

NP 114E

Belden® Access Points (APs) are simple, yet sophisticated, devices which require no set-up and no configuration. They are designed to leave all network traffic decisions to the Belden Switch.



Belden Wireless Solution High-bandwidth Access Points Allow WLAN Users Easy Network Access, Robust Client Connections

Belden's BWAP-200 Access Points are the point-of-network-entry for users of the Belden Wireless Solution. Elegant in their simplicity, these APs provide a true plug-and-play architecture for implementing large-scale, enterprise-grade WLANs. They are powered from industry-standard PoE (Power over Ethernet – IEEE 802.3af) and they support any off-the-shelf wireless network interface card (NIC).

Belden APs, combined with Belden BWS-8008/ BWS-8024 Switches, embody the Belden Wireless Solution. Using Belden's "Channel Blanket Technology," this wireless LAN provides seamless mobility with no roaming latency, no co-channel interference, and the ability to design for a guaranteed and predictable level of service.

Only the Belden Wireless Solution combines the mobility of a WLAN with the simplicity of a conventional hard-wired LAN. In fact, only a rudimentary understanding of wireless/radio frequency technology is required.

Belden's APs require no set-up or configuration. These system components are just radios – with no software, no storage, no "smarts." All traffic decisions are made by the centralized 8- or 24-port Belden Switch.

Belden's BWAP-200 Access Points are client agnostic: clients don't associate with any access point. Instead, the APs act as a conduit to rapidly funnel all traffic between switch and client. The net effect is ubiquitous, interference-free coverage, consistent bandwidth, and zero-latency mobility – all with the resilience of a wired connection.

In the Belden Wireless Solution, when adds, drops and changes occur, simply add or remove APs as needed. No network re-configuration or re-planning is needed. Adding or removing an AP has no effect on an existing set-up.

The Best Performance

Unlike cell-based WLAN systems, the Belden Wireless Solution yields an enterprise-grade wireless LAN with no trade-offs between coverage, capacity, and mobility.

- **Ubiquitous Coverage.**
Since the switch prevents co-channel interference by allowing only non-interfering APs to transmit simultaneously on the same channel, you can deploy as many APs as needed to get the coverage you want.
- **Highest Capacity and Bandwidth.**
The Belden Solution goes beyond eliminating the classic trade-off between coverage and capacity. It is designed to provide the industry's highest capacity and bandwidth.
- **Seamless, Zero-Latency Mobility.**
In the Belden Solution, the user associates once with the switch, and then can move freely within the "channel blanket." Since there are never any inter-AP handoffs, communications are never interrupted or disrupted by the users' mobility.
- **Wire-like Resilient Connectivity.**
The Belden Wireless Solution is the only WLAN system that introduces the concept of uplink path diversity. This makes the system uniquely resistant to AP failures, natural fades in RF signals, and external interference.
- **A New Level of Quality of Service (QoS).**
The layered channel blanket architecture of the Belden Solution gives IT unprecedented flexibility to dedicate physical channel bandwidth to one type of use over another. This enables the elimination – not just the mitigation – of contention between types of users, devices and traffic. The result: true triple-play convergence (voice/data/video). Only Belden delivers it.



Belden® Wireless Access Points Specifications

WLAN Standards

IEEE 802.11b, 2.4 GHz
(short/long preamble support)

IEEE 802.11g, 2.4 GHz
(pure mode, mixed model)

IEEE 802.11a, 5 GHz
(4.96 homeland security)

Homeland security/public safety 4.9 GHz

Wi-Fi* Collaboration Features (Requires a Belden Switch)

Centralized management and configuration (no configuration in access point)

Centralized authentication and encryption (transparent to AP)

Enhanced Voice over IP (VoIP) support

Spectrum reuse support

Quality of Service (QoS)

Multiple networks

VLAN tagging

SNMP traps to report AP disconnect

Live AP status to switch

Spectrum

Number of simultaneous channels Up to two, regardless of band (i.e., two 2.4 GHz channels, two 5 GHz channels, or one channel in each band configured to operate concurrently)

Public safety 4.9 - 5 GHz

Available channels	802.11a**	802.11b/g***
	5.15-5.25 GHz	2.402-2.472 GHz (U.S.)
	5.25-5.35 GHz	2.402-2.482 GHz (ETSI)
	5.505-5.725 GHz	2.402-2.494 GHz (Japan)
	5.725-5.850 GHz	

Transmission Power (Mean)

	802.11b/g	802.11g
802.11a 18 dBm (max) (limited by local regulation)	17 dBm (max)	15 dBm (max)

Supported Rates

802.11a	802.11b	802.11g
6, 9, 12, 24, 36, 48, 54 Mp/s	1, 2, 5.5, 11 Mp/s	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 Mp/s

Receive Sensitivity

802.11a	802.11b/g	
6 Mp/s: -88 dBm	1 Mp/s: -91 dBm	24 Mp/s: -82 dBm
9 Mp/s: -87 dBm	2 Mp/s: -88 dBm	36 Mp/s: -79 dBm
12 Mp/s: -86 dBm	5.5 Mp/s: -87 dBm	48 Mp/s: -74 dBm
18 Mp/s: -84 dBm	6 Mp/s: -89 dBm	48 Mp/s: -74 dBm
24 Mp/s: -81 dBm	9 Mp/s: -88 dBm	
36 Mp/s: -77 dBm	11 Mp/s: -85 dBm	
48 Mp/s: -73 dBm	12 Mp/s: -87 dBm	
54 Mp/s: -69 dBm	18 Mp/s: -85 dBm	

Regulations Approval

Regulation	Approval
Safety	UL 60950-1 EN 60950-1 IEC 60950-1
EMC	FCC Part 15 class B EN 301 489-1-17 VCCI Technical Requirement, V-3/2001.04
Radio (including modular approval)	FCC Part 15 C FCC Part 15 E EN 300 328 EN 301 893 Japan Type Certificate: Article 2, clause 1

Physical Properties

Property	Value
Dimensions (W x H x D)	195 mm x 125 mm x 45 mm (7.7" x 4.2" x 1.8")
Weight	400 gr/0.88 lbs.
Installation options	Horizontal (desktop) Vertical (wall or ceiling mount)
LEDs	Power LAN Activity 2 x WLAN Activity (2 colors)
Power	PoE (IEEE 802.3af) Power supply (optional): 48VDC

Environmental

Condition	Operational	Storage
Temperature:	0°C to 50°C (32°F to 122°F)	-45°C to +85°C (-49°F to 185°F)
Humidity:	0% to 90% non-condensing	0% to 90% non-condensing

Ordering Information

BWAP-200 Dual 802.11 a/b/g radios

* Wi-Fi is a registered trade mark of Wi-Fi alliance.

** Available channels limited by local regulations; U.S. has 13 non-overlapping channels

*** Available channels limited by local regulations; U.S. and ETSI have 3 non-overlapping channels, Japan has 4 non-overlapping channels