C-300 SERIES
Managed Ethernet Switches

SIGNAMAX

NETWORK SOLUTIONS

C-300 SERIES
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The Signamax C-300 series of fully managed switches delivers full Layer 2 capabilities with enhanced access security, ACLs, traffic prioritization, and IPv6 support. The security & reliability provided by this series is ideal for branch and campus implementations.

The C-300 Series switches are built from the ground up for easy deployment and management without compromising any of the power and flexibility traditionally found in enterprise-class switches.


- Cost-effective, reliable, and secure Layer 2 switches

- Non-blocking switches with up to 104 Gbps bandwidth support

- Fanless design on selected models for silent operation

- Up to 740 watts PoE budget with PoE+ support and dynamic power allocation for powering APs, phones, cameras, and other PoE-enabled devices

- 8 dedicated QoS queues for converged voice, video, and data applications

- Integrated mounting brackets for rack installation

- SFP uplink interfaces on all models

- Static IP routing & RIP support

- Low power consumption, quiet acoustic design, and shallow rack depth options, enabling flexible deployment in wiring closets as well as offices and classrooms

- 5 year hardware warranty & support at no additional cost

The C-300 Series Capabilities

The C-300's reliable architecture and simplified management is ideal for use in critical networks such as Physical Security and Building Automation like shown below in the illustration of a typical enterprise in a multi-level building. Powerful packet handling with the comprehensive suite of security and Quality of Service functionality is optimal for any enterprise data network.

The security and QoS segmentation capabilities enable a network convergence of data, VoIP, physical security, and building automation. When the solution leads to separate networks, those networks can be easily deployed and managed through the simplified management system.
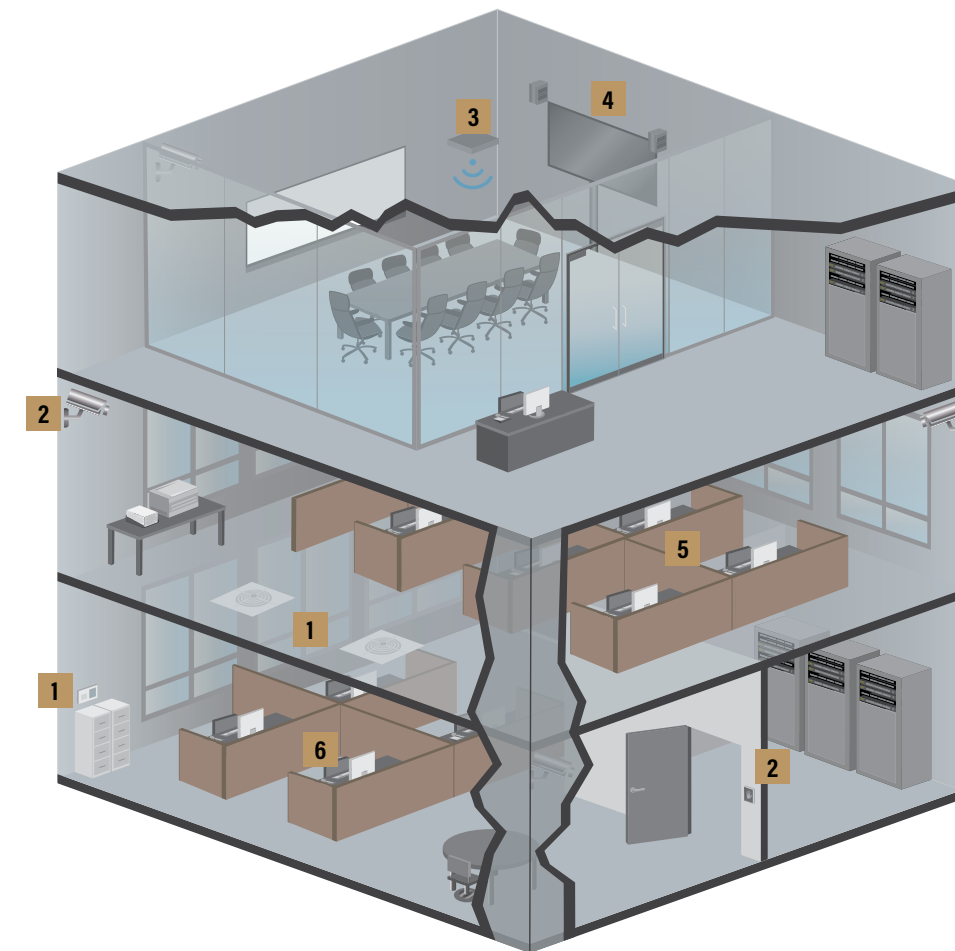

