

Fully Managed L2 Switch, iPECS Ethernet Switch 3500 Series

iPECS ES-3500 Switches are perfect for both LMEs and SMBs looking for solutions with the latest enterprise class switching features.

The iPECS ES-3500 Series are fully managed Layer 2 switches that support enterprise-class Layer 2 switching features including advanced QoS, security and simplified and intuitive management features allowing network administrators to build high performing robust network affordably.

The iPECS ES-3500 Series comes in two models (iPECS ES-3528GP/3552GP) with 56Gbps and 104 Gbps switching capacity repectively. Administrators can extend the existing networks or newly build the reliable and high-performing networks using sophisticated features optimized for all size enterprises and supporting both aggregation and access-level solutions. The iPECS ES-3500 Series also incorporate the Green Ethernet technology for energy efficiency. The Green Ethernet power-saving features and fanless design significantly reduce power consumption.

Enhancing overall network stability and reliability, the iPECS ES-3500 Series ensures fast recovery from filed links. The IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence. Moreover, IEEE 802.1s Multiple Spanning Tree Protocol runs STP per VLAN base, providing Layer 2 load sharing onredundant linkes up to 64 instances.

HIGHLIGHTS

Enterprise-class Layer 2 Switching with advanced features STP/RSTP/MSTP, IGMP Snooping, VLAN, Link Aggregation, LLDP, Storm Control, Jumbo Frame

Advanced Built-in Security Advanced built-in security like 802.1x RADIUS authentication, filtering, IPv6 ACL

Green Ethernet

Environment friendly design for power saving via link connection, cable length and fanless design

Easy to Install Auto-negotiation, Auto-MDI/MDIX, At-a-glance tri-colored status LED

iPECS ES-3500 Series

ES-3528GP

- 24 ports 10/100/1000 Base-T
- 4 ports Gigabit shared uplinks
- RJ-45 Console port support
- High availability
- IPv4/IPv6 dual protocol stack
- 56 Gigabit switching capacity
- Digital Diagnostic Monitoring on 1G SFP port
- IEEE 802.3az Energy-Efficient

ES-3552GP

- 48 ports 10/100/1000 Base-T
- 4 ports Gigabit shared uplinks
- RJ-45 Console port support
- High availability
- IPv4/IPv6 dual protocol stack
- 104 Gigabit switching capacity
- Digital Diagnostic Monitoring on 1G SFP port
- IEEE 802.3az Energy-Efficient





KEY BENEFITS

Advanced Quality of Service (QoS)

Prioritization of the data on the network is essential in order to ensure that mission critical applications such as voice are delivered in a timely manner. The iPECS Ethernet Switch is able to classify packets into one of four different priority queues and serve each packet in the priority queues using WRR (Weighted Round Robin) or SPQ (Strict Priority Queuing) method.

Green Ethernet

The iPECS ES-3500 Series Gigabit Ethernet Switches incorporate the latest green Ethernet technology to help you save energy costs for your network. It automatically detects link status, allowing each port to power down when the port is not connected or the connected device is not active. In addition, cable length is also automatically detected and adjusts the signal strength accordingly.

Virtual Private Network

The iPECS ES-3500 Series supports Layer 2 VPNs by using Q-in-Q functions, where an 802.1Q tag from a customer VLAN is encapsulated in a second 802.1Q tag. The switch supports rewriting the VLAN tag of egress traffic when the ingress traffic is tagged.

Secure Networking

The iPECS ES-3500 Series support key security features like RADIUS authentication and authorization as well as multi-layer filtering. All these management via web management sessions are secured with HTTPS encryption.

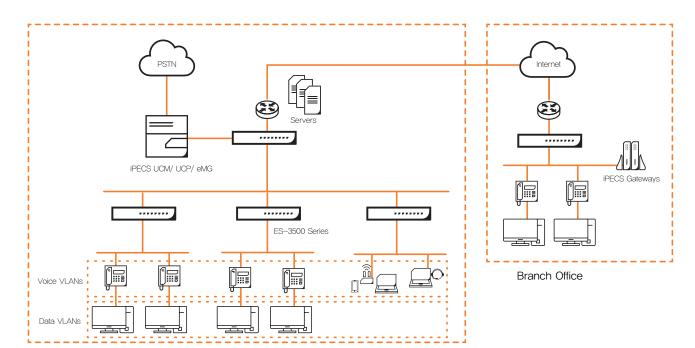
IPv6 Support

The switch supports a number of IPv6 features, including IPv6 Management, DCHPv6 Snooping with Option 37, IPv6 Source Guide, and MVR6.

Easy to Install

The iPECS Ethernet Switches have plug and play capabilities such as Auto-negotiation of speed and duplex mode, Auto-MDI/MDIX, at-a-glance tri-colored intuitive status LEDs right on top of the ports. Its intuitive web user interface makes the installation and administration much easier.

