

Wireless PoE Solution

Customer Profile:



Bremond Independent School District is a Pre-K through grade 12 district in Bremond, Texas. The organization encourages the development of individual potential, desire for excellence, and a sense of responsibility to self and society. The district was established in 1981 and has received more than 40 state academic awards and five state athletic championships.

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- Josh Hymer,
Director of Technology



Bremond Independent School District Solves Wi-Fi Coverage Issues with Low-Cost D-Link® PoE Switches and Access Points

The Challenge

Bremond ISD's older wireless LAN was difficult to expand and manage. The system didn't support Power over Ethernet (PoE) because the technology was not standardized at the time they purchased it.

“We had to wait months before we could deploy the wireless access points [APs], because the power wasn't in place,” said Josh Hymer, Director of Technology at Bremond ISD.

The old wireless network worked sporadically, according to Hymer. At one point it completely died. The district liked the managed network features. “I highly recommend a managed AP solution to anyone who's deploying a wireless network,” said Hymer. “We were spoiled in that sense. To do the firmware updates, or perform any changes on a system, you basically change one item, push it out to all the APs and you're done.”

Bremond needed a wireless network with PoE support. They wanted to eliminate receptacle installation costs and have a managed solution that wouldn't break the bank. The district got several quotes from D-Link competitors but solutions with managed APs ran \$37,000 and up.

The Solution

Initially, Hymer was discouraged. He didn't think they could find a PoE and managed solution at a good price. “I started poking around and found out

that D Link offers a managed wireless PoE solution,” said Hymer. “We installed it for under \$5,000 – and that included the new switches, new APs, new cabling... everything.”

Bremond bought three DES-1228P Web Smart™ 24-Port PoE switches and 20 DWL-3140 Web Smart 802.11g PoE Thin Access Points. “The APs are so small and easy to mount,” said Hymer. “I was really impressed with them. And the range is more extensive than what we had previously. The old APs were lucky to make 30-50 feet of coverage. The new APs reach 150 feet and more. Using a wireless LAN scanning utility, we found nine of the APs from just one location at the front of the school. It's a very big facility, and it was amazing that we could actually see that many of them. We were very impressed.”

Bremond's client connections with the D-Link equipment support Super G, which gives them a 50MB duplex connection (Super G is Atheros Communications' proprietary frame-bursting, compression and channel bonding technology that improves IEEE 802.11g wireless LAN performance). This is in comparison to a standard 54MB G simplex connection. “It's faster if you have the cards that support Super G,” said Hymer. “We support 60 clients at these speeds, which is amazing.”

D-Link's AP management software allows Bremond to push firmware updates out to each AP in an automated fashion. Each switch has four 1GB



Bremond ISD installed D-Link's managed wireless PoE solution for Wi-Fi coverage because of its range, ease of installation, ease of management and affordability.

Wireless PoE Solution



DES-1228P - Web Smart 24-Port PoE 10/100 + (4) 1000BASE-T Ports + 2 Combo Ports Switch

- 24 Ports IEEE 802.3af PoE
- Supports Industry Standards: 802.1p, 802.1Q, 802.1D
- CPU DoS Protection to Ensure Uptime
- Supports 802.1x User Authentication for Security
- Easy Management through GUI, Smart Console Utility, and SNMP v1



DWL-3140AP - Web Smart 802.11g PoE Thin Access Point

- Supports 802.3af Power-over-Ethernet
- Automatically Receives Configuration Settings via DES-1228P Web Smart Switch
- Prioritizes Latency Sensitive Network Traffic such as VoIP, before Servicing Other Network Traffic

copper interfaces and two 1GB fiber connections, which Bremond will upgrade to soon.

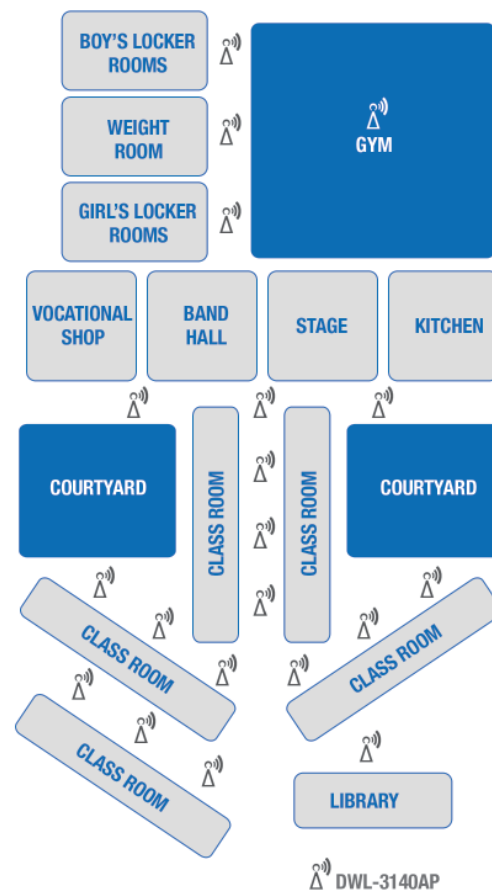
“Our priorities were 1) range, 2) ease of installation and 3) ease of management,” said Hymer. “D-Link satisfied all three of those. We were really happy to get all this in a PoE switch at this price point. The entire campus is now covered for Wi-Fi.”

All of Bremond’s APs use the same SSID, so their users can seamlessly roam across the campus. Load balancing is also supported, so whenever a particular AP becomes flooded, the system kicks traffic off to the next open AP. This is especially useful when the students are using mobile labs. When they move their lab carts, they stay connected without needing to plug into Ethernet jacks (which is what they did prior to the D-Link solution).

“They just pull the laptops off and start working instantly off those,” said Hymer. “We also have a wireless printer set up where they can print without even connecting it up.”

Hymer installed the switches and APs himself. The cabling and patch panel were installed by an outside vendor. It took about one hour per switch to install everything (the first one took a little longer).

“The students and faculty are very happy with the coverage,” said Hymer. “Everyone is impressed with the strides we’ve made.”



D-Link DWL-3140AP Web Smart 802.11g PoE Thin Access Points are strategically placed on the Bremond ISD campus for Wi-Fi coverage.