1. Next generation building automation systems include multiple sensors, controllers, and output devices such as variable air volume units (VAV) that are all connected to the network and need a reliable and secure infrastructure that's easy to install and monitor.

2. Security cameras and access control systems require flexible PoE options and unlike traditional enterprise network devices, they often are placed in unsecured locations which is why the C-300 Series includes enhanced security features such as Port Security, MAC Authentication, ACLs, and 802.1X port-based access control.

3. The C-300 PoE+ models supply connectivity and power to wireless APs with 30 watts of PoE+ per port and non-blocking, high performance packet forwarding.

4. AudioVideo is the latest industry to migrate to standard LAN for connectivity, but it's extremely sensitive to bandwidth and latency which is why the C-300 Series supports a comprehensive suite of Quality of Service features as well as powerful packet forwarding capabilities.

5. Enterprise networks are being used for more and more devices, but traditional data is still business-critical and requires security, resiliency, and flexibility in the network.

6. Deploying VoIP networks with the C-300 Series is simplified by using Auto Voice VLANs for security and Quality of Service.

Features for deployment in any solution.

INTELLIGENT POE:

The C-300 series includes several PoE options, all of which support PoE+ up to 30W on all ports. The SC30050 is a full-PoE fanless design which can provide a total of 125W while the SC30020 delivers a default 370W but can be extended up to 740W using a AP50010 power chassis. The innovative PoE scheduling allows the administrator complete control and flexibility regarding the power provided. The C-300 series supports dynamic power allocation and PoE ports can be individually configured for prioritization, scheduling, and consumption.
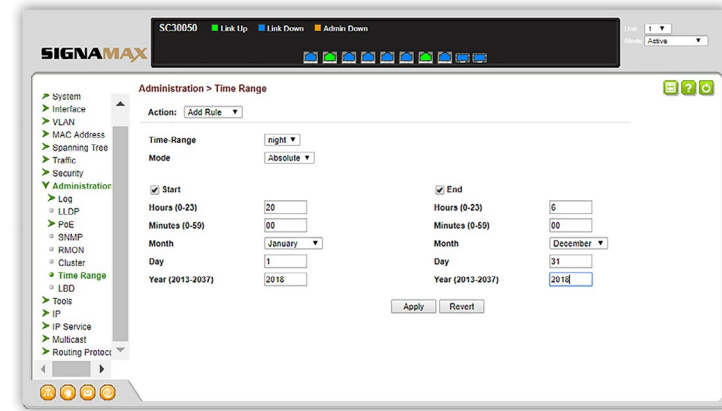

ENTERPRISE GRADE:

The C-300 Series runs a sophisticated operating system that provides a variety of advanced features including:

- Static Routing and RIP
- Dynamic VLAN assignment and Auto Voice VLAN
- Link Aggregation (LACP)
- IGMP and MLD snooping
- 802.3az and Green-Ethernet

SIMPLIFIED MANAGEMENT:

