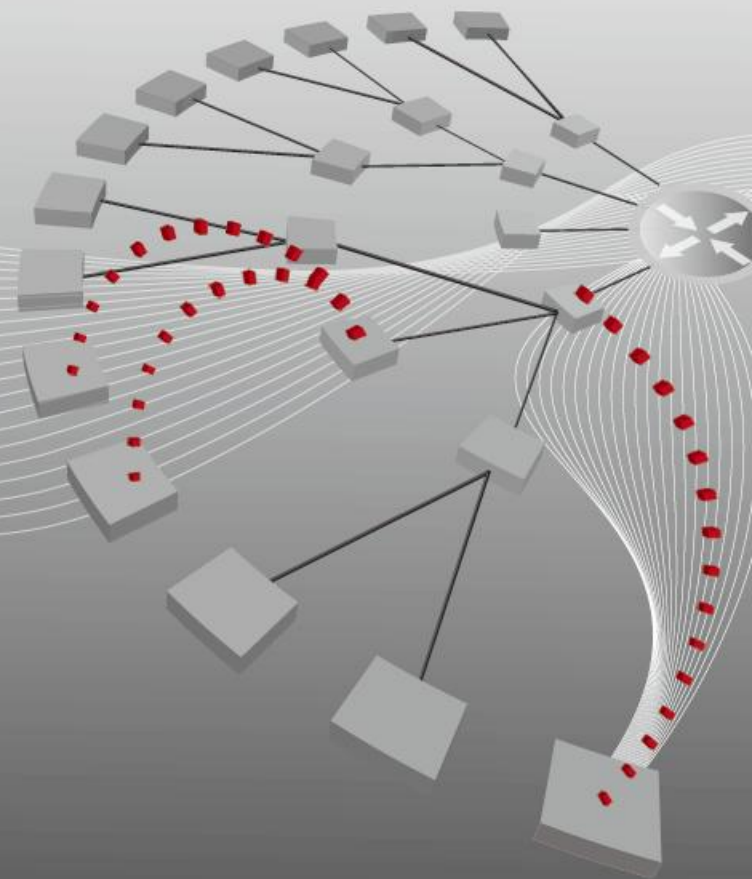




L2 Edge ECS2000 Series Sales Kit

October, 2012

-  **Product Overview**
-  **Target Market and Application**
-  **Product Features and Benefits**
-  **Competitive Analysis**
-  **Summary**

L2 Edge Switch Series Product Overview

GE Edge Switches without PoE

ECS2000-18T



- ◆ 16 10/100/1000Base-T
- ◆ 2G SFP uplink ports
- ◆ Fan-less Design

ECS2000-26T



- ◆ 24 10/100/1000Base-T
- ◆ 2G SFP uplink ports
- ◆ Fan-less Design

ECS2000-50T



- ◆ 48 10/100/1000Base-T
- ◆ 2G SFP uplink ports

GE Edge Switches with PoE

ECS2000-10P



- ◆ 8 10/100/1000Base-T
- ◆ 2G SFP uplink ports
- ◆ Fan-less Design

ECS2000-18P



- ◆ 16 10/100/1000Base-T
- ◆ 2G SFP uplink ports

ECS2000-26P



- ◆ 24 10/100/1000Base-T
- ◆ 2G SFP uplink ports

ECS2000-50P



- ◆ 48 10/100/1000Base-T
- ◆ 2G SFP uplink ports

Model Name	Speed	Copper	Fiber	SFP Gigabit Uplink	Combo Ports
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Non-PoE Models

ECS2000-18T	10/100/1000	16	0	2	0
ECS2000-26T	10/100/1000	24	0	2	0
ECS2000-50T	10/100/1000	48	0	2	0

PoE Models

ECS2000-10P	10/100/1000	8	0	2	0
ECS2000-18P	10/100/1000	16	0	2	0
ECS2000-26P	10/100/1000	24	0	2	0
ECS2000-50P	10/100/1000	48	0	2	0

	ECS2000-10P	ECS2000-18T	ECS2000-18P	ECS2000-26T	ECS2000-26P	ECS2000-50T	ECS2000-50P
Performance							
Switching Capacity	20Gbps	36Gbps	36Gbps	52Gbps	52Gbps	100Gbps	100Gbps
Forwarding Rate	14.9Mpps	26.8Mpps	26.8Mpps	38.7Mpps	38.7Mpps	74.4Mpps	74.4Mpps
Flash	8MB	16MB	16MB	16MB	16MB	16MB	16MB
SDRAM	64MB	128MB	128MB	128MB	128MB	128MB	128MB
MAC Address Table Size	8K	8K	8K	8K	8K	32K	32K

Product Configuration (III)

