# What Is A Zigbee Wireless Sniffer?

A packet analyzer (or packet sniffer) is a piece of computer software or hardware, and often those two working together, that intercepts and logs data, which come across the line of communication in "packets" of code, while it's in transit between nodes on a network.

Different packet sniffers work on wired and wireless networks in roughly the same way, just through different media and protocols. Whether wired or wireless, the job of a packet sniffer is to intercept and log all network traffic for monitoring and analysis by a human user.

Zigbee is like WiFi's easygoing cousin: it's a low power consumption, low cost communication technology designed for M2M communication. Unlike WiFi, it uses a mesh network; meaning that all connected devices talk to each other, making communication for any one device less dependent on a router and end point.

Zigbee operates on lower frequencies than WiFi, with lower bandwidth. Lower network speeds (around 250 kbps) are not a problem for machine communication networks which typically do not communicate large amounts of data. Lower costs, and lower power consumption make Zigbee a good solution for home and building automation, and any application where battery life is a priority. Essentially, Zigbee is a perfect choice when WiFi's speed and bandwidth would be overkill and when a connection consistency is important.

Now that we know what a packet sniffer is and how Zigbee works, we can come back to the Wireless Zigbee Sniffer. ICP DAS USA's ZT-CHK, for example, is an unassuming USB device that looks just like a flash drive or network adapter. It's easy to install on any Windows PC and comes with packet sniffing software. It will capture and analyze Zigbee traffic within ~60m (line-of-sight) any ICP DAS USA Zigbee network.

When ZT-CHK captures data, the packet sniffing software will analyze it and present it in a usable format. Users can then analyze data as it passes between network nodes. This is useful for onsite engineers who can use the information to fix problems and for analysts to monitor operations as they happen, or to log data apart from the network.

The ZT-CHK module is a wireless sniffer that captures and analyzes over-the-air data packets (that conform to IEEE 802.15.4 standard) in real-time with TI SmartRF Protocol Packet Sniffer (SPPS) software. It is easy to install the ZT-CHK to PC by USB interface. With SPPS software, users can view or store the wireless data packets in PC and these data packets are like ZigBee 2007(ZigBee Pro). Moreover, that can be a good way for users to analyze the IEEE 802.15.4 data in their applications, and reduce the wireless communication test time efficiently.

A Zigbee Wireless Sniffer like ZT-CHK is useful for debugging network problems quickly and at the field-level, so to speak. It's an excellent way to catch and diagnose problems that would be easy to miss from a higher level API.

Want to learn more? Visit our website www.icpdas-usa.com or give us a call at 1-310-517-9888. You can also reach us through email at sales@icpdas-usa.com. We are available from 8:00 a.m. to 5:00 p.m. PST.