Converged Network using iPECS Ethernet Switch Solutions



Enterprise-class L2 switching features available in iPECS ES-3500 Series

| • STP, RSTP, MSTP | Provides path redundancy while preventing undesirable loops in the network, thus improving network resiliency and availability | | |
|--|--|--|--|
| IGMP snooping v1/2/3 | With IGMP Snooping enabled, eliminate unnecessary traffic and improve overall network performance | | |
| Advanced Security | 802.1x/Radius/TACACS+ Authentication & encryption, Advanced ACL, Guest VLAN, DHCP Snooping, Dynamic ARP Inspection, SSHv2, HTTPS | | |
| Advanced QoS | Standard L2 QoS Features + Priority marking, L2 Policing (Metering), Time-Based ACL, CPU Interface Filtering | | |
| Link aggregations | gregations Group together any number of ports automatically using LACP, 8 members per group, 16 groups | | |
| • VLAN | Segment the network by grouping users for optimal use of the network - Port/Protocol/MAC/IP based VLAN, 256 VLANs | | |

Feature Specifications

| Spanning Tree Protocols 95,000179/002.10/08779/002.10/08779 Viea Lisk Aggregation (202.34) BEOU Hiteriguard maximum of groups 68 Lisk Aggregation (202.34) Maximum of groups 69 VLAN Maximum of groups 69 VLAN Maximum of another propo 69 VLAN Maximum of another VLAN per Solton 286 VLAN Maximum of another VLAN per Solton 286 VLAN Maximum of another VLAN per Solton 766 VLAN Maximum of multical groups 766 MAX Number of another VLAN per Solton 766 766 IDE (Mo2.14a) IL Ling Operand groups 766 MAX Number of multical groups 766 766 MAX Nu | List | Feature | Detailed list | ES-3500 series |
|---|-----------------|----------------------------|--|----------------|
| Poincing Poincing Poincing Poincing Rob grange Rob grange Rob grange Rob grange In An under of groups Rob grange Rob grange Rob grange 12 Second Descination MAC based load balance Ves Rob grange 12 Second Descination MAC based load balance Ves Rob grande 12 Manage Max Number of advo VLAN provis VLAN, VAN (VAR) VCNPP Ves 12 Manage Max Number of advo VLAN provis VLAN, VAN (VAR) Provis VLAN, VAN (VAR) Ves 12 Manage Max Number of advo VLAN provis VLAN, VAN (VAR) Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN, Van / Leave, Fast New Ves 12 Manage Max Number of advo VLAN provis VLAN housed | | Sponning Tree | 802.1d(STP)/802.1w(RSTP)/802.1s(MSTP) | Yes |
| Interaction of the second se | | | BPDU filter/guard | Yes |
| Liki Agregation (802 34) Max number of members per group 8 L2 Source and Destination MAC based load balance Ves NUMA Max Number of action VLANs per Solich 266 Max Number of action VLANs per Solich Ves 267 Max Number of action VLANS per Solich Ves Ves ILDP (602 14a) Link Layse Discovery Produced Ves Ves GMAP Snooping IGMAP Snooping VL20, Snoopil/MP packets per VLAN, Juin / Leave, Fast Leave, Ves Ves IGMAP Snooping IGMAP Snooping VL20, Snoopil/MP packets per VLAN, Juin / Leave, Fast Leave, Ves Ves IGMAP Snooping IGMAP Snooping VL20, Snoopil/MP packets per VLAN, Juin / Leave, Fast Leave, Ves Ves IGMAP Snooping IGMAP Snooping VL20, Snoopil/MP packets per VLAN, Juin / Leave, Fast Leave, Ves Ves IGMAP Snooping IGMAP Snooping VL20, S | | | Root guard | Yes |
| La Switching Source and Destination MAC based load balance Yes La Switching VLAN IDS 4000 Number of active VLANA provise VLAN, GVRP Yes Max Number of active VLANA provise VLAN, GVRP Yes LLDP (dot2 14a) Link Layer Ubscorey Protocol Yes MAR Number of multicest groups 256 256 MAR Number of multicest groups 256 256 Max Number of multicest groups Yes 256 Max Number of multicest groups Yes 256 Gol5 m L3 layer using TOS field of IP packet header Yes 256 Max Number of multicest groups Yes 256 Gol5 m L3 layer using TOS field of VLAN header Yes 256 Max On Meand ACL Yes 256 256 Max On Meand ACL Yes 256 256 First Priority Quaurienty, Wespfield Round Robin Quaurienty Yes 256 MACL Indee ACL Yes 256 256 First Priority Quaurienty, Wespfield Round Robin Quaurienty Yes 256 RACL Indee ACL Yes < | | | Max number of groups | 16 |
| 12.3 solution Vi.NI | | Link Aggregation (802.3ad) | Max number of members per group | 8 |
| L2 Switching Number of active VLANs perside VLANs, GVRP 256 MAN Protective VLANs, Private VLANS, GVRP Ves LIDP (R02.1ab) Link Layer Discovery Protocol Ves LIDP (R02.1ab) Link Layer Discovery Protocol Ves GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP Snooping V122,3 nono [GMP packets per VLAN, Join / Leave, Fast Leave, [GMP Snooping V122,3 nono [GMP Snooping V122,5 nono [GMP Snooping V124,5 nono [GMP Snoop | | | Source and Destination MAC based load balance | Yes |
| VLN Number of action VLNA por Solitoh 266 NURN (Multicast VLAN Reprint VLAN, Visor VLAN, VorVPP Viso LLDP (R02 1ab) Link Layer Discovery Protocol Viso IGMB Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso Viso IGMS Sinceping VLAN, Sinop IGMP packets per VLAN, Join / Leaver, Fast leaver, Vas Viso Viso IGMS Sinceping VLAN, Sinceping VLAN, Join / Leaver, Fast leaver, Vas Viso Viso IG | L2 Switching | | VLAN IDs | 4096 |
