EDGEWATER wireless

High Density WiFi

The best solution for High-Density WiFi networks, Edgewater Wireless WiFi3™ powered access point products, enable innovative service providers to plan, build and deploy reliable, high-capacity services for high-density wireless data demand in virtually any environment.

Do more with less! Fewer access points, delivering high quality service at a lower overall deployment cost, make our patented WiFi3™ technology the right choice for your next WiFi network.

Edgewater Wireless

WiFi3™ Access Point Products

The advantages of WiFi3™ for high-density user environments

Edgewater Wireless' WiFi3™ -powered access points are designed to address the needs of carrier-class WiFi deployments – indoor and outdoor. Our wideband, 802.11 WiFi3™ radio architecture provides up to 50x greater performance over single-channel access points and offers a rich, carrier feature set that includes integrated, real-time spectral surveillance, right out of the box.

Each EAP3000 integrates one or more WiFi3™- powered radios capable of supporting up to three concurrent channels simultaneously. Each channel supports four virtual SSIDs providing unbeatable flexibility for configuration. Each WiFi3™ integrated radio supports Edgewater Wireless' Spectrum Surveillance Architecture (SSA™) with the ability to identify interferers and security threats. Independent transmit power control is supported on each channel and can be configured by the operator to optimize the network deployment.

Our products are designed to be managed with our comprehensive, user friendly and intuitive Element Management System – EdgeNet that provides service providers with tremendous flexibility in configuring and independently monitoring each 802.11 channel in the network — without the high-cost of an unneeded controller based architecture. At Edgewater, it's about delivering the highest Quality of Service WiFi without additional annual licensing fees from customers!

With traditional Wi-Fi, most networks were designed based on the ranges delivered by 802.11 standard operating 2.4 GHz protocols for distance and performance. This model worked when everyone was walking around with just one Wi-Fi enabled device.

Fast forward to today, the average user has 2-3 Wi-Fi enabled devices all drawing down data from the network and seriously impacting network performance.

Today, network planners have a choice, they can make the jump to 802.11 ac – the "latest" 802.11 standard boasts extremely good performance in close proximity but diminishes quickly at distance. This means the jump to 802.11 ac will cost significantly more in building the network because of the additional hardware investment required.

OR

Network operators and service providers can leverage Edgewater Wireless WiFi3™ powered solutions to deliver reliable, high-capacity indoor/outdoor WiFi services for high-density data demand and user environments.

WiFi3™ Features

Unparalleled Advantages for WiFi3™

- Multi-channel radio architecture – offering up to three concurrent, channels per radio… Mitigating interference (which has plagued traditional wifi solutions)… Co-channel and adjacent channel interference
- SSA™ (real-time, integrated spectral surveillance architecture) dramatically lowers operational expense plus security
- ICA™ Intelligent Channel Association enables the operator to configure each channel to support different media, such as voice video and data, or different levels of QoS or different levels of security or different levels of throughput performance
- Load Balancing – enabling the operator to offload heavily loaded channels to other channels – Integrated dynamic load balancing across multichannel radio architecture to deliver the highest QoS to the most users on the network
- PowerZoning™ – with independent transmit power control per channel, APs can be configured to minimize inter-AP interference for APs that are deployed in close proximity to each other without trading off overall network performance – Maximize frequency reuse and planning to deliver a high performance / high QoS end user experience. highest channel density available

Connecting the Crowd

The exponential growth of WiFi is happening on a global scale and this impressive growth the challenges of WiFi will also grow exponentially – interference, security and performance. Edgewater Wireless APs with WiFi3 mitigate interference and dramatically improve network performance common in dirty, high density & complex environments.

Edgewater Wireless WiFi3- powered APs have applications for virtually any high-density indoor or outdoor application and are ideal for; Data Offload & Mobile Backhaul, Casino and Resort WiFi, Hotels & Marinas, Enterprise & Campus WiFi and Stadiums.

Carriers and Service providers can now take advantage of the unique capabilities that Edgewater Wireless Access Points deliver with WiFi3.

