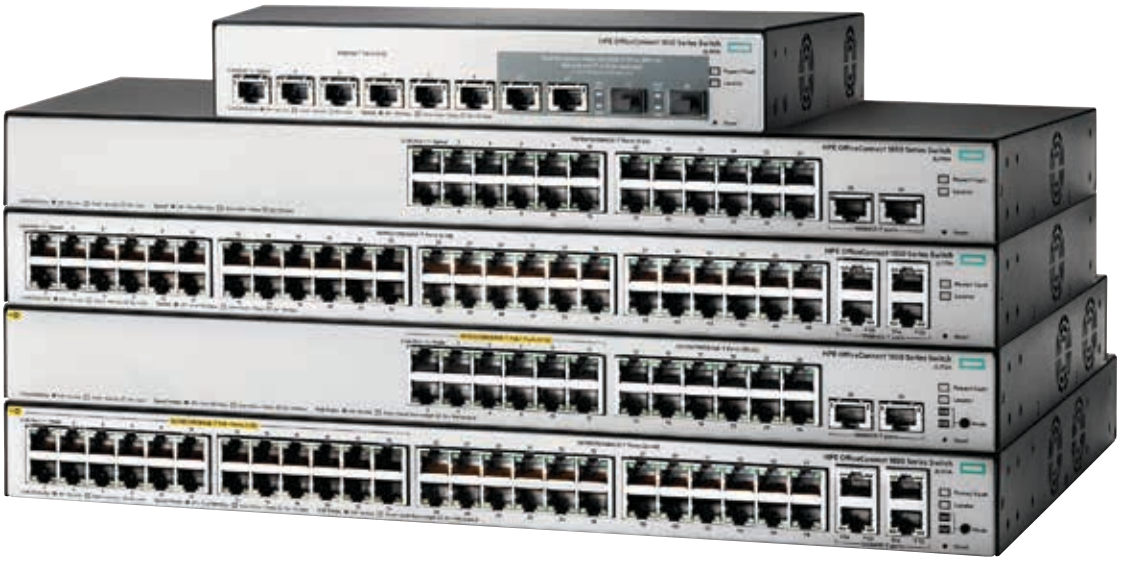
Hewlett Packard Enterprise

HPE OfficeConnect 1850 Switch Series



Key features

- 10-Gigabit 10GBASE-T on all models for high-speed interconnect
- Non-PoE and PoE+ 24- and 48-port models
- 8-port 10GBASE-T switch with 2 SFP+ dual-personality ports
- Intuitive web management interface for easy switch configuration
- Limited lifetime warranty

Product overview

HPE OfficeConnect 1850 Switch Series devices are basic smart managed, fixed configuration Gigabit plus 10 Gigabit Ethernet Layer 2 switches designed for small businesses looking for high performance in an easy-to-administer solution. The series is part of the HPE OfficeConnect portfolio of small business networking products.

The series consists of five switch models. Four are Gigabit switches each with 10-Gigabit 10GBASE-T uplink ports. One is an 8-port 10-Gigabit aggregator switch. Together, you can build a high-bandwidth network with Gigabit edge port switches interconnected at 10-Gigabit speeds. Non-PoE and PoE+ models are also available.

The 24-port models include two 10GBASE-T ports; the 48-port models include four 10GBASE-T ports and an 8-port model includes eight 10GBASE-T ports with two dual-personality SFP+ ports. All HPE OfficeConnect 1850 Switches support flexible installation options including mounting on a wall, under a table, or on a desktop.

These Gigabit switches are plug-and-play out of the box, yet network operation can be fine-tuned through features available from a simple web browser-based GUI, if necessary. Customizable features include VLANs, Rapid Spanning Tree, IGMP Snooping, link aggregation trunking, and DSCP QoS policies. All models include the latest energy-saving capabilities, including Energy Efficient Ethernet (EEE) and idle-port power down. All models include variable speed fans operating only at the speed necessary to maintain operating temperature to reduce excess noise and power consumption by the switch.