| PolitikaClip based VLAN, Private VLAN, Value VLAN, CoVP1 Yes MCR QMUINES VLAN, Private VLAN, Value VLAN, CoVP1 Yes LLDP (02.1ab) Link Layer Discovery Protocol Yes IOMP Snooping VL2S, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Discovery Protocol Yes IOMP Snooping VL2S, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Discovery Protocol Yes IOMP Snooping VL2S, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Discovery Protocol Yes IOMP Snooping VL2S, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Discovery Protocol Yes IOMP Snooping VL2S, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Discovery Protocol Yes IOMP Snooping VL2S, Interprint Passed ACL Yes IOM Snooping VL2S (Transping) Yes IOM Control (R02.30) Peth Iot | | VLAN | Max Number of active VLANs per Switch | 256 |
| LLDP (822.1ab) Link Layer Discovery Protocol Yes IGMP Snooping (GMP Snooping YE23, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Queer Yes Max Number of multicest groups 256 OcS and Singer using TOS field of IP packet header Yes BCS F10 boot 1p mapping Yes OcS DSO IP to 20:1p mapping Yes Mark One 21: Prompting Yes Mark One 21: Prompting Yes Mark One 21: Prompting Yes Strict Priority Queueing, Weighted Round Robin Queueing Yes Strict Priority Queueing, Weighted Round Robin Onte Classon Yes | | | Port/MAC/IP based VLAN, Private VLAN, Voice VLAN, GVRP | Yes |
| IGMP Snooping IGMP Snooping v1/23, Snoop IGMP packets per VLM, John / Leave, Fast leave, Guierer Val IGMP Snooping Goldener 256 Max Mumber of multicasit groups 958 SocP to 802, fp mapping Yes PADE PADE IPID Edition Yes Marking / Remarking Yes Socre and Destination PE Based ACL Yes Socre and Destination PE Based ACL Yes Note Chick per port, MAC based Bite Port, MAC based Yes Note Chick per port, MAC based Bite Port, MAC based Yes Revereroreror (ROL ACL) Yes | | | MVR (Multicast VLAN Registration), VLAN Double tagging (Q in Q) | Yes |
| IGMP Snooping Dalarce Yes Max Number of multical groups 256 Name of Discreting TOS field of IP packet header Yes DisCreting TOS field of IP packet header Yes DisCreting TOS field of VLAN header Yes DisCreting TOS field of VLAN header Yes DisCreting TOS field of VLAN header Yes Marking / Remarking Yes Strict Friority Quausing, Weighted Round Robin Quausing Yes Mace State ACL Yes Source and Destination Port Based ACL Yes Max Climit Mace Based ACL Yes Mace Gased ACL Yes Yes Source and Destination Port Based ACL Yes Yes Max Climit Mace Based ACL Yes Yes Source and Destination Port Based ACL Yes Yes Max Climit Mace Based ACL Yes Yes | | LLDP (802.1ab) | Link Layer Discovery Protocol | Yes |
| IGMP Snooping Deliver Max Number of multicat groups 250 Ocs On L3 layer using TOS field of IP packet header Yes DSCP to 502.1 pmpping Yes Ocs On L2 layer using TOI field of VLAN header Yes Ocs On L2 layer using TOI field of VLAN header Yes Marking / Romanking Yes Strict Priority Outwains, Weighted Round Robin Outwains Yes Strict Priority Outwains, Weighted Round Robin Outwains Yes For and Destination PD Based ACL Yes Source and Destination PD Based ACL Yes For and Destination PD Based ACL Yes Number of ACL lukes Source and Destination PD Based ACL Yes Number of ACL lukes Source and Destination PD Based ACL Yes Number of ACL lukes Yes Source and Destination PD Based ACL Yes Number of ACL lukes Yes Source and Destination PD Based ACL Yes Number of ACL lukes Yes Source and Destination PD Based ACL Yes Number of ACL lukes Yes Source and Destination PD Based ACL Yes Number of ACL lukes | | | IGMP Snooping v1/2/3, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, | Voc |
| Access Oos Oos Oos Oos Oos Oos Traffic Control Oos Oos DSCP is 002 17 mapping Yes Oos DSCP is 002 17 mapping Yes Yes Marking / Remarking Yes Yes Marking / Remarking Yes Yes Source and Destination IPD Based ACL Yes Yes Source and Destination IPD Based ACL Yes Yes Marking / Remarking Yes Yes State Chronic Yes / State Chronic Yes Yes Yes State Chronic Yes / State Chronic Yes Yes Yes State Chronic Yes / State Chronic Yes Yes Yes Yes / State Chronic Yes / State Chronic Yes / Yes Yes Yes | | IGMP Snooping | Quierer | 105 |
| Section Discription Yes IP4 Differv Yes QoS on L2 layor using TC1 field of VLAN header Yes QoS on L2 layor using TC1 field of VLAN header Yes Traffic Control Yes Strict Priority Queueing, Weighted Round Robin Queueing Yes ACL Weighted Round Robin Queueing Yes ACL Protocol type Based ACL Yes ACL Protocol type Based ACL Yes Mace Classed ACL Yes Yes ACL Protocol type Based ACL Yes Mace Classed ACL Yes Yes Time based Yes Yes Mace Innit Mace Innit graphing Yes Flow control (802.3x) Full / full duplex, Back pressure flow control for half duplex Yes Roto Control Based Act Inniting Shaping Yes Yes Broto Control (802.3x) Full / Shaping Yes Yes Access Yes Yes Yes Yes Access (Yes Control) Yes Yes Yes | | | Max Number of multicast groups | 256 |
