HAN Networks

S2130 Series

Smart Gigabit Ethernet LAN Switch Family

S2130-24G4X-S
S2130-24G4X-L
S2130-24G4X-E

S2130-P24G4X-S
S2130-P24G4X-L
S2130-P24G4X-E

S2130-48G6X-S
S2130-48G6X-E

S2130-P48G6X-S
S2130-P48G6X-E

Product Description

The S2130 series switch is an enhanced intelligent gigabit Ethernet switch launched by HAN Network Co., Ltd. for high-performance cloud computing, data centers, and high-end campus networks. Based on new high-performance hardware with enhanced three-layer characteristics, it provides high-performance, reliable, secure, and minimalist network access, which can be widely used in scenarios such as campus networks, branch offices, and workgroups in enterprise networks, achieving convenient access to workstations, wireless access points, IP phones, and Internet of Things (IoT) devices.

This series supports powerful Layer 2/Layer 3 routing functions, high-performance line speed forwarding, flexible port configuration, PoE power management, high bandwidth virtual chassis, and rich security features, which can greatly improve the security, reliability, and operational efficiency of user services, making it the best choice for enterprise networks.

Product Characteristics

- 24 and 48 Gigabit Ethernet data or PoE+ ports with line-rate performance
- 10 Gigabit Ethernet SFP+ uplink ports; “-L” model need to order license for upgrading uplink ports from SFP to SFP+.
- Perpetual and fast PoE+ support across all PoE models
- 10 GigE virtual chassis bandwidth up to 8 units (stacking). (Supported by “-E” models.

Management

- Software with management through web interface (WebView 2.0), command-line interface (CLI), and Simple Network Management Protocol (SNMP)
- Ethernet operations, administration and management (OA&M) support for service configuration and monitoring
- Cloud enabled with HAN CSP for secure, resilient, and scalable cloud-based network management.
- Support by HAN ESP (NMS)

Security

- Comprehensive 802.1X features to control access to the network.
- Flexible device and user authentication with HAN SAMP security and access management platform (IEEE 802.1x/MAC).
- Advanced QoS and Access Control Lists (ACLs) for IPv4 and IPv6 traffic control, including an embedded denial of service (DoS) engine to filter out unwanted traffic attacks.
- Extensive support of user-oriented features such as learned port security (LPS), port mapping, Dynamic Host Configuration Protocol (DHCP) binding tables, and User Network Profile (UNP)

Performance and redundancy

- Supports Layer 3 routing features, supports static routing for IPv4 and IPv6, and advanced routing protocols such as OSPF (OSPF advanced routing is supported on “-E” models.)
- Triple speed (10/100/1G) user interfaces and fiber interfaces (SFP/SFP+) supporting 1G/10G uplink.
- Wire-rate switching and routing performance.
- High availability with virtual chassis concept, remote/redundant stacking links, primary/secondary unit failover and configuration rollback. (It’s supported by “-E” models.)

Convergence

- Enhancing Voice over IP (VoIP) and Video Performance with Policy Based QoS
- Future-ready support for multimedia applications with wire-rate multicast
- IEEE 802.3af, IEEE 802.3at PoE support for IP phones, wireless LAN (WLAN) access points, PTZ video cameras, and IoT devices

Advantages

- Meets customer configuration needs and offers excellent investment protection and flexibility, as well as ease-of-deployment, operation, and maintenance.

- Provides outstanding performance when supporting real-time voice, data, and video applications for converged scalable networks.
- Ensures efficient power management, reduces operating expenses (OPEX), and lowers total cost of ownership (TCO) through low power consumption and dynamic PoE allocation, which delivers only the power needed by the attached device.
- A field-upgradeable solution that makes the network highly available and reduces OPEX.
- Fully secures the network at the edge, at no additional cost.
- Enterprise-wide cost reduction through hardware consolidation, to achieve network segmentation and security without additional hardware installation.
- Supports DHCP Server, providing IP addresses assignment for clients & terminals according to services requirements.
- Supports cost-effective installation and deployment with automated switch setup and configuration and end-to-end virtual LAN (VLAN) provisioning.
- HAN CSP powers secure, resilient and scalable, cloud-based network management. It offers hassle-free network deployment and easy service rollout with advanced analytics for smarter decision-making. It provides IT-friendly Unified Access with secure authentication and policy enforcement for users and devices.