HPE OfficeConnect 1850 Switch Series includes a limited lifetime warranty.

Features and benefits

Management

- **Simple web management**
  Allows for easy management of the switch—even by nontechnical users—through an intuitive web GUI; supports HTTP and HTTP Secure (HTTPS)
- **SNMPv1, v2c**
  Enables devices to be discovered and monitored from an SNMP management station
- **Port mirroring**
  Enables traffic on a port to be simultaneously sent to a network analyzer for monitoring
- **Dual flash images**
  Provides independent primary and secondary operating system files for backup while upgrading
- **Network time protocol (NTP)**
  Synchronizes timekeeping among distributed time servers and clients; keeps timekeeping consistent among all clock-dependent devices within the network
- **Manual network time configuration**
  Manually set the date and time on the switch in the absence of an NTP server
- **Default DHCP client mode**
  Allows the switch to be directly connected to a network, enabling plug-and-play operation; in absence of a DHCP server on the network, the switch falls back to a default, fixed IP address

Quality of Service (QoS)

- **Traffic prioritization**
  Provides time-sensitive packets (such as VoIP and video) with priority over other traffic based on DSCP or IEEE 802.1p classification; packets are mapped to eight hardware queues for more effective throughput
- **Broadcast control**
  Allows limiting of broadcast traffic rate to reduce unwanted network broadcast traffic
- **IEEE 802.1p/Q**
  Delivers data to devices based on the priority and type of traffic; supports IEEE 802.1Q virtual LANs (VLANs)

Connectivity

- **Auto-MDI/MDIX**
  Adjusts for straight-through or crossover cables on all ports automatically
- **IEEE 802.3X flow control**
  Provides a flow throttling mechanism propagated through the network to prevent packet loss at a congested node
- **Loop protection**
  If the switch detects a loop, it disables the source port from forwarding data packets originating from the switch to avoid broadcast storms
- **IEEE 802.3at Power over Ethernet (PoE+)**
  Provides up to 30 W per port, which allows support of the latest PoE+ capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device; lowers the cost of additional electrical cabling and circuits that would otherwise be necessary for IP phone and WLAN deployments
- **PoE+ port availability**
  Provides PoE+ for Ports 1–12 on the HPE 1850 24G 2XGT PoE+ 185W Switch; provides PoE+ for ports 1–24 on the HPE 1850 48G 4XGT PoE+ 370W Switch
- **Auto PoE power configuration**
  Assigns the required power to a port for a PD device automatically based on Link Layer Discovery Protocol (LLDP); optionally, the switch permits manual, per port PoE power configuration, and more
- **PoE shutdown mode**
  Provides the ability to define the hours of PoE power being supplied by a group of switch ports based on a 24-hour day; the scheduler enables the flexibility to select individual days of a week as well as recurrence on a weekly basis with a start and end date
- **Energy Efficient Ethernet**
  Is compliant with IEEE 802.3az standard requirements to save energy during periods of low data activity
- **Auto port shutdown**
  Saves power by automatically shutting down power to inactive ports; power is restored on a port upon link detection
- **Energy-efficient cooling**
  Includes variable speed fans operating only at the speed necessary to maintain operating temperature to reduce excess noise and power consumption by the switch
- **Energy savings status**
  Provides an estimated cumulative energy savings due to green Ethernet features enabled

Security

- **Secure Sockets Layer (SSL)**
  Encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- **Automatic denial-of-service protection**
  Monitors nine types of malicious attacks and protects the network by blocking these attacks
- **Management password**
  Provides security so that only authorized access to the web browser interface is allowed

Performance

- **Half- or full-duplex auto-negotiating capability on every port**
  Doubles the throughput of every port
- **IGMP snooping**
  Improves network performance through multicast filtering, instead of flooding traffic to all ports

Layer 2 switching

- **VLAN support and tagging**
  Supports up to 64 port-based VLANs and dynamic configuration of IEEE 802.1Q VLAN tagging, providing security between workgroups
- **Jumbo packet support**
  Improves the performance of large data transfers; supports frame size of up to 9220 bytes

