VoiceMaster
Power Management Server

FEATURES

- Real-Time Electrical System Monitoring and Optimization

- Compelling Increase in Electrical System Performance and Bill Savings

- Intelligent Electrical System Management

- Data Exchange via RS485 serial cable with over 1000 managed devices

- Intuitive, User-Friendly Web Management Interface

- Alarms and Notifications

Overview

VoiceMaster Power Management is an advanced power management server specifically designed for power monitoring, cost management, and optimization of the operation of commercial electrical systems. VoiceMaster Power Management collects electrical data such as KiloWatts consumed power in real-time remotely via SmartPower 10 meters attached to the electrical circuit. The software analyzes the data and provides graphical data reports for electrical data usage, and cost optimization. In addition, the VoiceMaster Power Management can turn on/off electrical appliances dynamically based on power consumption patterns, time-of-day parameters, pre-set schedules, and pre-defined energy limits.

Compelling Increase in Electrical System Performance and Cost Savings

The VoiceMaster Power Management server offers compelling increase in the performance of electrical systems. Typically, VoiceMaster Power Management can increase the performance of commercial electrical systems with over 30% by providing intelligent cost saving features to minimize power consumption. The server achieves such performance increase via automatic detection and switching of appliances that function outside their practical usage scope (for example automatically turning off after-hours AC equipment, water heaters, etc).

Real-Time Electrical System Monitoring and Optimization

VoiceMaster Power Management is designed to monitor and optimize the operation of electrical systems in real-time. The server receives data from SmartPower 10 meters attached to monitored electrical appliances. VoiceMaster Power Management analyzes the data and based on predefined power consumption patterns, time-of-day, pre-set limits, or pre-set schedule, turns on/off the connected appliances in real-time. Single VoiceMaster Power Management server with RS485 link can monitor over 1000 devices and provide valuable electrical consumption data.

Intelligent Electrical System Management

The VoiceMaster Power Management software can intelligently manage electrical power consumption by automatically switching appliances based on predefined operational parameters such as: time-of-day usage, pre-set schedule, or pre-defined power limits. The management is done centrally utilizing state-of-the-art software running on an industrial PC computer that communicates via RS485 to the SmartPower 10 meters. Using collected data, the management server provides data and graphical reports for KiloWatt power consumption.

Data Exchange via RS485 up to 1500m

The VoiceMaster Power Management server uses a RS485 link to support wired data exchange with the SmartPower 10 meters. In a typical system configuration, VoiceMaster Power Management receives electrical performance data from the SmartPower 10 meters, processes the information in real-time and sends switching commands to the SmartPower 10 to turn on/off the connected electrical appliances.

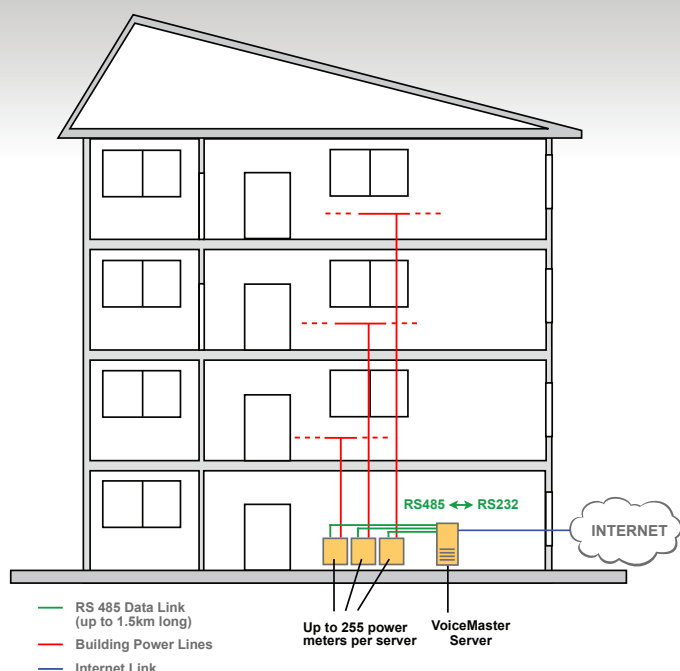## Intuitive, User-Friendly Web Management Interface

The VoiceMaster Power Management electrical management software offers user-friendly web management interface that allows quick and easy configuration and data reporting. Via the interface, users can access and manage all controlled SmartPower 10 meters. Additionally, users can set action thresholds, notifications, alarms, switching commands and other features. Report retrieval is simple and optimized and provides advanced data analysis tools.

Alarms and Notifications

The VoiceMaster Power Management server also offers alarms and notifications functionality. Alarms can be triggered by system performance, power outages, threshold crossings, electrical surges and other events configured by the system administrator. When a particular event triggers an alarm, VoiceMaster Power Management sends notifications to pre-defined email, HTTP, or SMS server.
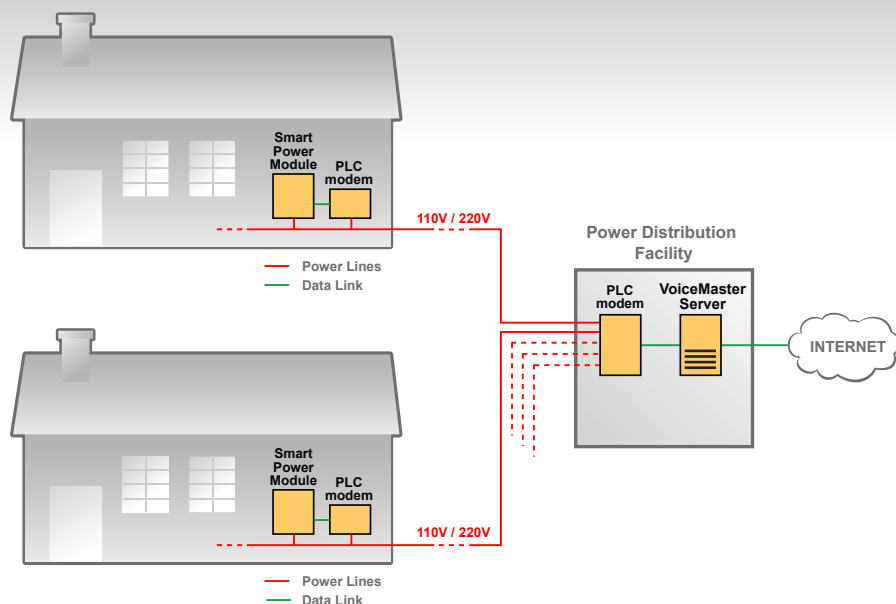

BUILDING OPERATION MODE

Building Operation Mode is used for large building such as office building, shopping centers, large residential buildings, and buildings that aggregate many power meters for various power consumers. The SmartPower10 meters are connected to the central Voicemaster server using RS485 serial data cable that can connect up to 255 devices over 1.5km long line.

RS485 ←→ RS232

INTERNET

— RS 485 Data Link (up to 1.5km long)
— Building Power Lines
— Internet Link

Up to 255 power meters per server

VoiceMaster Server

INFRASTRUCTURE OPERATION MODE

Infrastructure Operation Mode is used by the local utility power companies to automatically retrieve power meter readings and manage power meters remotely. The Infrastructure implementation uses PLC (power line communication) modem to support communication channel between the SmartPower 10 meter and the central Voicemaster server (located in the power transformer station) using the 110v/220v power lines.

Smart Power Module
PLC modem
110V / 220V
— Power Lines
— Data Link

Power Distribution Facility
PLC modem
VoiceMaster Server
INTERNET

Smart Power Module
PLC modem
110V / 220V
— Power Lines
— Data Link