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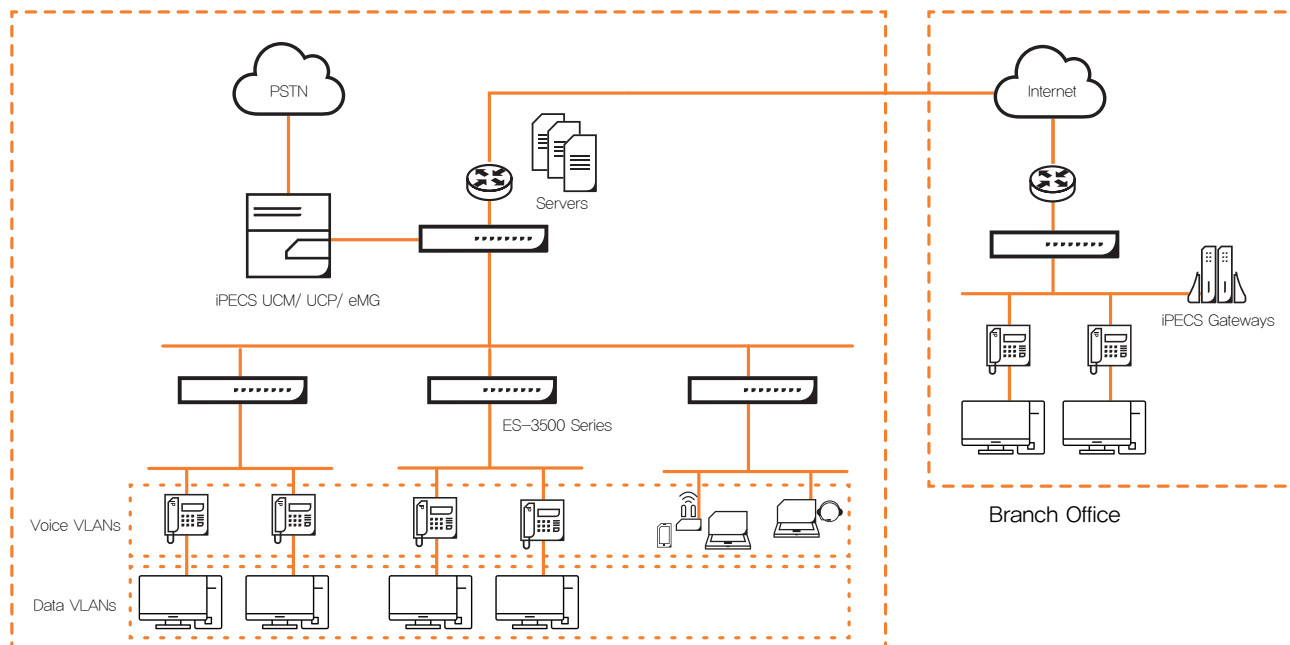
Enterprise-class L2 switching features available in iPECS ES-3500 Series

Feature	Description
· 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	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

List	Feature	Detailed list	ES-3500 series
L2 Switching	Spanning Tree Protocols	802.1d(STP)/802.1w(RSTP)/802.1s(MSTP)	Yes
		BPDU filter/guard	Yes
		Root guard	Yes
	Link Aggregation (802.3ad)	Max number of groups	16
		Max number of members per group	8
		Source and Destination MAC based load balance	Yes
	VLAN	VLAN IDs	4096
		Max Number of active VLANs per Switch	256
		Port/MAC/IP based VLAN, Private VLAN, Voice VLAN, GVRP	Yes
		MVR (Multicast VLAN Registration), VLAN Double tagging (Q in Q)	Yes
	LLDP (802.1ab)	Link Layer Discovery Protocol	Yes
	IGMP Snooping	IGMP Snooping v1/2/3, Snoop IGMP packets per VLAN, Join / Leave, Fast leave, Quierer	Yes
		Max Number of multicast groups	256
Traffic Control	QoS	QoS on L3 layer using TOS field of IP packet header	Yes
		DSCP to 802.1p mapping	Yes
		IPv4 Diffserv	Yes
		QoS on L2 layer using TCI field of VLAN header	Yes
		Marking / Remarking	Yes
		Strict Priority Queueing, Weighted Round Robin Queueing	Yes
	ACL	MAC Based ACL	Yes
		Source and Destination IP Based ACL	Yes
		Source and Destination Port Based ACL	Yes
		Protocol type based ACL	Yes
		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	Broadcast and Multicast packet control	Yes
Security	Port Security	Static/Dynamic port security (MAC based)	Yes
	DHCP	DHCP Snooping, IP Source Guard (IP Spoofing prevention)	Yes
		Dynamic ARP Inspection	Yes
	Authentication	RADIUS/TACACS+ Authentication and Accounting	Yes
		802.1x Extensible Authentication	Yes
		802.1x Multiple Host Multiple Authentication per Port	Yes
		802.1x Guest VLAN with EAP enabled on port (GVLAN-SHSA)	Yes
		802.1x MAC based EAP Authentication (Clientless EAP)	Yes
		802.1x RADIUS assigned VLAN in MHMA mode	Yes
		User/password authentication (upto 5 users)	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
	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
	IP Clustering	IP Clustering up to 36 switches	Yes

Technical Specifications

List	Detailed list	ES-3528GP	ES-3552GP
Product image			
Performance	Switching Fabric Capacity	56Gbps	104Gbps
	Packet Forwarding Throughput	41.6Mpps	77.4Mpps
	Flash Memory	32MB	32MB
	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)
Dimensions	19" Rack Space[EIA Standard RU]	Yes	Yes
	Height [mm]	44	44
	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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