| Book IP4 Differev Yes GoS on L2 layer using TCI field of VLAN header Yes Marking / Remarking Yes String / Remarking Yes MAC Based ACL Yes Source and Destination IP Based ACL Yes ACL Yes Protocol type based ACL Yes Ime based Yes Number of ACL rules Yes Time based Yes MAC Imit MAC Initie Yes MAC Imit MAC Initie provint (MAC based filtering Yes Yes Yes Yes Storn Control Broade and Multicast packet control for half duplex Yes Storn Control Broadest and Multicast packet control for half duplex Yes Broade Control Broadest and Multicast packet control for half duplex Yes Broade Control Broadest and Multicast packet control for half duplex Yes Broade Control Broadest and Multicast packet control for half duplex Yes Broade Control Broadest and Multicast packet control for half duplex Yes Bro | | 0.5 | QoS on L3 layer using TOS field of IP packet header | Yes |
| CoS CoS on L2 layer using TCI field of VLAN header Yes Marking / Remarking Yes Strict Priority Oueueing, Weighted Round Robin Oueueing Yes Source and Destination Pot Based ACL Yes ACL Protocol type based ACL Yes Time based Source and Destination Pot Based ACL Yes Macl Limit Protocol type based ACL Yes Time based Yes Yes Macl Limit or Ord Liules 512 Yes Flow control (802.3x) Full /half duplex, Back pressure flow control for half duplex Yes Port Security Full Analf duplex, Back pressure flow control for half duplex Yes Flow control (802.3x) Full /half duplex, Back pressure flow control for half duplex Yes Port Security Ford Security MAS duplex duplex flow flow flow flow flow flow flow flow | | | DSCP to 802.1p mapping | Yes |
| Function Nois Marking / Remarking Yes Marking / Remarking Yes Marking / Remarking Yes Surve and Destination /P Based ACL Yes Function / Protocol type based ACL Yes ACL Protocol type based ACL Yes Marking / Remarking Yes Yes Marking / Remarking provided Hird/Marking Yes Yes Marking / Remarking provided Hird/Marking/Shaping Yes Yes Rate Limiting / Shaping Yes Yes Yes Storm Control Yes Yes Yes Marking / Remarking provided Hird/Marking And Marking And Provided Hird/Marking And Provided And Provided And Pro | | | IPv4 Diffserv | Yes |
| Interpretation Strict Priority Quartering, Weighted Round Robin Quartering Yes NACC Based ACL Yes Source and Destination Port Based ACL Yes ACL Yes ACL Yes Time based ACL Yes Time based ACL Yes State Christing / Shaping Yes ACC Yes State Christing / Shaping Yes State Christing / Shaping Christing Preventio | | 000 | QoS on L2 layer using TCl field of VLAN header | Yes |
| AcL Yes Source and Destination IP Based ACL Yes Source and Destination IP Based ACL Yes AcL Protocol type based ACL Yes Protocol type based ACL Yes Mace limit Protocol type based ACL Yes Mace limit Mace limit of the based Yes Mace limit Mace limit of the based Yes Flow control (802:33) Full / haff duplex, Back pressure flow control for half duplex Yes Rate Limiting / Shaping Port based rate limiting/shaping Yes Storm Control Broadcast and Multicast packet control Yes DHCP Dipromic port security (MAC based) Yes Dynamic ARP Inspection Yes Yes 802:1x Kuthentication and Accounting Yes Yes 802:1x Multiple Host Multiple Authentication proft Yes Yes 802:1x Multiple Host Multiple Authentication (Cleanties EAP) Yes Yes 802:1x Multiple Host Multiple Authentication (Cleanties EAP) Yes Yes 802:1x Multiple Host Multiple Authentication (Cleanties EAP) Yes Yes | | | Marking / Remarking | Yes |
| Action of the section of the | | | Strict Priority Queueing, Weighted Round Robin Queueing | Yes |
| Fragmentication Second Destination Port Based ACL Yes NACL Protocol type based ACL Yes Time based Yes Yes Number of ACL rules Yes Yes Number of ACL rules Yes Yes Number of ACL rules Yes Yes ACL Macl limit op of ACL rules Yes Act limit op of ACL rules Yes Yes Act limit op of ACL rules Yes Yes Rate Limiting / Shaping Yes Yes Yes | | | MAC Based ACL | Yes |
| ACL Protocitype based ACL Yes Time based Yes Number of ACL rules 512 ACL milt Kall only of ACL rules 512 MAC limit MAC limit per yort MAC based filtering Yes Flow control (802.3X) Full / half duples, Back pressure flow control for half duples, Call on the full per yort MAC based filtering Yes Rate Limiting / Shaping Port based rate limiting/shaping Yes Yen Control Bradocast and Multicast packet control Yes MAC Port Society (MAC based) Yes Mach Port Society (MAC based) Yes Mach Mall/Synther per yort for Mach based Yes Mach Mall/Synther per yort (MAC based) Yes Mather Society (Mathy Hather Penthelication per port (SALAN-SHSA) Yes Mather Society (Mathy Mathy EAP enabled on port (GVLAN-SHSA) <t< td=""><td></td><td></td><td>Source and Destination IP Based ACL</td><td>Yes</td></t<> | | | Source and Destination IP Based ACL | Yes |
