

# Electroline AQ5000 Series

## Wifi Access Point

*With DOCSIS and EuroDOCSIS backhaul over Hybrid Fiber and Coaxial (HFC) Networks*

Wireless



### INTRODUCTION

Electroline AQ-5 Series is a concurrent dual-band 802.11ac outdoor access point with an integrated DOCSIS 3.0 Cable Modem for backhaul over HFC networks, designed specifically for high-density environments. Featuring two 3x3 MIMO radios that can support up to 450 and 1300 Mbps data rates in the 2.4 and 5 GHz bands respectively, the AQ-5 Series is ideal for providing wire-like access.

Given the overcrowding of the 2.4 GHz band by legacy Wi-Fi devices, more and more devices and networks are migrating to the 5 GHz band for increased performance. The wider channels and additional spatial streams offered by 802.11ac allows the AQ-5 Series to meet high capacity demands while providing three-fold performance over 802.11n networks. However, due to the significant proportion of 2.4 GHz-only clients in use today, the AQ-5 Series' ability to service legacy clients in both the 2.4 GHz and 5 GHz bands becomes essential for organizations that wish to improve overall wireless experience without sacrificing legacy support.

The AQ-5 Series' exterior is composed of a ruggedized, temperature hardened Aluminum Alloy enclosure a simplistic and elegant design that is perfect for external harsh environments. The six antennae connectors accommodate different types of antennae depending on the location and coverage. The AQ-5 Series can be easily mounted on cable strands, Wall or pedestals. It is integrated with power supplier that take its power that is transmitted over the coaxial cable and a network interface that provide configuration handles specifically designed for optimal adaption to the HFC environment.

### FEATURES

- Concurrent dual-band 2.4 & 5 GHz
- HFC cable plant powered 35 to 120 VAC
- Front end with US and DS diplexer power control with field upgradable PADS
- 802.11ac 3x3 MIMO supporting up to 1300 Mbps data rate
- Standalone or centrally managed by AQWLC5405 Controller
- Integrated standards-based security
- Up to 16 ESSIDs per radio with 802.1Q VLAN
- Captive portal and Guest provisioning\*<sup>1</sup>
- Rogue AP detection & Load balancing\*<sup>1</sup>
- Fast Layer 2/Layer 3 roaming\*<sup>1</sup>
- Proven technology with millions of DOCSIS® and EuroDOCSIS® integrated circuits deployed.
- DOCSIS® 3.0 and Euro-DOCSIS 3.0 Compliant
- Eight (8) bonded downstream channels with data rates in excess of 340 Mbps
- Four (4) bonded upstream channels with data rates in excess of 120 Mbps
- Embedded Web Server for all status indications and spectrum analyzer
- Various Powering options
- Surge Protection
- Operating Temperature Range -40°C to +60°C (-40°F to 140°F)

\*1: When used in conjunction with AQWLC5405 Controller

# SPECIFICATIONS

<b>WI-FI</b>	
<b>Standards</b>	802.11 a/b/g/n/ac Concurrent dual-band 2.4/5 GHz
<b>Supported Data Rates</b>	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 – 216.7 Mbps (20 MHz) 802.11n: 13.5 – 450 Mbps (40 MHz) 802.11ac: 6.5 – 260.1 Mbps (20 MHz) 802.11ac: 13.5 – 600 Mbps (40 MHz) 802.11ac: 29.3 – 1300 Mbps (80 MHz)
<b>Radio Chains</b>	3 x 3
<b>Spatial Streams</b>	3
<b>Output Power</b>	2.4 GHz: Up to 25 dBm* <sup>2</sup> 5 GHz: Up to 25 dBm* <sup>2</sup>
<b>Channelization</b>	20 MHz 40 MHz 80 MHz
<b>Frequency Band</b>	2.412 – 2.472 GHz 5.180 – 5.825 GHz
<b>Operating Channels</b>	2.4 GHz: 1 – 11 (US), 1 – 13 (Europe), 1 – 13 (Japan) 5 GHz* <sup>3</sup> : 36 – 165 (US), 36 – 140 (Europe), 36 – 140 (Japan)
<b>ESSIDs</b>	Up to 16 per radio (32 total)
<b>Certifications</b>	FCC (United States), CE (Europe), NCC (Taiwan)
<b>PHYSICAL</b>	
<b>Power</b>	35-120 VAC powered through F-connector from Cable plant
<b>Dimensions</b>	325L x 215D x 130H mm (12.8L x 8.5D x 5.2H inches)
<b>Weight</b>	3.3 Kg (7.3 Lbs)
<b>Interfaces</b>	RF and AC: Female "F" or "KS" type Antenna: Female "N" type
<b>Environmental Conditions</b>	-40° to 140°F (-40° to 60°C) - 0 to 90% RH non-condensing
<b>Power Consumption</b>	Up to 30 Watts
<b>Antenna</b>	Up to six (6) N-type connectors
<b>Mounting</b>	Strand, Pedestal or any external wall
<b>PERFORMANCE</b>	
<b>Physical Data Rate</b>	Up to 450 Mbps (2.4 GHz) Up to 1.3 Gbps (5 GHz) All are limited with WAN bandwidth on Cable Modem
<b>Concurrent Users</b>	Up to 384 (256 on 2.4 GHz, 128 on 5 GHz)

\*1: WES (Wireless Easy Setup) - Simple button-enabled establishment of WDS links

\*2: Maximum power is limited by local regulatory requirements

\*3: Some channels are restricted by local regulatory requirements

<b>QUALITY OF SERVICE</b>	
•	Wireless QoS (802.11e/WMM)
•	DSCP (802.1p)
•	Airtime Fairness
•	Band Steering
•	Multicast to Unicast Conversion
•	Optimal Client Filtering

<b>MANAGEMENT</b>	
<b>Deployment</b>	<ul style="list-style-type: none"> <li>• Standalone</li> <li>• For more information on our products, please visit: <a href="http://www.electr.com">www.electr.com</a></li> <li>• Tunnelled management by AQWLC5405 Controller</li> <li>• IPv4 &amp; IPv6 compatible</li> </ul>
<b>Configuration</b>	<ul style="list-style-type: none"> <li>• Web User Interface (HTTP/HTTPS)</li> <li>• SNMP v1, v2c</li> </ul>

<b>SECURITY</b>	
<b>Wireless Security</b>	WEP WPA/WPA2 Mixed WPA2-Personal WPA2-Enterprise (802.1X) TKIP and AES Encryption
<b>VLAN Tagging (802.1Q)</b>	
<b>Station Isolation</b>	
<b>DHCP Snooping</b>	
<b>Layer-2 Firewall</b>	

<b>MOBILITY/ROAMING</b>	
<b>802.1X Preauthentication</b>	
<b>Layer 2/Layer 3 Fast Roaming</b>	