Resiliency and high availability

- IEEE 802.1D Spanning Tree Protocol (STP) and IEEE 802.1W Rapid Spanning Tree Protocol (RSTP)
  Provides redundant links while preventing network loops
- **Link aggregation**
  Brings together groups of ports automatically using Link Aggregation Control Protocol (LACP) or, manually, to form an ultra-high-bandwidth connection to the network backbone; helps prevent traffic bottlenecks; the 8-port model supports 4 trunks, the 24-port models support 8 trunks, and the 48-port models support 16 trunks; the 8- and 24-port switches can support up to 4 ports per trunk, the 48-port switches can support up to 8 ports per trunk

Ease of use

- **Locator LED**
  Allows users to set the locator LED on a specific switch to either turn on blink or turn off; simplifies troubleshooting by making it easy to locate a particular switch within a rack of similar switches
- **Comprehensive LED display with per-port indicators**
  Provides an at-a-glance view of status, activity, speed, and full-duplex operation

Flexibility

- **Flexible installation**
  Allows mounting on a wall, a desktop, or under a table with supplied hardware
- **Rack mountable**
  Includes rack-mounting hardware for mounting in a standard 19-inch telco rack

Warranty and support

- **Limited lifetime warranty**
  See **hpe.com/officeconnect/support** for warranty and support information included with your product purchase.

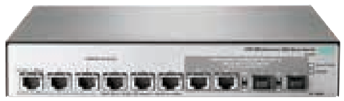
HPE OfficeConnect 1850 Switch Series

Specifications

	HPE OfficeConnect 1850 6XGT and 2XGT/SFP+ Switch (JL169A)	HPE OfficeConnect 1850 24G 2XGT Switch (JL170A)	HPE OfficeConnect 1850 48G 4XGT Switch (JL171A)
I/O ports and slots	6 RJ-45 1/10GBASE-T ports 2 dual-personality ports; each port can be used as either an RJ-45 1/10GBASE-T port or an SFP+ fixed 1000/10000 slot	24 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 RJ-45 1/10GBASE-T ports	48 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 4 RJ-45 1/10GBASE-T ports
Physical characteristics			
Dimensions	9.96(w) x 10.26(d) x 1.73(h) in. (25.3 x 26.07 x 4.4 cm) (1U height)	17.42(w) x 9.7(d) x 1.73(h) in. (44.25 x 24.64 x 4.4 cm) (1U height)	17.42(w) x 9.7(d) x 1.73(h) in. (44.25 x 24.64 x 4.4 cm) (1U height)
Weight	3.84 lb (1.74 kg)	5.86 lb (2.66 kg)	7.05 lb (3.2 kg)
Memory and processor	BCM53412 embedded ARM® Cortex-A9 @ 600 MHz, 128 MB DDR3 SDRAM; Packet buffer size: 2 MB	BCM53346 embedded ARM Cortex-A9 @ 400 MHz, 128 MB DDR3 SDRAM; Packet buffer size: 1.5 MB	BCM53346 embedded ARM Cortex-A9 @ 400 MHz, 128 MB DDR3 SDRAM; Packet buffer size: 3 MB
Performance			
100 Mb Latency	< 7.6 µs (64-byte packets)	< 9.1 µs (64-byte packets)	< 9.7 µs (64-byte packets)
1000 Mb Latency	< 3.6 µs (64-byte packets)	< 3.7 µs (64-byte packets)	< 3.7 µs (64-byte packets)
10 Gbps Latency	< 3.3 µs (64-byte packets)	< 3.7 µs (64-byte packets)	< 3.7 µs (64-byte packets)
Throughput	Up to 119 Mpps	Up to 65 Mpps (64-byte packets)	Up to 131 Mpps (64-byte packets)
Switching capacity	160 Gbps	88 Gbps	176 Gbps
MAC address table size	16000 entries	16000 entries	16000 entries
Reliability			
MTBF (years)	64.5	99	79.4
Environment			
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% @ 104°F (40°C), noncondensing
Nonoperating/Storage temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	Up to 9,842 ft (3 km)	Up to 9,842 ft (3 km)	Up to 9,842 ft (3 km)
Acoustic	Maximum power: 45 dB	Maximum power: 36 dB	Maximum power: 34 dB
Airflow direction	Side-to-side	Side-to-side	Side-to-side

