



Wireless Technology for Modern Health Care

CASE STUDY

The dual band ABDN-ER-DP551's flexibility, small form factor, network interoperability, low power requirements and robust security make it perfect for medical applications



Medical device manufacturer chooses B+B SmartWorx Airborne M2M technology.

Some medical devices become immensely more valuable if you can make them mobile. Moving a modern medical cart from room to room is far more efficient than moving the patients and their beds, so long as you can still maintain reliable network connections. Other devices, like EKG monitors and X-Ray machines, call for less mobility but still require dependable wireless data connectivity.

One possible answer would be Wi-Fi. Wi-Fi is standards-based, and will interoperate reliably with multiple vendor products. Wi-Fi networks are widely deployed in hospitals and can be used to connect remote medical devices to networks, letting them share data with other network nodes.

Wi-Fi supports robust security protocols, ensuring that the confidentiality of patient data is protected at all times. It lets a network administrator work from a central location while performing critical diagnostics tests and software updates anywhere on the network. Wi-Fi devices are steadily becoming more compact and less power hungry, allowing for easier integration into mobile devices.

But as Wi-Fi access has proliferated in hospitals, signals have begun to saturate the license-free 2.4 Ghz band. This can lead to degraded connections, timeouts and data retries.

One of our customers, a medical device manufacturer, wanted to continue taking advantage of the benefits of Wi-Fi. But they also wanted to address the issue of overcrowded airspace in hospitals.

The Solution

Our customer solved the problem with the B+B SmartWorx ABDN-ER-DP551. The ABDN-ER-DP551 is a dual band Ethernet bridge and router that can connect equipment to networks via either the 2.4 Ghz and 5 Ghz license free bands. Where the 2.4 Ghz band is overcrowded the ABDN-ER-DP551 can operate at 5 Ghz. Every radio environment is a bit different, so the ability to use either license free band provides vital flexibility. Additionally, the ABDN-ER-DP551's small form factor and low power requirements let it fit just about anywhere, which is important in a crowded medical cart. (It can be USB powered, a feature that our customer employed.) Its advanced security protocols ensured that patients' private information was secure.



Multiple Solutions

The ABDN-ER-DP551 is a member of B+B SmartWorx' Airborne M2M family of dual band Wi-Fi M2M solutions. Airborne M2M devices provide reliable network connections, they support advanced Wi-Fi security authentication and encryption protocols, they're built for rugged environments and they're easy to set up and use. Models with serial ports are available, making it easy to network-enable legacy serial equipment.



Embedded Solutions

B+B SmartWorx' Airborne M2M technology is also available as an embedded module. Our medical device manufacturer is now investigating an engineering project that will integrate Airborne M2M technology directly into their systems, with all of the same features and capabilities – and an even smaller form factor.

Why B&B Electronics?

B+B SmartWorx designs and builds rugged, reliable network devices that can do their jobs in tough environments. And when a problem calls for a custom solution, we'll design and build that, too. B+B SmartWorx keeps your data moving.

All B+B products come with a limited lifetime warranty.

Free B+B SmartWorx Tech Support is available from 7:00 a.m. to 5:30 p.m. CST, Monday through Friday.