

MeshAP™ 3100

Outdoor

Dual 5GHz/Single 2.4GHz

Full-Duplex Mesh

Network Access Point



Reliable, Intelligent, High Performance Mesh Network

- Patented Auto-discovery, auto-configure, and auto-healing POP (Predictable Optimum Path) mesh routing algorithm
- Multiple wireless paths 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
- WPA/WPA2 Security protection for the backhaul network.

Providing City-Wide Wi-Fi access to any community large or small. The Metro MeshAP 3100 provides users with a dependable flexible network, and at the same time improves city-wide productivity, increases safety and encourages economic development. ArrowSpan's MeshAP 3100 provides Wi-Fi access using wireless mesh technology with plug-n-play easy installation, and allows carriers and service providers to deliver a true wireless network over large geographical areas or other locations where wiring is too difficult or expensive to install.

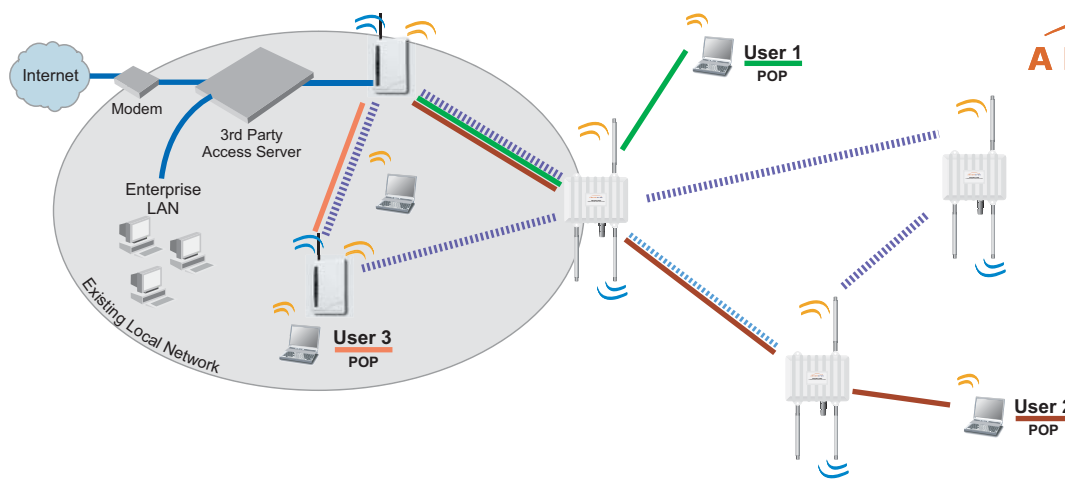
A Mesh Link is a true wireless connection between any two MeshAP units. ArrowSpan MeshAP 3100 will automatically discover its neighboring MeshAP 3100(s) and interconnect all the MeshAP units together to form a large coverage wireless network.

MeshAP 3100 implements Layer 2 mesh routing which provides excellent network performance and is fully compatible with existing network equipment and applications. The MeshAP 3100 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 3100 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'll 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. The MeshAP 3100 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



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 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
 (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: 200m@54Mbps

802.11g
 Outdoor: 250m@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