# Pakedge Wireless System
## Unleash Your Network

Set up your wireless network with a high performance enterprise class sysytem from Pakedge, the 2013, 2014 & 2015 CEPro Brand Leader for networking. Our wireless access points provide up to 3-5x the throughput of previous generation access points while adapting to local site conditions. The C36 Wireless Controller synchronizes and manages multiple access points in real-time to ensure easy deployment and maintenance while continuously optimizing wireless performance.



| WK-1 | WX-1 | C36 |

## Enterprise Grade Wireless

An enterprise grade wireless solution is composed of wireless access points and a controller - the command and control hub for the network's APs. Pakedge wireless access points offer a high-power solution for any network, broadcasting 802.11ac high speed wireless at incredibly high range. These wireless access points can be installed almost anywhere, thanks to their ability to be powered by PoE+ and versatile form-factors that allow them to be mounted on walls or ceilings. Multiple SSIDs segment data traffic, providing a smoother wireless experience overall. A separate guest network gives internet access to visitors without compromising overall security.

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# WK-1

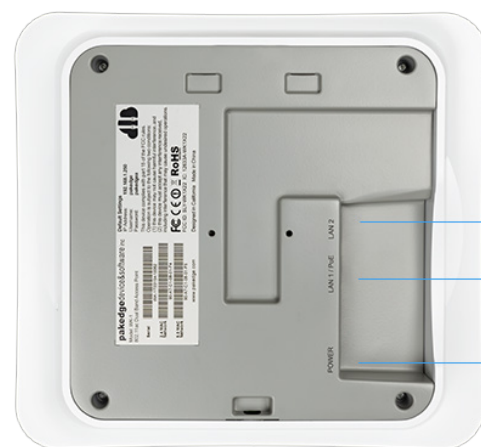## 2x2 AC Wireless Access Point

## High Powered AC Wireless

The WK-1 2×2 AC wireless access point provides high-speed, high-range wireless AC networking. Because it is designed with dual-LAN ports, users can daisy chain WK-1s for easy installation, even without access to network ports. Its 2×2 high powered technology brings blazing fast speeds, even at high ranges.

Front

Power  LAN 1  LAN 2  2.4GHz  5GHz
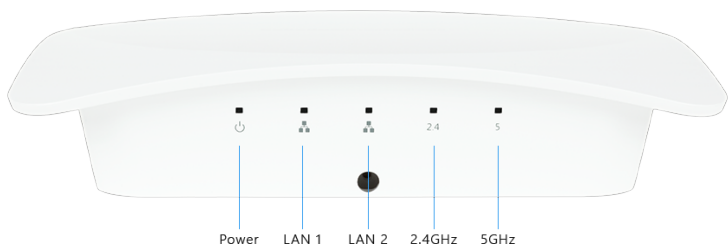
Bottom

