AP420 INDOOR ACCESS POINT

Tri-radio 4x4:4 MU-MIMO, 802.11ac Wave 2 support

2 Gigabit Ethernet ports, 10 integrated antennas, PoE+ power

The AP420 is the fastest indoor access point from WatchGuard, offering blazing fast wireless speeds with its 4x4 802.11ac Wave 2 chipset and comes equipped with multi-user MIMO (MU-MIMO) technology allowing many smartphones, laptops and tablets to be served by the AP420 at the same time – no more waiting to connect to Wi-Fi. With a third 2x2 MIMO dual band radio for dedicated Wireless Intrusion Prevention System (WIPS) when the WatchGuard Wi-Fi Cloud is enabled, so you don't have to sacrifice performance for security. Best for tradeshow floors, auditoriums, meeting rooms, and shopping malls.

"For customers, high-performance Wi-Fi means fast, reliable connectivity. But for us, it means much more. We need to provide the access, secure it, and be able to get intelligent information from it to help us optimize our business operations and offering. The new AP420 with Wi-Fi Cloud gives us all of that by combining performance and security into a solution that's simple to deploy and manage. We get reliable high-speed Wi-Fi that's not only secure, but also delivers an immersive guest experience, which is good for the customer and good for our brand."

~ Stuart Rowbotham, Founder at Bromleynet Limited

FLEXIBLE MANAGEMENT OPTIONS

You can manage AP420 access points with either a Firebox®, via the Gateway Wireless Controller with lightweight feature set, or with WatchGuard's Wi-Fi Cloud. And with the Wi-Fi Cloud you get an expanded set of features including strong WIPS security, marketing tools, and location-based analytics for optimal business insights.

PERFORMANCE WITHOUT COMPROMISE

Incorporating the latest 802.11ac Wave 2 standards, you'll have speeds of up to 1.73 Gbps over the air, without sacrificing security. When managed by the Wi-Fi Cloud, the AP420 comes equipped with a third 2x2 MIMO dual band radio for dedicated WIPS, RF optimization, spectrum monitoring, and troubleshooting built in.

UNIQUELY EFFECTIVE APPROACH TO SECURITY

Using patented Marker Packet technology, WatchGuard's cloud-managed WIPS defends your airspace from unauthorized devices, man-in-the-middle and denial-of-service attacks, rogue APs and more. Now with a dedicated WIPS sensor included, the AP420 can be added to any existing Wi-Fi network for a powerful layer of patented security features simply unavailable in most APs.

ADVANTAGES OF CLOUD-BASED MANAGEMENT

WatchGuard's secure Cloud-managed APs deliver the most comprehensive set of features for the price – including marketing tools for customizable user engagement and location-based analytics for enhanced business insights. With the WatchGuard Wi-Fi Cloud, IT pros can enjoy an entirely controller-less Wi-Fi management experience including setup, configuration, monitoring, troubleshooting, and improving corporate and guest Wi-Fi access, without worrying about the limitations of legacy controller infrastructure. Wi-Fi Cloud environments easily scale from one to an unlimited number of APs across multiple locations. APs can be grouped in many ways, including location, building, floor, and customer to maintain consistent policies.

FEATURES & BENEFITS

- Wave 2 chipset offers the latest MU-MIMO technology to serve today's toughest high-density environments

- AP420 takes less than two minutes to activate and configure after connecting to the Wi-Fi Cloud

- Smart steering automatically pushes clients with low speeds to a closer access point*

- Band steering manages spectrum efficiency, pushing clients to 5GHz channels for optimal throughput

- Third 2x2 MIMO dual band radio used as a dedicated WIPS sensor for 24x7x365 security and performance scanning*

- AP420 continues to scan for wireless threats and enforces security policy even if the connection with the Wi-Fi Cloud is interrupted*

