BELDEN
SENDING ALL THE RIGHT SIGNALS

New Product Bulletin

NP 115E

Belden's powerful and intelligent BWS-8008 (8-port) and BWS-8024 (24-port) Switches manage all WLAN traffic and network management activities.They work with and control the operation of Belden's BWAP-200 Access Points.

Belden® Wireless Solution Switches are the Heart of Belden's WLAN, Providing Unmatched Capacity, Unprecedented Client Mobility and Ease of Deployment.

Belden's BWS-8008 (8-port) and BWS-8024 (24-port) Switches are the foundation for the Belden Wireless Solution: a highly secure, enterprise-grade, high-capacity and campus-wide WLAN. BWS-8008/BWS-8024 Switches – and the BWAP-200 Access Points that they control – make possible Belden's Channel Blanket Technology: a technology that delivers seamless mobility with no security concerns, no roaming latency, no co-channel interference and the ability to design for a guaranteed and predictable level of service.

To achieve this unprecedented level of service, Belden's Switches allow the same channel to be transmitted from every AP in the system. By providing centralized control of each channel blanket, the enterprise can tailor the WLAN to support different types of users and applications, concurrently, and without performance trade-offs. Belden's Switches also take care of radio-frequency (RF) issues, making RF-related complexity disappear. As a result, only a rudimentary understanding of wireless/RF is needed to implement and maintain the system.

Under Belden's Channel Blanket architecture, the APs make no decisions on their own. Instead, the Switch provides centralized control over all APs, for a network that easily accommodates moves, adds, and changes. Both the 8-port and 24-port versions of the Switch can be used alone or with multiple switches, for a wireless LAN that can be easily scaled to meet the needs of a growing organization.

Belden's intelligent Switches create a network with the flexibility, simplicity and the performance to support data, video, and voice (VoWLAN) applications in wide-reaching WLAN deployments.

With Power over Ethernet built into the switch, there also is no need for either a midspan or endspan device.

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. Also, it achieves a new level of resiliency and flexibility – one that is not available in alternative architectures.

- **Ubiquitous Coverage.**
  Since the switch ensures that there's no 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 client's mobility.
- **Wire-like Resilient Connectivity.**
  The Belden Wireless Solution is the only system that introduces the concept of uplink path diversity, making it 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 allows unprecedented flexibility, giving IT the ability to dedicate channel bandwidth to one type of user over another. The elimination – not just the mitigation – of contention between types of users, devices and traffic is the result, or true voice, data and video convergence. Only Belden delivers it.

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Belden® Wireless Switches Specifications

Standards	
WLAN	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11i
Ethernet	IEEE 802.3x, full/half duplex IEEE 802.1q, VLAN tagging

Interfaces	
WLAN (APs)	BWS-8008: 8 x 100 BaseT Ethernet with IEEE 802.3af PoE (out of band, 6 wires) BWS-8024: 24 x 100 BaseT Ethernet with IEEE 802.3af PoE (out of band, 6 wires)
LAN (Wired LAN)	BWS-8008: 1 x 100 BaseT Ethernet Port BWS-8024: 2 x 100/1000 BaseT Ethernet Ports (2nd port is for redundancy option)

Wireless Performance	
Channels	Up to 2 simultaneous WLAN channels, regardless of band (i.e., two 2.4 GHz channels, two 5 GHz channels, or one channel in each band)
Capacity	Configurable data rate for each channel (up to 54 Mp/s)
Bandwidth	Triple the aggregate bandwidth of a/b/g channel, for effective data rates of up to 162 Mp/s on a standard channel
Roaming	Intra-switch – 0 mSec, Inter-switch < 50 mSec

Management	
User Interface	Secure web-based Graphical User Interface (GUI)
SNMP	Version 2
Redundancy	Master-to-backup auto fallback
Logging	Remote and local SYSLOG
Upgrades	Firmware upgrade through Web/CLI

Security	
Encryption	802.11i hardware-based encryption including: WEP-64, WEP-128, WPA-TKIP, WPA2-AES (CCMP)
Authentication	RADIUS (802.1x) WPA Pre-Shared Key (PSK) MAC Address-based ACL, EAP, TTS, TTLS, LEAP, PEAP, MD5

Network Names & VLAN	
Network names	16 Network names (SSIDs) per channel
VLANs	4096 Ethernet VLAN, Network name to VLAN mapping

Regulations Approval	
Safety	UL 60950-1, EN 60950-1, IEC 60950-1
EMC	FCC Part 15 Class B, EN 300386, VCCI technical requirements, V-3/2001.04

Physical	
Installation options	Rack mount (19″/0.48 m 1U) and desktop
Dimensions (W x H x D)	BWS-8008: 430 mm x 45 mm x 240 mm (16.9″ x 1.8″ x 9.4″) BWS-8024: 440 mm x 45 mm x 395 mm (17.3″ x 1.7″ x 15.5″)
Weight	BWS-8008: 3 kg/6.6 lbs. BWS-8024: 4.5 kg/9.9 lbs.
LEDs	Power, LAN activity, activity on AP ports
Power	100-240/2A Max PoE to WLAN ports: 15W per port

Environmental	
Operational	Temperature: 0°C to 45°C (32°F to 113°F) Humidity: 0% to 90%, non-condensing
Storage	Temperature: -20°C to +70°C (-4°F to 158°F) Humidity: 0% to 90%, non-condensing

Ordering Information	
BWS-8008	8-port switch
BWS-8024	24-port switch