| Image Time based Yes Number of ACL rules 512 Extended IPv6 ACL Yes MAC limit MAC limit per port, MAC based filtering Yes Flow control (802.3x) Full / half duplex, Back pressure flow control for half duplex Yes Rate Limiting / Shaping Port based rate limiting/shaping Yes Storm Control Breadcast and Multicast packet control Yes DHCP DPCP Shooping, IP Source Guard (IP Spoofing prevention) Yes 0purpamic ARP Inspection Yes Yes 802.1x Extensible Authentication and Accounting Yes 802.1x Extensible Authentication oper Port Yes 802.1x Katensible Authentication oper Port Yes 802.1x Katensible Authentication (Clientiese EAP) Yes 802.1x Katensible Authentication (Upt 5 users) Yes 802.1x MAC based EAP Authentication (Upt 5 users) Yes 802.1x Katensible Authentication (Upt 5 users) Yes 802.1x RAD USA sayinged VLAN in MHAM mode Yes 802.1x RAD USA sayinged VLAN in MHAM mode Yes 802.1x RAD USA sayinged VLAN in MHAM mode Yes <td>Traffic Control</td> <td></td> <td>Source and Destination Port Based ACL</td> <td>Yes</td> | Traffic Control | | Source and Destination Port Based ACL | Yes |
| Inspace Inspace Inspace Inspace | | ACL | Protocol type based ACL | Yes |
| Interfacion Extendel IP66 ACL Yes MAC limit MAC limit per port, MAC based filtering Yes Flow control (802.3x) Full / half duplex, Back pressure flow control for half duplex Yes Rate Limiting / Shaping Por based rate limiting/shaping Yes Stom Control Bordoats and Multicest packet control Yes Por Security Static/Dynamic port security (MAC based) Yes PDCP Dipartic Port Security (MAC based) Yes Authentication Yes Yes Authentication Yes Yes 802.1x Extensible Authentication and Accounting Yes 802.1x Extensible Authentication per Port Yes 802.1x Extensible Authentication (VerVLAN-SHSA) Yes 802.1x Extensible Authentication (VerVLAN-SHSA) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 1040 TCP/IP based intermets (RFC 1213), RMON v1/2 (RFC 8219 / RFC 4502) Yes MIB CP/IP based intermets (RFC 1213), RMON v1/2 (RFC 8219 / RFC 4502) | | | Time based | Yes |
| MAC limit MAC limit per port, MAC based filtering Yes Flow control (802.3x) Full / half duplex, Back pressure flow control for half duplex. Yes Rate Limiting / Shaping Port based rate limiting/shaping Yes Storm Control Broadcast and Multicast packet control Yes Port Security Static/Dynamic port security (MAC based) Yes PHCP DHCP horoping, IP Source Guard (IP Spoofing prevention) Yes MADUB/TACACS*A Authentication and Accounting Yes Variante Security RADIUS/TACACS*A Authentication and Accounting Yes Authentication Yes Yes Yes Authentication Quard (Dispace Control (SULAN-SHSA) Yes Yes Yes Yes Yes Yes Yes / Yes / Yes / Yes / Yes Yes Yes Yes / Yes | | | Number of ACL rules | 512 |
| Flow control (802.3x) Full / half duplex, Back pressure flow control for half duplex Yes Rate Limiting / Shaping Port based rate limiting/shaping Yes Storm Control Broadcast and Multicast packet control Yes Port Security Static/Dynamic port security (MAC based) Yes DHCP DHCP Snooping, IP Source Guard (IP Spoofing prevention) Yes Authentication Yes Yes Authentication Yes Yes 802.1x Extensible Authentication and Accounting Yes 802.1x Extensible Authentication Yes 802.1x Multiple Host Multiple Authentication per Port Yes 802.1x MAC based EAP Authentication per Port Yes 802.1x MAC based EAP Authentication (Clientiess EAP) Yes 802.1x MAC based EAP Authentication (Clientiess EAP) Yes 802.1x MAC based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes MIB TOP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes Port Mirroring Recevert affic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Retwork Time SNTP (RFC 2030) Yes < | | | Extended IPv6 ACL | Yes |
| Rate Limiting / Shaping Port based rate limiting/shaping Yes Storm Control Broadcast and Multicast packet control Yes Port Security Static/Dynamic port security (MAC based) Yes DHCP DHCP Snooping, IP Source Guard (IP Spoofing prevention) Yes DHCP DHCP Snooping, IP Source Guard (IP Spoofing prevention) Yes Authentication Yes Yes Authentication Yes 2012 Authentication Yes 202.1x Extensible Authentication and Accounting Yes 802.1x Kacest VLAN with EAP enabled on port (GVLAN-SHSA) Yes 202.1x Macl based EAP Authentication oper Ort (GVLAN-SHSA) Yes 802.1x MAC based EAP Authentication (Clientites EAP) Yes 202.1x MaC based EAP Authentication (Clientites EAP) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 202.1x MaC based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes 202.1x MaC based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes File Transfer FTP (Client, DHCP Snooping, DHCP Provision Yes 202.1x Gauge authentication (upto 5 | | MAC limit | MAC limit per port, MAC based filtering | Yes |