*Must be Wi-Fi Cloud enabled

PHYSICAL SPECIFICATIONS

Property	Specification
Physical Dimensions	8.66" x 8.66" x 2.24" (220 mm x 220 mm x 57 mm)
Weight	2.86 lb. (13 kg)
Operating Temperature	0°C to 40°C (32°F to 104°F)
Storage Temperature	-25°C to 75°C (-13°F to 167°F)
Humidity	0% to 95% non-condensing
Power Consumption	Max: 20W Min: 16W Average: 18W
Chipset	Qualcomm QCA9994
Processor and RAM	Qualcomm IPQ8064 1.4GHz dual core ARM processor with 256 MB RAM and 128 MB Flash

Physical Specifications	
Antenna	Internal PIFA x10
Ethernet Ports	2 Gigabit Ethernet ports with RJ45 connector type. One port to connect to the wired LAN and communicate with the Wi-Fi Cloud. This port can also be used to power the device using the 802.3at Power over Ethernet (PoE+) standard/802.3af Power over Ethernet(PoE). Using PoE results in limited feature functionality of the AP. Second port can be used for aggregation or wired extension of an SSID.
USB	1 USB 2.0 port
Reset	Pinhole push button
Console	RS - 232 Serial
Physical Security	Kensington lock slot
LEDs	Ethernet, 2.4Ghz, 5GHz, Scanning
Operational Specifications	
Input Power	12V DC (6.3mm connector)/802.3af (PoE)/802.3at (PoE+)
Number of Radios	3 radios; One 2.4GHz and 5GHz radio each for simultaneous dual band client access. Dual band 2x2 third radio for smart scanning, for both WIPS and RF Optimization
MIMO	4 X 4 for 2.4/5GHz Radios, 2 X 2 for Scanning Radio
Number of Spatial Streams	4 for 2.4/5GHz Radios, 2 for Scanning Radio
RF Transmit Power	27dBm per radio (max); Actual power for Tx will depend on Country Regulatory Domain
Simultaneous MU-MIMO Clients	64
Users in a MU-MIMO group with a 2x2 client	3
Bandwidth Agility	Yes
Small Cells Interference Mitigation (picocells, femtocells, microcells)	Supported
Frequency Bands	2.4-2.4835 GHz, 4.9-5.0GHz, 5.15-5.25 GHz; (UNII-1), 5.25-5.35 GHz, 5.47-5.6 GHz, 5.650-5.725 GHz (UNII-2), 5.725-5.85 GHz (UNII-3)
Dynamic Frequency Selection	Supported in compliance to all latest amendments from FCC, CE, IC, CB, TELEC, KCC regarding certifications.

WI-FI SPECIFICATIONS – Frequency, Modulation, and Data Rates

IEEE 802.11a/n/ac			
	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
Frequency Band	4.92 ~ 5.08 GHz 5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47~ 5.725 GHz 5.725~ 5.825 GHz	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.725~ 5.825 GHz	5.15 ~ 5.25 GHz 5.25 ~ 5.35 GHz 5.47~ 5.725 GHz
Dynamic Frequency Selection	DFS and DFS2		
Modulation Type	OFDM		
Peak Data Rates	Up to 1.7 Gbps (MCS 0-31)		
Antenna	Integrated modular high efficiency PIFA antenna x4 (peak gain: 5.75 dBi)		

IEEE 802.11b/g/n			
Frequency Band	Scanning	Transmission	
	All regions	USA & Canada (FCC/IC)	Europe (ETSI)
	2400 ~ 2483.5 MHz	2400 ~ 2473.5 MHz	2400 ~ 2483.5 MHz
Modulation Type	DSSS, OFDM		
Peak Data Rates	Up to 800 Mbps (MCS 0-31)		
Antenna	Integrated modular high efficiency PIFA antenna x4 (peak gain: 4.84 dBi)		

COUNTRY-WISE MAX TRANSMIT POWERS (DBM)

Countries	2.4GHz	5Ghz
Australia	20	23
Canada	30	23
India	20	20
Israel	20	20
Japan	20	20
UAE	20	17
USA	20	23

Note:

The actual transmit power will be the lowest of:

- Value specified in the Device Template
- Maximum value allowed in the regulatory domain
- Maximum power supported by the radio

