

AeroQam3 Access Point DOCSIS® 3.0

Hardened Wi-Fi Platform over DOCSIS® 3.0 & EuroDOCSIS

Description

The Electroline AeroQAM 3 product line is an Integrated Wireless Access Point and DOCSIS® 3.0-compatible cable modem unit. Supporting IEEE 802.11/a/b/g/n WiFi protocols, this highly performing devices, enables the MSO-s and/or cable system operators not only to off-load the cellular data traffic but most importantly to offer revenue generating, multi application, wireless, mobile data services over the existing infrastructure, outdoor as well as indoors. Wireless TV is no longer an "Indoor Only" solution.

Application

For the outdoor environment, it has all the functionality in a hardened device about the size of a very small line extender. It can be installed in the outside plant on strand or at the end of a drop cable at the subscriber's premise. DOCSIS 3.0 technology enables this solution to be very affordable. So the cable operator can deploy many of these devices throughout the network and node serving areas. Supporting 2x2 and 3x3 MIMO, the high power Wi-Fi radio is one of the most cost effective units in the market.



Features

- Designed for DOCSIS® & EURODOCSIS™ specifications
- Advanced QoS packet classification and automatic priority for latency sensitive traffic.
- WPA-PSK (AES), 802.1X support.
- Powered by Cable Infrastructure.
- Automatic interference mitigation, optimized for high-density environment.
- Hardened for outside plant installation.
- Independent network Managed Wi-Fi
- Scalable Multi radio solution
- High level Transmit Power.
- Dual Band software configurable radio.

Cable Modem Specifications

DOCSIS 3 standard 8x4 Bonded Channels Optional Euro-DOCSIS 3.0 Compliance DOCSIS 1.0, 1.1, 2.0 Cable Labs Certified Downstream data throughput in excess of 300 Mbps (without overhead) Upstream data throughput 100 Mbps (without overhead)	
Downstream	
Frequency Range:	88 MHz-860 MHz
Modulation:	64 QAM/256 QAM
Symbol Rate (Msymbols /sec)	5.075/5.361/6.952
Data Rate	30 Mbps (64 QAM)
	43 Mbps (256QAM)
RF Input/output Power (dBmV)	-15 to ~ +15
Carrier To Noise Ratio @ BER<10	64 QAM: 23.5 dB
	256QAM: 30 dB
Upstream:	
Frequency Range:	5-42/65 MHz
Modulation:	QPSK,8QAM/16QAM/32QAM/64QAM/128QAM
Symbol Rate (Ksymbols/sec)	TDMA:160,320,640,1280,2560,5120
	S-CDMA:1280,2560,5120
RF Input/output Power (dBmV)	+8 to ~ +58 (QPSK)
	+8 to ~ +58 (8QAM/16QAM)
	+8 to ~ +54 (32QAM/64QAM)
	+8 to ~ +53 (S-CDMA)
MAC, LLC/SNAP,IP and CPE Filter	DOCSIS RFI
Internet Protocol Stack	ARP, ICMP, IP, TCP/UDP, IGMPv2, RFC826, RFC792,RFC791,RFC768/793
Provisioning Applications	DHCP, TFTP, ToD client, RFC2236
SNMP Protocol	SNMPv2c, RFC2131/2132, RFC1350,RFC867,SNMPv3, RFC2571, RFC2576
MIBs Support	RFC1905,RFC1213,RFC2011,RFC2013,RFC2669,RFC2670,RFC2233, RFC1907,RFC1493, draft-ietf-ipcdn-mcns-bpi-mib-01,QosMIB,RFC2933,BBI=MIB, RFC2786,Ambit private
Power	11 W

Wireless Radio Specifications

Frequency Bands:	Dual Band 2.4 GHz and 5.x GHz
Wi-Fi Standard	IEEE 802.11a/b/g/n
802.11n	2.4-2.485 & 5.15-5.85 GHz
802.11a	5.15-5.85
802.11b:	2.4-2.485
Channel Support:	
802.11 b/g	13 channels max. (country dependent)
802.11 a	20 MHz Channel: 16
802.11 n	40 MHz Channel: 8
Modulations Supported:	
OFDM	BPSK; QPSK; 16 QAM; 64 QAM
DSSS	DBPSK; DQPSK; CCK
Data Rate Supported (Mbps):	
802.11a	6; 9; 12; 18; 24; 36; 48; 54
802.11b	1; 2; 5.5; 11
802.11g	6; 9; 12; 18; 24; 36; 48; 54
802.11n: depends on Modulation and Coding Scheme (MCS) and guard interval (GI):	
20 MHz Channel	1Nss: 65Mbps @ 800GI, 72.2Mbps @ 400GI (Max.) 2Nss: 130Mbps @ 800GI, 144.4Mbps @ 400GI (Max.)
40 MHz Channel	1Nss: 135Mbps @ 800GI, 150Mbps @ 400GI (Max.) 2Nss: 270Mbps @ 800GI, 300Mbps @ 400GI (Max.)

Wireless Radio Specifications

Transmitted Power in (dBm):	
802.11b	24 dBm @ 1 Mbps
	24 dBm @ 11Mbps
802.11g	25 dBm @ 6 Mbps
	22 dBm @ 54 Mbps
802.11a	25 dBm @ 6 Mbps
	21 dBm @54 Mbps
802.11n 2.4 GHz	25 dBm @ MCS0 20MHz
	24 dBm @ MCS0 40MHz
	21 dBm @ MCS7 20MHz
	20 dBm @ MCS7 40MHz
802.11n 5.x GHz	24 dBm @ MCS0 20MHz
	22 dBm @ MCS0 40MHz
	18 dBm @ MCS7 20MHz
	17 dBm @ MCS7 40MHz
Receive Sensitivity (dBm):	
802.11b	DBPSK (1Mbps) -93
	CCK (11 Mbps) -93
802.11g	BPSK (6Mbps) -94
	64QAM(54Mbps) -81
802.11a	BPSK (6Mbps) -97
	64QAM(54Mbps) -80
802.11n 2.4 GHz	MCS0: -94 (20 Mhz), -92 dBm (40Mhz)
	MCS7: -78 (20 Mhz), -75 dBm (40Mhz)
802.11n 5.x GHz	MCS0: -97 (20 Mhz), -92 dBm (40Mhz)
Security:	
Authentication Types	WPA2-PSK; WPA2-EAP; WPA-PSK; WPA-EAP
Encryption	TKIP; AES CCM
Antenna Connectors:	2 x N(F)
Operating Temperature:	-50°C to +60°C
Power Consumption:	9 W

For more information on our products, please visit: www.electroline.com or call: 800-461-3344