AP-5181 Access Point

Enterprise-class 802.11a/b/g outdoor access point

FEATURES

NEMA 4X-modified, IP56 Weatherproof housing
Equipment designed to withstand wind, rain, and extreme temperatures

Extended temperature range
Operates in temperatures from -30° C to 55° C (-22° F to 131° F)

Mesh-capable
Self-assembling, self-healing nodes automatically establish wireless links between APs; install nodes wherever there is power – no need to install cable or fiber

Dual-radio, dual-band design; 802.11a/b/g in 2.4/5 GHz bands
Simultaneous support of 802.11a/b/g; works with any standards-based IEEE WLAN device

Rugged enterprise-class access point designed for harsh environments

Motorola's AP-5181 Access Point, specifically designed for outdoor use, delivers enterprise-class wireless networking in harsh environments. In addition to a NEMA 4X-modified housing, severe-weather features include integrated lightning arrestors, surge protectors, extreme temperature range operation and an array of antenna and power accessories. The self-assembling, self-healing mesh capability supports Wi-Fi multimedia (WMM) extensions to ensure quality of service (QoS) while cost-effectively extending corporate networks beyond and between buildings — with no need to install additional Ethernet cable or fiber. With integrated router, firewall, DHCP, AAA and hotspot services, the AP-5181 offers a superior outdoor WLAN solution.

Extend the reach of your corporate network — cost-effectively

When used as either an access port or a mesh node, the AP-5181 can operate wirelessly, even in harsh conditions. Outdoor applications don't mean sacrificing security or manageability — support for today's standards- based security protocols helps ensure enterprise-level network protection, while a wide variety of administration options provides simple, yet powerful management tools. Because the AP-5181 operates wirelessly, all of this can be implemented outdoors without the added cost of installing network cable or fiber.

Mesh networking creates a flexible, easily-managed network

Using its mesh capability, the dual-radio AP-5181 can connect to other access points for data backhaul while providing network access to local users. Enabling an array of applications, from simple point-to-point bridges connecting two wired networks to complex multi-node, multi-link networks, this feature offers a simple way to extend the network to outdoor or remote locations. The self-assembling and self-healing aspects of a mesh network make the network flexible and easy to manage. This, combined with the straightforward configuration interface, makes deploying and maintaining a secure wireless network of access points almost effortless.

Engineered to withstand the elements

Because the AP-5181 was specifically designed for outdoor use in harsh conditions, it can withstand wind, rain and extreme temperatures. It comes standard with integrated lightning arrestors and

Integrated router, firewall and DHCP server
No need to install extra hardware; easy to scale, upgrade and maintain

AAA server and hotspot gateway
Integrated services for authentication and public access management

Wi-Fi Multimedia (WMM) quality of service (QoS) and voice prioritization
Superior performance for demanding mission-critical applications, including voice and video

Adaptive Switch Assisted Mesh
Can associate with a wireless switch to enable central management in the NOC, and in the event of loss of connectivity, resumes functionality as a standalone access point for local bridging of mesh traffic and continuity of local network connectivity

surge protection. The optional protective heavy weather mounting kit is designed to protect it from windblown debris at velocities of up to 130 mph, while the surge-protected power tap kit converts high voltage on light poles to low voltage to run the AP. In fact, Motorola offers everything required for a full outdoor AP solution, including a host of outdoor dual-band antennas and outstanding support.

Adaptive Switch Assisted Mesh

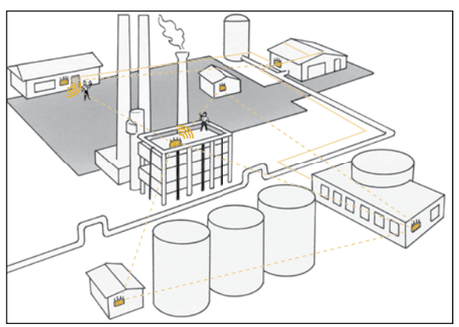
The AP-5181 supports an adaptive mesh mode of operation where the mesh AP's can be centrally configured from the wireless switch. Local bridging of mesh traffic allows the mesh network to remain fully operational even if connectivity to the wireless switch is lost.

Backed by world-class service

Motorola covers every aspect of the mobility solution — from network design to ongoing operations — providing unsurpassed breadth and depth of coverage to ensure all of your services and support needs are met. Professional planning, assessment and implementation services ensure that your mobility solution is designed to deliver maximum benefits. And our responsive Customer Services ensure that your solution continues to operate seamlessly and efficiently, and with maximum uptime — reducing your total cost of ownership and improving your return on investment.

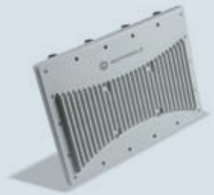
For more information on the AP-5181, please visit us on the web at www.motorola.com/AP5181 or access our global contact directory at www.motorola.com/enterprise/contactus

Mesh in a refinery environment



Mesh technology provides a convenient, flexible, scalable and cost-effective means to extend the corporate network — indoors and out — to areas that are typically expensive and hard to cable, including warehouses, shipping yards, processing plants, distribution centers and more.

