

# MeshAP™ 2180/2180G

## Outdoor

2.4GHz/5.8GHz/5.3GHz  
Selectable Frequency  
Full-Duplex  
Wi-Fi Mesh Network  
Access Point

**ARROWSPAN**



### Reliable, Intelligent, High Performance Mesh Network

- Patented Auto-discovery, auto-configure, and auto-healing POP (Predictable Optimum Path) mesh routing algorithm
- Multiple wireless path design for both backhaul and user traffic eliminates adjacent AP signal interference and provides zero performance degradation
- Best network throughput via layer 2 fast switching and bridging from AP to AP to support real time video, voice, and data applications

### Fully Compatible with Existing Access Server, Router, and Gateway

- Transparent to layer 3 and up protocols, fully compatible with existing network equipment
- Directly connects to existing Router, Gateway, or AP through 10/100 Ethernet

### Management and Security

- Supports Web Based browser & SNMP\*
- Supports WEP encryption security across wireless mesh network
- Mesh network protection with user defined Mesh ID

**Converting Hotspots to Hotzones** is the best way to increase WiFi service revenue by reaching more subscribers with minimum capital investment and operating cost. ArrowSpan's MeshAP 2180/2180G is ideal for users who are looking to deploy large scale mesh networks using industrial strength access points. Users can choose between 5.8GHz, 5.3GHz or 2.4GHz depending on their needs.

**A Mesh Link is a true wireless connection** between any two MeshAP units. ArrowSpan's MeshAP access point will automatically discover its neighboring MeshAP unit(s) and interconnect all the access points together to form a large coverage wireless network.

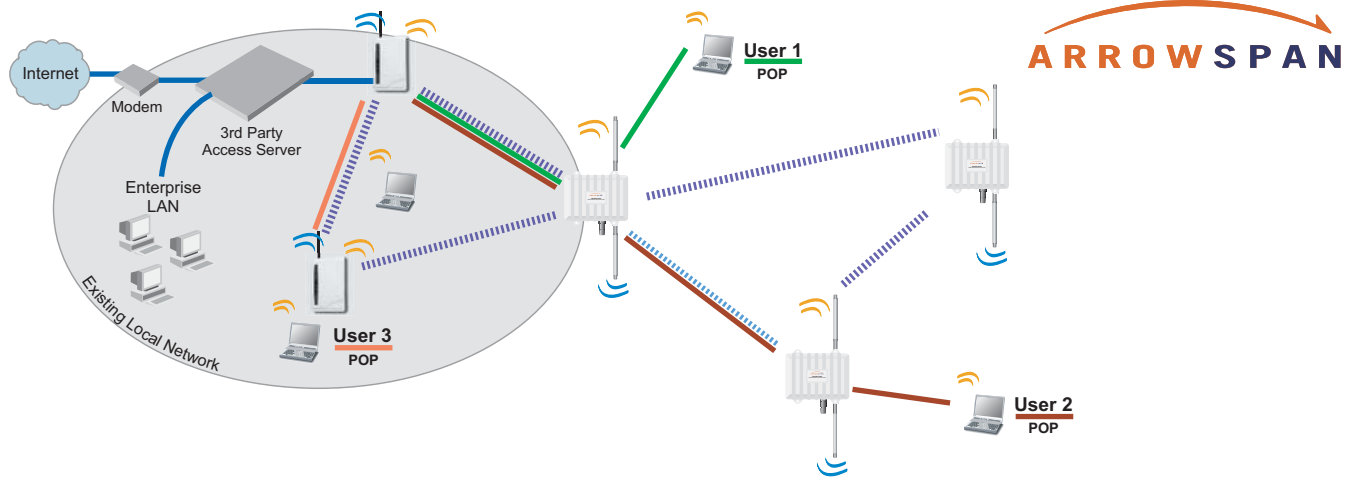
**MeshAP 2180/2180G implements Layer 2 mesh routing** which provides excellent network performance and is fully compatible with existing network equipment and applications. The MeshAP 2180/2180G is able to support high-bandwidth and low latency applications like real-time video and voice.

**Predictable Optimum Path (POP)** routing algorithm creates a MeshAP 2180/2180G based Wi-Fi mesh network with the best throughput, reliable mesh link, and self-discovery/self-configuration/self-healing benefits. The algorithm's human-like intelligence examines the network and makes appropriate connections among MeshAPs in real time. It also re-establishes a new network when obstacles, individual node problems, new nodes or internet access events occur.