LAN 2
Ethernet Out

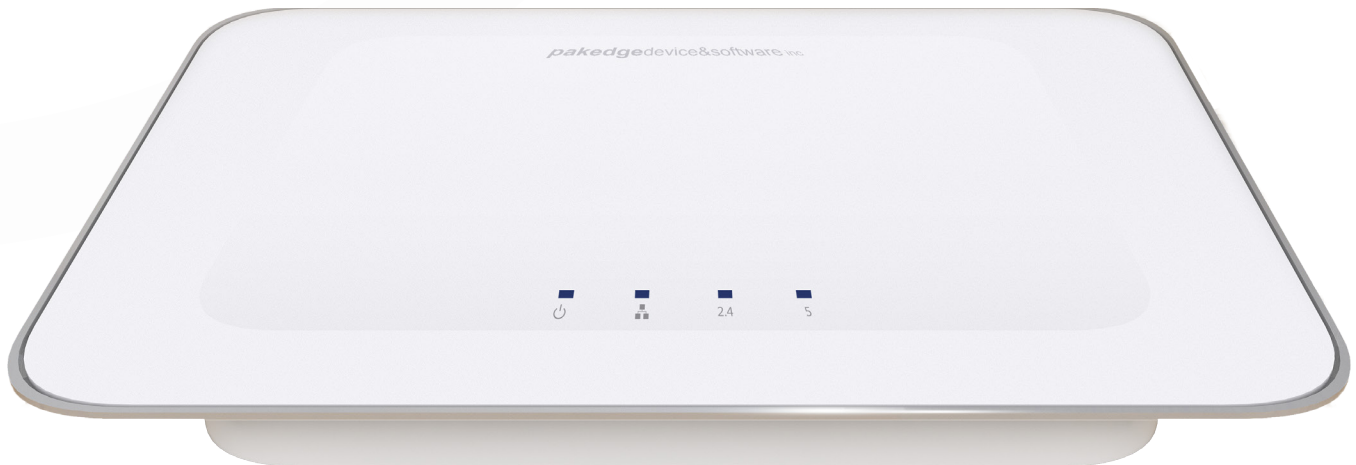LAN 1
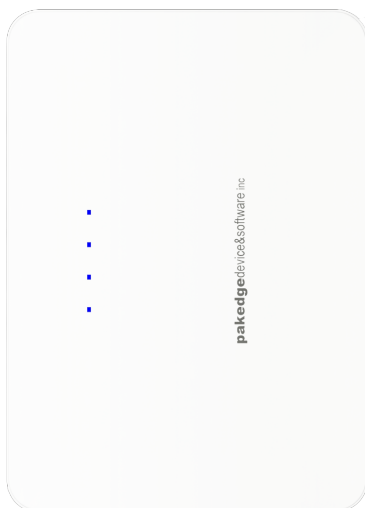Ethernet/PoE+ In

Power Jack

RESET

Side

# WX-1

## 3x3 AC Wireless Access Point

## The Next Level of AC Wireless

The WX-1 boasts the features and functionality of the WK-1, while bringing Pakedge AC wireless to the next level.  An additional radio enables higher throughput, perfect for dense urban or corporate environments, while the ability to flush-mount the AP into a wall or ceiling removes the need for a separate in-ceiling AP entirely. High-powered gigabit wireless networking ensures high-speed wireless networking with less need for roaming for a skip-free, lag-free wireless experience.
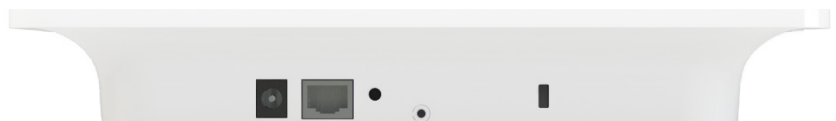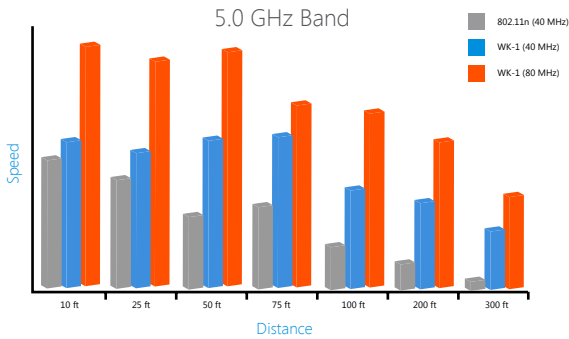


Top

Angled

Side

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# Wireless Features

## 5.0 GHz Band

Legend:
- 802.11n (40 MHz)
- WK-1 (40 MHz)
- WK-1 (80 MHz)