The easy to use C-300 Graphical User Interface includes an intuitive dashboard that provides a unified view of event logs, traffic statistics, and monitoring which simplifies managing and growing network deployments. The C-300 Series switches can be fully deployed in minutes, and there is no need for a console cable or any command line configuration to get started or even recover from misconfiguration. The auto firmware upgrade feature ensures the network is kept up-to date with bug fixes, security updates, and new features without overburdening the network administrator.
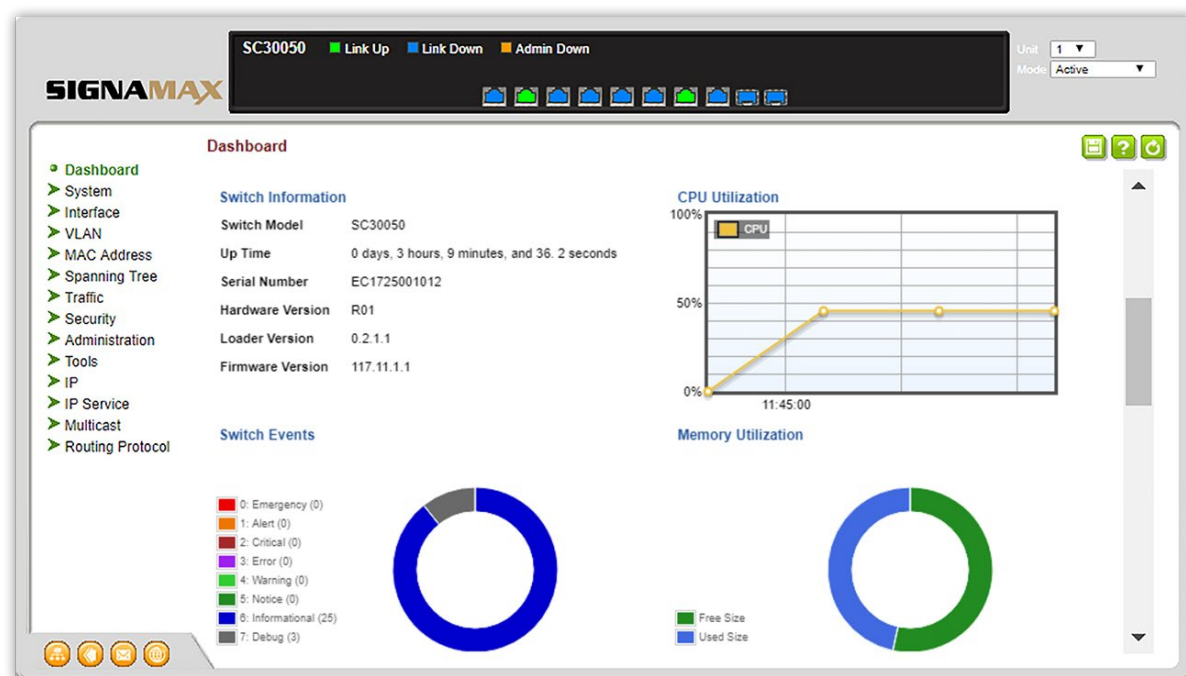

DIAGNOSTICS:

The C-300 includes several powerful diagnostic capabilities including real-time cable testing, automatic Power On Self Test, a diagnostics LED, dual firmware and configuration files, and Digital Diagnostic Monitoring (DDM). Port Mirroring and sFlow can be used for gaining visibility into network activity from the edge to the core. The C-300 also includes network utilities for connectivity testing.
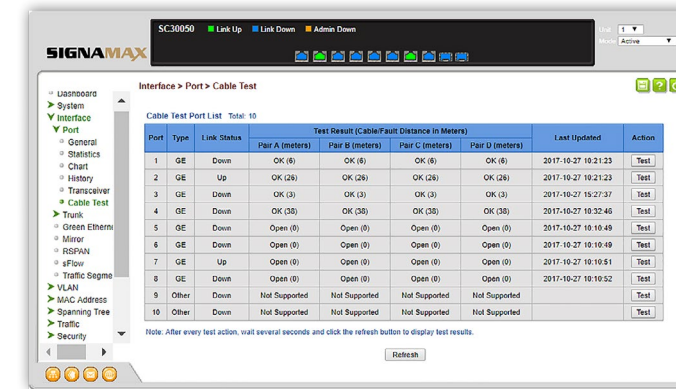
ENHANCED SECURITY:

The C-300 series includes sophisticated security features such as DDOS protection, Port Security, MAC authentication, ACLs and 802.1X port-based access control. SSH and SSL/HTTPS encryption provide secure network management.
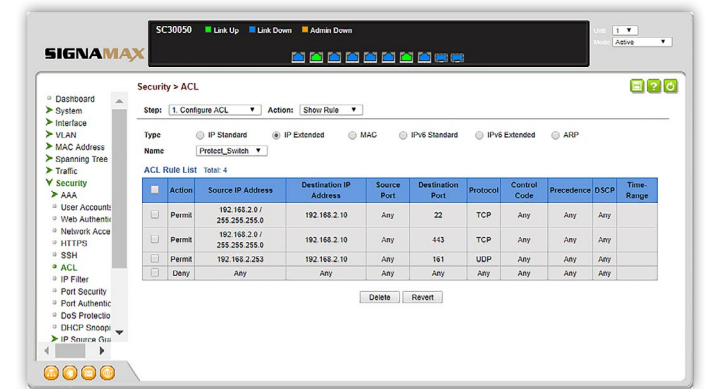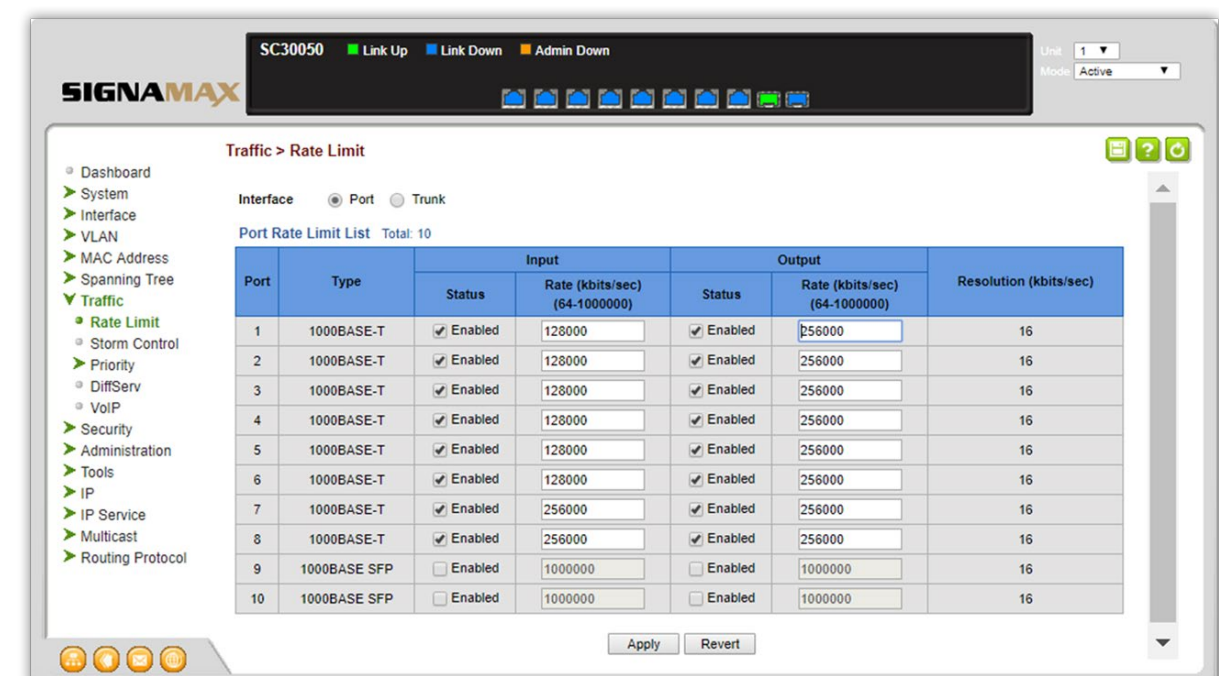

FIBER CONNECTIVITY:

All C-300 Series switches include fiber connectivity options for your growing networks. The 24 and 48 port models include four SFP ports while the 8 port models include two SFP ports, each providing up to 1 Gbps uplinks.

QUALITY OF SERVICE (QoS):

Traffic prioritization (IEEE 802.1p) allows real-time traffic classification with eight egress queues and uses weighted round robin (WRR), strict priority or Hybrid QoS. The C-300 Series simplifies QoS configuration by allowing prioritization by port or VLAN. Class of Service (CoS) sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), Layer 3 protocol, TCP/UDP port number, source port, and DiffServ. Rate limiting establishes per-port ingress/egress maximums for all traffic or for broadcast, multicast, or unknown destination traffic, and flow control helps deliver reliable communication during full-duplex operation.

