HP 830 Unified Wired-WLAN Switch Series

Key features
- Unified wired and wireless services for branch offices
- System-wide approach to WLAN reliability through Wi-Fi Clear Connect
- PoE+ capability
- Built-in IEEE 802.1X and portal authentication servers
- 8-port and 24-port versions available

Product overview
The HP 830 Unified Wired-WLAN Switch Series integrates both wireless controller and 1000 Mb/s Ethernet switch functions. The switch series provides 1000 Mb/s Ethernet ports, with each supporting a maximum of up to 30 W PoE+ power and IEEE 802.11a/b/g/n APs while delivering unified wired and wireless access control functions. The HP 830 24-Port PoE+ Unified Wired-WLAN Switch provides two 10GbE slots on the rear panel to relieve transmission bottlenecks at the core of a WLAN network.

This series provides edge-to-core unified access and consistent WLAN services to the small and medium branch offices of enterprises that are deploying the HP 10500/7500 20G Unified Wired-WLAN Module at their central (or main) offices.

The HP 830 Unified Wired-WLAN Switch Series is part of the HP Enterprise Mobility solution.
Features and benefits

Management
• **Wi-Fi Clear Connect**
  provides a system-wide approach to help ensure WLAN reliability by proactively determining and adjusting to changing RF conditions via advanced radio resource management and identifying rogue activity; these capabilities optimize WLAN performance by making decisions at a system-wide level

• **Advanced radio resource management**
  – **Automatic radio power adjustments**
    includes real-time power adjustments based on changing environmental conditions and signal coverage adjustment
  – **Automatic radio channel**
    provides intelligent channel switching and real-time interference detection
  – **Intelligent client load balancing**
    balances the number of clients across multiple APs to optimize AP and client throughput

• **Enterprise network management**
  is provided by HP Intelligent Management Center (IMC) Platform software and the IMC Wireless Services Manager Software Module, which effectively integrate traditionally disparate management tools into one easy-to-use interface

• **Secure controller management**
  manages the controller securely from a single location with IMC or any other SNMP management station; controller supports SNMPv3 as well as SSHv2 and SSL for secure CLI and Web management; console port is available as a pass-through to the switch console function

Quality of Service (QoS)
• **IEEE 802.1p prioritization**
  delivers data to devices based on the priority and type of traffic

• **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

Security
• **Web-based authentication**
  provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant

• **IEEE 802.1X and RADIUS network logins**
  supports port-based and SSID-based 802.1X authentication and accounting

• **WEP, WPA2, or WPA encryption**
  can be deployed at the AP to lock out unauthorized wireless access by authenticating users prior to granting network access; robust Advanced Encryption Standard (AES) or Temporal Key Integrity Protocol (TKIP) encryption secures the data integrity of wireless traffic

• **Integrated intrusion detection system (IDS) support**
  provides support for hybrid and dedicated modes; detects flood, spoofing, and weak IV attacks; displays statistics (events) and history; supports configuration of detection policies

• **Media access control (MAC) authentication**
  provides simple authentication based on a user’s MAC address; supports local or RADIUS-based authentication

• **Secure user isolation**
  virtual AP services enable the network administrator to provide specific services for different user groups, allowing effective resource sharing, and simplifying network maintenance and management

• **Secure access by location**
  AP location-based user access control helps ensure that wireless users can access and authenticate only to preselected APs, enabling system administrators to control the locations where a wireless user can access the network

• **Endpoint Admission Defense**
  integrated wired and wireless Endpoint Admission Defense (EAD) helps ensure that only wireless clients who comply with mandated enterprise security policies can access the network, reducing threat levels caused by infected wireless clients and improving the overall security of the wireless network

• **Public Key Infrastructure (PKI)**
  is used to control access

• **Authentication, authorization, and accounting (AAA)**
  uses an embedded authentication server or external AAA server for local users

Connectivity
• **IEEE 802.3at Power over Ethernet (PoE+)**
  – up to 30 W per port supports PoE+-capable devices such as IP phones, wireless access points, and security cameras, as well as any IEEE 802.3af-compliant end device
  – eliminates the cost of additional electrical cabling that would otherwise be needed in IP phone and WLAN deployments; the HP 830 8-Port PoE+ Unified Wired-WLAN Switch supports up to 5 ports at 30 W; the 24-port model can support up to 24 ports at up to 30 W depending on the power source

• **Loopback**
  supports internal loopback testing for maintenance purposes and an increase in availability; loopback detection protects against incorrect cabling or network configurations and can be enabled on a per-port or per-VLAN basis for added flexibility
IPv6