	ECS2000-10P	ECS2000-18T	ECS2000-18P	ECS2000-26T	ECS2000-26P	ECS2000-50T	ECS2000-50P
Operating conditions							
Operating temperature	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C
Humidity (Operating and storage)	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%	10% ~ 90%
Fan	Fanless	Fanless	Fan * 2	Fanless	Fan * 2	Fan * 2	Fan * 2
Acoustic	0dB	0dB	< 45dB	0dB	< 45dB	< 45dB	< 45dB
IEEE 802.3af	O	X	O	X	O	X	O
IEEE 802.3at	O	X	O	X	O	X	O
PoE Power Budget	75W	-	190W	-	190W	-	500W

Edge-core[®]

Basic Configuration

Advanced Configuration

System

Power Reduction

Ports

Security

Aggregation

Loop Protection

Spanning Tree

MVR

IPMC

LLDP

MAC Table

VLANs

Private VLANs

VCL

Voice VLAN

QoS

Mirroring & RSPAN

UPnP

sFlow

Monitor

System

Ports

State

Traffic Overview

QoS Statistics

QCL Status

Detailed Statistics

Security

LACP

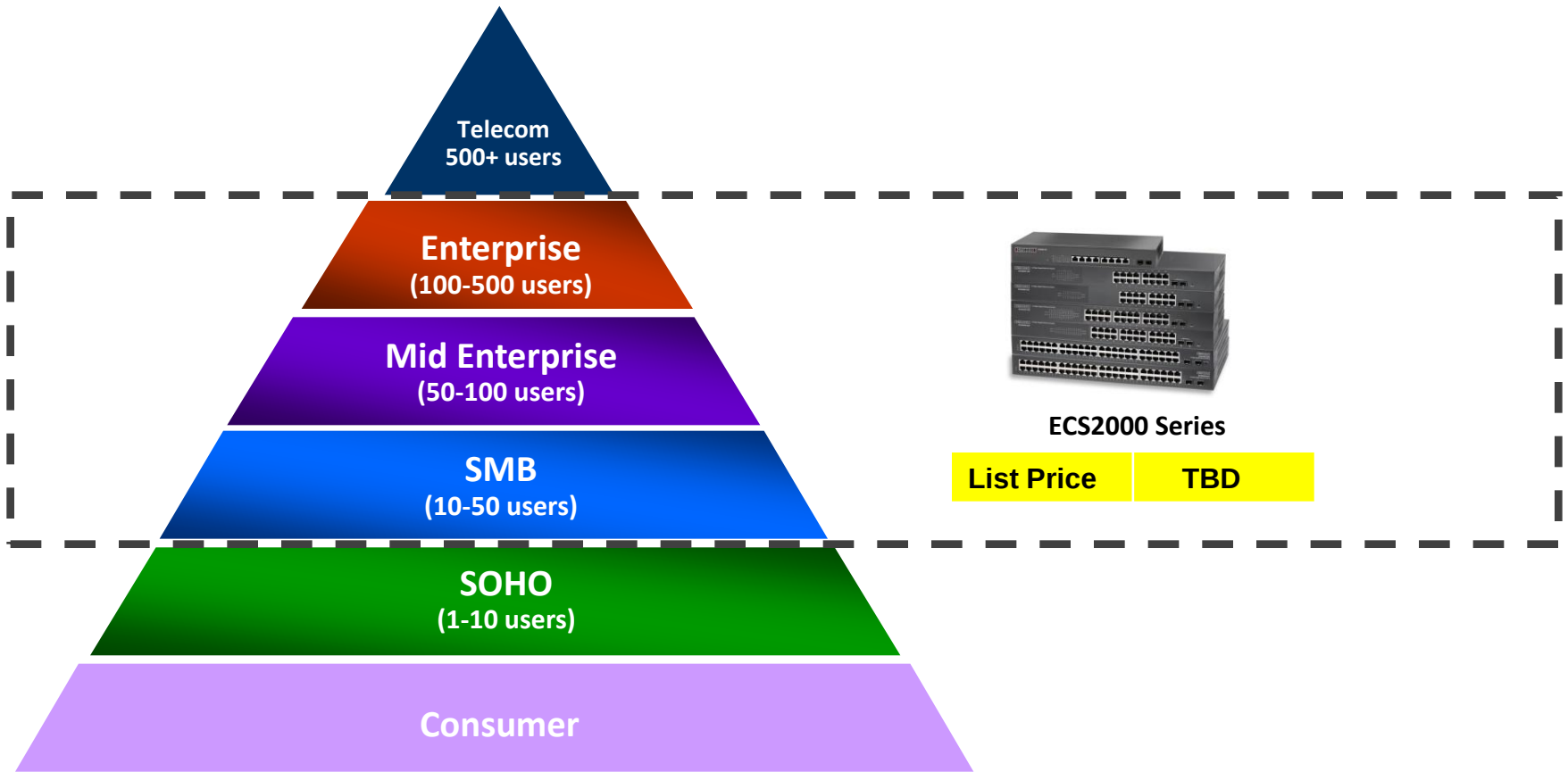
