Smart-Sync™ Bluetooth® Wireless Technology—FAQ's

Q   Why is Smart-Sync™ Bluetooth® Wireless Technology better than Wi-Fi?

A   Smart-Sync with Bluetooth® wireless technology employs a 'Dynamic' system of communicating from the 'Bridge' device to the clocks it is paired with. In other words, one bridge device is plugged directly into an IT Port. The bridge then 'communicates' via Bluetooth wireless technology to the closest 'synced' clock on the network. Then that clock finds the next closest clock, and so on.

One bridge device 'works' with 1 to up to several hundred (200-250) clocks. The clocks can be analog or digital, or a combination of the two and synchronize to the network to form the bridge-to-clock and subsequent inter-clock connections.

How Smart-Sync Works Diagram Below:

- Smart-Sync clocks 'wake up' once daily
- Clocks synchronize time via Smart-Sync Bridge
- Clocks form network based on strongest signal to another clock or the Smart-Sync Bridge
- If one clock fails, other clocks will 'find their way home' to the strongest signal
- Smart-Sync Bridge reports clock status to OneVue
- OneVue accessible via PC or mobile devices
- Two-year warranty on Smart-Sync Traditional Series analog clocks (Exception: 1-year warranty on Education Series)

Q   How does the Bluetooth® enabled clock solution different from Primex's past Wi-Fi solution?

A   Wi-Fi is a 'Static' system of communication that routes directly from the IT network, which means that the network is asked to support all points of contact coming directly from clocks. Smart-Sync with Bluetooth requires network connectivity with only a single point in the Bridge. Simply put, if your facility has 100 Primex clocks in it, the old Wi-Fi system would require 100 devices accessing your wireless network while the new Smart-Sync system would have only the Bridge on your network.

Q   How, exactly, will Smart-Sync clocks synchronize in my facility?

A   All of the system device settings are managed via OneVue™, Primex's cloud-based software system.

The Smart-Sync *Bridge is the only device that interacts directly with OneVue*. The Bridge connects to your facility's existing wired Ethernet or PoE (802.11 wireless upon request only) at which point it sends clock data to OneVue™ and downloads settings from OneVue including the time of day.   The Bridge then sends that information to the first clock in the network.

Q   What are the benefits of investing in Smart-Sync Bluetooth® wireless technology clocks and bridges?

A   Synchronized clock technology has evolved over time from hardwired clocks, requiring a direct connection, to a wireless network.

Each clock uses Bluetooth wireless technology to send and receive synchronized time settings from the Bridge.

Levering the value of Bluetooth wireless technology eliminates the requirement of network connected clock devices – the only system device that requires a network connection is the Bridge.

Key Benefits of Smart-Sync

Network Infrastructure Requirements and Impact	• Limited Network Load-Only the Bridge device requires a network connection to your facility's existing 802.11, Ethernet, or Power over Ethernet (PoE) network.
	• Single Network Security Point-Only the Bridge device requires network setting configuration and management. Additionally, there is less of a burden on IT, since they only have to manage a limited number of network dependent system devices.
	• Our solutions leverages the Nordic chip
	• Smart-Sync Bridge coverage
	    ▪ Ethernet
	        • Power via POE or A/C adapter
	• One bridge can cover a network of several hundred clocks (200-250)
	• Recommendation: one Bridge per floor in multi-level facilities
	• Smart-Sync Clock coverage
	    o General guidelines for connectivity and distance between devices
	        ▪ Bridge to first clock – no wall - Approx. 100'
	        ▪ Clock to clock – 1 internal wall – Approx. 50'
	        ▪ Clock to clock – 2 internal walls – Approx. 30'
	• Bluetooth Low Energy Technology (also known as Bluetooth 'smart') virtually eliminates RF interference with other devices
	• Typically uses different transmission bands than other synchronized time solutions
	• Employs adaptive frequency hopping (AFH) to further reduce any interference
	• Self-Organizing—Clocks automatically authenticate and connect to the network.
	• Self-Forming—Clocks automatically connect once a day.
	• Self-Healing—In the event of a Smart-Sync clock hardware failure or loss of Bluetooth signal, all other clocks intelligently reroute their communication path to another clock within the Bluetooth wireless technology network.

Easy Install	• Simple – Clocks are "plug & play" with one point of network access through our Bridge o Clocks can be installed anywhere-The installation location is not limited to an area within range of a wireless access point or close to an Ethernet/PoE network port. • No transmitters

For more information on Smart-Sync or to speak to a Primex representative call: 855-557-0337

	• No FCC licensing
	• No configuration with Ethernet bridge
	o Clocks do not require any end-user configuration. Simply take Smart-Sync Bluetooth® clock out of the box and install at any location.
Low Maintenance	• 2-year warranty on all Smart-Sync clock and bridge systems except: the education series which carries a 1-year warranty
	• Up to a 5 year clock battery life
	• Clocks do not require network configuration
	• Clocks can be relocated and added at any time
Accuracy	• Clock time is synchronized with the same Network Time Protocol (NTP) time source as other facility devices.
	• Clocks automatically adjust for Daylight Saving Time.

Q   What kind of 'software system' is needed to manage the Bluetooth® wireless technology clocks at my facility?

A   The OneVue™ cloud-based software system allows your staff to remotely manage Smart-Sync Clocks and Bridge settings and monitor your system devices at any time, from anywhere. OneVue can be accessed from a web browser on a mobile, tablet, or computer with an internet connection. OneVue does not require the installation of other software or third-party plug-ins or applications and is supported by Amazon Web Services cloud.

Q   How will I ensure my Smart-Sync Bluetooth® wireless technology clocks are synchronized properly?

A   Once the clocks have self-initiated to the Bluetooth wireless technology network, they 'wake-up' once a day at a system defined time, and continue to 'see' all the other clocks within the network. At their wake up time, they send and receive data from the Bridge. If one clocks' functioning is disrupted, the other clocks within the network 'see' one another and continue to synchronize properly.