

# WinPM.Net

Web-enabled Software



## Power Monitoring

Answers for industry.

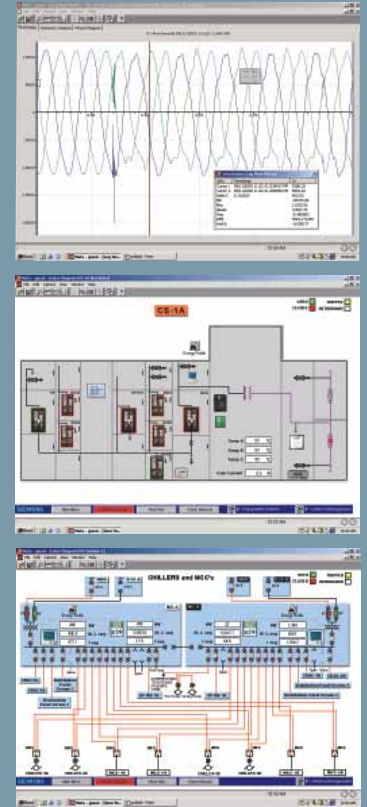
**SIEMENS**

# WinPM.Net™

Web-enabled software

A complete energy information management solution for your business allowing you to process, analyze, store and share energy usage and power quality data across your entire enterprise. It offers control capabilities, comprehensive power quality and reliability analysis and can help you reduce energy-related costs. WinPM.Net allows you to manage intelligent metering and protective devices, analyze data, and decide on new courses of action to help you save money and keep your business up and running.

Its cutting-edge flexibility and compatibility means you can add one piece at a time, at your own pace, while still maintaining your original investments. Interface to your existing systems through industry-standard protocols and choose newer components as they become available.

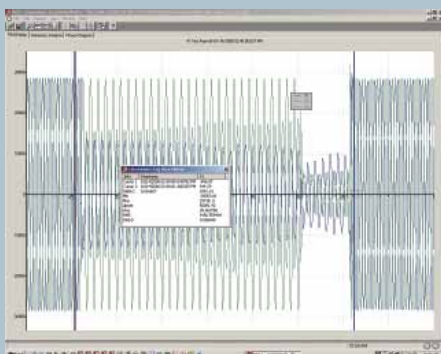


You can access information from any desktop workstation, locally or around the world.

## Applications summary

### Power quality and reliability analysis

Pinpoint the sources of transients, harmonics, or sags – whether external or internal to your facility – and decide on the right corrective actions. By monitoring circuits 24 hours a day, you can develop strategies to avoid interruptions.



Calculations - Log View Plotter Screen

### Cost allocation and sub-billing

Track energy-related costs by building, feeder, or tool. Match virtually any billing structure and use comprehensive multi-year scheduling and time-of-use activity profiles.

### Load studies and asset management

Trend power usage data to take full advantage of your electrical distribution system capacity and avoid over-design. Create usage profiles so you can distribute loads and avoid demand peak.

### Demand and power factor control

Eliminate penalties through automated power factor correction, load shedding, or peak shaving.

### Equipment monitoring and control

Meter all your utilities including gas, steam, air and water. Set up alarms for pending problems, pre-alarm on impending or imminent conditions. Interface with other energy management

and SCADA systems through multiple communication channels and protocols.

### Preventative maintenance

Base your maintenance schedule on actual operating history.