Y-axis: Speed
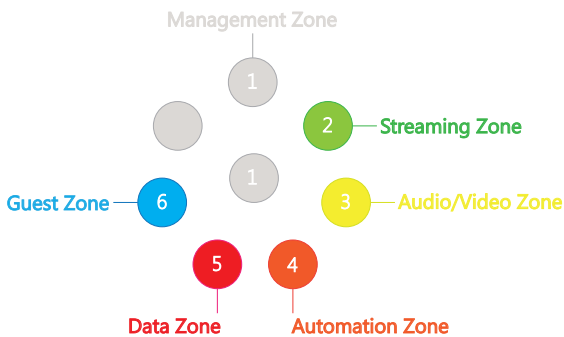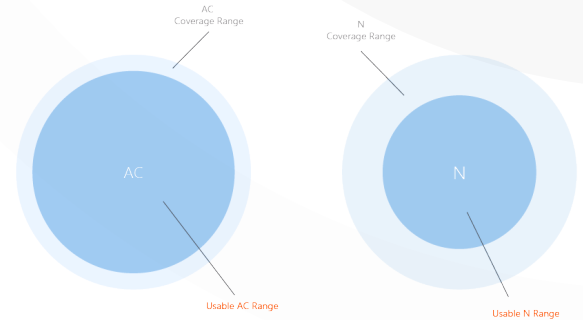X-axis: Distance — 10 ft, 25 ft, 50 ft, 75 ft, 100 ft, 200 ft, 300 ft

## 3x Faster

The 802.11ac WK-1 is 3x faster than previous generation N wireless, while the WX-1 displays speeds up to 5x of the generation N wireless.  Dual radios in a 2x2 configuration enable traffic to be routed through two seperate streams simultaneously while the wider 80 MHz channel enables more information to be transmitted.

AC
Coverage Range

N
Coverage Range

AC

N

Usable AC Range

Usable N Range

## Higher Effective Range

AC Wireless Access Points incorporates SectorMaxx™ to provide higher throughput and greater usable range.  This reduces the number of access points needed for a project.

Management Zone

1

2 — Streaming Zone

1

3 — Audio/Video Zone

Guest Zone — 6

5

4

Data Zone

Automation Zone

## Traffic Segmentation

Pakedge Zones™ enable the processing of segmented network traffic through an intuitive point and click interface.
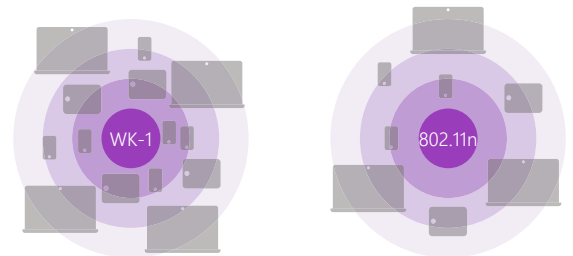
## More Clients

AC Access Points support 4x as many signals, thereby increasing channel capacity.  Each wireless-AC WAP supports twice as many clients.

WK-1

802.11n

## More Bandwith

40 MHz
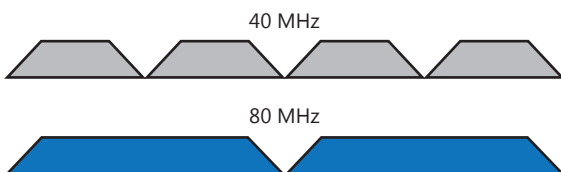
80 MHz

AC Access Points support channels that are twice as wide (80 MHz), allowing it to carry more information to be transmitted.

## Seamless Voice and Video Streaming

AC Access Points incorporate TruStream™ technology to automatically recognize and prioritize latency sensitive voice and video ahead of other network traffic for seamless performance.