HPE OfficeConnect 1850 Switch Series

Specifications (continued)



	HPE OfficeConnect 1850 6XGT and 2XGT/SFP+ Switch (JL169A)	HPE OfficeConnect 1850 24G 2XGT Switch (JL170A)	HPE OfficeConnect 1850 48G 4XGT Switch (JL171A)
Electrical characteristics			
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Voltage	100–127/200–240 VAC, rated	100–120/200–240 VAC, rated (200–240 VAC, max)	100–127/200–240 VAC, rated
Current	.9/.5 A	.6/.4 A	1/.6 A
Maximum power rating	42.8 W	29.5 W	49.3 W
Idle power	19.4 W	19.1 W	30 W
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated.
Safety	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
Emissions	VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32	VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32	VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32
Immunity			
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
EN	EN 55024, CISPR 24	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	Web browser	Web browser	Web browser
Services	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

HPE OfficeConnect 1850 Switch Series

Specifications (continued)

	HPE OfficeConnect 1850 24G 2XGT PoE+ 185W Switch (JL172A)	HPE OfficeConnect 1850 48G 4XGT PoE+ 370W Switch (JL173A)
I/O ports and slots	12 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 12 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 RJ-45 1/10GBASE-T ports	24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 24 RJ-45 auto-negotiating 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T) 4 RJ-45 1/10GBASE-T ports
Physical characteristics		
Dimensions	17.42(w) x 9.7(d) x 1.73(h) in. (44.25 x 24.64 x 4.4 cm) (1U height)	17.42(w) x 12.7(d) x 1.73(h) in. (44.25 x 32.26 x 4.4 cm) (1U height)
Weight	7.28 lb (3.3 kg)	10.3 lb (4.67 kg)
Memory and processor	BCM53346 embedded ARM Cortex-A9 @ 400 MHz, 128 MB DDR3 SDRAM; Packet buffer size: 1.5 MB	BCM53346 embedded ARM Cortex-A9 @ 400 MHz, 128 MB DDR3 SDRAM; Packet buffer size: 3 MB
Performance		
100 Mb Latency	< 8.6 µs (64-byte packets)	< 10 µs (64-byte packets)
1000 Mb Latency	< 3.6 µs (64-byte packets)	< 3.8 µs (64-byte packets)
10 Gbps Latency	< 3.6 µs (64-byte packets)	< 3.8 µs (64-byte packets)
Throughput	Up to 65 Mpps (64-byte packets)	Up to 131 Mpps (64-byte packets)
Switching capacity	88 Gbps	176 Gbps
MAC address table size	16000 entries	16000 entries
Reliability		
MTBF (years)	71.4	57.1
Environment		
Operating temperature	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Operating relative humidity	15% to 95% @ 104°F (40°C), noncondensing	15% to 95% (40°C), noncondensing
Nonoperating/Storage temperature	-40°F to 70°F (-40°C to 21.1°C)	-40°F to 158°F (-40°C to 70°C)
Nonoperating/Storage relative humidity	15% to 95% @ 149°F (65°C), noncondensing	15% to 95% @ 149°F (65°C), noncondensing
Altitude	Up to 9,842 ft (3 km)	Up to 9,842 ft (3 km)
Acoustic	Maximum power: 44 dB	Maximum power: 40 dB
Airflow direction	Side-to-side	Side-to-side

HPE OfficeConnect 1850 Switch Series

Specifications (continued)