Loop Protection

ECS2000-26T

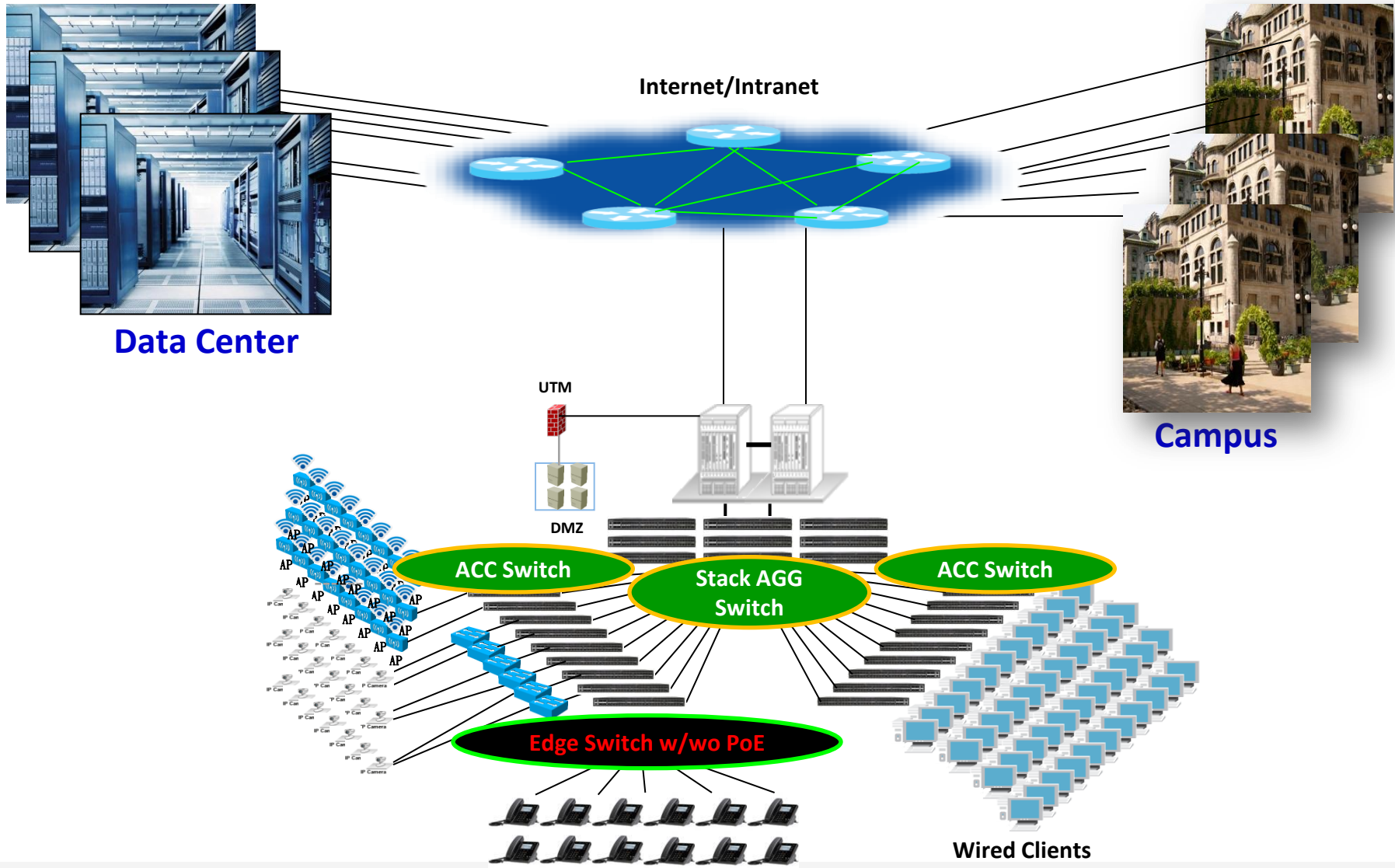
Port State Overview

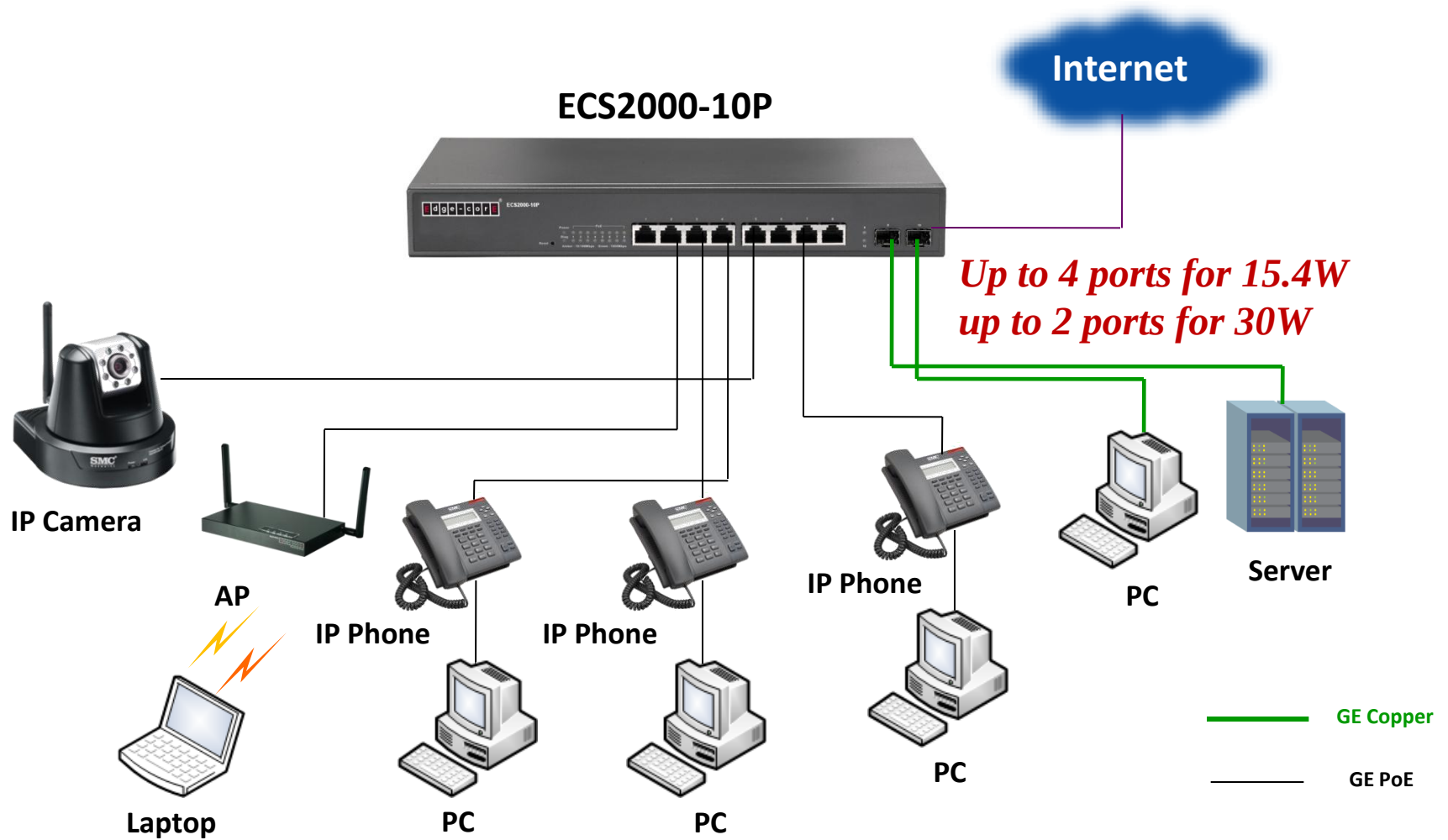
Port	1	3	5	7	9	11	13	15	17	19	21	23	25	26
State	Inactive	Inactive	Inactive	Active	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive

- 📌 Product Overview
- 📌 **Target Market and Application**
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- 📌 Competitive Analysis
- 📌 Summary