| Storm Control Broadcast and Multicast packet control Yes Port Security Static/Dynamic port security (MAC based) Yes DHCP DHCP Snooping, IP Source Guard (IP Spoofing prevention) Yes Dynamic ARP Inspection Yes 802.1x Extensible Authentication and Accounting Yes 802.1x Extensible Authentication Yes 802.1x Extensible Authentication per Port Yes 802.1x Multiple Host Multiple Authentication per Port Yes 802.1x RADIUS/TACACS+ Authentication (Clientless EAP) Yes 802.1x Multiple Host Multiple Authentication (Clientless EAP) Yes 802.1x RADIUS assigned VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes Very forgassword authentication (upto 5 users) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes File Transfer FTP Client, TFTP Client Yes File Transfer STP (RFC 2030) Yes Network Time SNTP (RFC 2030) Yes Received traffic, Transmit traf | | Flow control (802.3x) | Full / half duplex, Back pressure flow control for half duplex | Yes |
| Port SecurityStatic/Dynamic port security (MAC based)YesPHCPDHCP Snooping, IP Source Guard (IP Spofing prevention)YesPHCPRADIUS/TACACS+ Authentication and AccountingYesNameRADIUS/TACACS+ Authentication and AccountingYes802.1x Extensible Authentication per PortYes802.1x Extensible Authentication per PortYes802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA)Yes802.1x RADIUS assigned VLAN in MHMA modeYes802.1x RADIUS assigned VLAN in MHMA modeYes10.1x Pre/password authentication (up to 5 users)YesMIBTCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502)YesFIGPHTCP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trapYesFIGPDHCP Client, DHCP Snooping, DHCP ProvisionYesFIG TransferFTP Client, TFTP ClientYesFIG TransferFTP Client, TFTP ClientYesFile TransferSNTP (RFC 2030)YesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYes | | Rate Limiting / Shaping | Port based rate limiting/shaping | Yes |
| Automatical section PHCP Snooping, IP Source Guard (IP Spoofing prevention) Yes Security PHCP Dynamic ARP Inspection Yes RADIUS/TACACS* Authentication and Accounting Yes 802.1x Extensible Authentication Yes 802.1x Extensible Authentication per Port Yes 802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 901 MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes 1HCP | | Storm Control | Broadcast and Multicast packet control | Yes |
| BHCP Dynamic ARP Inspection Yes Security RADIUS/TACACS+ Authentication and Accounting Yes 802.1x Extensible Authentication Yes 802.1x Extensible Authentication per Port Yes 802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x AC based EAP Authentication (Clientless EAP) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes User/password authentication (upto 5 users) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes DHCP DHCP Client, DHCP Snooping, DHCP Provision Yes PIACP PICP Client, TFTP Client Yes PIACP SNTP (RFC 2030) Yes Received traffic, Transmit traffic, Received and Transmit traffic, N:1 milrroring Yes Reckup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | Port Security | Static/Dynamic port security (MAC based) | Yes |
| Security Ves Numeric ARP Inspection Yes RADIUS/TACACS+ Authentication and Accounting Yes 802.1x Extensible Authentication Yes 802.1x Extensible Authentication per Port Yes 802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x RADIUS assigned VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes User/password authentication (upto 5 users) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes PICP DHCP Client, DHCP Snooping, DHCP Provision Yes File Transfer FTP Client, TFTP Client Yes Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Retury Configuration file upload/download Yes Yes Interver upgrade Firmware backup / upgrade, Dual firmware images Yes | Security | | DHCP Snooping, IP Source Guard (IP Spoofing prevention) | Yes |
| SecurityNote of the securityNote of the securityNote of the securityAuthenticationYesAuthenticationYesAuthenticationYes802.1 x Kultiple Host Multiple Authentication per PortYes802.1 x Guest VLAN with EAP enabled on port (GVLAN-SHSA)Yes802.1 x RADIUS assigned VLAN in MHMA modeYes802.1 x RADIUS assigned VLAN in MHMA modeYes10.1 x PAPURATION (Command Interface)YesMBTCP/IP based internets (RFC 1213), RMON v1/2(RFC 2819 / RFC 4502)YesPICPDHCP Client, DHCP Snooping, DHCP ProvisionYesPort MirroringReceived traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroringYesNetwork TimeSNTP (RFC 2030)YesBackupConfiguration file upload/downloadYesImware upgradeFirmware backup / upgrade, Dual firmware imagesYesIP06 managementTelnet server/ICMPYes | | DHCP | Dynamic ARP Inspection | Yes |
| Security Authentication Res Authentication 802.1x Multiple Authentication per Port Yes 802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA) Yes 802.1x ADIUS assigned VLAN in MHMA mode Yes 802.1x RADIUS assigned VLAN in MHMA mode Yes User/password authentication (upto 5 users) Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2/3, SNMP trap Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes File Transfer FTP Client, TFTP Client Yes File Transfer FTP Client, TFTP Client Yes Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | Authentication | RADIUS/TACACS+ Authentication and Accounting | Yes |