**High throughput Mesh Network** is achieved by non-blocking and no-interference for client and backhaul traffic. ArrowSpan's multi-radio and multi-channel design eliminates wireless signal interference and traffic conflict problems that exist on many other mesh network products.

**The web-based (HTML) management interface and SNMP** enables both professional and non-technical users to easily handle network management and maintenance tasks for the MeshAP units. The "Point and Click" browser interface permits users to monitor node condition, link quality, traffic flow, and event logs of the MeshAP units on the mesh network. The web-based Topology function also allows Network administrators to easily configure, update, and monitor every MeshAP station on the mesh network. SNMP private MIBs are available for advanced user preferring to manage through their own network

**MeshAP™ 2180/2180G**



## Specifications

### Wireless

**Standards:** IEEE 802.11a, 802.11g, 802.11b  
**Media Access Protocol:** CSMA/CA with ACK  
**Frequency:** 5.8GHz/5.3GHz ISM radio band  
 2.4GHz ISM radio band

**GPS:** CXD2951 (Model No: MeshAP2180/2180G)

### Modulation

802.11a: OFDM((64-QAM, 16-QAM, QPSK, BPSK)  
 802.11g: OFDM(64-QAM, 16-QAM, QPSK, BPSK)  
 802.11b: CCK(11, 5.5MHz), DOPSK(2Mbps), DQPSK(1Mbps)

### Data Rates

802.11a: 6, 9, 12, 18, 24, 36, 48, 54, 72, 96, 108Mbps  
 802.11g: 6, 9, 12, 18, 24, 36, 48, 54, 72, 97, 108Mbps  
 802.11b: 1,2, 5.5, 11Mbps

### Tx Power

802.11a: typical 22.5dBm  
 802.11g: typical 23dBm  
 802.11b: typical 24dBm

### Channels

802.11a: USA, Canada: 12 non-overlapping channels (5.15 ~ 5.35GHz, 5.725~5.825GHz)  
 Europe: 19 non-overlapping channel (5.15~5.35GHz)  
 Japan:8 non-overlapping channels (5.15~5.35GHz)  
 China: 5 non-overlapping channels (5.725~5.85GHz)  
 802.11g: USA, Canada: 11  
 Most European countries: 13  
 Japan: 14  
 802.11b: USA, Canada, Taiwan: 11  
 Most European countries: 13  
 France: 4  
 Japan: 14

### Antenna (Not included in package)

(2x) 8dbi 5GHz omni directional antenna

### Minimum Distance Requirement (Node to Node)

Open Space: 132ft(40m)

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### Mesh Network Performance

#### Operating Range

802.11a  
 Outdoor: 85m@54Mbps, 350m@6Mbps  
 Indoor: 25m@54Mbps, 60m@6Mbps

#### 802.11b

Outdoor: 350m@11Mbps, 400m@1Mbps  
 Indoor: 45m@11Mbps, 70m@1Mbps

#### 802.11g

Outdoor: 90m@54Mbps, 400m@6Mbps  
 Indoor: 30m@54Mbps, 65m@6Mbps  
 (Transmission speed may vary according to the environment)

### Encryption & Security

64bit, 128bit WEP encryption (Hardware Accelerated)  
 WPK (Hardware Accelerated)  
 Mesh operator username/password  
 Mesh ID protection  
 RESET button to factory default (Inside Enclosure)

### Network Management

Web based (HTML) Management  
 SNMP\*

### Hardware Specifications

#### Network Ports

(1) 10/100Mbps auto crossover Ethernet WAN Port  
 (For connecting to Router or Gateway)

#### Power

Power Interface: POE

#### Environmental Conditions

**Operating Temperature:** -40°F to 131°F (-40°C to 55°C)  
**Storage Temperature:** -50°F to 158°F (-58°C to 70°C)  
**Humidity:** 95% maximum relative humidity, non-condensing

#### Physical Specifications

**Dimension:** 23.4cm x 17cm x6.3cm  
**Weight:**1.5kg

#### Enclosure

**Rating:** IP66 water proof  
 Antenna Connector: (2) weatherproof antenna connectors  
 Power Connector: (1) weatherproof Power/Data connector

#### Regulatory Compliance

Certification: FCC Part 15