

ProCurve Radio Port 220

The ProCurve Radio Port 220, with simultaneous 802.11a and 802.11g wireless operation, works in conjunction with the ProCurve Wireless Edge Services xl Module to deliver advanced wireless services. These services enable a highly secure and resilient wireless LAN that dynamically adapts to the demands of a mobile, multi-service network. With per-radio external diversity antenna support, the ProCurve Radio Port 220 is ideal for wireless LAN installations where expanded wireless coverage or physical device placement requires the use of external antennas.



ProCurve Radio Port 220 (J9005A)

ProCurve Radio Port 220

Features and benefits

Resiliency and high availability

- **Network self-healing:** In the event of a radio port failure, adjacent ProCurve radio ports adjust transmit power and data rates to maintain wireless LAN coverage.
- **RF detection and interference avoidance:** ProCurve radio ports automatically recalibrate channel assignments to avoid environmental or other 802.11-based wireless interference.

Security

- **Choice of IEEE 802.11i, Wi-Fi Protected Access 2 (WPA2), or WPA:** locks 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 the wireless traffic
- **IEEE 802.1X:** provides port-based user authentication with support for Extensible Authentication Protocol (EAP), TLS, TTLS, PEAP, and SIM, with choice of AES, TKIP, and static or dynamic WEP encryption for protecting wireless traffic between authenticated clients and the access point
- **4 BSSIDs/16 SSIDs per radio:** Multiple wireless broadcast domains with separate security, authentication, and policy configuration per SSID provide access control of network resources based on user authentication and level of trusted security between the wireless user and the network.
- **Web-based authentication:** similar to 802.1X, provides a browser-based environment to authenticate clients that do not support the 802.1X supplicant

- **RADIUS-based MAC authentication:** a wireless client is authenticated with a RADIUS server based on the MAC address of the client; this is useful for clients that have minimal or no user interface
- **Neighbor access point (rogue AP) detection:** Each ProCurve radio port simultaneously scans for the presence of other access points while servicing wireless clients. Radio ports can be configured as dedicated RF monitors for continuous monitoring of the RF environment.
- **Inter-station traffic blocking:** prevents communication between client devices associated on the same radio port
- **Closed system:** restricts broadcast of SSID as a security measure to conceal presence of the wireless network

Connectivity

- **Simultaneous 802.11a and 802.11g radio operation:** supports dual-band wireless clients and provides backward compatibility for 802.11b wireless devices
- **Per-radio external diversity antenna support:** specifically designed for installations where expanded wireless coverage or physical device placement requires the use of external antennas
- **IEEE 802.11h International Telecommunication Union (ITU) compliant:** Dynamic Frequency Selection (DFS) and Transmit Power Control (TCP) are employed to automatically select another channel and adjust transmit power to minimize interference with systems such as radar, if detected on the same channel.
- **International country configuration:** Centrally configured on the ProCurve Wireless Edge Services xl Module, all ProCurve radio ports automatically adjust to match selected country regulatory requirements.

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- **Auto Channel Select (ACS):** helps minimize radio co-channel interference by automatically selecting an unoccupied radio channel
- **Adjustable output power:** controls cell size for high-density access point deployments

Quality of Service (QoS)

- **Wi-Fi WMM support:** provides QoS functionality in wireless networks by prioritizing wireless traffic from different applications
- **SpectraLink voice priority (SVP) support:** prioritizes SpectraLink voice IP packets sent from a SpectraLink NetLink SVP server to SpectraLink wireless voice handsets to help ensure excellent voice quality
- **Fast, secure roaming:** enables seamless, fast roaming with pre-cached authentication credentials for wireless users

Industry certifications

- Visit www.procurve.com for an up-to-date list of industry certifications.

Services

- 3-year, 4-hour onsite, 13x5 coverage for hardware (UD542E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware (UD543E)
- 3-year, 4-hour onsite, 24x7 coverage for hardware, 24x7 software phone support (UD544E)

Check www.hp.com/go/procurveservices for part numbers and service-level descriptions. For details about services and response times in your area, please contact your local HP sales office.