## Features summary

### WebReach: Free client access

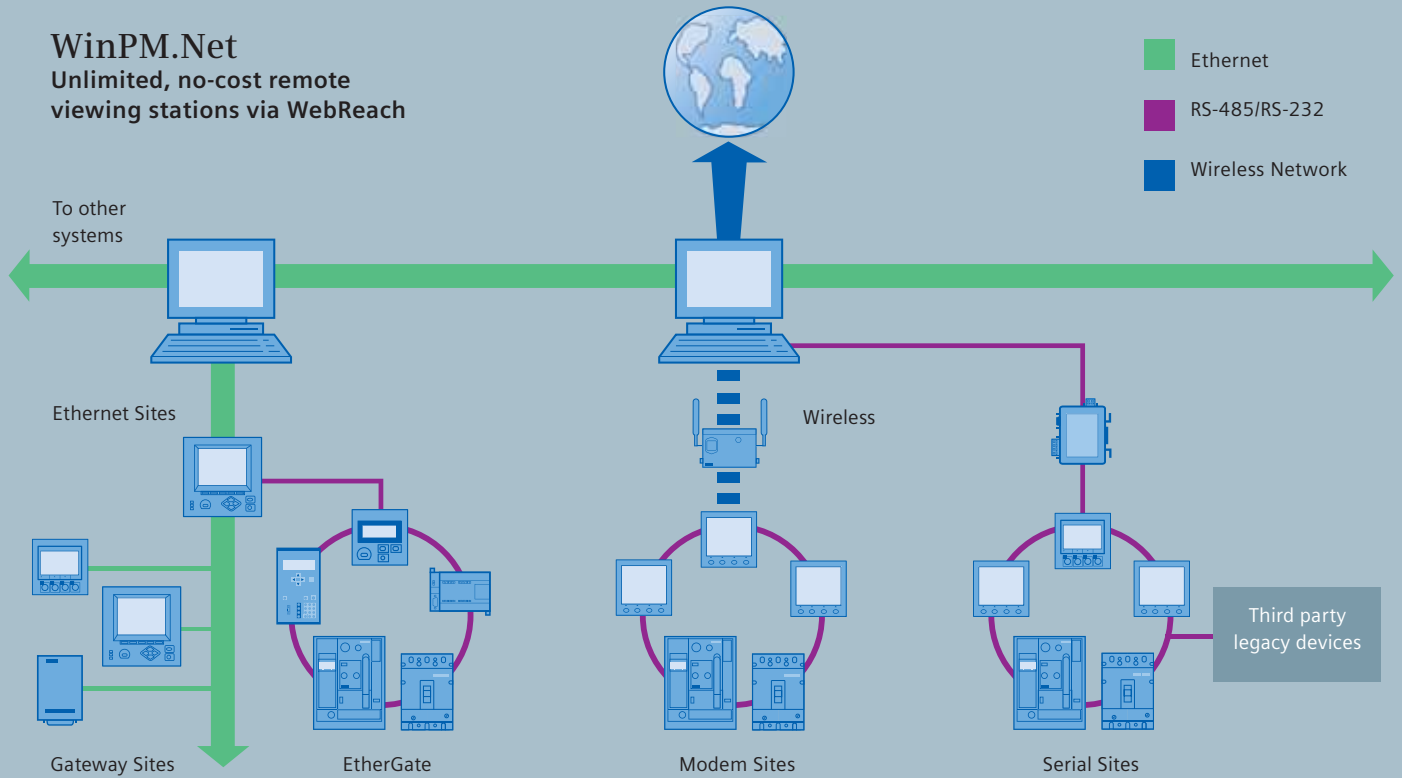
- Your Internet Explorer® web browser is now a window to the power management system. WebReach clients provide all the same functionality as a full client, but with no control ability.

### Data acquisition

- Gather data via the internet, serial, modem, or Ethernet links
- Store historic and event data in a networked ODBC-compliant database
- Integrate metering of electricity, gas, water, steam, air, and more
- Interface to third party hardware and software through Modbus RTU, Modbus TCP, Ethernet, OPC DDE and XML

## WinPM.Net

Unlimited, no-cost remote viewing stations via WebReach



### Monitoring

- Use your computers standard web browser to display the WinPM.Net graphics, logged data, real-time data, alarms, trends without any software loaded on the computer
- Customize graphics for alarms, status indicators, control triggers, and facility views
- Examine waveform overlays, odd/even harmonics, THD, K-factor, crest factor, vector diagrams, and symmetrical components
- Receive alarms via e-mail, cell phone, PDA or other wireless devices

### Modbus device support

- WinPM.Net can read data from any third party Modbus/RTU or Modbus TCP device
- Integrate devices from many major manufacturers

