

# AVAYA




## Avaya™ P580 and P882 MultiService Switches



Converged Voice and  
Data Networks  
Customer Relationship  
Management  
Unified Communication  
Supported by:  
Avaya Labs and Services

Communication without boundaries



As your communications network becomes more central to your business, it will be called upon to do more: IP Telephony, customer relationship management, video collaboration, unified messaging, supply chain management, process control, and distance learning. Meeting these demands will take more than just the muscle of additional bandwidth—it will require the brains of smarter networking hardware and software. That's where the Avaya™ P580 and P882 MultiService Switches excel.

Part of Avaya's family of Cajun® network switches, the P580 and P882 scale far beyond the shared bus and shared memory designs of other lower capacity switches. They benefit from Avaya's VLAN support, impressive N+1 redundancy options, Avaya's comprehensive understanding of Quality of Service (QoS) issues for voice, and Avaya software including Avaya™ Policy Manager and Avaya™ MultiService Network Manager.

## Gigabit-Scaled Campus Networking

The P580 and P882 combine powerful backbone switching, high-port density, performance, and capacity. They are enabled for voice/data/video applications without the need for expensive forklift upgrades. The two different chassis sizes, a wide range of interfaces including 10 Gigabit Ethernet (10 GbE), fault-tolerance options and superior port densities ensure the P580 and the P882 meet a wide range of enterprise network needs.

The Avaya P882 MultiService Switch provides:

- Up to 139 Gbps switching/routing performance
- Up to 768 10/100 ports per switch
- Up to 128 full-duplex Gigabit Ethernet ports
- Up to 384 100BASE-FX ports
- Up to 8 10 GbE ports per switch

The Avaya P580 MultiService Switch provides:

- Up to 55 Gbps switching/routing capacity
- Up to 288 10/100 ports per switch
- Up to 144 100BASE-FX ports
- Up to 48 full-duplex Gigabit Ethernet ports
- Up to 3 10 GbE ports per switch

Both models support:

- Advanced QoS features for guaranteed delivery of time-critical, delay-sensitive traffic
- Efficient IP Multicast support for streaming media and other high-volume multicast applications
- High-speed ATM uplinks with superior Ethernet to ATM QoS mapping
- Unique OpenTrunk VLAN interoperability

- Investment protection—interoperable with legacy Avaya 50-Series media modules or 80-Series modules
- Avaya's Switch Architecture For Extreme Resiliency (SAFER) Technology™ for no single point of failure
- QoS policy management via Avaya Policy Manager
- Advanced network management and monitoring via Avaya MultiService Network Manager

The P580 incorporates a rack-mount chassis with 6 payload slots and the P882 incorporates a rack-mount chassis with 16 payload slots that accept a wide variety of media modules including 10 Gigabit Ethernet, Gigabit Ethernet over Fiber, Gigabit Ethernet over Copper, ATM OC3/OC12, as well as 100BASE-FX and 10/100BASE-T. Spare crossbar switch elements, crossbar controllers, power supplies and fans can all be mounted for superb N+1 redundancy. The maximum port density is 48 10/100BASE-T ports per module.

Avaya P580 and  
P882 MultiService Switches





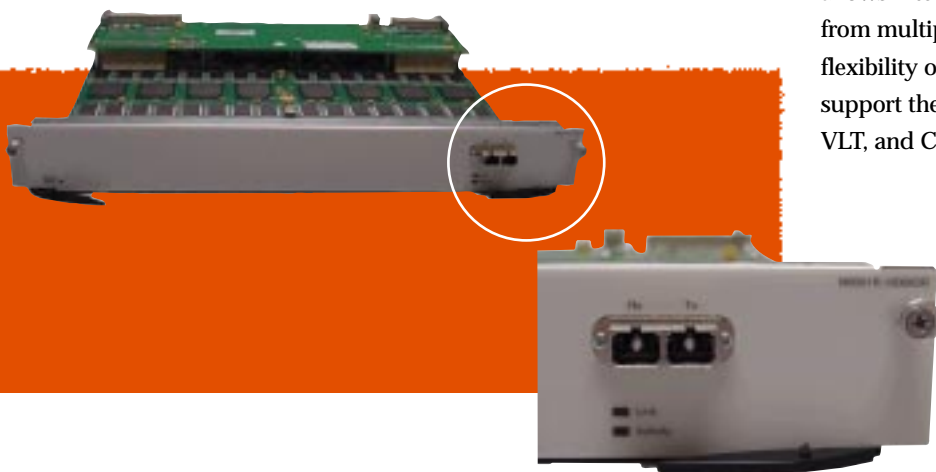
## Industry-Leading Quality of Service (QoS) Features

Latency, jitter and dropped packets that would be minor issues in data networks become major concerns when you're dealing with voice and video. In the new multiservice networks, quality of service is essential. Like all Avaya network switch solutions, the P580 and P882 offer wirespeed queuing. The P580 and P882 give you multiple traffic classes with bandwidth reservation, bandwidth caps, and real-time traffic support. These QoS features are fully compatible with industry standards. Additionally, the P580 and P882 ATM uplink module offers mapping of Ethernet QoS to ATM service classes.