Product Specifications

型号	S2130-24G4X-S S2130-24G4X-L S2130-24G4X_E	S2130-P24G4X-S S2130-P24G4X-L S2130-P24G4X-E	S2130-48G6X-S S2130-48G6X-E	S2130-P48G6X-S S2130-P48G6X-E
Switch Capacity	128Gbps	128Gbps	216Gbps	216Gbps
Switch frame rate	126Mpps	126Mpps	222Mpps	222Mpps
MAC capacity	16K	16K	16K	16K
Gigabit RJ45	24	24 PoE+	48	48 PoE+
1G/10G SFP+	4 “-L”: 4 SFP by default; Could be upgraded to 4 SFP+ by licenses	4 “-L”: 4 SFP by default; Could be upgraded to 4 SFP+ by licenses	6	6
Console port	1	1	1	1
Power supply	Internal	Internal	Internal	Internal
Fans	1	2	1	2
CPU	1 GHz MIPS dual core	1 GHz MIPS dual core	1 GHz MIPS dual core	1 GHz MIPS dual core

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Flash	256MB	256MB	256MB	256MB
RAM	1G DDR4	1G DDR4	1G DDR4	1G DDR4
Packet buffers	16 Mb/s	16 Mb/s	16 Mb/s	16 Mb/s
System power consumption (25℃)	28.1W	28.3W	47.7W	54.8W
Power consumption w/PoE	N/A	416.6W	N/A	804.7W
Input voltage	100V ~ 240VAC, 50/60Hz	100V ~ 240VAC, 50/60Hz	100V ~ 240VAC, 50/60Hz	100V ~ 240VAC, 50/60Hz
dimensions (mm)	442x160x43.6	440x320x43.6	442x260x43.6	440x320x43.6
Weight (w/o packaging & accessories)	2.05Kg	4.15Kg	4.15Kg	5.10Kg
Operating temperature	0℃-45℃	0℃-45℃	0℃-45℃	0℃-45℃
Humidity (operating)	5%-95% noncondensing	5%-95% noncondensing	5%-95% noncondensing	5%-95% noncondensing
Storage temperature	-40℃-70℃	-40℃-70℃	-40℃-70℃	-40℃-70℃

Note: * New features of future products and software

Detailed product features

Simplified management

- Intuitive CLI in a scriptable BASH environment via console, Telnet or Secure Shell (SSH) v2 over IPv4/IPv6*
- Powerful WebView Graphical Web Interface via HTTP and HTTPS over IPv4/ IPv6*
- Fully-programmable RESTful web services interface with XML and JSON support. API enables access to CLI and individual mib objects
- Integrated with HAN ESP/CSP for network management
- Full configuration and reporting using SNMPv1/2/3 to facilitate third-party network management over IPv4/IPv6*
- File upload using USB, TFTP, FTP, SFTP, or SCP using IPv4/IPv6
- Human-readable ASCII-based configuration files for off-line editing, bulk configuration, and out-of-the-box auto-provisioning
- Multiple microcode image support with fallback recovery
- Dynamic Host Configuration Protocol (DHCP) relay for IPv4/IPv6*
- IEEE 802.1AB Link Layer Discover Protocol (LLDP) with Media Endpoint Discover (MED) extensions
- Network Time Protocol (NTP)

Monitoring and troubleshooting

- Local (on the flash memory) and remote server logging (Syslog): event and command logging
- IP tools: Ping and trace route
- Loopback IP address support for management per service
- Policy- and port-based mirroring
- Remote port mirroring*
- Remote Monitoring (RMON) sFlow v5*
- Unidirectional Link Detection (UDLD) and Digital Diagnostic Monitoring (DDM)

Network configuration

- ESP/CSP Management
- BOOTP/DHCP client allows autoconfiguration of switch IP information for simplified deployment
- DHCP relay to forward client requests to a DHCP server
- DHCP Server *
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP) with MED extensions for automated device discovery
- Multiple VLAN Registration Protocol (MVRP) for IEEE 802.1Q-compliant VLAN pruning and dynamic VLAN creation

Resiliency and high-availability

- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) encompasses IEEE 802.1D Spanning Tree Protocol (STP) and IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- Per-VLAN spanning tree (PVST+) and 1x1 STP model
- IEEE 802.3ad/802.1AX Link Aggregation Control Protocol (LACP) and static LAG groups across modules
- Built-in CPU protection against malicious attacks
- Virtual Routing Redundancy Protocol with Tracking Function (VRRP) *