### Analysis

- Generate power quality, energy, billing and load profile reports based on events or schedules
- Correlate and categorize sequences of events to within one millisecond
- Analyze disturbances by plotting waveforms, and ITIC (CBEMA) curves

### Control

- Initiate setpoint and event driven control schemes from multiple devices
- Automatically perform load shedding, generator startup, or relay control
- Implement distributed control in response to interruptible rates or real-time pricing
- Breaker remote



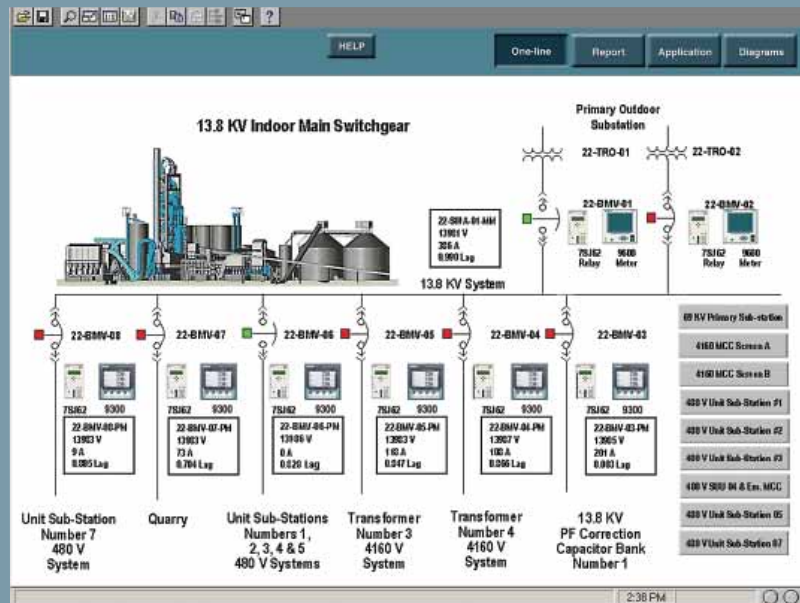
WinPM.Net 7SJ64 Relay Control Screen



Custom Campus Monitoring Screen



## WinPM.Net — customizable graphics screen

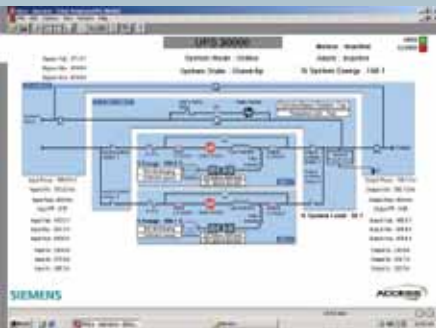


Customizable graphics capabilities are included in WinPM.Net at no additional charge.

WinPM.Net standard components include:

### Custom graphical interface

WinPM.Net provides a comprehensive graphics utility as standard to build and edit any graphical screen whether it is a standard screen or a customized one. These custom screens can display real-time and historical data, alarms, status indications, meter, relay and third party equipment information.



Third Party UPS Screen

### Powerful math, logic and control

Aggregates data from multiple sources, analyzes it and initiates coordinated actions based on the results. Perfect for demand control, cost allocation, and power quality.

### Reporting tools

Produces load and energy profile, (per shift or period over period comparison) cost allocation, power quality, EN50160 and IEC61000-4-30 compliance and custom reports in Excel and HTML formats as standard.

### Device configuration

Lets you graphically configure and customize devices and WinPM.Net across your network.

### Database management

Installed with WinPM.Net is an SQL Light ODBC compliant database that allows immediate logging of data up to 4meg in size. Larger systems can utilize a full SQL database for long term data storage if required. Logged data is time stamped to +/- 16 ms with accurate meter synchronization or greater accuracy can be achieved using GPS. The software comes with OPC DA Client as standard and OPC DA Server as an option. Further exportability can be achieved through the use of the optional PQDIF Exporter.

### Firmware upgrade

Updates the operating software inside your devices over the network whenever new versions are available.