## Efficient Multicast Support

The P580 and P882 provide hardware-based multicasting that efficiently distributes traffic only "as needed." Distance Vector Multicast Routing Protocol (DVMRP) and Internet Group Management Protocol (IGMP) "snooping" are both supported. This provides a means of "pruning" multicast traffic to reduce unnecessary bandwidth consumption. The P580 and P882 also replicate multicast packets only once, sending them to all outbound ports simultaneously. The result is high efficiency and low latency.

Avaya 10 Gigabit Ethernet Module for the Avaya P580 and P882 MultiService Switches



## 10 Gigabit Ethernet Support

The IEEE 802.3ae standard-compliant Avaya 10 Gigabit Ethernet module for the P580 and P882 provides large enterprise customers a non-disruptive migration to higher speeds and performance levels with a lower total cost of ownership. Avaya's 10 Gigabit Ethernet solution significantly increases the core network performance to support high-bandwidth, mission-critical business applications such as Enterprise Resource Planning (ERP) systems, Voice & Video over IP, and content storage/database backup operations. 10 Gigabit Ethernet can also be deployed to create high speed enterprise networks across significant distances between campuses, or within existing data centers where over-provisioning of critical links is needed to avoid degradation of network performance.

## Multilayer Switching

Multilayer switching can substantially boost network performance compared to legacy software-based routers. The Avaya P580 and P882 offer Layer 2, 3, and 4 switching—all at wirespeed. All 80-series media cards are multilayer capable; no expensive upgrades are required.

## Multi-Vendor Interoperability

Avaya is firmly committed to supporting industry standards and interoperating in multi-vendor networks. For example, Avaya's unique OpenTrunk technology allows interoperation among VLAN tagging formats from multiple vendors, significantly increasing the flexibility of your virtual LAN. The P580 and P882 support the IEEE 802.1Q standard, 3Com's LinkSwitch VLT, and Cisco's ISL. OpenTrunk translates VLAN

information, as well as Class of Service information, between these three different frame formats so that VLAN products can work together seamlessly.

## Scalability Features

Flood suppression prevents lower-speed links from being overwhelmed by broadcast storms, unknown destination traffic or unknown multicast traffic. You can create gigabit-scaled Hunt Groups that enable multiple switch-to-switch links to participate in a single, logical group. This results in higher-capacity connections, enhanced fault tolerance, load balancing and quick recovery from link failure. When a Hunt Group link fails, the P580 and P882 automatically redistribute traffic among the remaining ports, virtually eliminating network downtime. The P580 and P882 switches also support both standard IEEE 802.1D spanning tree configurations and a unique two-layer spanning tree approach for better scalability and fault-tolerance.

## No Single Point of Failure

To make your network bulletproof, you'll want redundancy at every level. That's why the P580 and P882 take advantage of Avaya's SAFER Technology. You can powerfully increase switch fault tolerance with the Avaya Redundant Supervisor Module, which occupies just one of the available payload slots. At the port level, the P580 and P882 link aggregation group technology lets you trunk multiple ports, increasing capacity and maintaining connectivity when an individual link goes down.

## Additional Features or Characteristics:

### Powerful network management

With the optional Avaya MultiService Network Manager, you get element management, integrated fault reporting and configuration for the entire Avaya network switch product line. Avaya MultiService

Network Manager software also brings you Avaya's Switch Monitoring (SMON) technology, which has been adopted as an Internet Engineering Task Force (IETF) standard. While conventional Remote Monitoring looks at one network element at a time, Avaya SMON enables simultaneous real-time monitoring of your entire network. You can monitor traffic across multiple switches or ports, across all ports in a virtual local area network or all hosts in a port. Powerful drill-down capability can zoom in from a global view to individual connectivity between two users. With proactive monitoring, you can maintain QoS levels consistently and reliably.

### Comprehensive policy management

Now you can align your network operations with your business goals using Avaya Policy Manager software. For instance, you can create a QoS policy that helps ensure mission-critical, delay-sensitive voice traffic is forwarded ahead of other traffic types. The software allows you to establish a higher priority for senior management traffic, or enable applications like SAP to take priority over applications like Microsoft Internet Explorer. All told, you can establish rules by class of traffic, by application, by user and by workgroup.

### Avaya Data and Professional Services

Avaya's in-house data and professional services experts, who are qualified in multi-vendor data/video/voice environments, support Avaya's family of Ethernet, ATM and multifunction switches. We can help you with planning, implementation and integration, operations, administration, support, maintenance and managed communications.



