

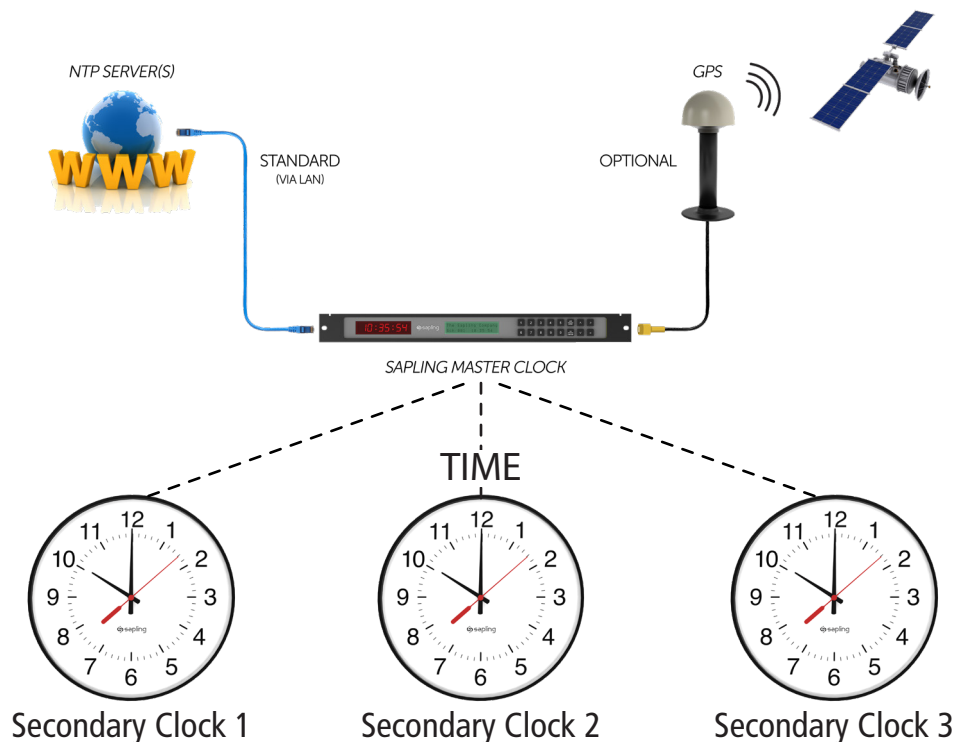
# Synchronized Clock Systems Explained

## What is it?

A synchronized clock system provides the exact same time to all clocks in the system. The synchronized clock system typically consists of a “master clock” and multiple “secondary clocks,” also known as “slave clocks.” The master clock communicates with all the secondary clocks in the system to provide them with an accurate time source. The purpose is to make sure that all clocks in the system will show the exact same time. No matter which part of the building you are in, the time shown by the clocks will be uniform and accurate.

## How Does it Work?

In a synchronized clock system, the master clock receives time from either an NTP server or GPS receiver, or its internal clock can be utilized as a time source. When the master clock has received the correct time from either source, the time is then distributed to all slave clocks in the system. The signal is sent to the clocks multiple times per day, ensuring that all clocks stay synchronized and do not drift from their accurate time.

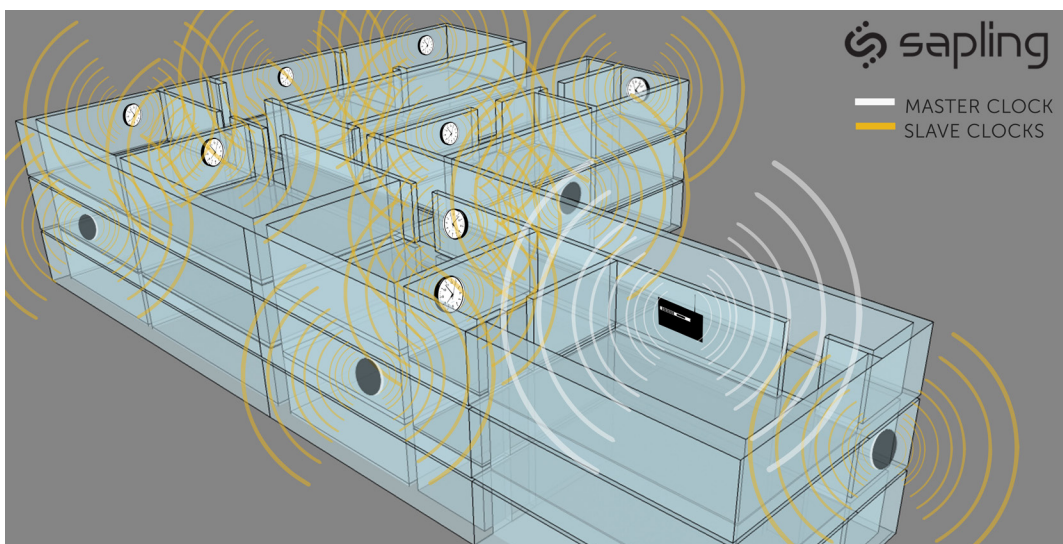


## Benefits to Having a Synchronized Clock System

There are many benefits to using a synchronized clock system. The main benefit is that everyone in the building is following the same time source. This eliminates confusion and disorder in different facilities because with a synchronized clock system, everyone is utilizing the same time source. Another feature that synchronized clocks provide is the elimination of correcting the time on all the clocks when Daylight Saving Time occurs. In the event of a power failure, the system will automatically adjust to the correct time as soon as the power returns. The master clock (depending on the model) may also include scheduling capabilities, which enables the user to program the ringing of bells, turning on heating and air conditioning at predetermined times, and control many other devices as needed. Another popular feature is the Count Up and Count Down function, which allows the user to show elapsed time between breaks, between shifts, for "Code Blue" situations in operating rooms, and for many other applications.

## Who is Sapling?

Sapling Inc. has been a pioneer in synchronized timekeeping systems for over two decades. Sapling clocks can be found in schools, hospitals, universities, manufacturing plants, courtrooms, business complexes, hotels, transportation facilities, and many other institutions throughout the United States and all over the world. Sapling has a comprehensive line of clock systems and products to fit virtually any application. We're committed to providing reliable, high quality products with top notch customer support. All Sapling clocks are engineered and assembled in the United States at our main headquarters in Huntingdon Valley, Pennsylvania.



Pictured is Sapling's Wireless Synchronized Clock System. The master clock sends out the time to the secondary clocks and the clocks redistribute the signal to other clocks in their vicinity - creating a mesh network.

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