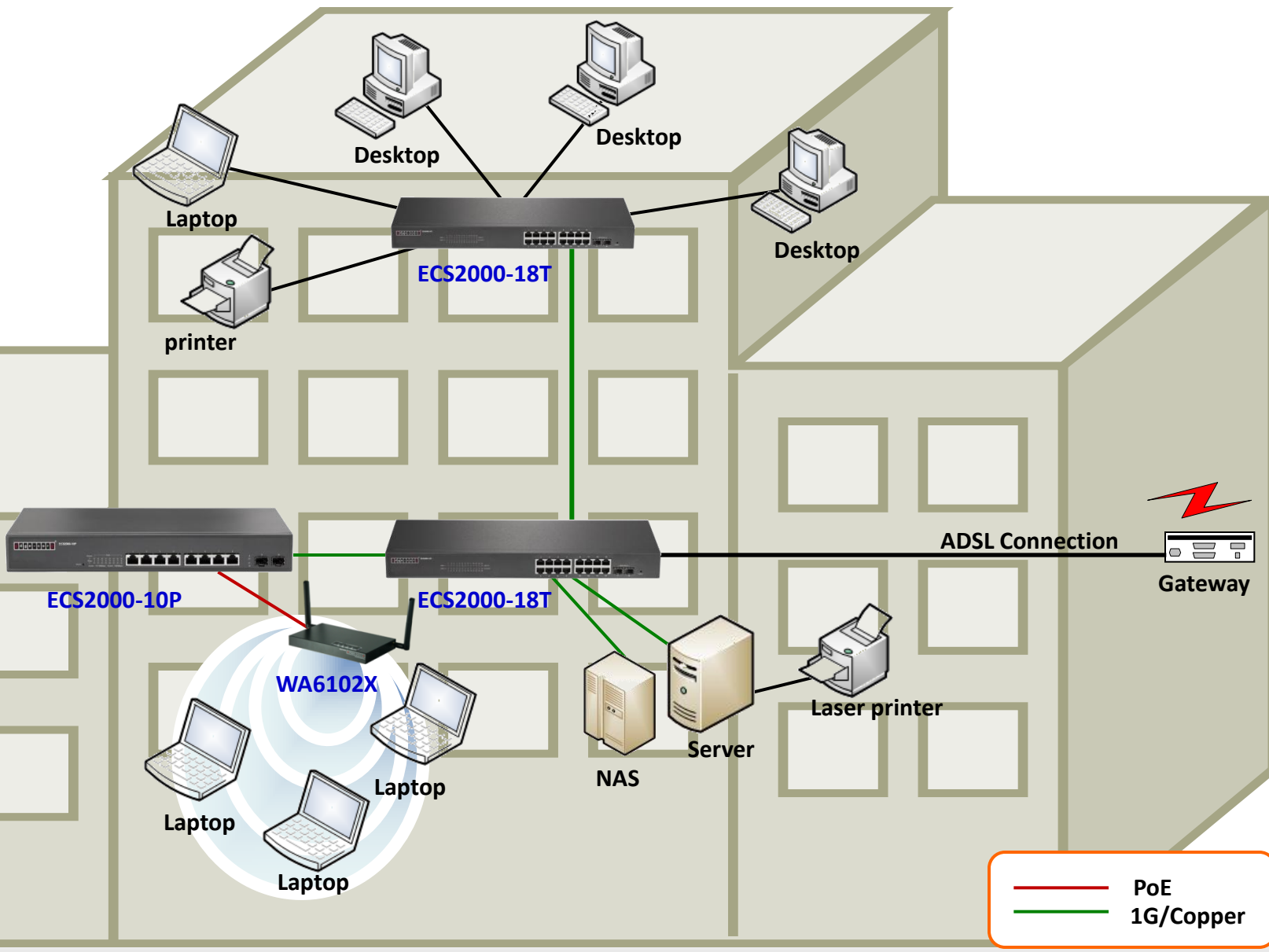


**** Per Target Range: 10~50 users**





Application II



-  Product Overview
-  Target Market and Application
-  **Product Features and Benefits**
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-  Summary

Switching Feature

- 8K MAC
- Flow control
- Broadcast/ Multicast/ Unknown unicast control
- Auto MDI/MDIX

Spanning Tree Protocol

- IEEE 802.1D/w/s
- STP fast forwarding/Auto Edge
- Loopback detection

VLAN

- **4K VLAN**
- Port-based VLAN
- MAC based VLAN
- 802.1Q VLAN
- Voice VLAN
- Private VLAN
- Guest VLAN

Port Trunk

- Static trunk
- IEEE 802.3ad LACP

QoS

- **8 hardware queues**
- 802.1p CoS
- CoS based on DSCP, TCP/UDP Port, ACL
- WRR/Strict or Hybrid
- Ingress traffic policing
- Egress traffic shaping
- Rate limiting

Multicast control

- IGMP snooping v1/v2/v3
- IGMP Querier
- IGMP snooping
- Immediate leave

Security

- Port security (dynamic & static)
- Port security intrusion action
- 802.1x Port-based authentication
- 802.1x MAC-based authentication
- Web authentication
- MAC authentication
- **MAC filtering**
- **DHCP snooping**
- ARP Inspection
- **IP Source Guard**
- Access Control List
- AAA (Authentication, Authorization, Accounting)
- SSH v1/v2
- SSL/HTTPS
- Management access filter (WEB/SNMP/Telnet)

Management

- Telnet/WEB/SNMP v1/v2/v3
- RMON(1,2,3,9)
- **sFlow**
- TFTP/HTTP download
- DHCP client/relay/server
- Time zone for Sntp
- Event/error log, system log
- Auto upgrade
- Port mirroring
- LLDP (802.1ab)
- **Cable diagnostic**

IPv6

- IPv4/IPv6 Dual Protocol Stack
- IPv6 Address types: Unicast
- IPv6 Neighbor Discovery
- SNMP over IPv6
- HTTP over IPv6
- Remote IPv6 ping



- ❑ Compliant with IEEE 802.3af

 - PD classification

- ❑ Support IEEE 802.3at

 - Up to 30W per port and up to total power budget

- ❑ Centralized power distribution

 - Simultaneously 8/16/24/48 ports can support a maximum of 7.5W per port

 - Simultaneously 4/8/12/24 ports can support a maximum of 15.4W per port

 - Simultaneously 2/4/6/12 ports can support a maximum of 30W per port

PoE Features (II)