## Technical Specs:

### Avaya P580 MultiService Switch

#### Power

AC Input Voltage	100-120/200-240 VAC @+6%, -10%
Frequency	50-60 Hz
Maximum Power Consumption	8.0 A @ 120 V 4.0 A @ 240 V
DC Input Voltage	48-55 VDC (nominal)

#### Operating/Physical

Operating Temperature	0-40° C
Storage Temperature	-20 to 80° C
Relative Humidity	5% to 95% (non condensing)
Physical Dimensions	17.5" W x 18" D x 10.5" H (445 x 457 x 267 mm)
Safety	UL 1950 EN 60950 TUV GS CSA 22.2-No. 950 IEC 950
EMI	FCC 15, Class A CE Mark EN55022 Class A CISPR 22 Class A

### Avaya P882 MultiService Switch

#### Power

AC Input Voltage:	100-120/200-240 VAC @ +6%, -10%
Frequency:	50-60 Hz
Maximum Input Current (per power supply):	12.0 A @ 100-120 VAC 6.0 A @ 200-240 VAC
DC Input Voltage:	48-55 VDC (nominal)

#### Operating/Physical

Slot Density	Up to 16 payload slots
Operating Temperature:	0° to 40°C
Storage Temperature:	-20° to 80°C

## Technical Specs:

### Avaya P882 MultiService Switch (continued)

#### Power

Relative Humidity:	5% to 95% non-condensing
Physical Dimensions:	17.25" W x 18.0" D x 25.0" H (438 x 457 x 635 mm)
EMI:	FCC 15, Class A CE Mark EN55022 Class A CISPR 22 Class A EN55024
Safety	UL 1950 EN60950 TUV GS CSA 22.2 - No. 950 IEC 950

#### Capacities and Performance

	Avaya P580 MultiService Switch	Avaya P882 MultiService Switch
Backplane	55 Gbps	139 Gbps
Switching	40 Mpps	106 Mpps
Routing	40 Mpps	106 Mpps
Maximum Gigabit Ports	48	128
Maximum 10/100 Ports (Telco connectors)	288	768
Maximum 10/100 Ports (RJ-45)	288	768
VLANs	1000	1000
Address Forwarding Table Entries	24,000	24,000
Routes	16,000	16,000
Maximum Flows	960,000	2,560,000

#### Ordering Information

P5800R-SWC	Avaya P580 MultiService Switch (including Supervisor Module and a 400W Supply)
P5800RFT-SWC	Fault-Tolerant P580 switch (including Supervisor Module, Fault-Tolerant switching elements, and three 400W Supplies)
P5800R-SW-48V	Avaya P580 MultiService Switch with Integrated Routing (including multilayer Supervisor Module and one 48V DC Power Supply)
P5800RFT-SW-48V	Fault-Tolerant P580 with integrated routing (including Multilayer Supervisor Module, Fault-Tolerant Switching Elements, and three 48V DC Power Supplies)



## Technical Specs:

### Ordering Information (continued)

P5500-SCTRL	Crossbar Control Module
P5500-SXBAR	Crossbar Element Module
P5507-C	Spare Chassis (No Power Supplies)
P5507FT-C	Spare Fault-Tolerant Chassis (Fault-Tolerant Switching Element. No Power Supply)
P550P-400	Spare 400 Watt Power Supply, AC
P5800-P48V	Spare 48V DC Power Supply

## Hardware Components:

### P580 Chassis and Components

Model Number	Description
P5800R-SWC	Avaya P580 MultiService Switch (including Supervisor Module and a 400W Supply)
P5800RFT-SWC	Fault-Tolerant P580 Switch (including Supervisor Module, Fault Tolerant switching elements and controllers, and Three 400W Supplies)
P5800R-SW-48V	Avaya P580 MultiService Switch with Integrated Routing (including Multilayer Supervisor Module and One 48V DC Power Supply)
P5800RFT-SW-48V	Fault-Tolerant P580 with integrated routing (including Multilayer Supervisor Module, Fault-Tolerant Switching Elements and Controllers, and three 48V DC Power Supplies)
M8000R-SUP	Redundant/Spare Supervisor Module
M8000-FLC16M	PCMCIA Flash card for 80-Series supervisor, 16 MB
P5500-SCTRL	Crossbar Control Module (P550/P580)
P5500-SXBAR	Crossbar Element Module (P550/P580)
P550-FAN	Spare Fan Tray (P550/P580)
P5507-C	Spare Chassis (No Power Supplies, no fan tray, no supervisor module)
P5507FT-C	Spare Fault-Tolerant Chassis (No Power Supplies, no fan tray, no supervisor module)
P550P-400	Spare 400 Watt Power Supply, AC
P5800-P48V	Spare 48V DC Power Supply



