3COM

DATA SHEET

Enterprise-class, Gigabit switches for small and medium businesses, voice ready with PoE and advanced features for network control and flexibility

OVERVIEW

The "smart" voice-ready 3Com® Baseline Switch 2900 Plus Family delivers Layer 2 enterprise-class Gigabit switching solutions, customized and priced for small and mid-sized organizations.

These managed switches offer tremendous value to small and medium businesses looking for a low cost solution who need a level of control over their network not offered by unmanaged switching products, without sacrificing the advanced functionality normally found on higher-end managed switching products.

KEY BENEFITS

LAYER 2 SWITCHING WITH ADVANCED FEATURES

The Baseline Switch 2900 Plus helps build a voice ready network—with 3Com's unique auto-voice VLAN, advanced voice QoS, SNMP-based management, Power over Ethernet (PoE) and other features.

To ensure optimal use of the network bandwidth and deliver maximum voice and data quality, traffic flow can be directed according to the needs of the business using Spanning Tree and Rapid Spanning Tree, traffic prioritization, priority queuing and VLANs.

Link aggregation can be done via IEEE 802.3ad LACP or manually, allowing ports to be grouped together to form an ultra-high-bandwidth connection that greatly expands bandwidth capacity to the network core or other parts of the network.

Baseline Switch 2900 models are available with 16, 24 and 48 ports; a 24-port PoE version delivers data and power over the same cabling. Each switch also has four dual-purpose ports (configurable as 10/100/1000 copper or SFP-based fiber) to connect to high-performance computers, servers, or network backbones.

ENTERPRISE-QUALITY SECURITY

Enterprise-quality security is provided with IEEE 802.1X network login and advanced Access Control Lists (ACLs), which enable usage policies via the switch at each point of access to the network. All management communications are encrypted with HTTPS.

POWER OVER ETHERNET

The Baseline Switch 2924-PWR Plus provides inline power to attached devices—access points, Voice over IP (VoIP) phones, IP security cameras, etc.—via industry-standard IEEE 802.3af PoE over a single Ethernet cable, resulting in significant deployment cost savings.

from left top, clockwise: 3Com Switch 2916-SFP Plus, Switch 2924-PWR Plus, Switch 2948-SFP Plus, Switch 2924-SFP Plus

KEY BENEFITS
(CONTINUED)

NO SWITCH SETUP REQUIRED

Baseline Plus switches are operational straight out-of-the-box; as long as default settings are acceptable, there is no need to configure the switch. If desired, the switch can be configured using a web browser, console port, or SNMP management software.

ENHANCED INTUITIVE MANAGEMENT OPTIONS

For networks that require more control, the switch web management interface provides an intuitive, menu-driven process for even novice users to quickly and confidently configure the switch during initial setup and manage it during normal operation. Graphical switch and port views provide a clear understanding of switch status and configuration.

In addition, the web interface features individual port-traffic monitoring (port mirroring) and MAC address port mapping tables. A cable diagnostic tool lets users troubleshoot basic connectivity problems via the web management interface further simplifying network installation.

The Baseline Switch 2900 family is also supported by 3Com Network Supervisor (3NS) and 3Com Network Director (3ND) management software. 3NS and 3ND can be used to map the network topology, indicating what devices are connected, and on what ports. Switch management and software upgrades can be easily done. Other SNMP-based management tools may also be used.

The Switch family also supports a compact Command Line Interface (CLI) that is accessed via the front panel console port. Using the CLI, major switch management options can be quickly configured.
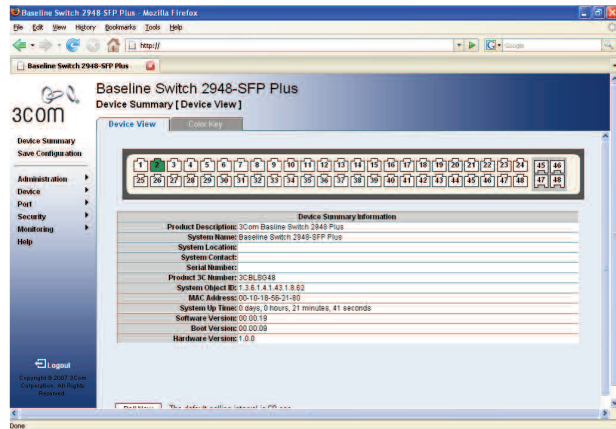
FEATURES HIGHLIGHTS