Model No	Max Power Consumption (system)	Max Power Consumption	Max PoE Power Budget	AF(7.5W)	AF(15.4W)	AT(30W)
ECS2000-18P	AC 110V 26.16W AC 220V 27.30W DC 15.42W	250W	190W	16 ports	Any 12 ports	Any 6 ports
ECS2000-26P	AC110V 33.11W AC220V 33.89W DC 20.54W	250W	190W	24 ports	Any 12 ports	Any 6 ports
ECS2000-50P	AC110V 67.93W AC220V 67.8W DC 47.8W	525W	375W	48 ports	Any 24 ports	Any 12 ports

□ Hardware specification that endures from 0 °C to 50 °C

□ Green Ethernet Switch (EEE)

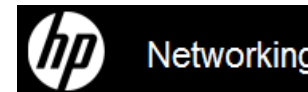
□ Reset Button

The switch will automatically reboot and reloads its factory default configuration.

□ Enhanced Securities

- DHCP Snooping and Option 82
- Web authentication and MAC authentication
- Voice VLAN

-  Product Overview
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ECS2000-10P

ECS2000-18T

ECS2000-18P

ECS2000-26T

ECS2000-26P

ECS2000-50T

ECS2000-50P

GS110TP

GS716T

GS724T

GS748T

GS724TP

GS748TP

DGS-1210-10P

DGS-1210-16

DGS-1210-24

DGS-1210-48

DGS-1224TP

SG200-08P

SG200-18

SG200-26

SG200-26P

SG200-50

SG200-50P

HP 1910-16G

HP 1910-24G

HP 1910-24G-PoE

(170W)

HP 1910-24G-PoE

(365W)

HP 1910-48G

- Hardware specification that endures from 0 °C to 50 °C
- Green Ethernet Switch (EEE)
- IPv6 support
- Support IEEE802.3at
- Full and complete family offers more options and choices for customers

L2 Edge Switch Port Comparison (I)

Competitor	Model Name	Speed	Copper	Fiber	Uplinks	Combo Ports	802.3af/at (PoE)
Edge-Core	ECS2000-10P	10/100/1000	8	0	2	0	0 (PoE+)
NETGEAR	GS110TP	10/100/1000	8	0	0	2	0
D-Link	DGS-1210-10P	10/100/1000	8	0	0	2	0
Cisco	SG200-08	10/100/1000	8	0	0	0	0

L2 Edge Switch Port Comparison (II)

Competitor	Model Name	Speed	Copper	Fiber	Uplinks	Combo Ports	802.3af/at (PoE)
Edge-Core	ECS2000-18T	10/100/1000	16	0	2	0	X
NETGEAR	GS716T	10/100/1000	16	0	2	0	X
D-Link	DGS-1210-16	10/100/1000	12	0	0	4	X
Cisco	SG200-18	10/100/1000	16	0	0	2	X
HP	1910-16G	10/100/1000	16	0	4	1	X
Edge-Core	ECS2000-18P	10/100/1000	16	0	2	0	0 (PoE+)

L2 Edge Switch Port Comparison (III)

Competitor	Model Name	Speed	Copper	Fiber	Uplinks	Combo Ports	802.3af/at (PoE)
Edge-Core	ECS2000-26T	10/100/1000	24	0	2	0	X
NETGEAR	GS724T	10/100/1000	24	0	2	0	X
D-Link	DGS-1210-24	10/100/1000	20	0	0	4	X
Cisco	SG200-26	10/100/1000	24	0	0	2	X
HP	1910-24G	10/100/1000	24	0	4	1	X
Edge-Core	ECS2000-26P	10/100/1000	24	0	2	0	O (PoE+)
NETGEAR	GS724TP	10/100/1000	24	0	2	0	O
D-Link	DGS-1224TP	10/100/1000	24	0	0	4	O
Cisco	SG200-26P	10/100/1000	24	0	0	2	O
HP	1.1910-24G-PoE(170W) 2.1910-24G-PoE(365W)	10/100/1000	24	0	4	1	O

L2 Edge Switch Port Comparison (IV)

Competitor	Model Name	Speed	Copper	Fiber	Uplinks	Combo Ports	802.3af/at (PoE)
Edge-Core	ECS2000-50T	10/100/1000	48	0	2	0	X
NETGEAR	GS748T	10/100/1000	48	0	2	0	X
D-Link	DGS-1210-48	10/100/1000	44	0	0	4	X
Cisco	SG200-50	10/100/1000	48	0	0	2	X
HP	1910-48G	10/100/1000	48	0	4	1	X

Edge-Core	ECS2000-50P	10/100/1000	48	0	2	0	O (PoE+)
NETGEAR	GS748TP	10/100/1000	48	0	2	0	O
Cisco	SG200-50P	10/100/1000	48	0	0	2	O