TruStream™

# Complexity Simplified

An intuitive GUI based menu simplifies access point setup and maintenance. The menu design is similar across Pakedge devices for a simplified installation and management experience.
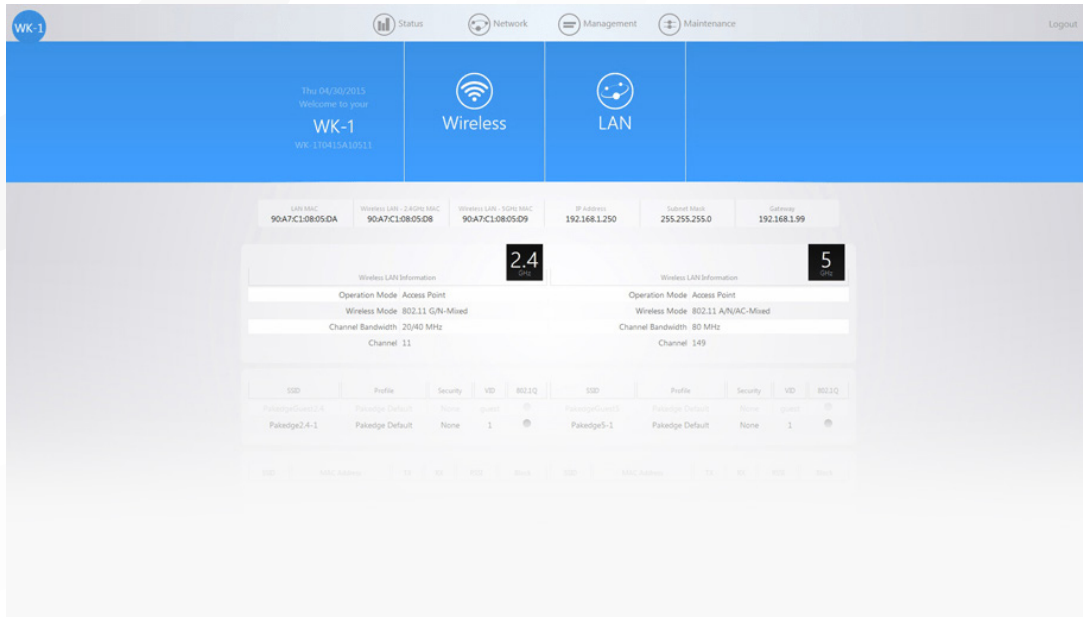


# Architectural Aesthetics





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## Easy Wall or Ceiling Mount
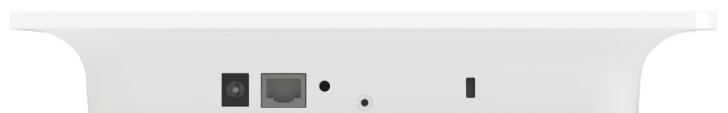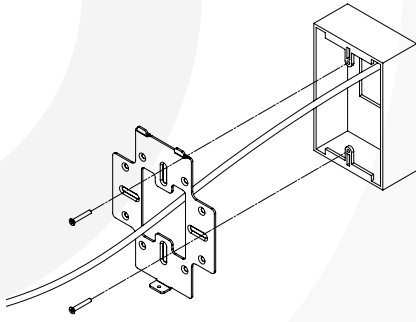
Included wall and ceiling mount brackets allow the WK-1 and WX-1 to quickly and easily mount to standard or drop-tile style ceilings and walls. With just a few screws, the WK-1 and WX-1 can be easily and safely secured in moments.



## In-Wall or In-Ceiling (WX Only)

With the In-Ceiling bracket (sold separately), the WX-1 can be mounted flush with any wall or ceiling for a nearly invisible look without loss of performance.

# Decide what's right for you

|  | WK-1 | WX-1 |
|---|---|---|
| **MIMO** | 2x2 | 3x3 |
| **Mounting Style** | Desk, On-Wall, On-Ceiling | Desk, On-Wall, On-Ceiling, In-Wall, In-Ceiling |
| **Throughput vs N** | 3x | 5x |
| **# SSIDs** | 16 | 16 |
| **Guest SSIDs** | 2 | 2 |
| **Channel Widths** | 20MHz, 40MHz, 80MHz | 20MHz, 40MHz, 80MHz |
| **Color** | Black, White | Black, White |

## Custom Engineering

The WK-1 and WX-1 are Pakedge Custom Engineering-ready, allowing dealers to create their own, customized configurations and co-branding for a simple, plug-and-play out of the box experience. Contact sales@pakedge.com for more information.

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# C36 Wireless Controller

## True Wireless Harmony

In a network without a wireless controller, the wireless access points are unaware of each other and act independently - resulting in sub-optimal network performance, coverage gaps, and unreliable connectivity. AP settings may not be applied consistently throughout the network - leading to incompatible policy application and enforcement, and potential problems with rogue access points and devices.