Maximum Aggregate Transmit Power

For 5GHz	
MCS Index	Transmit Power(dBm)
802.11a (legacy)	
6Mbps	27
36Mbps	25
48Mbps	24
54Mbps	24
802.11n HT20 (legacy)	
MCS 0,1,8,9,16,17, 24,25	27
MCS 2,3,10,11,18,19,26,27	26
MCS 4, 5, 12, 13, 20, 21, 28, 29	25
MCS 6, 14, 22, 30	24
MCS 7, 15, 23, 31	23
802.11n HT40	
MCS 0,1,8,9,16,17,24,25	25
MCS 2,3,10,11,18,19,26,27	24
MCS 4,5,12,13,20,21,28,29	23
MCS 6,7,14,15,22,23,30,31	22
802.11ac 256QAM VHT80	
3/4 Code Rate	21
5/6 Code Rate	20

For 2.4GHz	
MCS Index	Transmit Power(dBm)
802.11b (legacy)	
1Mbps - 11Mbps	27
802.11g (legacy)	
6Mbps	27
54Mbps	24
802.11n HT20 (legacy)	
MCS 0,1,8,9,16,17, 24,25	27
MCS 2,3,10,11,18,19,26,27	26
MCS 4, 5, 12, 13, 20, 21, 28, 29	25
MCS 6, 14, 22, 30	24
MCS 7, 15, 23, 31	23
802.11n HT40	
MCS 0,1,8,9,16,17,24,25	25
MCS 2,3,10,11,18,19,26,27	24
MCS 4,5,12,13,20,21,28,29	23
MCS 6,7,14,15,22,23,30,31	22

Receive Sensitivity

For 5GHz	
MCS Index	Receive Sensitivity
802.11a (legacy)	
6Mbps	-91
36Mbps	-78
48Mbps	-75
54Mbps	-73
802.11n HT20 (legacy)	
MCS 0,8	-91
MCS 1,9	-88
MCS 2,10	-85
MCS 3,11	-81
MCS 4,12	-77
MCS 5,13	-74
MCS 6,14	-72
MCS 7,15	-71
802.11n HT40	
MCS 0,8	-87
MCS 1,9	-85
MCS 2 ,10	-82
MCS 3,11	-78
MCS 4,12	-74
MCS 5,13	-70
MCS 6,14	-69
MCS 7,15	-68
802.11ac 256QAM VHT80	
MCS 0	-84
MCS 1	-82
MCS 2	-79
MCS 3	-75
MCS 4	-71
MCS 5	-67
MCS 6	-66
MCS 7	-65
MCS 8	-60
MCS 9	-58

For 2.4GHz	
MCS Index	Receive Sensitivity
802.11b	
1Mbps	-94
11Mbps	-86
802.11g	
6Mbps	-90
24Mbps	-81
36Mbps	-78
48Mbps	-74
54Mbps	-73
802.11n HT20	
MCS 0,8	-90
MCS 1,9	-87
MCS 2 ,10	-84
MCS 3,11	-80
MCS 4,12	-77
MCS 5,13	-73
MCS 6,14	-71
MCS 7,15	-69
802.11n HT40	
MCS 0,8	-86
MCS 1,9	-84
MCS 2,10	-81
MCS 3,11	-77
MCS 4,12	-74
MCS 5,13	-70
MCS 6,14	-68
MCS 7,15	-66

INTERNAL ANTENNA RADIATION PATTERNS

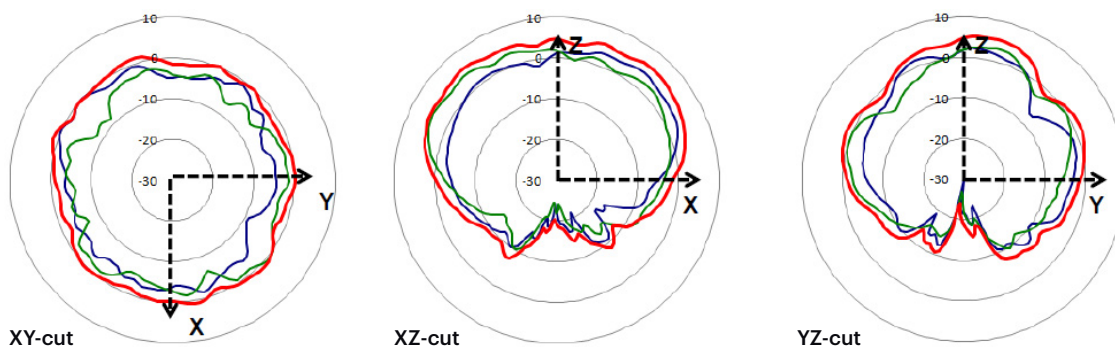**Radiation Pattern for 2G antennas (Ant 1,2,3,4)**

