

iPECS

ES-3000 Series

iPECS Ethernet Switch ES-3000/3000G Series

iPECS ES-3000 & 3000G layer 2 managed switches are perfect for SMBs looking for solutions with high reliability, performance and latest enterprise class switching features.



Overview

The new LG-Nortel iPECS ES-3000/3000G is a family of 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-3000 series comes in 4 models from Fast Ethernet to Gigabit Ethernet offering multiple choices to meet the demands of various high performance network environments. Administrators can extend the existing networks or newly build the reliable and high-performing networks using sophisticated features optimized for SMBs and supporting both aggregation and access-level solutions.

To reduce the growing complexity and often time-consuming process, LG-Nortel offers an industry-unique solution called the UDM (Unified Device Manager). The UDM enables the network administrators to quickly and easily configure and manage multiple iPECS switches across the network contributing to reducing the installation and operation time, efforts and expenses for SMBs with limited resources and budgets.

These LG-Nortel new switches also incorporate the latest technologies such as Green Ethernet and draft standard POE+. ES-3000 switches can connect to high power consuming devices like 802.11n APs and multimedia videophones by providing up to 30 watts to these devices while connecting to other low power devices.

Highlights

Easy to Install

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

Smart Management

Managing multiple iPECS switches from a single intuitive graphic user interface

Green Ethernet

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

VoIP and UC Friendly

Advanced L2/L3 QoS, Economical & Flexible POE via 802.3af & 802.3at

Advanced Built-in Security

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

Enterprise-class Layer 2 Switching with advanced features

STP/RSTP/MSTP, IGMP Snooping, VLAN, Link Aggregation, LLDP, Storm Control, Jumbo Frame

iPECS ES-3000/3000G Series

Models	Port Configurations
ES-3026	24 10/100Base-TX & 2 Gigabit combo uplinks (SFP/RJ-45)
ES-3026P	24 10/100Base-TX with POE on all ports & 2 Gigabit combo uplinks (SFP/RJ-45)
ES-3024G	24 10/100/1000Base-T & 4 Gigabit shared uplinks (SFP)
ES-3024GP	24 10/100/1000Base-T with POE on all ports & 4 Gigabit shared uplinks (SFP)



→ ES-3026



→ ES-3026P



→ ES-3024G



→ ES-3024GP

Key Benefits

Easy to Install

The iPECS ES 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. And also its intuitive web user interface makes the installation and administration much easier.

Smart Management using UDM

LG-Nortel offers an unique management tool, the Unified Device Manager (iPECS-UDM), which enables the management of all iPECS product lines from IP Telephony to Data Networks via a single management interface. iPECS UDM simplifies network administration and management through the use of a single consistent and familiar interface.

Green Ethernet (3000G models only)

iPECS ES-3000G Gigabit Ethernet Switches incorporate the latest green Ethernet technology to help you save energy costs for your network. ES-3000G Switches detect link status, allowing each port to power down when the port is not connected or the connected device is not active. In addition, it detects cable length and adjusts the signal strength accordingly

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.

Flexible Power over Ethernet (POE models only)

The LG-Nortel iPECS Ethernet POE switches are designed to support both 802.3af standard and 802.3at draft standard. Therefore, SMBs flexibly and cost effectively connect standard and high powered devices on a single LG-Nortel POE switch. In addition, the PoE control and monitoring can be easily managed via the intuitive web user interface.