The C36 eliminates these problems by working in conjunction with up to 30 Pakedge Wireless Access Points. The C36 Wireless Controller serves as the command, coordination, and control center of a wireless network with multiple access points. It provides seamless, scalable, reliable wireless network  access by managing each access point and optimizing wireless coverage with a suite of performance enhancing technologies.
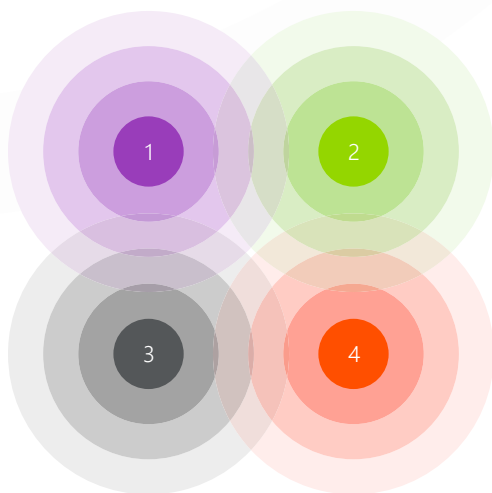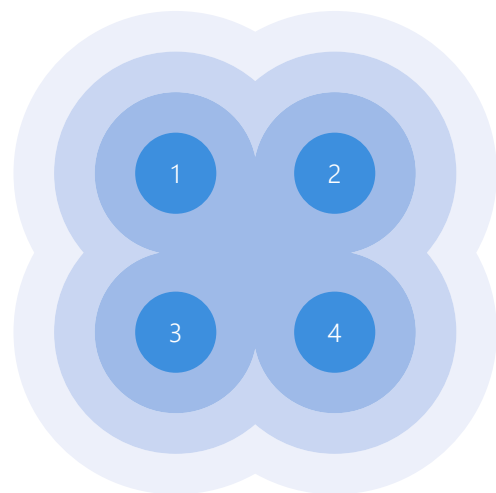
Without C36                    With C36

## Unified, Seamless Coverage

The C36 utilizes adaptive wireless technologies to allow a unified team of access points to work in conjunction with one another, creating a more seamless wireless environment with fewer dead zones between APs. SmartWav™ technology mitigates interference, enabling higher effective ranges with greater throughput and alleviates connectivity issues that occur when wireless signals overlap. With fewer handoffs, users will enjoy a wireless experience with fewer dropped connections.

SmartWav™

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# Key Features



| SectorMaxx ™ | TruStream ™ | SmartWav™ |
|---|---|---|
| Designed for improving the range of a wireless network | Designed for improving speed of a wireless network | Innovative software algorithms to eliminate wireless interference |
| off ▮ on | off ▮ on | Optimize Automatically in background |
| | | off ▮ on |

**Apply**

| SmartWav ™ | Fluxx ™ |
|---|---|
| Optimize Manually | AP power optimization based on interference and environment conditions. |
| | Optimize Bands |
| | 2.4 GHz        5.0 GHz |
| | off ▮ on      off ▮ on |
| **Optimize Now** | **Apply** |

## Optimized Wireless

The C36 continuously scans the local enviroment to adapt and optimize wireless performance, using TruStream™, SectorMaxx™ and SmartWav™ technologies.  This enhances speed and coverage while mitigating interference across the entire site.

## Simple Management

Configure and manage up to 30 APs from any device on the network, all on one page.  Setup, manage and maintain the network in minutes.

## Fast Synchronized Deployment

Automatic detection and configuration of APs, site surveys, a GUI wizard, heat maps, and visualization tools make deploying expanding a network simple.

## Enhanced Security

The ability to establish, push, and manage security settings across the network, integrated individual device blocking, guest access and Wi-Fi broadcast scheduling prevents security holes and provides a unified, secure wireless network.

## Centralized Reporting

Quickly and easily obtain information about any access point or client device on the network, including device and system logging.  Integrates with the Pakedge Cloud Management System for visibility and management using any device, anywhere, anytime.