Competitor	Edge-Core	NETGEAR	D-Link	Cisco	HP
SDRAM	128MB	TBD	64MB	128MB (32MB in SG200-08P)	128MB
Flash	16MB	TBD	16MB	16MB (8MB in SG200-08P)	128MB
MAC Table	8K	4K	8K	8K	TBD
Acoustic	1. ECS2000-10P: Fan-less (0dB) 2. ECS2000-18T & ECS2000-26T : Fan-less (0dB) 3. ECS2000-18P, ECS2000-50T & ECS2000-50P : Under 45dB	1. GS108T/GS110TP: Fan-less (0dB) 2. GS716T : 33dB 3. GS724T : 34.3dB 4. GS724TP : 46.5dB 5. GS748TP : 44.8dB	1. DGS-1210-10P : Fan-less (0dB) 2. DGS-1210-16 : Fan-less (0dB) 3. DGS-1210-24 : Fan-less (0dB) 4. DGS-1210-48 : 46.2dB 5. DGS-1224TP : 47dB	1. SG200-08 & SG200-08P : Fan-less (0dB) 2. SG200-18 : Fan-less (0dB) 3. SG200-26 (Fan-less) & SG200-26P : 40.2dB 4. SG200-50 & SG200-50P : 42.5dB	TBD
802.3af	O	O	O	O	O
802.3at	O	X	X	X	X

Competitive Comparison- L2 Features

Competitor	Edge-Core	NETGEAR	D-Link	Cisco	HP
IEEE 802.1D (STP)	O	O	O	O	O
IEEE 802.1w (RSTP)	O	O	O	O	O
IEEE 802.1s (MSTP)	X	O	X	X	O
VLAN	4K	128	256	128	4K
LACP	1. ECS2000-10P: (5 trunks / up to 8 ports per trunk) 2. ECS2000-18T & ECS2000-18P: (9 trunks / up to 12 ports per trunk) 3. ECS2000-26T & ECS2000-26P : (13 trunks / up to 12 ports per trunk) 4. ECS2000-50T & ECS2000-50P : (25 trunks / up to 8 ports per trunk)	Yes	1. DGS-1210-10P : 5 trunks / up to 8 ports per trunk 2. DGS-1210-16/24/48 : 8 trunks / up to 8 ports per trunk	4 trunks / up to 16 ports per trunk	Yes
IGMP Snooping	O	O	O	O	O
Jumbo Frame	10K	TBD	10K	10K	10K

Competitor	Edge-Core	NETGEAR	D-Link	Cisco	HP
Number of priority queue	8 queues/port	4 queues/port	4 queues/port	4 queues/port	4 queues/port
Rate limiting	O	O	O	O	O
Scheduling	WRR +Strict Priority scheduling	WRR +Strict Priority scheduling	WRR +Strict Priority scheduling	WRR +Strict Priority scheduling	WRR +Strict Priority scheduling
802.1p	O	O	O	O	O
IP TOS Precedence	X	X	X	O	O
IP DSCP	O	O	O	O	X
TCP / UDP	O	O	O	O	O

Competitor	Edge-Core	NETGEAR	D-Link	Cisco	HP
Port Security (MAC-based)	O	O	O	O	O
IEEE 802.1x	O	O	O	O	O
HTTPS and SSL	O	X	SSL	X	O
SSH	O	X	X	X	X
RADIUS	O	O	O	O	O
MAC Filter	O	X	X	X	X

Competitor	SMC	NETGEAR	D-Link	Cisco	HP
Command Line Interface (CLI)	Yes (only IP setup/PING/system check/debug commands)	X	O	X	O
SNMP v1/v2/v3	O	O	O	O	O
RMON I	O	O	X	O	O
DHCP Client	O	O	O	O	O
DHCP Relay	O	X	X	X	O
DHCP Snooping	O	X	X	X	X
LLDP	O	X	O	O	O
sFlow	O	X	X	X	X
Loopback detection	O	X	O	X	X
Cable Diagnostics	O	X	O	O	O
Factory Default Reset	O	X	O	O	X

Competitive Comparison- IPv6

Competitor	SMC	NETGEAR	D-Link	Cisco	HP
IPv4/IPv6 Dual Protocol Stack	O	X	X	O	X
IPv6 Ping	O	X	X	X	X
ICMPv6	O	X	X	O	X
ICMPv6 Redirect	O	X	X	O	X
IPv6 Neighbor Discovery	O	X	X	O	X
SNMP over IPv6	O	X	X	X	X
IPv6 Telnet	O	X	X	X	X
IPv6 TFTP	O	X	X	O	X
IPv6 FTP	X	X	X	X	X
IPv6 SNMP	O	X	X	O	X
IPv6 SMTP	X	X	X	X	X
IPv6 sFlow	O	X	X	X	X
DHCP IPv6	O	X	X	X	X

-  Product Overview
-  Target Market and Application
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-  **Summary**

- ❑ Price competitive
- ❑ Focus solution for enterprise and campus markets
- ❑ Support IPv6 management
- ❑ Support IEEE 802.3at PoE+
- ❑ Full & complete family offers more options and choices for our customers
- ❑ ECView Pro will need to implement configuration/firmware upload and download in phase II.
- ❑ Phase II will add MIBs and PoE timer feature.

