

Service Provider focused metro access solution suited for MTU/MDU applications

Linksys Service Provider (SPS) switches deliver cost-effective Metro Ethernet Access solutions. These products are optimized for Multi-tenant Units (MTU) and Multi-Dwelling Units (MDU) where Triple Play (VoIP, Video, and Data) services are delivered by the Service Provider to multiple businesses or homes in close proximity.

The Linksys SPS2024 Managed Switch makes it ideal for environments where security and uptime are important. It offers 24 Gigabit copper ports and 2 shared pluggable SFP modules for optional optical interfaces for connecting to the core network.

The SPS switches facilitate the delivery of multiple services over a layer 2 network with support for Q-in-Q. This allows customer VLANs to be kept separate across the Service Provider backbone. Also, for efficient delivery of multicast traffic (like Video) to multiple customers, these switches provide support for a variation of MVR (Multicast VLAN Registration).

Network security is a primary concern for Service Providers, and the SPS family of switches deliver a number of advanced features that alleviates this concern. Support for Dynamic ARP Inspection eliminates the man-in-the-middle attack. IP Source Guard prevents a subscriber (or malicious user) from using an IP address not assigned to them. DHCP Guard eliminates rogue devices from behaving as a DHCP server. STP Root Guard prevents a rogue spanning tree device from advertising that it should be the root bridge thereby having the Spanning Tree network compromised by an outside device. Unauthorized access to the network is protected through 802.1X port and multi-session authentication and MAC Filtering/Port Security. 802.1X requires clients to authenticate themselves before the port will pass data. An additional security feature is Access Control Lists (ACLs) which restrict network use to certain users, groups, or applications. Also, the SPS switches secure Management traffic with support for SSH, SSL, and SNMPv3.

The Management capabilities of the SPS switches include support for DHCP Option 82, allowing for assignment of IP addresses to subscribers on the basis of where they connect to the network. Configuration of the switches can be performed through a Graphical User Interface or through a Command Line Interface (CLI). The switches also support SNMP for management from a Network Management station.

Solution optimized for Triple Play MTU/MDU Metro Access deployments by Service Providers

Feature set for delivery of Services with support for Q-in-Q and Multicast VLAN

Strong security feature set includes support for IP Source Guard, Dynamic ARP Inspection, STP Root Guard, DHCP Guard, and per-session 802.1X support

Management features include support for DHCP Option 82, CLI, and Intuitive Web GUI



PRODUCT DATA

BUSINESS SERIES

24-Port 10/100/1000 Gigabit SP Switch

Features

- 24 - 10/100/1000 Switched RJ-45 ports deliver up to 2000 Mbps of throughput per port
- 2 shared mini-GBIC slots for Fiber and Copper Gigabit Ethernet expansion
- 48 Gbps Non-blocking, store-and-Forward switching mechanism
- Simplified QoS management enabled by advanced queuing techniques using 802.1p, Diffserv or ToS traffic prioritization specifications
- Configuration and monitoring from a console port with CLI or a standard web browser with WebView management
- Secure remote management of the switch via SSH and SSL secure channel network protocols
- 802.1Q-based VLANs enable segmentation of networks for improved performance and security
- Stacking Q-in-Q VLAN allows customer VLANs transparently crossing a Service Provider network and isolating traffic among customers
- Private VLAN Edge for simplified network isolation for guest connections or autonomous networks
- Automatic configuration of VLANs across multiple switches through GVRP/GARP
- Automatic MDI/MDIX detection support

PRODUCT DATA

BUSINESS SERIES

24-Port 10/100/1000 Gigabit SP Switch

Specifications

| | |
|--------------|---|
| Model | SPS2024 |
| Ports | 24 RJ-45 Connectors for 10BASE-T/100BASE-TX/1000BASE-T 2 Combo Ports with miniGBIC/SFP Slots Console Port Auto MDI/MDI-X Autonegotiate/Manual Setting |
| Cabling Type | UTP CAT5 or Better for 10BASE-T/100BASE-TX, UTP CAT5e or Better for 1000BASE-T |
| LEDs | Giga Link/Act, Giga Speed, MiniGBIC Link/Act, Speed, System |

Performance

| | |
|--------------------|-----------------------------------|
| Switching Capacity | 48 Gbps, Non-blocking |
| Forwarding Rate | 35.71 Mpps Wire-Speed Performance |

Layer 2

| | |
|-----------------|---|
| MAC Table Size | 8K |
| Number of VLANs | 256 Active VLANs (4096 range) |
| VLAN | Port-Based and 802.1Q Tag-Based VLANs Q-in-Q Stacking VLAN Private VLAN Edge (PVE) GVRP - Dynamic VLAN Registration Management VLAN |
| HOL Blocking | Head of Line Blocking Prevention |
| MVR | Multicast VLAN Registration Implementation also known as Multicast TV VLAN |

