy, and ARP entry timeout

L3-Routing
IPv4 and IPv6 static routing,
RIP and RIPng OSPFv2 and OSPFv3 IS-ISv4 and IS-ISv6
BGP4 and BGP4+ Routing policy IPv4/VRF IPv4/IPv6 PBR

Security
Multiple AAA modes, RADIUS and TACACS+
IEEE802.1X authentication, MAC address bypass (MAB) authentication
BPDU guard, Port security, IP source guard, ARP spoofing prevention

QoS
Port traffic rate limiting, 802.1p/DSCP/ToS traffic classification
Congestion management: SP, WRR, DRR, WFQ, SP+WFQ, SP+WRR, SP+DRR,and SP+WFQ
Congestion avoidance: tail drop, RED, and WRED. 8 priority queues per port

Multicast
IGMPv1/v2/v3, IGMPv1/v2 snooping, IGMP fast leave
PIM-DM, PIM-SM, PIM-SSM, PIM SMv6, and PIM-SSMv6
MSDP for inter-domain multicast, MLDv1/v2 and MLD proxy, MLDv1/v2 snooping

Reliability
REUP, RLDP, L2 link connectivity detection, unidirectional link detection
Data Link Detection Protocol (DLDP),IPv4 VRRP v2/v3, IPv6 VRRP
BFD, Link monitoring, fault notification, and remote loopback
802.3ah(EFM)

Management
IPv4/v6 FTP client, FTP server, TFTP client, TFTP server, SNMP v1/v2c/c3
Web GUI, Syslog/Debugging, RMON (1, 2, 3, 9), CWMP
OpenFlow Special 1.3, Cloud Management

CARACTERíSTICA TéCNICAS ADICIONALES

Console interface
RJ45 female connector
External storage interface
1x USB port 2.0

CPU and storage
Dual-core CPU, each core with the clock speed of 1.0 GHz
BootROM 16 MB. Flash 512 MB. RAM DDR4 1GB

MTBF
>200K hours

Scenarios