| Management Access (Command Interface) MTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trap Yes Management Access (Command Interface) TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes Management FTP Client, TFTP Client Yes File Transfer FTP Client, TFTP Client Yes File Transfer SNTP (RFC 2030) Yes Network Time SNTP (RFC 2030) Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | | 802.1x Extensible Authentication | Yes |
| Management Access (Command Interface) NTP, NTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trap Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes DHCP DHCP Client, DHCP Snooping, DHCP Provision Yes File Transfer FTP Client, TFTP Client Yes Access Configuration file upload/download Yes Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Backup Configuration file upload/download Yes IPv6 management Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | | 802.1x Multiple Host Multiple Authentication per Port | Yes |
| Management Access (Command Interface) HTTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trap Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes DHCP DHCP Client, DHCP Snooping, DHCP Provision Yes File Transfer FTP Client, TFTP Client Yes Network Time SNTP (RFC 2030) Yes Backup Configuration file upload/download Yes Immare upgrade Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | | 802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA) | Yes |
| Management Access (Command Interface) HTTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trap Yes MIB TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) Yes DHCP DHCP Client, DHCP Snooping, DHCP Provision Yes File Transfer FTP Client, TFTP Client Yes Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes | | | 802.1x MAC based EAP Authentication (Clientless EAP) | Yes |
| Access (Command Interface)HTTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trapYesMIBTCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502)YesDHCPDHCP Client, DHCP Snooping, DHCP ProvisionYesFile TransferFTP Client, TFTP ClientYesPort MirroringReceived traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroringYesNetwork TimeSNTP (RFC 2030)YesBackupConfiguration file upload/downloadYesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYesIPv6 managementTelnet server/ICMPYes | | | 802.1x RADIUS assigned VLAN in MHMA mode | Yes |
| ManagementHTTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trapYesMIBTCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502)YesDHCPDHCP Client, DHCP Snooping, DHCP ProvisionYesFile TransferFTP Client, TFTP ClientYesPort MirroringReceived traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroringYesNetwork TimeSNTP (RFC 2030)YesBackupConfiguration file upload/downloadYesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYesIPv6 managementTelnet server/ICMPYes | | | User/password authentication (upto 5 users) | Yes |
| Management DHCP DHCP Client, DHCP Snooping, DHCP Provision Yes File Transfer FTP Client, TFTP Client Yes Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Network Time SNTP (RFC 2030) Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes IPv6 management Telnet server/ICMP Yes | | | HTTP, HTTPS, Telnet, SSH, SNMP v1/2/3, SNMP trap | Yes |
| Management File Transfer FTP Client, TFTP Client Yes Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Network Time SNTP (RFC 2030) Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes IPv6 management Telnet server/ICMP Yes | | MIB | TCP/IP based internets (RFC 1213), RMON v1/2 (RFC 2819 / RFC 4502) | Yes |
| Management Port Mirroring Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring Yes Network Time SNTP (RFC 2030) Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes IPv6 management Telnet server/ICMP Yes | | DHCP | DHCP Client, DHCP Snooping, DHCP Provision | Yes |
| Network Time SNTP (RFC 2030) Yes Backup Configuration file upload/download Yes Firmware upgrade Firmware backup / upgrade, Dual firmware images Yes IPv6 management Telnet server/ICMP Yes | | File Transfer | FTP Client, TFTP Client | Yes |
| Network TimeSNTP (RFC 2030)YesBackupConfiguration file upload/downloadYesFirmware upgradeFirmware backup / upgrade, Dual firmware imagesYesIPv6 managementTelnet server/ICMPYes | Management | Port Mirroring | Received traffic, Transmit traffic, Received and Transmit traffic, N:1 mirroring | Yes |
| Firmware upgradeFirmware backup / upgrade, Dual firmware imagesYesIPv6 managementTelnet server/ICMPYes | | Network Time | SNTP (RFC 2030) | Yes |
| IPv6 management Telnet server/ICMP Yes | | Backup | Configuration file upload/download | Yes |
| | | Firmware upgrade | Firmware backup / upgrade, Dual firmware images | Yes |
| IP Clustering up to 36 switches Yes | | IPv6 management | Telnet server/ICMP | Yes |
| | | IP Clustering | IP Clustering up to 36 switches | Yes |