## Hardware Components:

### P882 Chassis and Components

Model Number	Description
P8820R-SW	P882 MultiService Switch (includes Supervisor Module, Switch Elements and Controller, and one Power Supply)
P8820RFT-SW	Fault-tolerant P882 MultiService Switch (includes Supervisor Module, Fault-tolerant Switch Elements and Controllers, and three Power Supplies)
M8000R-SUP	Redundant/Spare Supervisor Module
M8000-FLC16M	PCMCIA Flash card for 80-Series supervisor, 16 MB
P8800-P700	Spare Power Supply, AC (P880/P882)
P8800-SE	Spare Crossbar Switch Element (P880/P882)
P8820-SC	Spare Crossbar Switch Controller
P8800-FANF	Spare Front Fan (P880/P882)
P8800-FANR	Spare Rear Fan (P880/P882)
P8820-CH	Spare Chassis (no Supervisor Module, no Power Supplies)
P8820FT-CH	Spare Fault-tolerant Chassis (no Supervisor Module, no Power Supplies)
P8820R-SW-48V	P882 MultiService Switch 48V (includes Supervisor Module, Switch Elements and Controller, and one Power Supply)
P8820RFT-SW-48V	Fault-tolerant P882 MultiService Switch 48V (includes Supervisor Module, Fault-tolerant Switch Elements and Controllers, and three Power Supplies)
P8820-P48V	Spare Power Supply, DC

### Avaya 80-Series Media Modules for both P580 and P882

Model Number	Description
M8004R-1000GB	80-Series 4-port L3 Gig module with GBIC interfaces
M8008R-1000GB	80-Series 8-port L3 Gig module with GBIC interfaces
M8001-1000SX	1000BASE-SX compliant GBIC module (850nm) for distances up to 550m over 50/125m multimode fiber or 275m over 62.5/125m multimode fiber



## Hardware Components:

Avaya 80-Series Media Modules for both P580 and P882

Model Number	Description
M8001-1000LX	1000BASE-LX compliant GBIC module (1300nm) for distances up to 550m over 50/125m or 62.5/125m multimode fiber or 10km over single-mode fiber
M8001-1000ELX	GBIC module (1550nm) for distances up to 70km over single-mode fiber
M8048R-100TC	80-Series 48-port L3 10/100 module with Telco connectors
M8024R-100TX	80-Series 24-port L3 10/100 module with RJ45 connectors
M8048R-100TX	80-Series 48-port L3 10/100 module with RJ45 connectors (dual slot)
M8008R-1000T	80-Series 8-port L3 1000BASE-T (Gigabit over Copper) module
M8004R-1000T	80-Series L3 4-port 1000BASE-T (Gigabit over Copper) module
M8024R-100FX	80-Series 24-port L3 100BASE-FX module with MT-RJ connectors
M5502-AOC12MMF	2-port ATM SONET OC-12C or SDH STM-4C interface, MMF, with SC connectors. Specified to run 500 M.
M5502-AOC12SMF	2-port ATM SONET OC-12C or SDH STM-4C interface, SMF, with SC connectors. Specified to run 10 KM.
M5502-AOC3MMF	2-port ATM SONET OC-3C or SDH STM-1C interface, MMF, with SC connectors. Specified to run 2 KM.
M5502-AOC3SMF	2-port ATM SONET OC-3C or SDH STM-1C interface, SMF, with SC connectors. Specified to run 10 KM.
M8001R-10000LR	Single-port 10GBASE-LR compliant module (1310 nm) for distances up to 10 KM over SMF.
M8001R-10000ER	Single-port 10GBASE-ER compliant module (1550 nm) for distances up to 40 KM over SMF.

### About Avaya

Avaya enables businesses to achieve superior results by designing, building, and managing their communications networks. More than one million businesses worldwide, including 90 percent of The FORTUNE 500®, rely on Avaya solutions and services to enhance value, improve productivity, and gain competitive advantage.

Focused on enterprises large to small, Avaya is a world leader in secure and reliable IP telephony systems and

communications software applications. Driving the convergence of voice and data communications with business applications—and distinguished by comprehensive worldwide services—Avaya helps customers leverage existing and new networks to unlock value and enhance business performance. For additional information on our Converged Systems, please contact your Avaya Client Executive, Authorized BusinessPartner, or visit us at [avaya.com/leanmore/data](http://avaya.com/leanmore/data). For more information about Avaya and our other award-winning solutions, visit [avaya.com](http://avaya.com).



# AVAYA

© 2002 Avaya Inc.

All Rights Reserved. All trademarks identified by ®, ™ and ℠ are registered trademarks, servicemarks or trademarks respectively of Avaya Inc. All other trademarks are properties of their respective owners.

Printed in the U.S.A.  
12/02 • EF-MSN1897



[avaya.com](http://avaya.com)