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# Advanced Features
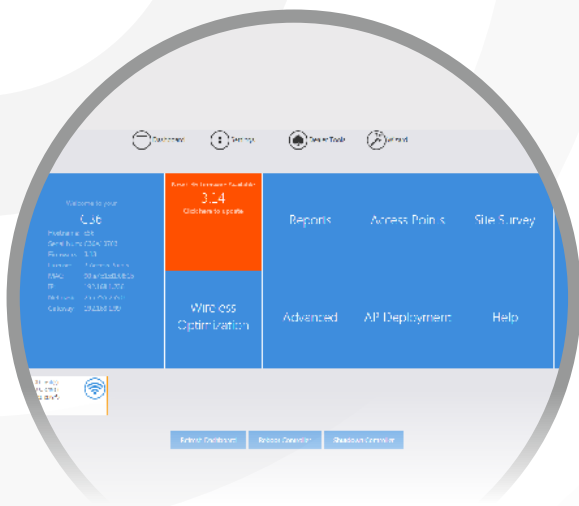


Firmware Update Via Cloud



Intuitive Setup Wizard



Site Survey



Heat Map



Band Steering

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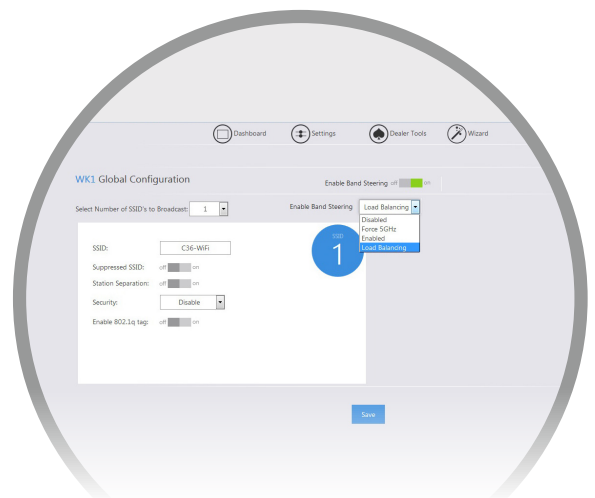
Device Blocking



One Step Backup and Restore



Wireless Scheduling
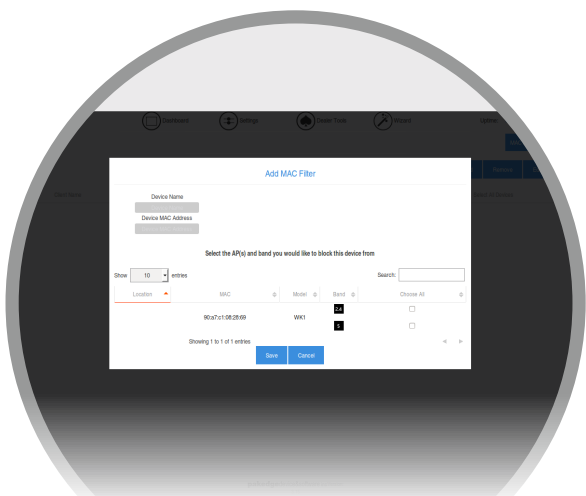


MAC Filtering
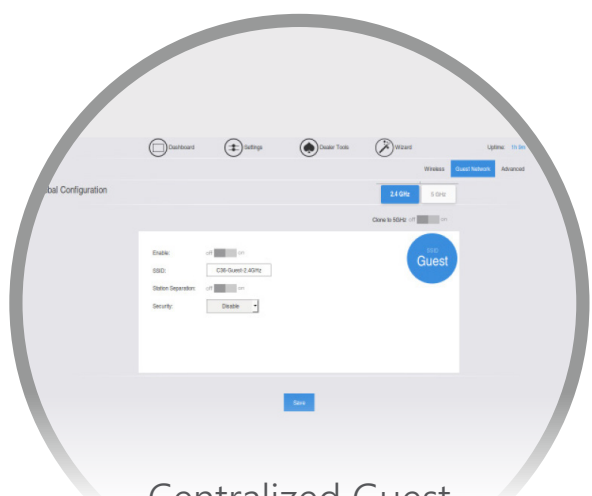


Centralized Guest Maintenance

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# C36 Specifications

## Interface

| | |
|---|---|
| Total Network Interfaces | 2 |
| Auto MDIX auto-sensing 10/100/1000 (Copper, RJ-45) | 1 |
| Console Port (Copper, RJ-45) | 1 |
| USB Interfaces | 2 (USB 2.0) |
| HDMI Interfaces | 1 |

