Wireless Synchronized Clock System

Technology Overview

The wireless synchronized clock system operates in the 2.4GHz ISM band and uses the open standard wireless communication protocol IEEE802.15.4 configured in the meshed network topology. The meshed network topology allows up to 65,535 slave clocks in the network, with a typical communication distance of about 400 metres.

The master clock obtains the time data from the central Network Time Protocol (NTP) server and broadcast this as a beacon signal to synchronize all slave clocks. The clock system is supported by an intranet server which acts as a centralized controller for status monitoring, maintenance and inventory.

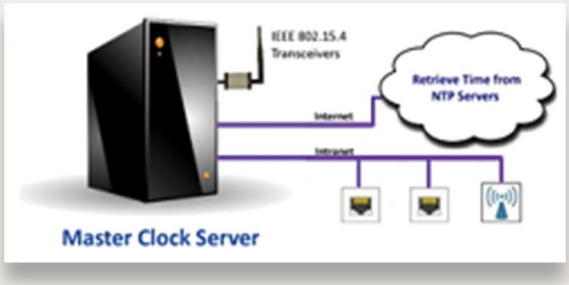
Slave Clock

Specifications:

- Display: 2.3 inch 7-segment numeral display
- Power Supply: 220Vac to 240Vac
- Accuracy: ± approximately 200 milliseconds
- Operating Temperature: 0°C to 40°C
- Operating Humidity: 90% max, non-condensing
- Dimension: 330mm x 110mm x 45mm

Features:

- Bright digital display
- Wall flush mounting design
- Built-in real-time clock
- Time power backup for 3 days
- Allows real-time clock oscillator calibration



Master Clock

Main function:

- Periodically retrieve NTP time and transmit to slave clocks.
- Hosting of intranet web site access for remote monitoring and maintenance of slave clocks.
- Manage a database which keeps track of information related to system settings, clocks, users and events logging.

Features:

- Selection of NTP sites.
- Consider transmission latency during time synchronization with each slave.
- Automatic real-time clock oscillator calibration for slave clocks.

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