C-300 Series Models & Specifications

PART NUMBER		SC30010	SC30020	SC30030
Switches				
Ports	RJ-45 10/100/1000 Ports	48	24	24
	SFP Uplink Ports	4	4	4
	PoE Ports	X	24	24
PoE	PoE Budget	X	370W (740W with AP50010)	200W
Performance	Switching Capacity	104Gbps	56Gbps	56Gbps
	Forwarding Rate	77.4Mpps	41.7Mpps	41.7Mpps
	MAC Address Table	16K	8K	8K
Electrical & Environmental	Max Power Consumption	40W	490W	260W
	Acoustic Noise	54.2 dB (A)	49.7 dB (A)	46.1 dB(A)
	Heat Dissipation	136 (Btu/H)	1679 (Btu/H)	887 (Btu/H)
	MTBF	534K hrs	370K hrs	681K hrs
	Operating Temperature	32 to 122 ºF (0 to 50 ºC)	32 to 113 ºF (0 to 45 ºC)	32 to 122 ºF (0 to 50 ºC)
Physical Characteristics	Dimensions	17.3 x 8.6 x 1.7 in (44 x 22 x 4.4 cm)	17.3 x 8.6 x 1.7 in (44 x 22 x 4.4 cm)	17.3 x 8.6 x 1.7 in (44 x 22 x 4.4 cm)
	Weight	5.51 lb (2.5 kg)	6.85 lb (3.1 kg)	6.18 lb (2.8 kg)
	Fanless	-	-	-

PART NUMBER		SC30040	SC30050	SC30060
Switches				
Ports	RJ-45 10/100/1000 Ports	24	8	8
	SFP Uplink Ports	4	2	2
	PoE Ports	X	8	X
PoE	PoE Budget	X	125W	X
Performance	Switching Capacity	56Gbps	20Gbps	20Gbps
	Forwarding Rate	41.7 Mpps	14.9Mpps	14.9Mpps
	MAC Address Table	8K	8K	8K
Electrical & Environmental	Max Power Consumption	20W	160W	8W
	Acoustic Noise	0 dB (A)	0 dB (A)	0 dB(A)
	Heat Dissipation	68 (Btu/H)	546 (Btu/H)	27 (Btu/H)
	MTBF	564K hrs	546K hrs	554K hrs
	Operating Temperature	32 to 122 ºF (0 to 50 ºC)	32 to 104 ºF (0 to 40 ºC)	32 to 122 ºF (0 to 50 ºC)
Physical Characteristics	Dimensions	17.3 x 8.6 x 1.7 in (44 x 22 x 4.4 cm)	12.9 x 8 x 1.67 in (33 x 20.4 x 4.26 cm)	7.7 x 4.6 x 1.4 in (19.6 x 11.7 x 3.6 cm)
	Weight	4.86 lb (2.2 kg)	5.34 lb (2.4 kg)	1.81 lb (816 g)
	Fanless	Yes	Yes	Yes

Specifications

PERFORMANCE
Up to 16K MAC Addresses
256MB DRAM
Up to 12Mb Packet Buffer
32MB Flash memory
Supports 10K Jumbo Frames
Wirespeed forwarding
IPv4/IPv6 Dual Protocol Stack

SECURITY
DDOS Protection
CPU Guard (CPU Protection)
Port Isolation
Storm Control
Broadcast/Multicast/Unknown Storm Control
Up to 512 Access Control Lists (ACL) based on L2/L3/L4
Port Security
MAC Authentication
Dynamic ARP Inspection
AAA (IEEE 802.1X RADIUS/TACACS+)
IP Source Guard
Web Authentication
DHCP Snooping
Encrypt switch access with SSH and SSL

LAYER 3
Up to 56 Static routes
RIPv1/RIPv2(apart from SC30010)
DHCP v4/v6 Client / DHCP Relay
Static Multicast Routing