## Dimensions

| | |
|---|---|
| Height x Width x Depth | 1.675in x 17.026in x 9.202in (4.254cm x 43.246cm x 9.202cm) |
| Weight | 7.35lbs (3.33kg) - Controller 9.7lbs (4.39kg) - Packaged |
| 1U Rack Mountable | Yes |

## System Performance

| | |
|---|---|
| Managed APs | Up to 30 |
| WLANs | Depends on AP |

## Multimedia & Quality of Service

| | |
|---|---|
| 802.11e/WMM | Supported |
| Client Load Balancing | Supported (v2) |
| Client Capacity Limit | Supported (v2) |
| Suppressed SSIDs | Supported |

## Environment

| | |
|---|---|
| Power Input | 110-240v AC |
| Power Consumption | 55w |
| Operating Temp | 0°- 40°C (32°-104° F) |
| Operating Humidity | 95% non-condensing |
| Storage Temp | -20°- 80°C (-4°-176° F) |
| Storage Humidity | 95% non-condensing |

## Management

| | |
|---|---|
| Configuration | Web user interface, CLI, SNMP v1, v2, v3 |
| AAA | RADIUS (v2) |
| AP Provisioning | Auto-upgrade, Auto channel & power optimization, VLAN tagging, Spanning Tree, Heat Map (v2) |
| Centralized Management | Supported |
| Centralized Reporting | Supported |

## Security

| | |
|---|---|
| Standards | WEP, WPA, WPA2, IPv4, IPv6, PSK (v2), AES |
| Intrusion Detection | Rogue AP Detection |
| MAC Filtering | Supported |
| Guest Network | Supported |

## Package Contents

C36 Wireless Controller, Console Cable, Rack Mounting Hardware, Power Cable and Quick Start Guide

# Access Point Specifications

| Access Point | WK-1 | WX-1 |
|---|---|---|
| Wireless Protocols | 802.11ac/a/b/g/n | 802.11ac/a/b/g/n |
| Wireless Band | 2.4, 5GHz | 2.4, 5GHz |
| Max SSIDs | 8 per band | 8 per band |
| Guest SSIDs | 2 | 2 |
| C36 Compatible | ✓ | ✓ |
| Transmit Power | 29dBm on 2.4Ghz, 29dBm on 5Ghz | 29dBm on 2.4Ghz, 29dBm on 5Ghz |
| Receive Sensitivity | -91dBm | -87dBm |
| Antenna Configuration | 2x2 | 3x3 |
| Ports | 2x LAN, Console, Power | LAN, Power, Ethernet |
| Encryption Options | WPA2 PSK, WPA | WPA2 PSK, WPA |
| Input Power | PoE+ 802.3at or 12V/1.5A with included PSU | PoE+ 802.3at or 110-220VAC |
| Operating Temperature | 0° - 45°C (32° - 113°F) | 0° - 45°C (32° - 113°F) |
| Storage Temperature | -25° - 60°C (-13° - 140°F) | -25° - 60°C (-13° - 140°F) |
| Humidity | 10%-90% non-condensing | 10%-90% non-condensing |
| Mounting Options | Wall Bracket, Ceiling T-Bar | Wall Bracket, Ceiling T-Bar |
| Dimensions (LxWxH) | 9.18" x 7.05" x 1.44" | 9.81" x 7.05" Depth: 1.44 in Base: 7.76" x 5.55" |
| Buttons | Reset | Reset |
| LEDs | Power, 2x Ethernet, 2.4GHz, 5GHz | Power, Ethernet, 2.4GHz, 5GHz |
| Weight (lbs) | 4 | 4 |
| Certifications | FCC, CE, IC, RoHS | FCC, CE, IC, RoHS, UL |
| Colors | White, Black | White, Black |

## Package Contents

WK-1: WK-1 Access Point, Ethernet Cable, Power Supply Adapter, RJ45 clip, Torx screw driver, Rubber feet, Wall mount kit, T-Bar mounting adapter, Quick Start Guide

WX-1: WX-1 Access Point, Ethernet cable, Power supply adapter, RJ45 clip, Torx screw driver, Rubber feet, Wall mount kit, T-bar mounting adapter, Quick Start Guide

## Warranty

Pakedge Device & Software offers a 3-year limited warranty. Pakedge Device & Software will repair or replace products that do not perform as specified within 3 years of the date of purchase due to a defect in materials, workmanship, or functionality.