A Complete Outdoor Access Point



AP-5181 Dual Radio AP
AP-5181-13040-WWR

Heavy Weather Kit
KT-5181-HW-01R

48V Transformer and Power Surge Protector
AP-PSBIAS-5181-01R

Not Shown: Wall Pole and Mounting Kit (KT-5181-WP-01R) and Outdoor Antennas

AP-5181 Specifications

Physical Characteristics	
Dimensions:	12 in. L x 8.2 in. W x 3.55 in. H/ 305 mm L x 210 mm W x 89 mm H
Weight:	5.50lbs/2.50kg
Housing:	Die cast aluminum alloy; NEMA 4X-modified; IP56
Available Mounting Configurations:	Pole and wall mounting kit; Protective heavy weather mounting kit; Light pole power transformer kit
LEDs:	4 back-mounted LEDs, indicating radio activity, power, adoption and errors
Uplink:	2 ports (WAN, LAN) Auto-sensing 10/100Base-T Ethernet
User Environment	
Operating Temperature:	-22°F to 131°F/-30°C to 55°C
Storage Temperature:	-40°F to 185°F/-40°C to 85°C
Operating Humidity:	5 to 95% RH non-condensing
Operating Altitude:	8,000 ft./2438m @ 82°F/28°C
Storage Altitude:	15,000 ft./4572m @ 53°F/12°C
Electrostatic Discharge:	IEEE 61000-4-2, 20kV air, 8kV contact
Weather rating:	IP56 weather-tight, NEMA 4X
Wind survivability:	>170 mph, 148 knots (without antenna)
Wind loading (165 mph):	<60 lbs, 267 Newtons (without antenna)
Shock & vibration:	MIL-STD-810F method 514 procedure 1
Transportation/Cargo:	ASTM D775-80 D4169 level 3
Power Specifications	
Operating Voltage:	48V DC
Operating Current:	280mA
Integrated Power-Over-Ethernet Support:	802.3af on LAN Port
Radio Specifications	
Wireless Medium:	Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency Division Multiplexing (OFDM)
Network Standards:	802.11a, 802.11b, 802.11g, 802.3
Data Rates Supported:	1, 2, 5.5, 6,9, 11, 12, 18, 24, 36, 48, 54 Mbps
Operating Channels:	Chan 32-165 (5180 – 5825 MHz); Chan 1-13 (2412-2472 MHz) Actual operating frequencies depend on regulatory rules and certification agency

Operating Bands:	FCC 2.412 to 2.462 GHz 5.150 to 5.250 (UNII -1)1 5.725 to 5.850 (ISM) [1]Indoor use only		
	EU 2.412 to 2.472 GHz 5.150 to 5.250 GHz1 5.250 to 5.350 GHz1 5.470 to 5.725 GHz (Country Specific) [1]Indoor use only		
Receiver Sensitivity:	Radio .11a (dBm) 10% PER for 1,000 bytes IEEE 802.11a sect 17.3.10.1 (MIN} & 17.3.10.4 (MAX)	6 Mbps 9 Mbps 12 Mbps 18 Mbps 24 Mbps 36 Mbps 48 Mbps 54 Mbps	-91 -89 -87 -83 -81 -78 -74 -73
	Radio .11g (dBm @ 10% PER for 1,000 bytes IEEE 802.11g sect 19.5.1 (MIN) & 19.5.3 (MAX)	6 Mbps 9 Mbps 12 Mbps 18 Mbps 24 Mbps 36 Mbps 48 Mbps 54 Mbps	-89 -88 -85 -82 -80 -77 -72 -70
	Radio .11g (dBm @ 8% PER for 1,024 bytes	11 Mbps 5.5 Mbps 2 Mbps 1 Mbps	-84 -88 -90 -94
Available Transmit Power Settings:	4-20 dBm		
Antenna Protection:	Transient IEEE 61000-4-4, level 4, EFT; Surge IEEE 61000-4-5 Class 5, 1.2x50uS & 8x20uS Waveform		

Regulatory	
Standards Compliance:	802.11a/b/g, 802.11i, WPA2, WMM, UAPSD
Product Certifications:	UL / cUL 60950-1, IEC / EN60950-1
Radio Approvals:	FCC (USA), Industry Canada, CE (Europe)

AP-5181 Part Numbers and Product Descriptions

Part Number	Description
AP-5181-13040-WWR	AP-5181 802.11a+g
KT-5181-HW-01R	AP-5181 Heavy Weather Kit
KT-5181-WP-01R	AP-5181 Wall/Pole Mounting Kit
AP-PSBIAS-5181-01R	48V Transformer and Power Surge Protector

MOTOROLA

motorola.com