	HPE OfficeConnect 1850 24G 2XGT PoE+ 185W Switch (JL172A)	HPE OfficeConnect 1850 48G 4XGT PoE+ 370W Switch (JL173A)
Electrical characteristics		
Frequency	50/60 Hz	50/60 Hz
Voltage	100–127/200–240 VAC, rated	100–127/200–240 VAC, rated
Current	2.5/1.3 A	5/2.4 A
Maximum power rating	222.9 W	446.4 W
Idle power	24.4 W	46.5 W
PoE power	185 W PoE+	370 W PoE+
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE Power is the power supplied by the internal power supply, it is dependent on the type and quantity of power supplies and may be supplemented with the use of an External Power Supply (EPS).	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE Power is the power supplied by the internal power supply, it is dependent on the type and quantity of power supplies and may be supplemented with the use of an External Power Supply (EPS).
Safety	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1	UL 60950-1; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1; EN 60825-1
Emissions	VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32	VCCI Class A; CNS 13438; ICES-003 Issue 5 Class A; FCC CFR 47 Part 15, Class A; EN 55032: 2015/CISPR-32
Immunity		
Generic	EN 55024, CISPR 24	EN 55024, CISPR 24
EN	EN 55024, CISPR 24	EN 55024, CISPR 24
ESD	IEC 61000-4-2	IEC 61000-4-2
Radiated	IEC 61000-4-3	IEC 61000-4-3
EFT/Burst	IEC 61000-4-4	IEC 61000-4-4
Surge	IEC 61000-4-5	IEC 61000-4-5
Conducted	IEC 61000-4-6	IEC 61000-4-6
Power frequency magnetic field	IEC 61000-4-8	IEC 61000-4-8
Voltage dips and interruptions	IEC 61000-4-11	IEC 61000-4-11
Harmonics	EN 61000-3-2, IEC 61000-3-2	EN 61000-3-2, IEC 61000-3-2
Flicker	EN 61000-3-3, IEC 61000-3-3	EN 61000-3-3, IEC 61000-3-3
Management	Web browser	Web browser
Services	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.	Refer to the Hewlett Packard Enterprise website at **hpe.com/networking/services** for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local Hewlett Packard Enterprise sales office.

Standards and Protocols
(Applies to all products in series)

Denial of service protection		CPU DoS Protection	
General protocols	IEEE 802.1AB-2005 Link Layer Discovery Protocol (LLDP) IEEE 802.1D Spanning Tree Protocol IEEE 802.1p Priority	IEEE 802.3X Flow Control RFC 1534 DHCP/BOOTP Interoperation RFC 2030 Simple Network Time Protocol (SNTP) v4	IEEE 802.1Q VLANs IEEE 802.1W Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP)

HPE OfficeConnect 1850 Switch Series accessories

HPE OfficeConnect 1850 6XGT and 2XGT/SFP+ Switch (JL169A)	Aruba 1G SFP LC SX 500m OM2 MMF Transceiver (J4858D) Aruba 1G SFP LC LX 10km SMF Transceiver (J4859D) Aruba 10G SFP+ LC SR 300m OM3 MMF Transceiver (J9150D) Aruba 10G SFP+ LC LR 10km SMF Transceiver (J9151D) Aruba 10G SFP+ LC LRM 220m OM2 MMF Transceiver (J9152D) Aruba 10G SFP+ to SFP+ 1m Direct Attach Copper Cable (J9281D) Aruba 10G SFP+ to SFP+ 3m Direct Attach Copper Cable (J9283D) Aruba 10G SFP+ to SFP+ 7m Direct Attach Copper Cable (J9285D)
HPE OfficeConnect 1850 24G 2XGT Switch (JL170A)	HPE X410 1U Universal 4-post Rack Mounting Kit (J9583A)
HPE OfficeConnect 1850 48G 4XGT Switch (JL171A)	HPE X410 1U Universal 4-post Rack Mounting Kit (J9583A)
HPE OfficeConnect 1850 24G 2XGT PoE+ 185W Switch (JL172A)	HPE X410 1U Universal 4-post Rack Mounting Kit (J9583A)
HPE OfficeConnect 1850 48G 4XGT PoE+ 370W Switch (JL173A)	HPE X410 1U Universal 4-post Rack Mounting Kit (J9583A)

Learn more at
hpe.com/networking

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