XY-cut   XZ-cut   YZ-cut

— Directional Gain   — 2G-1   — 2G-2   — 2G-3   — 2G-4
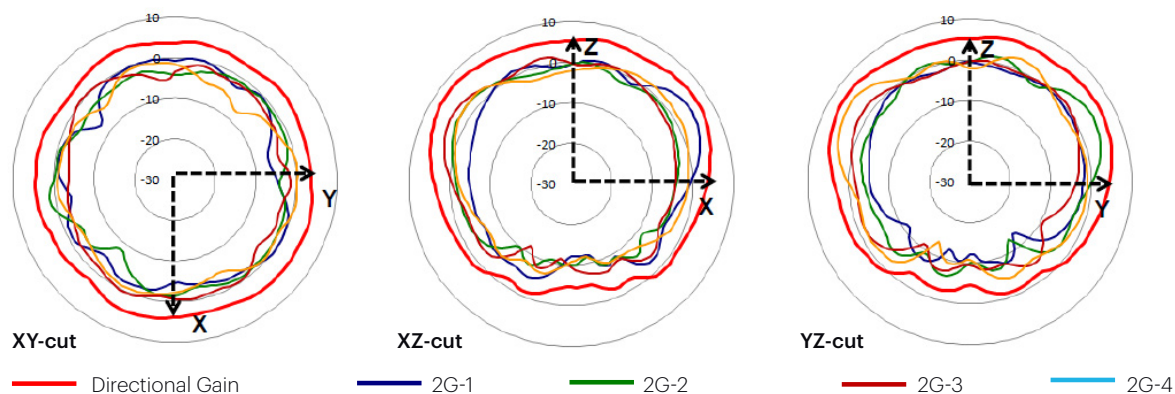
Radiation Pattern for 5G antennas (Ant 5,6,7,8)

XY-cut   XZ-cut   YZ-cut

Radiation Pattern for 2G antennas (Ant 9,10)

XY-cut   XZ-cut   YZ-cut
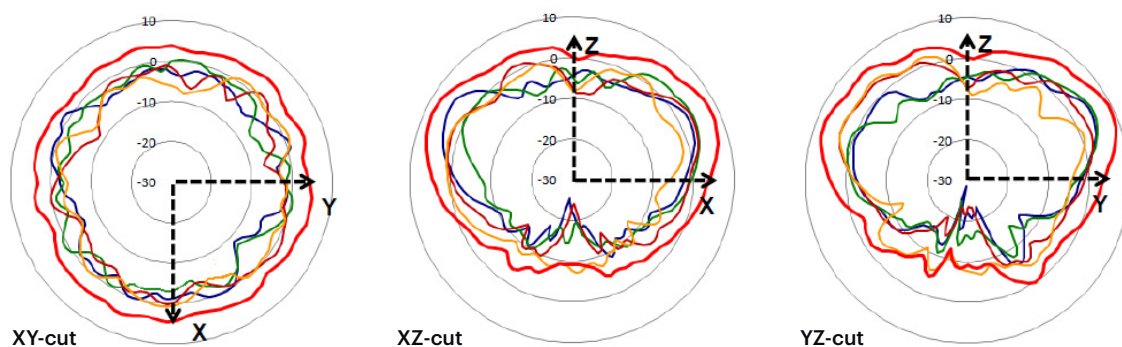
— Directional Gain   — 2G-9   — 2G-10
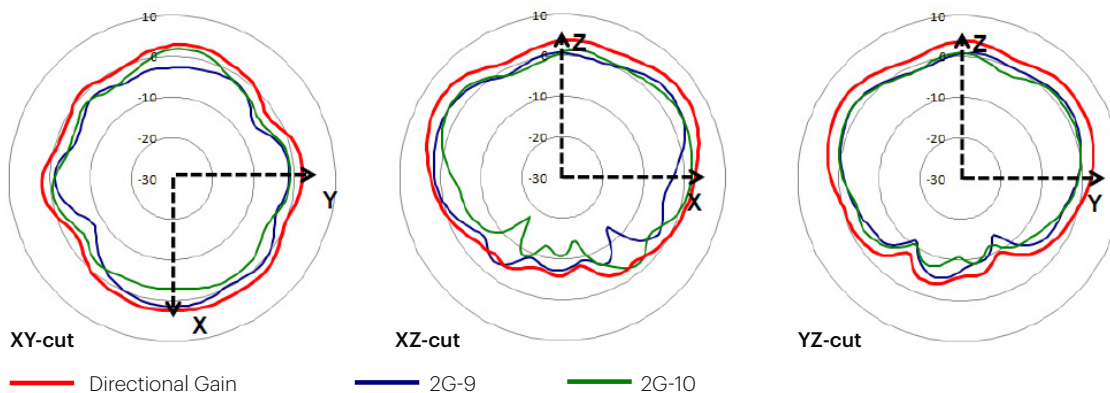
Radiation Pattern for 5G antennas (Ant 9,10)