LAYER 2
SFP ports support IEEE 802.3u (100FX), 802.3z (1000SX/LX/LHX/ZX)
IEEE 802.3x Flow Control
Spanning Tree:
  IEEE 802.1D Spanning Tree Protocol (STP),
  IEEE 802.1w Rapid Spanning Tree Protocol (RSTP),
  IEEE 802.1s Multiple Rapid Spanning Tree Protocol (MSTP,64 instances)
  Loopback Detection
  BPDU Filter/Guard
  BPDU Forward
  Root Guard
Up to 4094 IEEE 802.1Q (802.3ac) VLANs:
  Port-Based/MAC-Based/Protocol-Based(IEEE 802.1v)
  Guest VLAN
  Auto Voice VLAN
  Dynamic VLAN Assignment
802.3ad Link Aggregation (static and LACP)
Multicast:
  IGMP v1/v2/v3 snooping
  IGMP Filtering/Throttling:
  IGMP Queries
  IGMP Immediate leave
  MLD Snooping
  mDNS
IEEE 802.1AB LLDP/LLDP-MED
IEEE 802.3az Energy Efficient Ethernet
Q-in-Q

MANAGEMENT
Web-based Graphical User Interface (GUI)
Industry-standard CLI (Telnet/SSH) with context-sensitive help
Console management port on the front panel for ease of access
Switch Cluster allows up to 36 switches to be managed from a single switch
Comprehensive SNMP MIB support for standards based device management
Dual Image/Configuration
RMON (groups 1,2,3 and 9)
NTP/SNTP
Auto Firmware Upgrade
SNMP v1/v2/v3

QoS
Rate Limiting (Ingress/Egress Port-Based)
Priority Queues Schedule (WRR/Strict Priority/Hybrid QoS)
Port-Based QoS
IPv4/IPv6 DSCP
DiffServ
Auto VOIP
8 HW Queues per port for 802.1p priority tagging
Policy based dynamic QoS

PoE
Support IEEE 802.3af/IEEE802.3at on each port
Dynamic Power Allocation
PoE Scheduling

DIAGNOSTIC TOOLS
Diag LED
Cable Test
Digital Diagnostic Monitoring (DDM) on SFP Ports
Ping polling for IPv4 and IPv6
TraceRoute for IPv4 and IPv6
Port Mirror (One to One, One to Many)
Remote Mirror
Event/Error Log/Syslog/SMTP Alerts
SFlow
SC30010 trace multi port
Other models Trace on port -Ingress only

ELECTRICAL CHARACTERISTICS
Power Supply AC Input: 100 - 240 V AC, 50/60 Hz

ENVIRONMENTAL REQUIREMENTS
Storage Temperature: -40 to 158°F (-40 to 70°C)
Operating/Storage Humidity: 10 to 90% (non-condensing)

CERTIFICATIONS
Emissions: CE Mark: EN 55022, Class A; FCC Part 15 Class A
Immunity: IEC 61000-3-3, 61000-4-2/3/4/5/6/11

WARRANTY
Five Years (Including power supply)

ETHERNET SWITCHES

PART NO.	DESCRIPTION
SC30010	48 Port Gigabit Managed Switch
SC30020	24 Port Gigabit PoE+ Full Power Managed Switch
SC30030	24 Port Gigabit PoE+ Managed Switch
SC30040	24 Port Gigabit Managed Switch
SC30050	8 Port Gigabit PoE+ Managed Switch
SC30060	8 Port Gigabit Managed Switch

ACCESSORIES

Power Chassis (SC30020 only)

AP50010	C-300 Power Chassis
AP50020	460W Extended Power Supply (for use in AP50010 Power Chassis)

Cables

AC30010	C-300 Series Console Cable

Replacement Mounting Kits

AM30010	C-300 24 and 48 Port Switches Rack Mount Kit
AM30020	SC30050 Rack Mount Kit
AM30030	SC30060 Rack Mount Kit

SFP MODULES

PART NO.	DESCRIPTION
065-79SXMG	1000SX Multi-Mode SFP Module 850nm up to 550m
065-79LXMG	1000LX Single-Mode SFP module 1310nm up to 10km
065-79ZXMG	1000ZX Single-Mode SFP Module 1550nm up to 80km
065-73FXMM5MG	100FX / OC-3 / STM-1 Multi-Mode SFP Module 1300nm up to 5km
065-73FXSM20MG	100FX / OC-3 / STM-1 Single-Mode SFP Module 1300nm up to 20km
065-791000TTXMG	10/100/1000TX SFP Module 100m span

For a complete list of SFP Modules visit www.signamax.com.

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