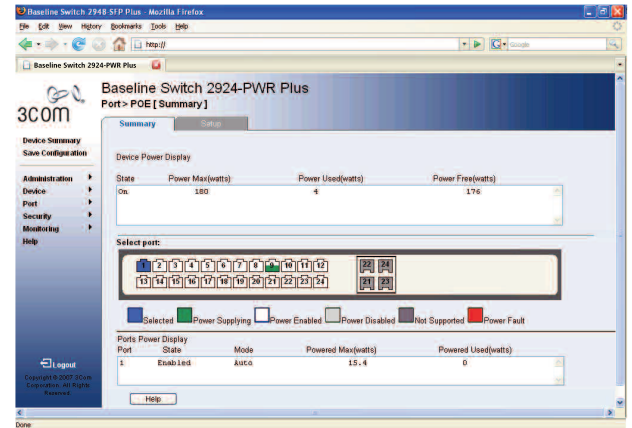| Feature	Description
Performance	
VLANs	Segment the network by grouping users based on their data or traffic exchange requirements. This ensures optimal use of available bandwidth as traffic flow is directed according to the needs of the business.
Advanced QoS and traffic shaping	Traffic prioritization, using IEEE 802.1p Quality of Service (QoS) and Type of Service (TOS) with Differentiated Services Code Point (DSCP), and ingress/egress rate shaping help ensure that critical time-sensitive traffic like voice gets the priority needed for quality communications.
Link aggregation (trunking)	Group together any number of ports automatically using Link Aggregation Control Protocol (LACP), or manually, to form an ultra-high-bandwidth connection to the network backbone; help prevent traffic bottlenecks.
Rapid Spanning Tree Protocol support	Improves network compatibility, scalability and availability.
IGMP snooping	Multicast filtering optimizes network performance, instead of flooding traffic to all ports.
Unique voice features	Automatic assignment of voice traffic to separate VLANs ("auto-voice VLAN"), advanced voice QoS, traffic shaping, multicast filtering and PoE support delivers the support necessary for quality voice communications.
Flexible Gigabit uplinks	Daisychain multiple units together via the built-in copper Gigabit uplink ports or connect to a network backbone via SFP-based fiber modules.
PoE support (PWR model only)	Provides power for IP phones, wireless LAN access points, and other IEEE 802.3af-compliant devices over the same cable used for data; lowers total cost of ownership since there is no need to run additional electrical wiring.
Security	
IEEE 802.1X network access control	Provides standards-based security combined with local authentication.
Advanced Access Control Lists (ACLs)	MAC- and IP-based ACLs enable network traffic filtering and enhance network control.
Traffic monitoring (port mirroring)	Administrators can examine suspect data streams received on any port by mirroring the data stream to a monitoring port.
Configuration and management	
Enhanced browser-based interface	Graphical user interface allows even the most novice users to configure the switch during initial setup and monitor it during normal operation.
SNMP support	Switch can be managed with 3Com Network Supervisor, Network Director and other SNMP-compatible tools.
PoE configuration	PoE power can be enabled or disabled per unit and per port; power can also be limited per port.
Cable diagnostics	Remotely detect copper cable issues using a browser-based tool.