XY-cut   XZ-cut   YZ-cut

Access Point Security Modes:

- WPA/WPA2 (802.11i) with TKIP or AES-CCMP encryption and PSK or 802.1x authentication

- Integrated WIPS background wireless scanning and Rogue AP prevention

WIPS Sensor Mode:

- Dedicated WIPS sensor scans for 24x7x365 protection from wireless threats

REGULATORY SPECIFICATIONS

RF and Electromagnetic	
Country	**Certification**
USA	FCC Part 15.247, 15.407
Canada	IC
Europe	CE EN300.328, EN301.893 Countries covered under Europe certification: Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Iceland, Luxembourg, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Slovakia, Slovenia, Switzerland, The Czech Republic, UK.

Safety	
Country	**Certification**
USA	UL 60950
Canada	cUL 60950
European Union (EU)	EN 60950, RoHS

ORDERING INFORMATION

Access Point	
Part Number	**Description**
WGA42723	**WatchGuard AP420 and 3-yr Total Wi-Fi** Total Wi-Fi Package includes AP with subscription to manage that AP in Wi-Fi Cloud, Standard Support, WIPS, Engage Captive Portals, Analyze Location Analytics, and Go Mobile Web App
WGA42721	**WatchGuard AP420 and 1-yr Total Wi-Fi** Total Wi-Fi Package includes AP with subscription to manage that AP in Wi-Fi Cloud, Standard Support, WIPS, Engage Captive Portals, Analyze Location Analytics, and Go Mobile Web App
WGA42733	**WatchGuard AP420 and 3-yr Secure Wi-Fi** Secure Wi-Fi Package includes AP with subscription to manage that AP in Wi-Fi Cloud, Standard Support, and WIPS
WGA42731	**WatchGuard AP420 and 1-yr Secure Wi-Fi** Secure Wi-Fi Package includes AP with subscription to manage that AP in Wi-Fi Cloud, Standard Support, and WIPS
WGA42703	**WatchGuard AP420 and 3-yr Basic Wi-Fi** Basic Wi-Fi Package includes AP with subscription to manage that AP with a Gateway Wireless Controller and Standard Support
WGA42701	**WatchGuard AP420 and 1-yr Basic Wi-Fi** Basic Wi-Fi Package includes AP with subscription to manage that AP with a Gateway Wireless Controller and Standard Support

Power Options	
Part Number	**Description**
WG8599 (US)	WatchGuard 802.3at PoE+ Injector with AC cord (US)
WG8600 (EU)	WatchGuard 802.3at PoE+ Injector with AC cord (EU)
WG8601 (UK)	WatchGuard 802.3at PoE+ Injector with AC cord (UK)
WG8602 (AU)	WatchGuard 802.3at PoE+ Injector with AC cord (AU)
WG8025	Power Supply for WatchGuard AP420