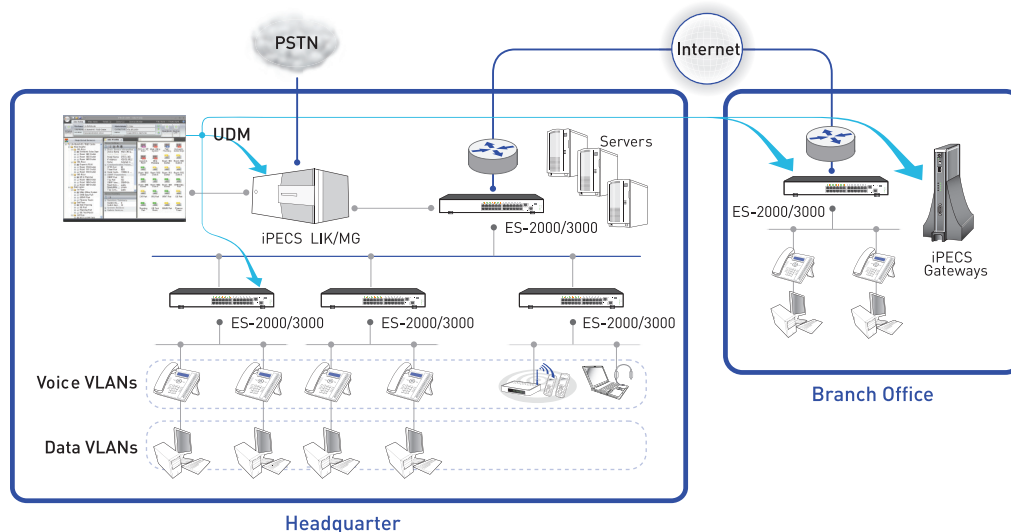
Secure Networking

iPECS ES-3000/3000G Ethernet Switches 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.

Enterprise-class L2 switching features available in iPECS ES-3000/3000G

• 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/L3 QoS Features + Priority marking, L2-L4 Policing (Metering), Time-Based ACL, CPU Interface Filtering
• Link aggregations	Group together any number of ports automatically using LACP, 8 members per group, 12 groups
• VLAN	Segment the network by grouping users for optimal use of the network – Port/Protocol/MAC/IP based VLAN, 256 VLANs
• Power over Ethernet	Provides power based on both 802.3af standard and 802.3at draft standard
• Single IP Clustering	Single IP Management via clustering up to 36 switches

Converged Network using iPECS Ethernet Switch Solutions



Feature Specifications

List	Feature	Specifications	ES-3000 series
L2 Switching	Spanning Tree Protocols	802.1d : Spanning tree protocol (STP), 802.1w : Rapid Spanning Tree Protocol (RSTP)	Yes
		802.1s : Multi Spanning Tree Protocol (MSTP)	Yes
	Link Aggregation	Max number of groups	12
		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, GVRP, Voice VLAN, VLAN Trunking	Yes
		MVR (Multicast VLAN Registration), GVRP, VLAN Double tagging (Q in Q)	Yes
	LLDP	Link Layer Discovery Protocol (802.1ab)	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	Voice VLAN & Auto QoS, QoS on L3 layer using TOS field of IP packet header	Yes
		DSCP to 802.1p mapping, QoS on L2 layer using TCI field of VLAN header	Yes
		Marking / Remarking	Yes
		Strict Priority Queuing, Weighted Round Robin Queuing	Yes
	ACL	MAC based ACL, Source/Destination IP based ACL	Yes
		Source/Destination Port based ACL	Yes
		Protocol type based ACL, MAC limit per port	Yes
		Max number of ACLs	512
	Flow Control	Full / half duplex, Back pressure flow control for half duplex	Yes
	Rate Limiting / Shaping	Port based, IP based, MAC based	Yes
Storm Control	Broadcast and Multicast packet control	Yes	
Security	DHCP	DHCP snooping, IP Source Guard - IP spoofing prevention, ARP spoofing prevention	Yes
	Authentication	RADIUS/TACACS+ Authentication and Accounting	Yes
		802.1x Extensible Authentication(EAP), 802.1x MHMA	Yes
		Guest VLAN w / EAP enabled on port (GVLAN-SHSA)	Yes
		Multiple Host Single EAP Authentication - EAP + GVLAN	Yes
		MAC based EAP Authentication (Clientless EAP)	Yes
	RADIUS assigned VLAN in MHMA mode	Yes	
Management	Access (Command Interface)	HTTP, HTTPS, Telnet/SSH, SNMP v1/v2c/v3, Trap (RFC 1215)	Yes
	MIB	TCP / IP-based internets, RMON v1/2	Yes
	DHCP	DHCP Snooping, DHCP Client, Dynamic Provision (Option 66, 67)	Yes
	File Transfer	FTP client, TFTP client	Yes
	Event/Error Log	Store on local non-volatile memory, Send to remote syslog server	Yes
	Port Mirroring	Received traffic , Transmit traffic, Received and Transmit traffic	Yes
	Network Time	SNTP	Yes
	Backup	Configuration backup / restore	Yes
	Firmware upgrade	Firmware backup / restore / upgrade, Dual firmware images	Yes
	IP Clustering	IP Clustering up to 36 switches	Yes