The WiFi3™ Advantage

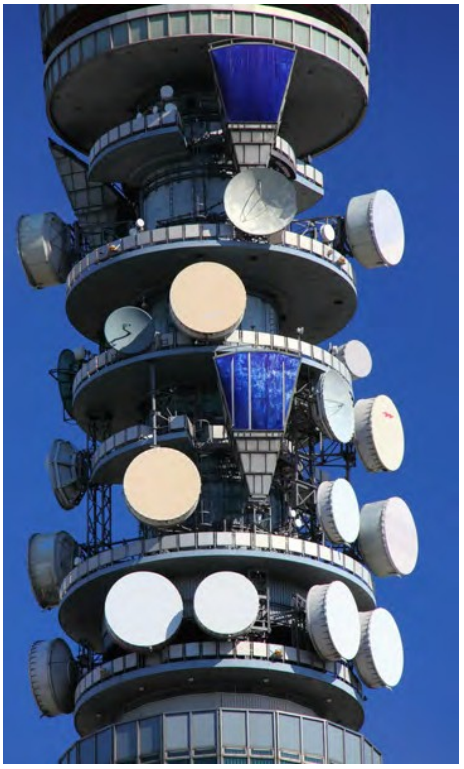
Multi-Channel WiFi Features

UNIQUE PERFORMANCE ADVANTAGES

- Multiple, independent channels per radio and multiple radios per Access Point (AP) that delivers exceptional throughput advantages over conventional Access Points.
- 162Mbps per radio • Basic (3-channel) configuration provides over 50x increased throughput performance versus single channel access points.
- Uses industry leading, proprietary data converter technology.
- Roving Monitor - that acts as a sniffer looking for rogue or unauthorized access Spectral Signature Recognition- identifies types of signals such as: frequency hoppers, microwave ovens, radar, OFDM, CCK, Bluetooth, cordless phones
- Enables continuous, concurrent scanning and simultaneous data communications.

HIGH FLEXIBILITY

- Three independent channels per radio chipset
- Four Virtual APs per channel expandable to multiple radios per AP.
- QoS, encryption, data/media-types configured on a per VAP basis
- Enhanced Quality of Service with WiFi^{3}s supporting multiple SSID's per channel enabling enhanced QOS for data, video, voice - priority communication, Variable classes 802.11i security on per SSID basis.
- Extendible from 3 channels to 6 channels (3 channels per radio, 162Mbps to 324Mbps)
- Interoperability verified through WiFi and UNH certification.
- Unsurpassed Security monitors entire communications spectrum and provides spectrally aware security across all 802.11 frequency bands.
- 3 Channels per radio, 4 VAPs/channel, QoS, Security enabled on a per VAP basis
- Wideband enables spectral surveillance of the entire 802.11b/g/n band simultaneously with data transfer across three channels
- Locationing with multiple APs
- Certified "WiFi Compliant" & 802.11i (AES)



+EAP 3033 Product Specifications

The EAP3033 offers the flexibility of a dual-band, AP with three channels in the 2.4GHz band.

The 2.4GHz band has three independent channels to concurrently support voice, video, data, security cameras and other WiFi enabled media while offering high-performance connectivity to the users.

Applications: Data Offload, WISPs, MuniWiFi & Hotspots, Enterprise, Resort, Stadium, Airport & Campus deployments plus hazardous environment variants available (UL1604 Class 1, Div. 2, ATEX Zone 2 Category 3

STANDARDS

- Wi-Fi Certified
- UL/CSA 1950
- FCC Part 15 Class B

NETWORKING CAPABILITIES

- MAC Filtering
- Ethertype Filtering
- Link Aggregation
- 802.3ad-wireline & 802.3as – wireless
- Layer 2 Roaming (802.11 (IAPP) Spanning Tree Protocol (802.1d/s/w)
- MAC ACL
- DMAC Substitution
- SMAC Substitution
- MACin MAC

WARRANTY AND OTHER SERVICES

- 1 year Hardware replacement
- Technical support: 90 days

PHYSICAL DESCRIPTION

- 3 External Antennas
- Optional Wall/Ceiling Mounting Adapter

Dimensions: 11" x 7" x 1.5"

ANTENNAS

- External 2.4Ghz
- Dual Band External, 5GHz/2.4GHz

MANAGEMENT

- Enterprise Grade Web GUI
- SNMP v1/2
- HTTPS
- CLI-SSHv2
- CLI-TELNET
- CLI-SERIAL