- **IPv6 host**
  enables controllers to be managed and deployed at the IPv6 network’s edge
- **Dual stack (IPv4 and IPv6)**
  transitions customers from IPv4 to IPv6, supporting connectivity for both protocols
- **MLD snooping**
  directs IPv6 multicast traffic to the appropriate interface, preventing traffic flooding
- **IPv6 ACL/QoS**
  supports ACL and QoS for IPv6 network traffic

Performance

- **Flexible forwarding modes**
  supports both distributed and centralized forwarding mode; in a wireless network using centralized forwarding, all wireless traffic is sent to the HP 830 Unified Wired-WLAN Switch for processing; if the distributed mode is configured, authenticated clients can continue to access local resources in the event that connectivity to the HP 830 Unified Wired-WLAN Switch is lost
- **Fast roaming**
  supports Layer 3 roaming and fast roaming, satisfying the most demanding voice service requirements

Scalability

- **Pay as you grow**
  license upgrades allow you to increase support for additional access points without the need to buy additional costly hardware and use additional valuable space in a rack

Resiliency and high availability

- **High reliability**
  supports N+1 and N+N backup

Layer 2 switching

- **VLAN support and tagging**
  supports IEEE 802.1Q with 4,094 simultaneous VLAN IDs
- **Spanning Tree Protocol (STP)**
  supports standard IEEE 802.1D STP, IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for faster convergence, and IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- **Port mirroring**
  duplicates port traffic (ingress and egress) to a local or remote monitoring port
- **Jumbo packet support**
  supports frame sizes up to 9K-byte (switch) and up to 4K-byte (controller) to improve the performance of large data transfers

Layer 3 routing

- **Routing Information Protocol (RIP)**
  provides RIPv1 and RIPv2 routing

- **Static IP routing**
  provides manually configured routing for both IPv4 and IPv6 networks

Comprehensive portfolio

- **Access point support**
  includes HP MSM430, MSM460, MSM466, MSM466-R, WA2620, WA2620E, WA2612, and WA2610E models

Warranty and support

- **Lifetime warranty**
  for as long as you own the product with advance replacement and next-business-day delivery (available in most countries)
- **Electronic and telephone support**
  limited electronic and telephone support is available from HP for as long as you own the product; to reach our support centers, refer to [www.hp.com/networking/contact-support](http://www.hp.com/networking/contact-support); for details on the duration of support provided with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary)
- **Software releases**
  includes all offered software releases for as long as you own the product; to find software for your product, refer to [www.hp.com/networking/support](http://www.hp.com/networking/support); for details on the software releases available with your product purchase, refer to [www.hp.com/networking/warrantysummary](http://www.hp.com/networking/warrantysummary)

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†HP warranty includes repair or replacement of hardware for as long as you own the product, with next business day advance replacement (available in most countries). The disk drive included with HP AllianceOne Advanced Services and Services zl Modules, HP Threat Management Services zl Module, HP AllianceOne Extended zl Module with Riverbed Steelhead, HP MSM765z Mobility Controller and HP Survivable Branch Communication zl Module powered by Microsoft® Lync has a five-year hardware warranty. For details, refer to the Software license and hardware warranty statements at [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty).
# HP 830 Unified Wired-WLAN Switch Series

## Specifications

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<td><strong>Ports</strong></td>
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<td>8 RJ-45 dual-personality 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Media Type: Auto-MDIx; Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only</td>
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<tr>
<td>4 SFP dual-personality ports; Duplex: full only; (4 10/100/1000BASE-T and 1000BASE-X Gigabit Ethernet combination)</td>
<td>2 SFP 1000 Mbps ports</td>
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<td>2 extended module slots</td>
<td>1 RJ-45 serial console port</td>
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</table>

## Environmental

- **Physical characteristics**
  - Weight: 17.32(w) x 16.89(d) x 1.72(h)in (44 x 42.9 x 4.36 cm) (1U height)  
  - 17.32(w) x 16.89(d) x 1.72(h)in (44 x 42.9 x 4.36 cm) (1U height)

- **Memory and processor**
  - Processor: Dual core @ 750 MHz, 1GB Flash, 512 MB DDR2 SDRAM  
  - Dual core @ 750 MHz, 1GB compact flash, 512 MB DDR2 SDRAM

- **Mounting**
  - EIA-standard 19 in. telco rack or equipment cabinet (hardware included)

## Performance

- **Switch fabric speed**
  - 88 Gbps
  - 20 Gbps

- **Memory and processor**
  - Dual core @ 750 MHz, 1GB Flash, 512 MB DDR2 SDRAM

- **Mounting**
  - EIA-standard 19 in. telco rack or equipment cabinet (hardware included)

## Electrical characteristics

- **Frequency**
  - 50/60 Hz

- **Maximum heat dissipation**
  - 307 BTU/hr (323.89 kJ/hr)

- **Voltage**
  - 100-240 VAC

- **DC voltage**
  - -52 to -55 VDC

- **PoE power**
  - 370 W

- **Notes**
  - 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 for specific requirements.