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Specifications

ProCurve Radio Port 220

Ports	1 10/100 port (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX)							
Physical characteristics								
Dimensions (D x W x H)	5.75 x 9.25 x 1.0 in. (14.61 x 23.5 x 2.54 cm)							
Weight	1.3 lb. (0.59 kg)							
Mounting	Ceiling mount (above ceiling tile) or wall mount							
Environment								
Operating temperature	-4°F to 122°F (-20°C to 50°C)							
Operating relative humidity	5% to 95%, non-condensing							
Non-operating/Storage temperature	-40°F to 158°F (-40°C to 70°C)							
Non-operating/Storage relative humidity	5% to 95%, non-condensing							
Altitude	Up to 10,000 ft. (3 km)							
Electrical characteristics								
Voltage	48 Vdc (PoE)							
Maximum heat dissipation	24 BTU/hr							
Current	0.148 A							
Power consumption	7 W							
Safety	UL 2043; UL 60950-1; CAN/CSA 22.2 No. 60950-1; IEC 60950-1; EN 60950-1							
Emissions	EN 60601-1-2; EN 301 489-1; EN 301 489-17; FCC Part 15.107; FCC Part 15.109; ICES-003 (Canada)							
RF exposure	FCC Bulletin OET-65C; IEEE C95.1; RSS-102							
Radio	FCC Part 15.247; FCC Part 15.407 (US); RSS-210 (Canada); EN 300 328; EN 301 893 (Europe); ARIB STD-T66; ARIB STD-T71; ARIB STD-33							
Radio characteristics: IEEE 802.11b								
Data rate	11 Mbps	5.5 Mbps	2 Mbps	1 Mbps				
Receiver sensitivity	-84 dBm	-87 dBm	-88 dBm	-90 dBm				
Transmit power	17.5 dBm	17.5 dBm	17.5 dBm	17.5 dBm				
Radio characteristics: IEEE 802.11g								
Data rate	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
Receiver sensitivity	-68 dBm	-70 dBm	-75 dBm	-79 dBm	-81 dBm	-85 dBm	-87 dBm	-88 dBm
Transmit power	12.5 dBm	12.5 dBm	14 dBm	14 dBm	16.5 dBm	16.5 dBm	17 dBm	17 dBm
Radio characteristics: IEEE 802.11a								
Data rate	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
Receiver sensitivity	-68 dBm	-70 dBm	-75 dBm	-79 dBm	-81 dBm	-85 dBm	-87 dBm	-88 dBm
Transmit power	12 dBm	12 dBm	14 dBm	14 dBm	16 dBm	16 dBm	17.5 dBm	17.5 dBm
Frequency band and operating channels								
FCC (US & Canada)	2.412-2.462 GHz (11 channels)			5.150-5.350 GHz (8 channels)			5.725-5.825 GHz (4 channels)	
European Union	2.412-2.472 GHz (13 channels)			5.150-5.350 GHz (8 channels)			5.470-5.725 GHz (11 channels)	
Japan	2.412-2.484 GHz (14 channels)			5.150-5.350 GHz (8 channels)				
China	2.412-2.472 GHz (13 channels)			5.725-5.825 GHz (4 channels)				
Singapore	2.412-2.472 GHz (13 channels)			5.150-5.350 GHz (8 channels)			5.725-5.825 GHz (4 channels)	
Taiwan	2.412-2.462 GHz (11 channels)			5.250-5.350 GHz (4 channels)			5.725-5.825 GHz (4 channels)	

ProCurve Radio Port 220 Accessories

Accessories

ProCurve 5 dBi Indoor/Outdoor Omnidirectional Antenna (J8441A)

5 dBi indoor/outdoor high-gain omnidirectional antenna with ceiling T-bar, I-beam, and mast mount



Electrical characteristics

Frequency range 1 (MHz):
2400–2500
Gain 1 dBi (with antenna cable):
4.4
VSWR max.: 1.7:1
E-Plane (3 dB beamwidth):
31 degrees
H-Plane (3 dB beamwidth):
omnidirectional
Polarization: linear (vertical)
Impedance (ohms): 50
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.30 lb. (0.13 kg)
Height: 11.5 in. (29.21 cm)
Mounting style: ceiling T-bar,
I-beam, or mast

Environment

Wind surface area: 0.08 ft.
(0.01 m)
Wind survival: 125.1 mph
(201.13 km/hr)
Enclosure: polycarbonate
Cable length: 2.75 ft. (0.84 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve 8 dBi Outdoor Omnidirectional Antenna (J8444A)

8 dBi outdoor omnidirectional antenna



Electrical characteristics

Frequency range 1 (MHz):
2400–2500
Gain 1 dBi (with antenna cable):
7.4
VSWR max.: 1.5:1
E-Plane (3 dB beamwidth):
12 degrees
H-Plane (3 dB beamwidth):
omnidirectional
Polarization: linear (vertical)
Impedance (ohms): 50
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.5 lb. (0.23 kg)
Mounting style: mast
Height: 25.25 in. (64.14 cm)

Environment

Wind surface area: 0.11 ft.
(0.01 m)
Wind survival: 125 mph
(201.13 km/hr)
Enclosure: polycarbonate
Cable length: 2.75 ft. (0.84 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve 14 dBi Yagi Antenna (J8448B)

14 dBi yagi antenna enables extended 2.4 GHz point-to-point wireless LAN links between ProCurve access points



Electrical characteristics

Frequency range 1 (MHz):
2400–2500
Gain 1 dBi (with antenna cable):
13.8
VSWR max.: 1.7:1
E-Plane (3 dB beamwidth):
30 degrees
H-Plane (3 dB beamwidth):
34 degrees
Impedance (ohms): 50
RF connector: N-type (female)

Physical characteristics

Weight: 1.25 lb. (0.57 kg)
Mounting style: wall or mast
mount
Front-to-back ratio (dB): 18
Dimensions (D x W x H):
26.5 x 3.75 x 1.5 in.
(67.31 x 9.53 x 3.81 cm)