Mounting Options	
Part Number	**Description**
WG8020	**Flat Surface Mount Kit** Flat surfaces (wall, hard ceiling) mount kit for WatchGuard AP420
WG8026	**T-grid Rails (9/16″,15mm) Mount Kit** Drop ceiling T-grid rails (9/16″, 15mm) mount kit for WatchGuard AP325/AP420
WG8021	**T-grid Rails Interlude and Silhouette Mount Kit** Drop ceiling T-grid rails (interlude and silhouette) mount kit for WatchGuard AP325/AP420
WG8027	**T-grid Rails (15/16″, 24mm) Mount Kit** Drop ceiling T-grid rails (interlude and silhouette) mount kit for WatchGuard AP325/AP420

WATCHGUARD HAS YOU COVERED, INDOORS AND OUT

No matter what your wireless battleground is – remote offices, guest Wi-Fi, corporate access, public hotspots, outdoor environments – WatchGuard has a range of access points to fit your business needs. WatchGuard's Wi-Fi packages allow you to quickly and easily find the right set of features your business needs today…and tomorrow.

WatchGuard Wi-Fi Solution	Total Wi-Fi	Secure Wi-Fi	Basic Wi-Fi
Management Platform	Wi-Fi Cloud	Wi-Fi Cloud	Firebox Appliance*
Scalability Number of managed access points.	Unlimited	Unlimited	Limited**
Configuration and Management SSID configuration with VLAN support, band steering, smart steering, fast roaming, user bandwidth control, Wi-Fi traffic dashboard.	✓	✓	✓
Additional Wi-Fi Cloud-Based Management Radio Resource Management, Hotspot 2.0, enhanced client roaming, nested folders for configuration before deployment, integration with 3rd party WLAN controllers.	✓	✓	
Intelligent Network Visibility and Troubleshooting Pinpoint meaningful network problems and application issues by seeing when an anomaly occurs above baseline thresholds and remotely troubleshoot.	✓	✓	
Verified Comprehensive Security A patented WIPS technology defends your business from the six known Wi-Fi threat categories, enabling a Trusted Wireless Environment.	✓	✓	
GO Mobile Web App Quickly and easily set-up your WLAN network from any mobile device.	✓	✓	
Guest Engagement Tools Splash pages, social media integrations, surveys, coupons, videos, and so much more.	✓		
Location-Based Analytics Leverage metrics like footfall, dwell time, and conversion to drive business decisions and create customizable reports.	✓		
Support Hardware warranty with advance hardware replacement, customer support, and software updates	Standard	Standard	Standard

*Requires Firebox with active support contract. **20 access points recommended for each Firebox model. For the T-15 Firebox model 4 access points are recommended.

NO NEED TO RIP AND REPLACE, JUST ADD WIPS

Each WatchGuard access point has the flexibility to operate as both an access point and a dedicated WIPS security sensor. This means that when deployed as dedicated WIPS sensors, the devices work with your existing access points (Cisco, Aruba, Ruckus, Ubiquiti, etc) and add enterprise-grade wireless security protection to your network. In this case, instead of delivering secure Wi-Fi traffic to users, we deliver unprecedented WIPS security protection that is 100% dedicated to scanning the air and protecting your business from wireless threats.

For additional details, talk to your authorized WatchGuard reseller or visit
https://www.watchguard.com/wifi

About WatchGuard Technologies, Inc.

WatchGuard® Technologies, Inc. is a global leader in network security, secure Wi-Fi, and network intelligence products and services to more than 80,000 customers worldwide. The company's mission is to make enterprise-grade security accessible to companies of all types and sizes through simplicity, making WatchGuard an ideal solution for distributed enterprises and SMBs. WatchGuard is headquartered in Seattle, Washington, with offices throughout North America, Europe, Asia Pacific, and Latin America. To learn more, visit **WatchGuard.com**.

AP420

Power / Ethernet — 2.4GHz 5GHz 3rd radio

Reset Button — USB Port — Console Port

Kensington lock slot