## Safety

- **UL 60950-1; CAN/CSA 22.2 No. 60950-1; IEC 60950-1; FDA 21 CFR Subchapter J**
- **UL 60950-1; CAN/CSA 22.2 No. 60950-1; IEC 60950-1; EN 60950-1; FDA 21 CFR Subchapter J**

## Emissions

- **EN 55022 Class A; CISPR 22 Class A; IES-003 Class A; AS/NSZ CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A**
- **EN 55022 Class A; CISPR 22 Class A; IES-003 Class A; AS/NSZ CISPR 22 Class A; EN 61000-3-2; EN 61000-3-3; VCCI-3 CLASS A; VCCI-4 CLASS A; ETSI EN 300 386; FCC Part 15 (CFR 47) CLASS A**

## Immunity

- **EN 55024, CISPR24 & ETSI EN 300 386**
- **EN 55024, CISPR24 & ETSI EN 300 386**

## Management

- **IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB**
- **IMC - Intelligent Management Center; command-line interface; Web browser; SNMP Manager; Telnet; HTTPS; RMON1; FTP; IEEE 802.3 Ethernet MIB; Ethernet Interface MIB**

## Features

- **Default supported APs: 24**
- **Default supported APs: 12**

- **Maximum supported APs: 60** (via the optional purchase of the 12-Access Point E-LTU)
- **Maximum supported APs: 24** (via the optional purchase of the 12-Access Point E-LTU)

- **Maximum supported users: 1000**
- **Maximum supported users: 1000**

- **Maximum supported users via local portal authentication: 1000**
- **Maximum supported users via local portal authentication: 1000**

- **Maximum supported configured SSIDs: 64**
- **Maximum supported configured SSIDs: 64**

- **Maximum supported ACLs: 2000**
- **Maximum supported ACLs: 2000**

- **Supported MSM APs are automatically discovered, Comware firmware is loaded, and the APs can be fully managed.**
- **Supported MSM APs are automatically discovered, Comware firmware is loaded, and the APs can be fully managed.**

## Services

- Refer to the HP website at [www.hp.com/networking/services](http://www.hp.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 HP sales office.
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## HP 830 Unified Wired-WLAN Switch Series

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### Network Management

- RFC 1518 Structure of Management Information
- RFC 1905 SNMPv2 Protocol Operations
- RFC 2573 SNMPv3 Applications
- RFC 2574 SNMPv3 User-based Security Model (USM)
- RFC 2575 VACM for SNMP (SNMPv1/v2c)
- QoS/CcSx
- RFC 2474 DS Field in the IPv4 and IPv6 Headers
- RFC 2473 DiffServ Architecture
- RFC 3168 The Addition of Explicit Congestion Notification (ECN) to IP
- WiFi Multimedia (WMM), IEEE 802.11e

### Security

- IEEE 802.1x Port Based Network Access Control
- RFC 3394 Advanced Encryption Standard (AES) Key Wrap Algorithm
- RFC 3579 RADUS Support For Extensible Authentication Protocol (EAP)
- Access Control Lists (ACLs)
- Guest VLAN for 802.1x
- Secure Sockets Layer (SSL)
- SSHv2 Secure Shell
- Web Authentication
- Wi-Fi Protected Access (WPA)
- WPA2 (Wi-Fi Protected Access II)

### IKEv1

- RFC 3748 - Extensible Authentication Protocol (EAP)
- RFC 3749 - Extensible Authentication Protocol (EAP)
- RFC 3750 - Extensible Authentication Protocol (EAP)
- RFC 3751 - Extensible Authentication Protocol (EAP)
- RFC 3752 - Extensible Authentication Protocol (EAP)
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accessories

HP 830 24-Port PoE+ Unified Wired-WLAN Switch (JG640A)
HP 830 Unified Wired-WLAN Switch Uplink Module (JG643A)
HP X130 10G XFP LC LR Transceiver (JD108B)
HP X130 10G XFP LC SR Transceiver (JD117B)
HP X135 10G XFP LC ER Transceiver (JD121A)
HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)
HP X125 1G SFP LC LH70 Transceiver (JD063B)
HP X120 1G SFP LC SX Transceiver (JD118B)
HP X120 1G SFP LC LX Transceiver (JD119B)
HP RPS1600 Redundant Power System (JG136A)
HP RPS1600 1600W AC Power Supply (JG137A)
HP 830 Unified Wired-WLAN Switch 12-Access Point E-LTU (JG648AAE)

HP 830 8-Port PoE+ Unified Wired-WLAN Switch (JG641A)
HP X125 1G SFP LC LH40 1310nm Transceiver (JD061A)
HP X120 1G SFP LC LH40 1550nm Transceiver (JD062A)

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