Environment

Wind surface area: 0.70 ft.
(0.07 m)
Wind survival: 100 mph
(160.9 km/hr)
Enclosure: polycarbonate
Cable length: 1.7 ft. (0.52 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve Radio Port 220 Accessories

Accessories (continued)

ProCurve Antenna Lightning Arrester (J8996A)

helps protect access points from damage upon lightning strike to an outdoor access point antenna



Electrical characteristics

VSWR max.: 1.4:1

Physical characteristics

Dimensions (D x W x H):
2.4 x 0.9 x 1.2 in.
(6.1 x 2.29 x 3.05 cm)

Notes

Input RF power, 100 MHz/
6000 MHz: 250 W/10 W
Insulation resistance:
50 Meg ohm
Maximum insertion loss:
0.4 dB

ProCurve 3 dBi Dual Band Diversity Antenna (J8997A)

3 dBi multi-band diversity ceiling-mount antenna



Electrical characteristics

Frequency range 1 (MHz):
2400–2500
Gain 1 dBi (with antenna cable): 3
Frequency range 2 (MHz):
4900–5990
Gain 2 dBi (with antenna cable): 4
VSWR max.: 2.0:1
E-Plane (3 dB beamwidth):
60 degrees
H-Plane (3 dB beamwidth):
omnidirectional
Impedance (ohms): 50
Grounding: dc
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.5 lb. (0.23 kg)
Mounting style: ceiling grid
Dimensions (D x W x H):
6.16 x 3.66 x 0.89 in.
(15.65 x 9.3 x 2.26 cm)

Environment

Enclosure: PVC/acrylic
Cable length: 2.75 ft. (10.06 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve 6 dBi 5 GHz Omnidirectional Antenna (J8998A)

5 GHz omnidirectional antenna provides high gain performance for 802.11a radio of either the ProCurve Access Point 530 or Radio Port 220



Electrical characteristics

Frequency range 1 (MHz):
5150–5875
Gain 1 dBi (with antenna cable):
6.3
VSWR max.: 2.0:1
E-Plane (3 dB beamwidth):
17 degrees
H-Plane (3 dB beamwidth):
omnidirectional
Polarization: linear (vertical)
Impedance (ohms): 50
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.3 lb. (0.14 kg)
Mounting style: ceiling T-bar,
I-beam, or mast
Height: 11.56 in. (29.36 cm)

Environment

Wind surface area: 0.09 ft.
(0.01 m)
Wind survival: 120 mph
(193.08 km/hr)
Enclosure: polycarbonate
Cable length: 2.75 ft. (0.84 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve Radio Port 220 Accessories

ProCurve 7 dBi Dual Band Directional Antenna (J8999A)

7 dBi multi-band directional antenna for use with 2.4 GHz or 5 GHz radios of the ProCurve Access Point 530 or Radio Port 220



Electrical characteristics

Frequency range 1 (MHz):
2400–2500
Gain 1 dBi (with antenna cable):
6.9
Frequency range 2 (MHz):
4900–5990
Gain 2 dBi (with antenna cable):
7.7
VSWR max.: 2.0:1
E-Plane (3 dB beamwidth):
66 degrees
H-Plane (3 dB beamwidth):
68 degrees
Polarization: linear (vertical)
Front-to-back ratio: 10 dB
Impedance (ohms): 50
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.5 lb. (0.23 kg)
Mounting style: flush wall mount,
articulating wall, or mast
Dimensions (D x W x H):
5.16 x 5.16 x 1.37 in.
(13.11 x 13.11 x 3.48 cm)

Environment

Wind surface area: 0.12 ft.
(0.01 m)
Wind survival: 120 mph
(193.08 km/hr)
Enclosure: PVC/acrylic
Cable length: 2.75 ft. (0.84 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

ProCurve 14 dBi 5 GHz Directional Antenna (J9000A)

indoor/outdoor 14 dBi 5 GHz wide-band, high-gain directional antenna extends 802.11a coverage for point-to-point or point-to-multi-point wireless bridging



Electrical characteristics

Frequency range 1 (MHz):
5150–5875
Gain 1 dBi (with antenna cable):
13.3
VSWR max.: 2.0:1
E-Plane (3 dB beamwidth):
27 degrees
H-Plane (3 dB beamwidth):
29 degrees
Polarization: linear (vertical)
Impedance (ohms): 50
Grounding: dc
RF connector: reverse SMA (male)

Physical characteristics

Weight: 0.7 lb. (0.32 kg)
Mounting style: flush wall mount,
articulating wall, or mast
Front-to-back ratio (dB): 17
Dimensions (D x W x H):
4.16 x 4.16 x 1.37 in.
(10.57 x 10.57 x 3.48 cm)

Environment

Wind surface area: 0.12 ft.
(0.01 m)
Wind survival: 120 mph
(193.08 km/hr)
Enclosure: PVC/acrylic
Cable length: 2.75 ft. (0.84 m)
Operating temperature:
–22° to 131°F (–30° to 55°C)
Storage temperature:
–40° to 149°F (–40° to 65°C)

For more information

To learn more about ProCurve
Networking, please visit
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