### WinPM.Net networks

Devices are grouped into "sites" based on their physical or logical locations and communication links. They offer:

- Sequence of events recording
- Load profiles
- Power quality data
- Alarms and control
- Breaker status and control
- Revenue accuracy
- PLC/RTU capabilities
- Simultaneous multi-protocol communication

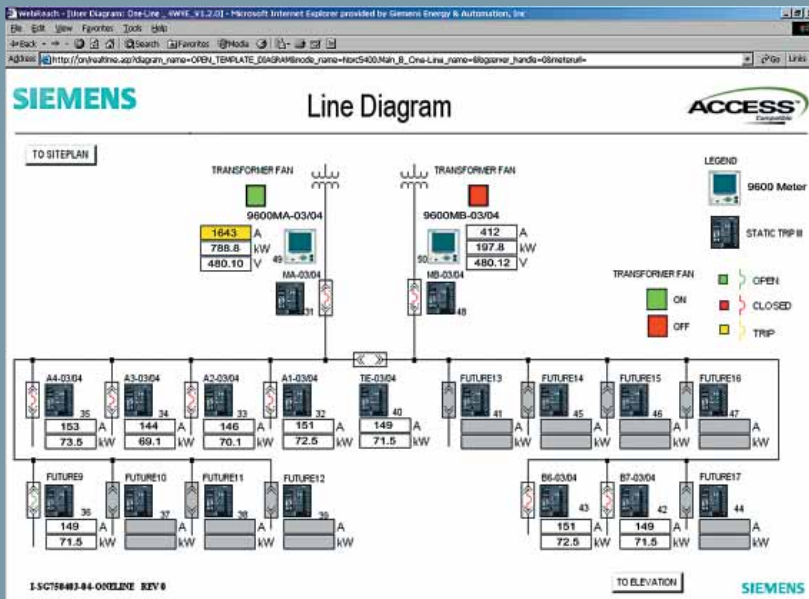
### Serial connectivity

Support for basic RS-485 Modbus RTU communications from any device is provided in WinPM.Net. A serial RS-485 to RS-232 converter will be needed and the serial RS-485 wire can be run up to 4000 feet with up to 32 devices on one string.

### Ethernet connectivity

A WinPM.Net system can be deployed on any standard Ethernet TCP/IP network for fast transmission of data from any Ethernet device tied to the network. These devices can be locally or remotely





One-Line Diagrams are easy to create for meaningful visualization of system and component status and control



connected using the plants WAN network. Using the existing Ethernet network provides efficient use of resources and allows visibility to the WinPM.Net system by anyone on the network through their computers Internet Explorer screen.

#### Modem connectivity

Data can be retrieved via modem from remote sites through one-time or scheduled dial-outs, or in response to a meter's alert signal. Modem pooling provides for efficient use of available resources and redundancy from equipment failure.

#### Gateway connectivity

The Gateway ability of the Siemens advanced meters allows a user to connect multiple serial devices on one RS-485 daisy-chain communications wire to the ethernet by using one meter as the gateway or RS-485 to Ethernet converter. This allows the WinPM.Net software to communicate to multiple devices using one IP address. This ability reduces the amount of IP Addresses required by the WinPM.Net system, thus reducing server space requirements.

#### Web deployment

Users can gain access to all the advanced features of WinPM.Net through standard web browsers. Full WinPM.Net functionality

can be delivered over the internet using Microsoft Terminal Services or "view only" functionality using their Internet Explorer screen.

#### GPS time synchronization

WinPM.Net allows easy integration of common GPS Time synchronization systems. This provides a precise 1 ms time stamping for the logged data, which allows detailed sequence-of-events and power quality analysis.

#### WinPM.Net compatible devices

The ability of the WinPM.Net software to connect to any Modbus RTU, Modbus TCP, Seabus and more devices provides the ability to tie in a large array of devices. The complete backwards compatibility for older Siemens devices means you can upgrade your monitoring system without the need to replace all the existing devices, saving time and money.

