

# MeshAP™ 5100

## Outdoor

### Dual 5GHz/Single 2.4GHz

### Full-Duplex

### Wi-Fi Mesh Network

### Access Point

#### Reliable, Intelligent, High Performance Mesh Network

- Patent pending, 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 Servers, Routers, and Gateways

- Transparent to layer 3 and up protocols, fully compatible with existing network equipment
- Directly connects to existing Routers, Gateways, or APs 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
- WPA/WPA2 Security protection for the backhaul network



#### Deploying Wi-Fi mesh networks to large geographical areas.

The metro MeshAP 5100 is ideal for city-wide deployments. The Dual 5GHz / Single 2.4GHz Full-Duplex Wi-Fi Mesh Network Access Point is able to provide large and small communities with a reliable, flexible, scalable, and economical Wi-Fi mesh network. The MeshAP 5100 is designed for maximum performance and offers 802.11b/g client compatibility, along with existing network access server, application server, router and gateway compatibility.

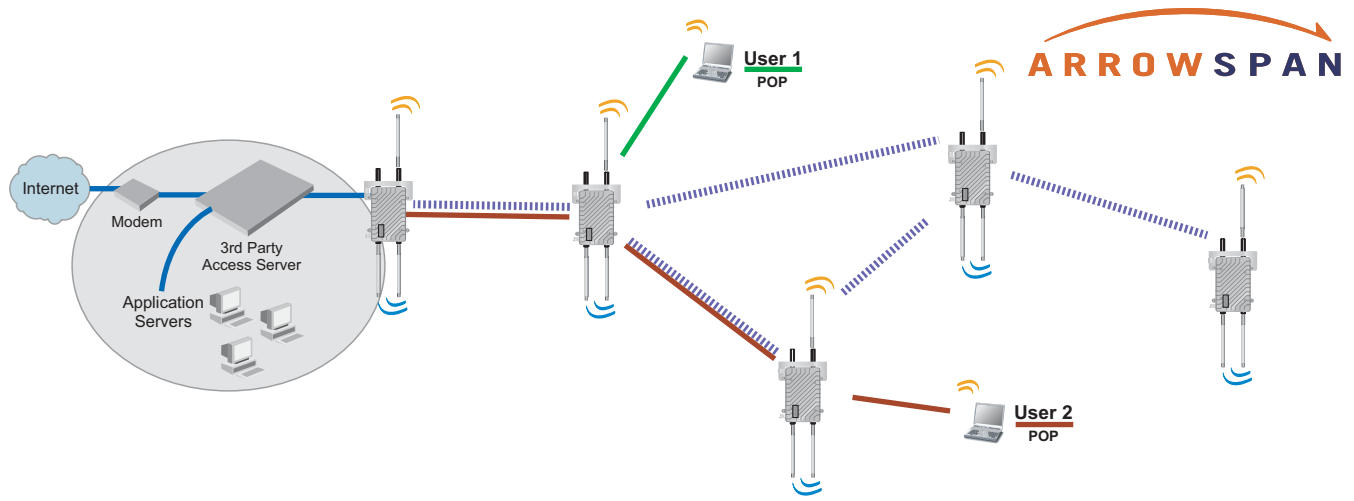
**A Mesh Link is a true wireless connection** between any two MeshAP units. ArrowSpan's MeshAP 5100 will automatically discover its neighboring MeshAP unit(s) and interconnect all MeshAPs together to form a large coverage wireless network.

**MeshAP 5100 implements Layer 2 mesh routing** which provides excellent network performance and is fully compatible with existing network equipment and applications. The MeshAP 5100 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 5100 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 a non-blocking and no-interference design for client and backhaul traffic. ArrowSpan's multi-radio and multi-channel architecture eliminates the 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 users preferring to manage through their own network.



## 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

### 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 18dBm  
 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  
 (1x) 8dbi 2.4GHz omni directional antenna

### Recommended Node to Node Distance

Open Space: 656ft(200m)

### Mesh Network Performance

Up to 30Mbps backhaul throughput at 5th hop count

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### Operating Range

Backhaul  
 Outdoor: 304m(1000ft)@54Mbps

802.11g  
 Outdoor: 150m(492ft)@54Mbps, 1km@6Mbps

(Transmission speed may vary according to the environment)

### Encryption & Security

64bit, 128bit WEP encryption (Hardware Accelerated)  
 WPA/WPA-2 (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: (3) weatherproof antenna connectors  
 Power Connector: (1) weatherproof Power/Data connector

#### Regulatory Compliance

Certification: FCC Part 15