Technical Specifications

| List | Detailed list | ES-3528GP | ES-3552GP |
|----------------|--|-------------------|------------------|
| Product image | | | |
| | Switching Fabric Capacity | 56Gbps | 104Gbps |
| | Packet Forwarding Throughput | 41.6Mpps | 77.4Mpps |
| | Flash Memory | 32MB | 32MB |
| Performance | DRAM | 256MB | 256MB |
| | MAC Address Capacity | 16K | 16K |
| | MTU / Jumbo Frames support | 12K | 12K |
| | Auto-negotiation, Auto-MDI/MDIX | Yes | Yes |
| Port | 10/100/1000 Base-T Ports per Unit | 24 | 48 |
| | 100/1000 Base-X SFP Ports per Unit | 4 | 4 |
| | Types of GBIC and SFP support | SFP (SX, LX) | SFP (SX, LX) |
| | 19" Rack Space[EIA Standard RU] | Yes | Yes |
| | Height [mm] | 44 | 44 |
| Dimensions | Width (mm) | 440 | 440 |
| | Depth (mm) | 220 | 220 |
| | Weight (Kg) | 2.2 | 2.5 |
| Power | 100-240 VAC, 50/60Hz | Yes (Front Panel) | Yes (Rear Panel) |
| | Max power consumption (Watts) | 20 W | 40 W |
| | PoE budget | 190W | 370W |
| Operation | Operating Temperature (°C) | 0 to 50 °C | 0 to 45 °C |
| | Storage Temperature (°C) | - 40 to 70 °C | - 40 to 70 °C |
| | Operating Humidity (non-condensing) | 10% to 90% | 10% to 90% |
| Certifications | Storage Humidity (non-condensing) | 10% to 90% | 10% to 90% |
| | EMC Compliance - FCC class A, CE | Yes | Yes |
| | Electromagnetic immunity, Korea [KCC] | Yes | Yes |
| | Safety Compliance - UL, CB | Yes | Yes |
| | Environmental Reulation Compliance: WEEE, RoHS | Yes | Yes |
| | PFOS | Yes | Yes |

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