sapling
Synchronized Clock Systems

Master Clock Options

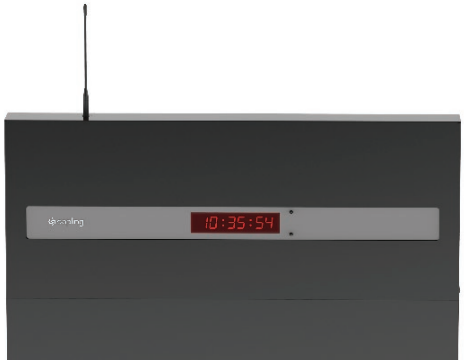
The master clock's main function is to receive and distribute the accurate time to all secondary clocks in the system. Master clocks are offered in various models and with various features in order to accommodate a wide range of applications.

Below are options available for our master clocks. Please select the appropriate boxes to indicate your desired options and after we receive your request, we will provide you with additional information relating to the master clock model you are interested in.

In Order to Provide an Accurate Quote, We Need the Following Information:

Choose a Master Clock Mounting Option:

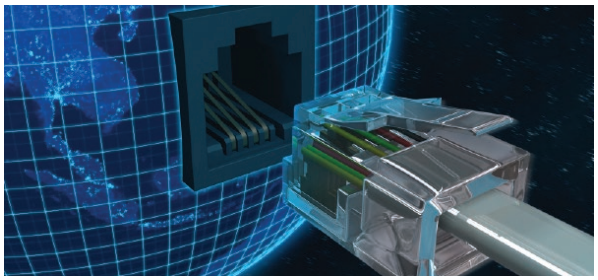
- **Wall/Surface Mount** ☐



- **Rack Mount** ☐

Master Clock Time Source:

- **NTP Servers as a Time Input**



All of our master clock models can receive accurate time from NTP servers as a standard feature. A master clock may receive its time either from an external NTP server (third party NTP server via internet connection) or from an in-house NTP server (if there is one in the facility).

All of our master clocks have the capability of storing up to ten IP addresses of NTP servers in order to receive the accurate time and redundancy. In the event the connection to one of the NTP servers has failed, the master clock will automatically try to connect to a different NTP server from the ten available servers.

NTP time source is a standard feature with all of our master clocks.

- **GPS Receiver**

As an optional feature, the master clock may also receive accurate time from a satellite via GPS receiver.

This feature is typically used when a facility requires additional redundancy or in facilities with no LAN or limited access to LAN. With a GPS receiver the synchronized clock system can function independently.

The master clock with a GPS receiver will also allow you to utilize its standard option to receive time from an NTP server, as well as from the GPS receiver for dual redundancy. In this case, if communication with the GPS signal has been lost, the master clock can be set to receive accurate time from NTP servers via LAN.

GPS Feature Required: ☐

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Additional Options:

- **GPS Cable**

If you choose to receive the time through a GPS receiver, we will provide a 75 foot (22.8 meters) GPS antenna cable as standard. Since the GPS antenna is typically located on the roof of the facility, the distance from the GPS antenna and master clock must be checked to confirm that a 75 foot cable will be sufficient. If your project requires a GPS cable longer than 75 feet, we provide two additonal options:

150 Foot (45.7 meters) GPS Cable Required: ☐

300 Foot (91.4 meters) GPS Cable Required: ☐

GPS Surge Protector/Arrestor: ☐

*All GPS cables are tested by us with each specific master clock for proper funcitonality. Altering the original GPS cable provided by us would void the system warranty.

- **Relay Option**

The relay feature will allow you to connect any system within your facility that may contain a relay closure input. The relay closure input may be connected to our master clock relay which can be controlled and activated at predetermined times. This will allow you to set your system to work according to a schedule with the software provided with the master clock. This option is typically used to ring school bells, control air conditioning systems, lighting, etc. We offer a master clock without relays, 4 relays or 8 relays.

No Relays are needed: ☐

Master Clock with 4 controllable Relays is needed: ☐

Master Clock with 8 controllable Relays is needed: ☐

- **Act as an NTP Server**

As standard, a master clock will only communicate accurate time to all secondary clocks in the system. If a facility requires an NTP server that will provide NTP time to various IP devices in the facility (via LAN), we offer an NTP master clock that can act as an NTP server. This way the master clock will not only communicate the accurate time to all secondary clocks in the system, but it will be the same time source for all other IP devices in the facility that can receive NTP time via LAN. Examples of these devices are: IP cameras, IP phones, IP intercoms, IP time and attendance, etc.

For facilities that require an in-house NTP server, having our master clock upgraded to act as an NTP server will save costs by not having to purchase a separate NTP server.

NTP Server Upgrade Required: ☐

- **Countdown Option**

The count down optional feature will allow the master clock to command our digital clocks to conduct a **prescheduled** countdown. This feature is typically utilized in between classes at schools or in between shifts in manufacturing plants or production facilities. This countdown feature is a **master clock feature** that will command **all digital clocks** in the system to initiate a countdown.

Do not confuse this feature with our elapsed timer **real-time** count up or count down which is done **specifically to an individual digital clock** using the Elapsed Timer control panel.

Countdown Option is needed: ☐

Contact Information

Email: Info@sapling-inc.com

Please also visit our website at www.sapling-inc.com