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# Wall Mounting Bracket Specifications
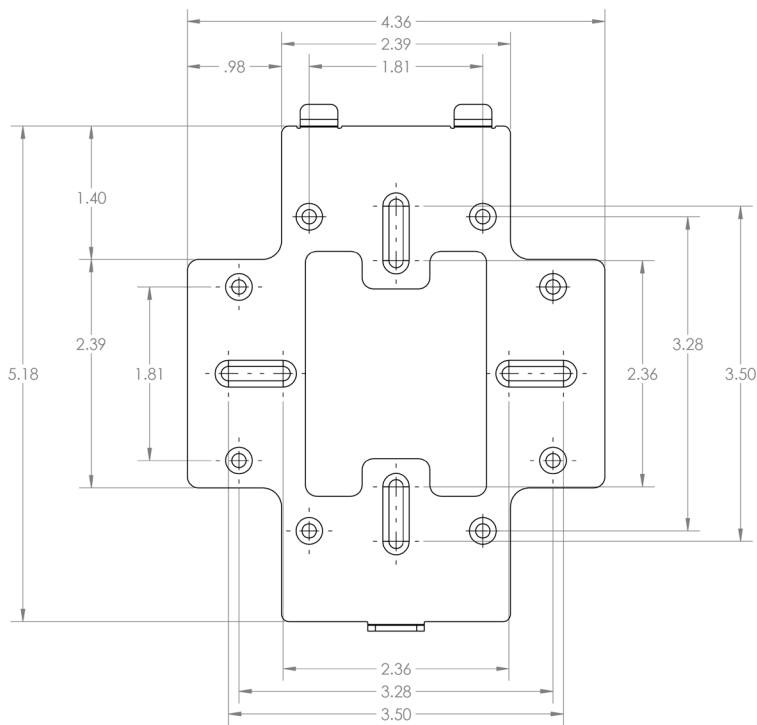


Dimensons in Inches

# Drop Ceiling T-Bar Mount
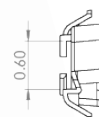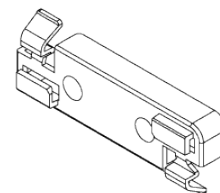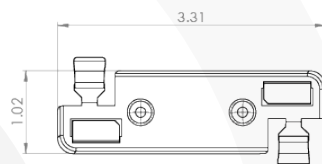


Dimensons in Inches

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3847 Breakwater Avenue,
Hayward, CA 94545

17011 Beach Blvd. Suite 600
Huntington Beach, CA 92647

www.pakedge.com

sales@pakedge.com

1 (650) 385-8702

## Connect+ Certified

The Pakedge Connect+ Platform is a carefully integrated system of switches, routers, wireless, power management and software technologies, designed specifically to work with each other to deliver seamless, scalable, and reliable multimedia networking performance. When unified with the BakPak Cloud Management System, the functionality of the Pakedge Connect+ Platform is extended with cloud-enabled services such as monitoring and management of all connected devices anywhere, any time, and from any device.

## Why Pakedge?

• Purpose-built for A/V networking applications
• Enterprise-level performance
• Seamless, scalable, and reliable

• End-to-end network system solutions
• Free lifetime technical support
• Free lifetime firmware updates and functionality support

### About Pakedge Device & Software
Pakedge is an industry leading manufacturer of high performance end-to-end networking platforms for residential and commercial A/V applications. Recognized by industry peers and winner of the prestigious CEPro Brand Leader award for Networking in 2013 and 2014, Pakedge specializes in integrating high performance engineering innovations, operational simplicity, and systems engineering to develop technology that enables customers to unleash the power of their network.