POWER SUPPLY

- 48Vdc
- 100 -240Vac, 50–60Hz, AC Adapter
- PoE IEEE 802.af compatible

ENVIRONMENTAL

- Operating Temperature: -40 to 50°C
- Storage Temperature: -40 to 85°C
- Humidity: 0 to 95% non-condensing
- Media Interfaces
- 10/100 Base-T (RJ45)
- 10/100 PoE (RJ45)
- RS-232

OPERATIONAL MODES

- Point-to-Point
- Point-to- Multipoint
- Repeater (WDS Root, WDS Repeater)

LEDs

- Power
- 802.11b/g
- 802.11a
- Ethernet 1
- Ethernet 2

RADIO

- Transfer Data Rates:
  802.11a: 54,48,36,24,18,12,9,6
  802.11g: 54,48,36,24,18,12,9,6
  5.5.2,1
  802.11b: 11,6,5.5,2,1,
- Modulation type:
  DSSS
  OFDM
- Channels/frequency range
  802.11a: 5Ghz
  802.11b/g: 2.4Ghz

SECURITY

- Authentication
  Null
  802.1X(EAP-TLS)
  802.1X(EAP-TTLS)
  802.1X (PEAPv0- MSCHAPv2)
  802.1X (PEAPv1- MSCHAPv2)
  802.1X (PEAPv1/EAP- GCT)
  802.1X(EAP-SIM)
  WPA2 – Pre-authentication
  WPA-PSK Pre-Shared Key
- Encryption
  Null
  128 bit CCMP-CBC
  TKIP
  64 bit WEP
  128 bit WEP

LAYER 2

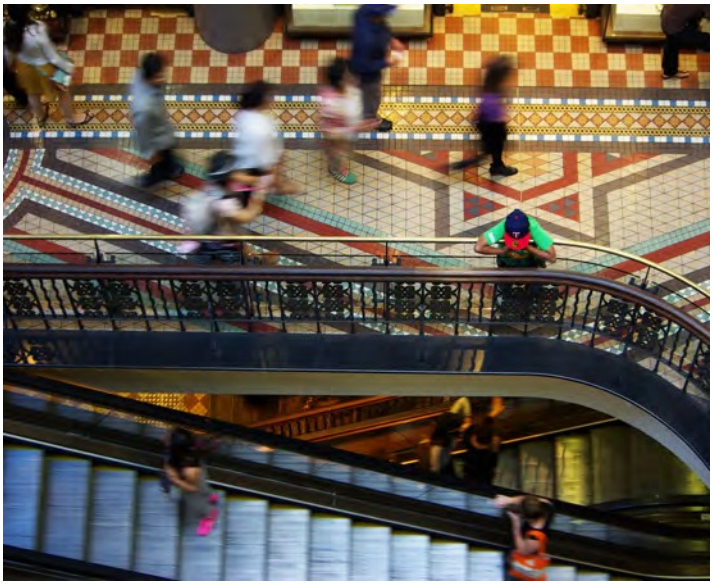
- 802.1Q
- Management VLAN

RADIO SUPPORT

- 802.11g Protected Mode Dynamic
- Automatic Channel Select
- Tx Power
- Maximum Station Data Rate
- Multicast Data Rate
- Antenna Type
- Antenna Diversity
- Fragmentation Length Beacon interval
- Data Beacon Rate (DTM)
- RTS threshold
- Preamble Mode
- Integrated Rogue AP detection
- Station - Station Detect/ Prevention
- WiFi^3 Spectral Scanner
- Spectral Signature Recognition
- Promiscuous MAC Mode

RFC COMPLIANCE

- IP: RFC C791
- ICMP: RFC792
- TCP: RFC793
- TFTP: RFC783
- ARP: RFC826
- UDP: RFC791
- IP over Ethernet: RFC894
- SNMPv1: RFC1157
- SNMP MIB II: RFC1573
- SNMP v2c: RFC1905, 1906
- SNTP: RFC2030
- HTTPS: RFC2068
- Syslog: RFC3164
- Telnet: RFC3164
- SSH: SSHv2



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