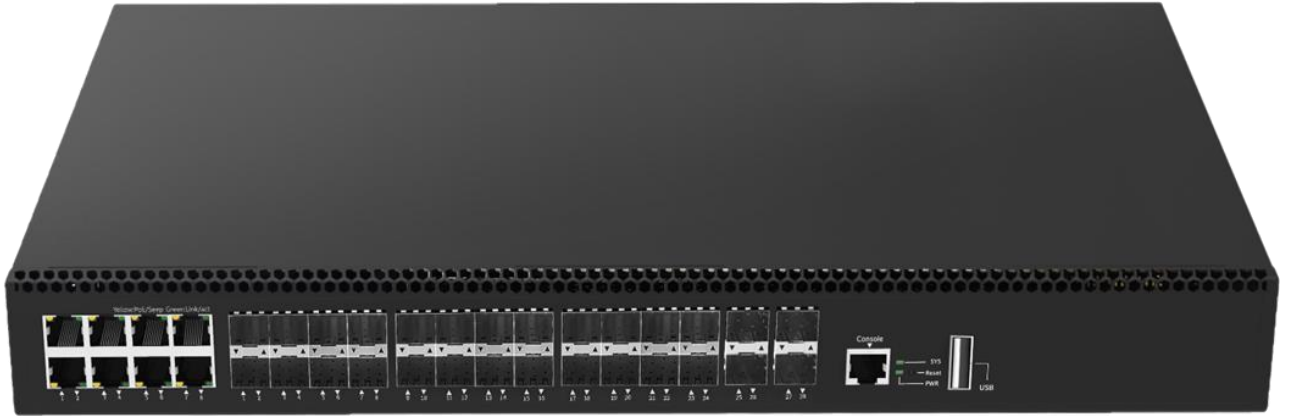


PRODUCT OVERVIEW



LN-2316-SERIES

Highlights

- ▶ Proactive Threat Defense with Real-Time DoS Mitigation and IP Integrity Protection
- ▶ Seamless Stack Management: Control Up to 8 Switches as One, with Zero Overhead
- ▶ Optimized Voice VLAN with Intelligent QoS for Lag-Free VoIP Performance
- ▶ Advanced QinQ Stacking for Multi-Tenant Networks and Seamless VLAN Isolation
- ▶ Hardened Secure Control Technology for Uninterrupted Administration Under Attack
- ▶ All Models Can Support Layer 3 if Necessary
- ▶ PoE Budget Can Be Adjusted According to Client Requirements
- ▶ Ability to Modify the Number and Types of Ports
- ▶ Supports PoE+ or PoE++ Ports
- ▶ Design can be Modified to Include a Removable Power Supply Unit
- ▶ Removable Fans can be Added (Where Applicable)



HARDWARE SPECIFICATIONS

| | 1G RJ45 Downlinks | 1G Combo Downlinks | 10G SFP+ Uplinks | PoE | 2 Hot swap PSU | Marvell Chipset |
|----------------------|----------------------|-----------------------|---------------------|------|-------------------|--------------------|
| LN-2316G-4XGF | 16 | - | 4 | - | - | 98DX223S |
| LN-2316GP-4XGF | 16 | - | 4 | 400W | - | 98DX223S |
| LN-2316GP-2XGF | 16 | - | 2 | 400W | - | 98DX223S |
| LN-2316XF8C-4XGF | 16 | 8 | 4 | - | - | 98DX223S |
| LN-2416XF8C-4XGF-HSP | 16 | 8 | 4 | - | + | 98DX336S |

Hardware

| | |
|-----------------|---|
| Marvell Chipset | 98DX223S/ 98DX336S |
| MTBF | 100,000h |
| Case | 440x245x44mm (LxDxH) |
| Weight | 2.8KG (16x1G + 4xSFP/SFP+), 3.5KG (16x1G + 4xSFP/SFP+ w/16xPOE+) |

Environment

| | |
|-----------------------|-----------------------------|
| Operating temperature | -5°C (23°F) to 65°C (149°F) |
| Humidity | 5% ~ 95% non-condensing |

Capacity

| | |
|--------------------------|--|
| Switching capacity | 88 Gbps (for models LN-2316G-4XGF and LN-2316GP-4XGF); 72 Gbps (for model LN-2316GP-2XGF); 128 Gbps (for models LN-2316XF8C-4XGF and LN-2416XF8C-4XGF-HSP) |
| Forwarding rate | 65.47 Mpps (for models LN-2316G-4XGF and LN-2316GP-4XGF); 53.57 Mpps (for model LN-2316GP-2XGF); 95.23 Mpps (for models LN-2316XF8C-4XGF and LN-2416XF8C-4XGF-HSP) |
| MAC address table | Max 16k |
| Packet buffer size | 3 MB |
| Active VLANs support | 4096 |
| Maximum jumbo frame size | 9,216 bytes |

SOFTWARE FEATURES

Quality of Service

| | |
|---|---|
| DiffServ (Differentiated services) | Strict priority support |
| Priority queue | Traffic shaping/policing |
| ACL mapping to priority queue | WRR support |
| Flow mirror, 802.1p Support | SP+WRR |
| Flow redirection | Rate limiting (Based on per port and per queue) |
| Single Rate Three Color Marker (srTCM) | Class map defines traffic flow with ACLs or support for network traffic management |
| Two Rate Three Color Marker (trTCM) | Policy map & route MAP to define the action for a set of classified inbound traffic |
| QoS based on classification (Based on IP, MAC and VLAN) | |