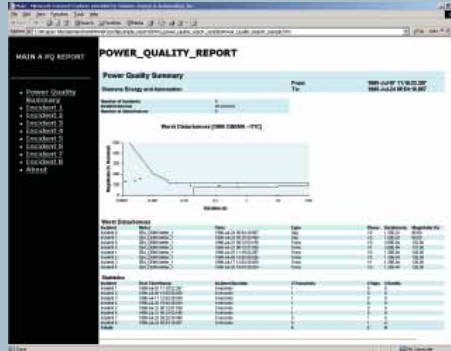
Typical devices connected to the system include:

- Siemens meters – PAC3100, PAC3200, PAC4200, 9340, 9360, 9510, 9610 and 9510-ADR
- Siemens Med. Voltage Relays – 7JS64/63/62/61, 7SJ602, and 7UT61 via Modbus

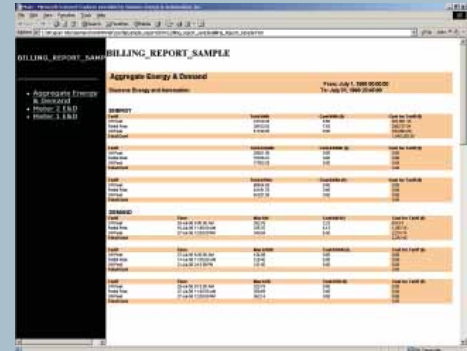
- Siemens Low Voltage Trip units – WL ETU7xx, VL, STIIIc/cp, and SBEC
- Siemens PLC's – S7-200, 300 and 400 via Modbus or ODBC
- Siemens MCC's - Simicode and Simicode Pro / Pro V
- Siemens Legacy Devices – USGS MV relay, SAMMS LV motor protectors, SIMPRO-100, and 9200, 9330, 9350, 9500, 9600, 9700 meters

Common third party devices:

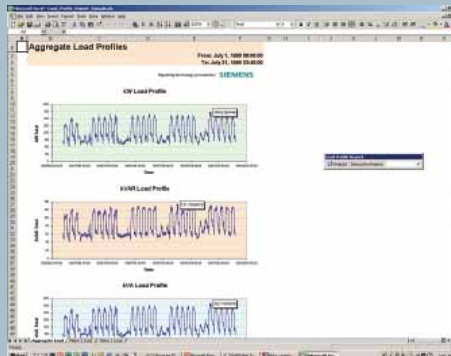
- Liebert products UPS, PDU, STS, etc.
- MGE products UPS, PDU, etc.
- Generator Interfaces with Caterpillar, Cummins and Detroit Diesel
- Veris metering products
- PDI products such as branch circuit monitoring
- Qualitrol transformer temperature monitors
- GE meters – PQM series, EPM series and Multilin relays
- Square D devices – CM2000/3000/4000, PM600/700/800 series, Masterpac breakers and more
- Eaton devices – IQ series 4000/6000/8000 series meters, and Digitrip trip units
- ASCO Group 5 Controllers
- Any other Modbus RTU or Modbus TCP device for real time data
- Branch circuit monitoring with Intellimeter MP636 meters



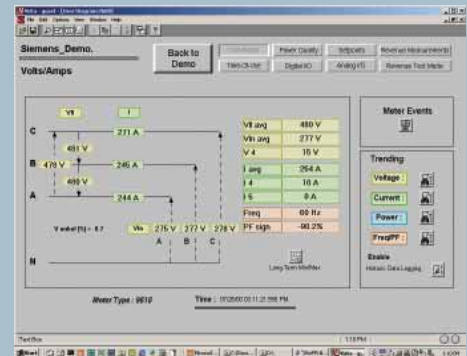
Standard Power Quality CBMA Report



Standard Energy / Billing Report



Standard Load / Trending Report



Standard Device Specific Screen

## Reporting with WinPM.Net

The advanced capability of the WinPM.Net system to obtain data from a large array of devices means the imbedded reporting tool can provide detailed information for billing, power quality, trended data and other utility information in one system.



WinPM.Net gives your desktop access to all your power system information.

### Modbus integration

WinPM.Net can act as a Modbus master or slave. The master writes data to and stores data from any Modbus slave device via the workstation's serial or Ethernet ports. The slave can respond to requests from a master and transmit power system information through the workstation's serial ports.