Management

| | |
|--------------------|--|
| Web User Interface | Built-in Web UI for Easy Browser-Based Configuration (HTTP/HTTPS) |
| CLI Interface | CLI Support via Console Port or Telnet |
| SNMP | SNMP Version 1, 2c, 3 with Support for Traps |
| SNMP MIBs | RFC1213 MIB-2, RFC2863 Interface MIB, RFC2665 Ether-like MIB, RFC1493 Bridge MIB, RFC2674 Extended Bridge MIB (P-bridge, Q-bridge), RFC2819 RMON MIB (groups 1, 2, 3, 9 only), RFC2737 Entity MIB, RFC2618 RADIUS Client MIB, RFC1215 Traps |
| RMON | Embedded Remote Monitoring (RMON) software agent supports four RMON groups (history, statistics, alarms, and events) for enhanced traffic management, monitoring, and analysis |
| Firmware Upgrade | CLI upgrade and Web Browser upgrade (HTTP) and TFTP |
| Port Mirroring | Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe |
| Other Management | Traceroute Secure Socket Layer (SSL) Secure Shell (SSH) RADIUS Port Mirroring TFTP Upgrade SSL Security for Web UI Management Access List for IP Address DHCP Client BootP SNTP Xmodem Upgrade Cable Diagnostics PING Telnet Client (SSH Secure Support) |

Security

| | |
|----------------|--|
| IEEE 802.1X | 802.1X - RADIUS Authentication. MD5 Encryption 802.1X Multiple Sessions Authentications on per-Host Basis 802.1X Guest VLAN |
| Access Control | ACLs - Permit, Drop, or Shutdown based on: Source and Destination MAC-Based Source and Destination IP Address Protocol TOS/DSCP Port VLAN Ethertype |

- User/Network port level security via 802.1X authentication and MAC-based filtering
- 802.1X multiple sessions mode enhances 802.1X authentication on per-host basis
- Increased bandwidth (up to 8x) and added link redundancy with Link Aggregation Control Protocol (LACP)
- Enhanced rate limiting capabilities provide control, including back pressure to control the rate that data can flow in and out of a port
- DHCP snooping prevents rogue devices from acting as the DHCP server and ensures the integrity of Port, MAC, and IP address
- Multicasting, broadcasting and flood control
- Port mirroring for non-invasive monitoring of switch traffic
- Jumbo frame support—up to 9K bytes
- SNMP v1, v2c, v3
- Fully rack-mountable using the included rack-mounting hardware

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PRODUCT DATA

BUSINESS SERIES



Access Security

DHCP Snooping
IP Source Guard
Dynamic ARP Inspection
L2 DHCP Relay and Option 82
STP Root Guard
MAC-Based Port Security

Availability

Link Aggregation

Link Aggregation using IEEE 802.3ad LACP
Up to 8 Ports in up to 8 Trunks

Storm Control
Spanning Tree

Broadcast, Multicast, and Unknown Unicast
IEEE 802.1D Spanning Tree, IEEE 802.1w Rapid Spanning Tree, IEEE 802.1s Multiple Spanning Tree, STP Root Guard

IGMP Snooping

IGMP (v1/v2) snooping provides for fast client joins and leaves of multicast streams and limits bandwidth-intensive video traffic to only the requestors. Support 256 multicast groups.

QoS

Priority levels
Scheduling
Class of Service

4 Hardware Queues
Priority Queueing and Weighted Round Robin (WRR)
Port-Based
802.1p VLAN Priority-Based
IP TOS/DSCP-Based

Per Flow QoS

VLAN ID
Ether Type
Source/Destination MAC Address
IPv4/v6 IP Precedence/TOS/DSCP-Based
Source/Destination IPv4 Address
Protocol
TCP/UDP Port-Based
Diffserv
Classification and Remarking DSCP

Rate Limiting

Per Flow Ingress Policer
Per Port Ingress Rate Control and Egress Shaping

Standards

802.3 10BASE-T Ethernet, 802.3u 100BASE-TX Fast Ethernet, 802.3ab 1000BASE-T Gigabit Ethernet, 802.3z Gigabit Ethernet, 802.3x Flow Control, 802.3 ad LACP, 802.1D STP, 802.1Q/p VLAN, 802.1w Rapid STP, 802.1s Multiple STP, 802.1X Port Access Authentication

Environmental

Dimensions
Weight
Power
Certification
Operating Temp.
Storage Temp.
Operating Humidity
Storage Humidity

16.93" x 1.75" x 13.78" (430 x 44.45 x 350 mm)
8.60 lb (3.9 kg)
Internal Switching Power
FCC Part15 Class A, CE Class A, UL, cUL, CE Mark, CB
32 to 104°F (0 to 40°C)
-4 to 158°F (-20 to 70°C)
10 to 90%
10 to 95%

Package Contents

- One SPS2024 with 24 10/100/1000 RJ-45 Gigabit ports and 2 Shared Gigabit mini-GBIC
- Power Cord
- Two Rack Mounting Kits/Eight Screws
- One CD with User Guide in PDF Format
- One Registration Card
- Console Cable

Minimum Requirements

- Web-Based Utility: Web Browser—Microsoft Internet Explorer (Version 5.5 or Above) or Mozilla Firefox (Version 2.0.0.1)
- CAT5 Ethernet Network Cable

Check the product package and contents for specific features supported. Specifications are subject to change without notice.



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Model: SPS2024