Security

| | |
|---|--|
| RADIUS, TACACS+ | Downloadable ACL |
| Port security | Dynamic ACL |
| DHCP Snooping | Role based access control |
| AAA (Authentication, Authorization, and Accounting) | 802.1x authentication (Port Based, MAC Based, Web Based) |
| ACL (Based On IP, Port, Protocol, MAC, Time Based) | Management ACL |
| IP source guard | DoS prevention |
| Protected port | Secure copy (SCP) |
| ARP inspection (DAI & SAI) | Kerberos |
| SSL | |

Multicast

| | |
|---|---|
| Internet Group Management Protocol -IGMP v1/v2/v3 | Multicast Listener Discovery- MLD v1/V2 |
| IGMP snooping | MLD snooping |
| PIM-SM/SSM | Multicast TV VLAN |
| PIM-SMv6 | MVR (Multicast VLAN registration) |

SOFTWARE FEATURES

Layer 2

| | |
|---------------------------------|--|
| Port Tagging/untagged | BPDU guard |
| MAC based VLANs | GVRP |
| Private VLAN | LLDP/LLDP MED |
| Subnet based VLAN | RADIUS assigned VLAN |
| Auto MDI/MDIX | Link aggregation (Ether Channel) |
| Loopback detection | Link Aggregation Control Protocol (LACP) |
| Port isolation | Port mirroring (Port, ACL, VLAN Based) |
| Root guard | Default VLAN |
| Guest VLAN | Auto voice VLAN |
| Energy Efficient Ethernet (EEE) | Green Ethernet |
| Link flapping detection | Flow control |
| STP/RSTP/MSTP | Native VLAN |
| QinQ (802.1Q) | Loop guard |

Layer 3

| | |
|--|---|
| IPv4 and IPv6 dual stack | IPv6 prefix list |
| Intra-Site Automatic Tunnel Addressing Protocol (ISATAP) | IP source guard |
| Policy Based Routing (PBR) | DHCP server |
| ARP, Gratuitous ARP | DHCP relay |
| DHCP Client | IPv6 NDRA (Neighbor Discovery Router Advertisement) |
| ICMP redirect & ICMP unreachable | Duplicate Address Detection (DAD) |
| IPv6 SLAAC (Stateless Address Auto configuration) | IPv6 ND |
| ARP-Proxy | DHCP Option 82, 66, 67 |

Layer 3 Routing

| | |
|---|--------------------------------------|
| Static routing (IPv4, IPv6) | Inter-VLAN routing |
| Routing Information Protocol, version 2 (RIPv2) | OSPFv2/v3 (Open Shortest Path First) |

High Availability

| | |
|---|---|
| Stacking (Up-to 8 members) | Ring Redundancy Protocol (RRP) |
| Equal-Cost Multi Path (ECMP) | Virtual Router Redundancy Protocol (VRRP) |
| Storm control (Broadcast, Multicast, Unicast) | |

SOFTWARE FEATURES

Management

| | |
|------------------------------------|--|
| Local GUI | Management: RUDDER (Controller)/Standalone |
| Industrial standard CLI | SPAN/RSPAN |
| Telnet support | SSHv1/v2 |
| Storage & File management with USB | Firmware auto install support |
| TFTP support | Syslog server |
| SNMP v1/v2c/v3 | RMON (All 4 Groups 1,2,3,9) |

Standard Compliance

IEEE Standards Compliance

| | |
|--|-----------------------------------|
| 802.1AB LLDP/ LLDP-MED | 802.3ae 10 gigabit Ethernet |
| 802.1D MAC bridging | 802.3at power over Ethernet Plus |
| 802.1p Mapping to priority queue | 802.3u 100Base-TX |
| 802.1s Multiple Spanning Tree (MST) | 802.3x flow contro |
| 802.1w Rapid Reconfiguration of Spanning Tree (RSTP) | 802.3z 1000Base-SX/LX |
| 802.1x Port-based Network Access Control (PNAC) | 802.3 MAU MIB (RFC 2239) |
| 802.3 Carrier Sense Multiple Access/Collision Detection(CSMA/CD) | 802.1Q VLAN tagging |
| 802.3ab 1000Base-T | 802.3az Energy Efficient Ethernet |
| 802.3 10Base-T | 802.3af Power over Ethernet |
| 802.3ad link aggregation (Dynamic and Static) | |

Monitoring and Troubleshooting

| | |
|--|--------------------------------------|
| Errdisable detection and recovery | CPU Utilization |
| Device temp/PSU/FAN/status display & alarm | User operation logs |
| Virtual cable test | Management logs, alarms |
| ICMPv4/v6 | DDM (Digital Diagnostic Monitoring) |
| Traceroute | UDLD (Unidirectional Link Detection) |

Packaging Content

Switch with type D power cord with rack mounting kit

CERTIFICATION & COMPLIANCES

Regulatory

FCC

BIS

TEC

Environmental

RoHS

CE

ORDERING INFORMATION

| Models | Description |
|----------------------|---|
| LN-2316G-4XGF | Campus Switch L2, 16×1G ETH+ 4×10G, no PoE |
| LN-2316GP-4XGF | Campus Switch L2, 16×1G ETH+ 4×10G, PoE+ 400W |
| LN-2316GP-2XGF | Campus Switch L2, 16×1G+2×10G, PoE+ 400w USB, OOB |
| LN-2316XF8C-4XGF | Campus Switch L2, 16×1G SFP + 8×1G SFP/RJ45 COMBO + 4×10G |
| LN-2416XF8C-4XGF-HSP | Campus Switch L3, 16×1G SFP + 8×1G SFP/RJ45 COMBO + 4×10G Hot-swappable 2PSU, AC+AC |

In all configurations: USB, OOB, and Console.

All switches include a 1-year HW Warranty.