Advanced security

Access control

- Autosensing IEEE 802.1X multi-client, multi-VLAN support
- MAC-based authentication for non-IEEE 802.1X hosts
- User Network Profile (UNP) simplifies NAC by dynamically providing predefined policy configuration to authenticated clients - VLAN, BW
- Secure Shell (SSH) with public key infrastructure (PKI) support
- Terminal Access Controller Access Control System Plus (TACACS+) client
- Centralized Remote Access Dial-In User Service (RADIUS) and Lightweight Directory Access Protocol (LDAP) administrator authentication
- Centralized RADIUS for device authentication and network access
- control authorization
- Learned Port Security (LPS) or MAC
- address lockdown
- Access Control Lists (ACLs); flow-based field in hardware (Layer 1 to Layer 4)
- ARP poisoning detection
- IP Source Filtering as a protective and effective mechanism against

ARP attacks

Converged networks

Power over Ethernet (PoE)

- PoE models support HAN WLAN access points, as well as any IEEE 802.3af, IEEE 802.3at compliant end device
- Configurable per-port PoE priority and max power for power allocation
- Dynamic PoE allocation: Delivers only the power needed by the powered devices (PD) up to the total power budget for most efficient power consumption

Quality of Service (QoS)

- Priority queues: Eight hardware-based queues per port for flexible QoS management
- Traffic prioritization: Flow-based QoS with internal and external (also known as, remarking) prioritization
- Bandwidth management: Flow-based bandwidth management
- Queue management: Configurable scheduling algorithms — Strict Priority Queuing (SPQ), Weighted Round Robin (WRR)

Layer-2, Static Routing, and Multicast

Layer-2 switching

- Up to 16k MAC addresses
- Up to 1.5k total system policies
- Latency: < 4 µs
- Max Frame: 12KB (jumbo)

IPv4 and IPv6

- Static routing for IPv4 and IPv6*
- RIPv2 for IPv4 *
- RIPng for IPv6 *
- OSPFv2 *

Multicast

- IGMPv1/v2/v3 snooping to optimize multicast traffic
- Multicast Listener Discovery (MLD) v1/v2 snooping
- Up to 1000 multicast groups

Network protocols

- DHCP relay (including generic UDP relay)
- Address Resolution Protocol (ARP)
- Generic User Datagram Protocol (UDP) relay per VLAN
- DHCP Option 82 — configurable relay agent information

Indicators

System LEDs

- SYS: System Status
- Mode: Port link/PoE Status

Per-port LEDs

- 10/100/1000: PoE, link/activity
- SFP: Link/activity

Commercial references

Model	Description
S2130-24G4X-S	Fixed 1RU chassis 24 RJ 45 10/100/1G BaseT, 4 10G SFP+ uplink ports
S2130-48G6X-S	Fixed 1RU chassis 48 RJ 45 10/100/1G BaseT, 6 10G SFP+ uplink ports
S2130-P24G4X-S	Fixed 1RU chassis 24 RJ 45 PoE 10/100/1G BaseT, 4 10G SFP+ uplink ports, 370W power budget
S2130-P48G6X-S	Fixed 1RU chassis 48 RJ 45 PoE 10/100/1G BaseT, 6 10G SFP+ uplink ports, 740W power budget
S2130-24G4X-L	Fixed 1RU chassis 24 RJ 45 10/100/1G BaseT, 4 1G SFP uplink ports. (4 1G SFP uplink could be upgraded to 4 10G SFP+ by license “S2130-SW-PERF”)
S2130-P24G4X-L	Fixed 1RU chassis 24 RJ 45 PoE 10/100/1G BaseT, 4 1G SFP uplink ports, 370W power budget. (4 1G SFP uplink could be upgraded to 4 10G SFP+ by license “S2130-SW-PERF”)
S2130-SW-PERF	S2130 “-L” software license, for upgrading 1G SFP uplink to 10G SFP+ uplink.
S2130-24G4X-E	Enhanced fixed 1RU chassis 24 RJ 45 10/100/1G BaseT, 4 10G SFP+ uplink ports.
S2130-P24G4X-E	Enhanced fixed 1RU chassis 48 RJ 45 10/100/1G BaseT, 6 10G SFP+ uplink ports
S2130-48G6X-E	Enhanced fixed 1RU chassis 24 RJ 45 PoE 10/100/1G BaseT, 4 10G SFP+ uplink ports, 370W power budget
S2130-P48G6X-E	Enhanced fixed 1RU chassis 48 RJ 45 PoE 10/100/1G BaseT, 6 10G SFP+ uplink ports, 740W power budget
S2130-SW-SL3	S2130 software license, for supporting stacking and layer 3 features.

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