BASELINE SWITCH 2900 PLUS USER INTERFACE

Intuitive Browser-Based Interface

With the switch web management interface, even novice users can quickly and confidently configure the switch during initial setup and manage it during normal operation. Graphical switch and port views provide a clear understanding of switch status and configuration.
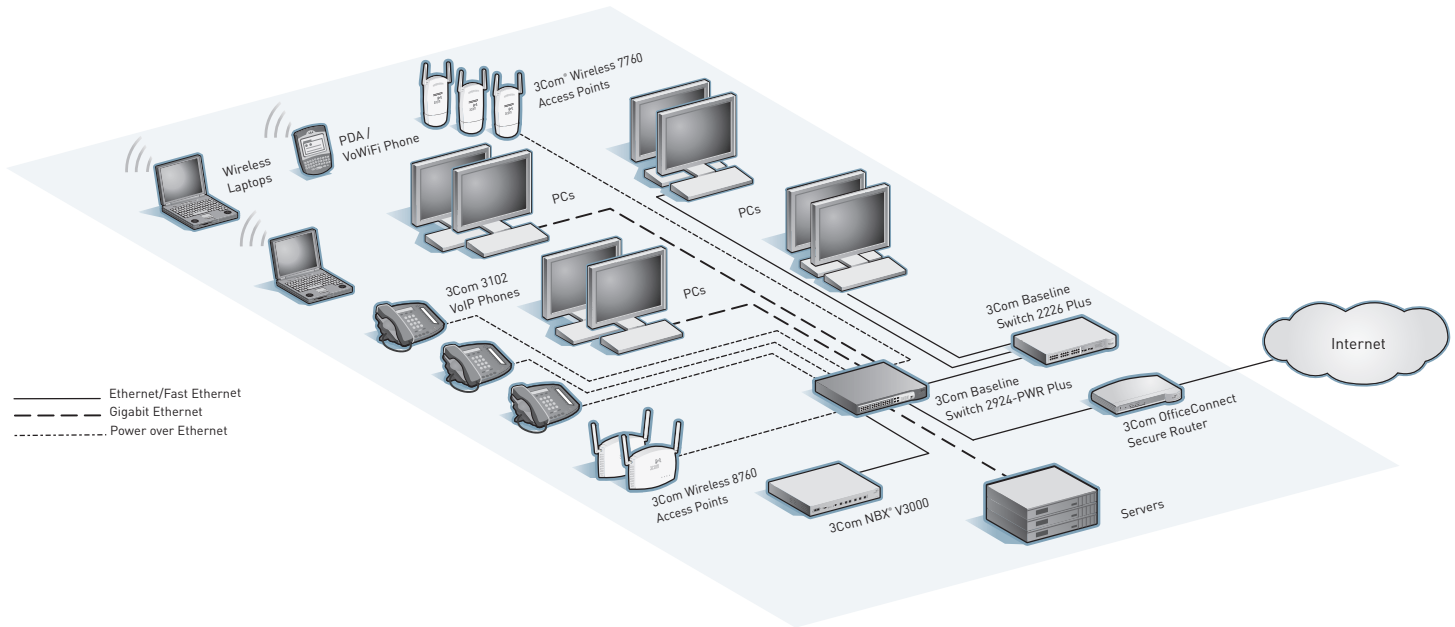

PoE summary information for the Switch 2924-PWR Plus.

Device summary information for the Switch 2948-SFP Plus.

BASELINE SWITCH 2924-PWR PLUS IN A CONVERGED NETWORK

VOICE READY NETWORK

3Com Voice Ready Networks provide an innovative and holistic approach to assessing, recommending and implementing a converged network, solving the most vexing challenges that confront IT managers as they deploy Internet Protocol (IP) telephony systems. With 3Com Voice Ready Networks, organizations can optimize network infrastructure for realtime voice and video traffic, ensure secure communications and protect business assets.

The Baseline Switch 2900 Plus Family is an integral component of this approach, offering:

› Automatic assignment of voice traffic to separate VLANs

› IEEE 802.1p prioritization and 802.1Q VLANS

› Advanced QoS and traffic shaping capabilities

› IEEE 802.1X authentication

› Power over Ethernet (PWR model only)

SPECIFICATIONS

Information in this section is relevant to all members of the 3Com Baseline Switch 2900 Plus family, unless otherwise stated.

CONNECTORS

Switch 2916-SFP Plus
16 10BASE-T/100BASE-X/1000BASE-T

Switch 2924-SFP Plus
24 10BASE-T/100BASE-X/1000BASE-T

Switch 2924-PWR Plus
24 10BASE-T/100BASE-X/1000BASE-T, PoE-enabled

Switch 2948-SFP Plus
48 10BASE-T/100BASE-X/1000BASE-T

All switches
4 Gigabit SFP ports, dual-purposed with 4 of the above 10/100/1000 ports (configurable as 10/100/1000 or SFP)

All copper ports are auto MDI/MDIX, auto-negotiating RJ-45

Front-mounted console port

PERFORMANCE

Switch 2916-SFP Plus
32 Gbps switching capacity, max.
23.7 Mpps forwarding rate, max.

Switch 2924-SFP Plus
48 Gbps switching capacity, max.
35.5 Mpps forwarding rate, max.

Switch 2924-PWR Plus
48 Gbps switching capacity, max.
35.5 Mpps forwarding rate, max.

Switch 2948-SFP Plus
96 Gbps switching capacity, max.
71.4 Mpps forwarding rate, max.

All models
Wirespeed performance
Store-and-forward switching

LAYER 2 SWITCHING

8,192 MAC addresses in address table
256 port-based VLANs (IEEE 802.1Q)
IEEE 802.3ad Link Aggregation, automated (LACP) and manual aggregation: 8 trunks, max.; 8 ports per trunk, max.
Auto-negotiation of port speed and duplex
Auto-voice VLAN for automatic vendor-independent segregation and prioritization of VoIP traffic
IEEE 802.3x flow control (half- and full-duplex)
IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
Internet Group Management Protocol (IGMP) v1 and 2 on Layer 2 interfaces
Jumbo frames (up to 9K bytes)
Multicast filtering