Technical Specifications

List	Detailed information	ES-3026	ES-3026P	ES-3024G	ES-3024GP
Performance	Switching Fabric Capacity (Gbps)	8.8	8.8	48	48
	Packet Forwarding Throughput (Mpps)	6.6Mpps	6.6Mpps	35.7Mpps	35.7Mpps
	Flash Memory	32M	32M	32M	32M
	DRAM	128M	128M	128M	128M
	MAC Address Capacity	8K	8K	8K	8K
	MTU / Jumbo Frames support	10K	10K	10K	10K
	Auto-negotiation, Auto-MDI/MDIX	Yes	Yes	Yes	Yes
	Reset button (rear panel)	Yes	Yes	Yes	Yes
	MTBF (Hours)	560,000	150,000	158,000	146,000
Ports	Type of Service ports	10/100Base-TX	10/100Base-TX	10/100/1000Base-T	10/100/1000Base-T
	10/100Base-TX Ports per Unit	24	24	-	-
	10/100/1000Base-T Ports per Unit	-	-	24	24
	Type of Built-in Gigabit uplink ports	2 pair combo RJ45/SFP	2 pair combo RJ45/SFP	4 shared SFP	4 shared SFP
	Types of GBIC and SFP support	SFP (SX, LX, LH, FX)	SFP (SX, LX, LH, FX)	SFP (SX, LX, LH, FX)	SFP (SX, LX, LH, FX)
Management	Management Console ports (Connector)	RJ45	RJ45	RJ45	RJ45
PoE	POE Support on all ports based on 802.3af	N/A	Yes	N/A	Yes
	POE+ support based on 802.3at	N/A	Yes (port 1-6)	N/A	Yes (port 1-6)
	POE Power Indication and safety	N/A	Yes	N/A	Yes
	Auto disable on the excess of total power	N/A	Yes	N/A	Yes
	POE Power Budget	N/A	185W	N/A	185W
	Dynamic Power Allocation	N/A	Yes	N/A	Yes
Dimensions	19" Rack Mount	Yes	Yes	Yes	Yes
	Height (mm)	44	44	44	44
	Width (mm)	440	440	440	440
	Depth (mm)	210	280	210	280
	Weight (Kg)	2.2	4.3	2.3	4.4
Power	100 ~ 240 VAC, 50/60Hz, 3Pin	Yes	Yes	Yes	Yes
	Maximum Input Power (Watts)	15	240	30	240
	Max power consumption (Watts)	17	245	23	252
Environmental	Operating Temperature (°C)	0 to 50 °C	0 to 50 °C	0 to 50 °C	0 to 50 °C
	Storage Temperature (°C)	-40 to 70 °C	-40 to 70 °C	-40 to 70 °C	-40 to 70 °C
	Operating Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Storage Humidity (non-condensing)	10% to 90%	10% to 90%	10% to 90%	10% to 90%
	Operating Altitude (Meters)	4000m	4000m	4000m	4000m
Certifications	EMC Compliance - FCC class A, CE	Yes	Yes	Yes	Yes
	Electromagnetic Immunity	Yes	Yes	Yes	Yes
	Safety Compliance - cUL	Yes	Yes	Yes	Yes
	Australia (C-Tick)	Yes	Yes	Yes	Yes
	Korea (KCC)	Yes	Yes	Yes	Yes
Environment Regulation Compliance	WEEE	Yes	Yes	Yes	Yes
	RoHS	Yes	Yes	Yes	Yes
	PFOS	Yes	Yes	Yes	Yes