Power Saving Features

- Link-down power saving

ECS2000-26T										
Port Configuration										
Port	Link	Speed		Flow Control			Maximum Frame Size	Excessive Collision Mode	Power Control	
		Current	Configured	Current Rx	Current Tx	Configured				
*			<>			☐	9600	<>	ActiPHY	
1	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
2	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
3	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
4	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
5	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
6	Down		Auto	X	X	☐	9600	Discard	ActiPHY	
7	1Gfdx		Auto	X	X	☐	9600	Discard	ActiPHY	

- Cable length power savings

Port Configuration										
Port	Link	Speed		Flow Control			Maximum Frame Size	Excessive Collision Mode	Power Control	
		Current	Configured	Current Rx	Current Tx	Configured				
*			<>			☐	9600	<>	PerfectReach	
1	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
2	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
3	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
4	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
5	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
6	Down		Auto	X	X	☐	9600	Discard	PerfectReach	
7	1Gfdx		Auto	X	X	☐	9600	Discard	PerfectReach	

- EEE: idle link power savings

E d g e - c o r e

ECS2000-26T

▼ Basic Configuration

- ▶ System
- Ports
- ▶ Aggregation
- ▶ Spanning Tree
- MAC Table
- ▶ VLANs
- Mirroring & RSPAN

▼ Advanced Configuration

- ▶ System
- ▼ Power Reduction
 - EEE
- Ports
- ▶ Security
- ▶ Aggregation
- Loop Protection
- ▶ Spanning Tree
- MVR
- ▶ IPMC
- ▶ LLDP
- MAC Table
- ▶ VLANs
- ▶ Private VLANs
- ▶ VCL
- ▶ Voice VLAN
- ▶ QoS

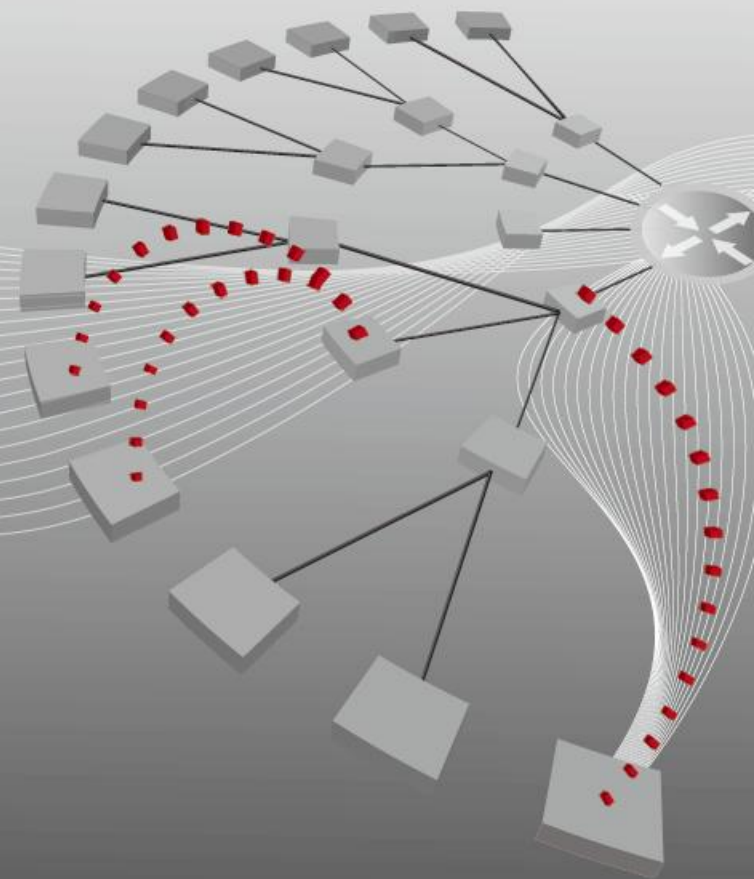
EEE Configuration

		EEE Urgent Queues							
Port	Enabled	1	2	3	4	5	6	7	8
*	☐	☐	☐	☐	☐	☐	☐	☐	☐
1	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	☐	☐	☐	☐	☐	☐	☐	☐	☐
10	☐	☐	☐	☐	☐	☐	☐	☐	☐
11	☐	☐	☐	☐	☐	☐	☐	☐	☐
12	☐	☐	☐	☐	☐	☐	☐	☐	☐
13	☐	☐	☐	☐	☐	☐	☐	☐	☐

1. EEE disable: 48.4W

2. EEE enable: 30.8W

****Power save around per port 2.2W****



Thank you!