CONVERGENCE

4 hardware queues per port, with IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress
Weighted Round Robin queuing
Traffic prioritization at Layer 2 using 802.1p QoS, and at Layer 3 using Type of Service (TOS) with Differentiated Services Code Point (DSCP)
Ingress/egress rate shaping
Auto VLAN assignment for voice traffic determined by vendor OUI
CoS remarking for prioritization of VoIP traffic

SECURITY

IEEE 802.1X Network login
Access Control Lists (ACLs)
MAC-based Layer 2 filtering rules:
• source/destination address
• Ethertype
• CoS
• VLAN
IP-based Layer 3 filtering rules:
• protocol
• source/destination address
• TCP/UDP port
• DSCP value
• IP precedence
Management communications are encrypted via HTTPS

POWER OVER ETHERNET
(Switch 2924-PWR Plus, only)
IEEE 802.3af
180W per switch, max.

MANAGEMENT

Web-based configuration and management
System configuration with SNMP v1 and 2
Compatible with SNMP management tools like 3Com Network Supervisor and 3Com Network Director*
CLI via console
Management communications are encrypted via HTTPS

LED INDICATORS
Module active, power, network traffic/duplex mode, link status/speed

AT-A-GLANCE TRAFFIC MONITORING
Ports: active, enabled, disabled
Modules: present, active

POWER SUPPLY

Switch 2916-SFP Plus
Current rating: 1A, max.
Power dissipation: 198.0 BTU/hr, max.

Switch 2924-SFP Plus
Current rating: 1.5A, max.
Power dissipation: 286.7 BTU/hr, max.

Switch 2924-PWR Plus
Current rating: 5.1A, max.
Power dissipation: 1,194.6 BTU/hr, max.

Switch 2948-SFP Plus
Current rating: 1.5A, max.
Power dissipation: 238.9 BTU/hr, max.

All switches
Input voltage: 100-240 VAC, 50/60 Hz
Power inlet: IEC 320

DIMENSIONS
Height: 4.4 cm (1.7 in or 1 RU)
Width: 44.0 cm (17.3 in)
Depth–
2916-SFP, 2924-SFP, 2924-PWR: 17.1 cm (6.7 in)
2948-SFP: 23.8 cm (9.4 in)
Weight–
2916-SFP: 1.8 kg (4.0 lb)
2924-SFP: 1.6 kg (3.5 lb)
2924-PWR: 1.9 kg (4.2 lb)
2948-SFP: 2.5 kg (5.5 lb)

ENVIRONMENTAL REQUIREMENTS
Operating temperature: 0° to 40°C (32° to 104°F)
Operating humidity: 10 to 95% (non-condensing)
Standard: EN 60068 (IEC 68)

REGULATORY AND AGENCY APPROVALS
Safety: UL 60950-1, EN 60950-1, CSA 22.2 60950-1, IEC 60950-1
Emissions: EN 55022 Class A, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, CISPR22 Class A, ICES-003 Class A, VCCI Class A
Immunity: EN 55024

IEEE STANDARDS SUPPORTED
IEEE 802.1ad Provider Bridges
IEEE 802.1d Spanning Tree
IEEE 802.1p Priority Tags
IEEE 802.1Q VLANs
IEEE 802.1X Port Security
IEEE 802.1w Rapid Spanning Tree
IEEE 802.3 Ethernet
IEEE 802.3ab Gigabit Ethernet
IEEE 802.3ad Link Aggregation
IEEE 802.3af Power over Ethernet (Switch 2924-PWR only)
IEEE 802.3u Fast Ethernet
IEEE 802.3x Flow Control
IEEE 802.3z Gigabit Ethernet
ISO 8802-3

PACKAGE CONTENTS
Switch unit, power cord, self-adhesive rubber pads, console cable, rack-mount kit, product CD, warranty and safety information flyer

WARRANTY AND OTHER SERVICES
Three Year Limited Hardware Warranty
Limited Software Warranty for 90 days
Advance Hardware Replacement with Next Business Day shipment in most regions
90 days of telephone technical support
Refer to www.3com.com/warranty for details.

* Switch 2948-SFP Plus will be supported in future release of 3Com Network Supervisor and Network Director, planned for 3rd quarter calendar year 2007

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Baseline Switch 2916-SFP Plus	3CBLSG16
3Com Baseline Switch 2924-SFP Plus	3CBLSG24
3Com Baseline Switch 2924-PWR Plus	3CBLSG24PWR
3Com Baseline Switch 2948-SFP Plus	3CBLSG48

Transceivers

3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92

Visit www.3com.com for more information about 3Com secure converged network solutions.

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