### Reports

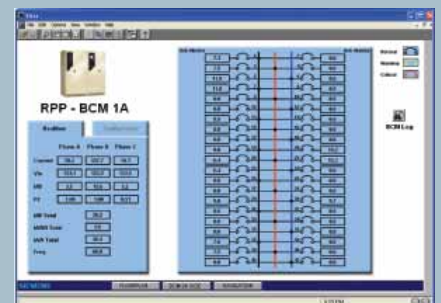
Standard and custom WinPM.Net reports can be generated using an easy to use report wizard interface. The reports can be generated in a Microsoft Excel, HTML and PDF format and can be e-mailed, saved or printed out automatically. Standard reports already setup include; Aggregate energy and demand (billing), load profiles, IEC50160 and IEC61000-4-30 compliance report and detailed power quality reports with waveforms and harmonic analysis.

They help you:

- Allocate costs to individual areas and identify expensive processes that need attention
- Compile historic trending data to load circuits at higher levels and run systems near rated tolerances
- Create models of daily electricity usage so you can distribute loads and avoid demand peaks
- Verify your power system's compliance with EN50160 and IEC61000-4-30 power quality standards
- Energy period over period reports compare a measurement from multiple devices over specified aggregation periods (e.g. this week vs. the same week from the previous month)
- Energy Usage by Shift report compares a measurement from multiple devices for specified time periods (or shifts)
- Verify power quality for contracts between energy suppliers and consumers

## WinPM.Net Integration

WinPM.Net supports Modbus RTU, Modbus TCP, ION, XML, and OPC, FTP, and PQDIF compliant systems, so you can unify your diverse operations into one system. Interface to other energy management software, or include transducers, PLCs and RTUs in a WinPM.Net network. OPC can extract values from other software databases then combine these values with up-to-date readings from WinPM.Net to perform real-time calculations.

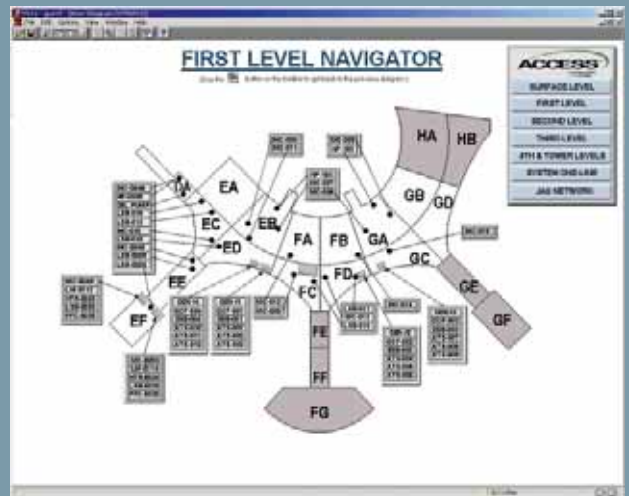


Common RPP - BCM Screen









**Custom diagrams**

Select any one-line diagrams, photos, animation, site plans, equipment elevations or maps that help you understand the power monitoring system.

**Breaker/system status indicators**

Display the current status of breakers, motors or any device. See a transformer change color to indicate over-temperature. Watch a switch change when you press a trigger button.

**Power quality analysis**

Overlay waveforms to correlate phase-to-phase relationships between voltages and currents and cascading failures. View several seconds of consecutive waveforms using cursor control and zoom options. Plot transients, surges, and sags on ITIC (CBEMA) curves. Provide detailed analysis of the fault with the Fault Directional tool that provides an indication of where the fault occurred, line or load side, from the Siemens 9610 meters

**Generate trend graphs**

Interpret data using analyses that are easy to understand at a glance. Watch the KW load change over a month, a week, or during production changes for both real-time and historical data.

**Scalability**

WinPM.Net offers easy, cost-effective, and fast system expansion. The system grows as your needs grow. Add one piece at a time, at your own pace, within your own budget.

Flexibility of the software allows you to choose newer, faster, and lower-cost devices as they become available, while still maintaining your original investment.

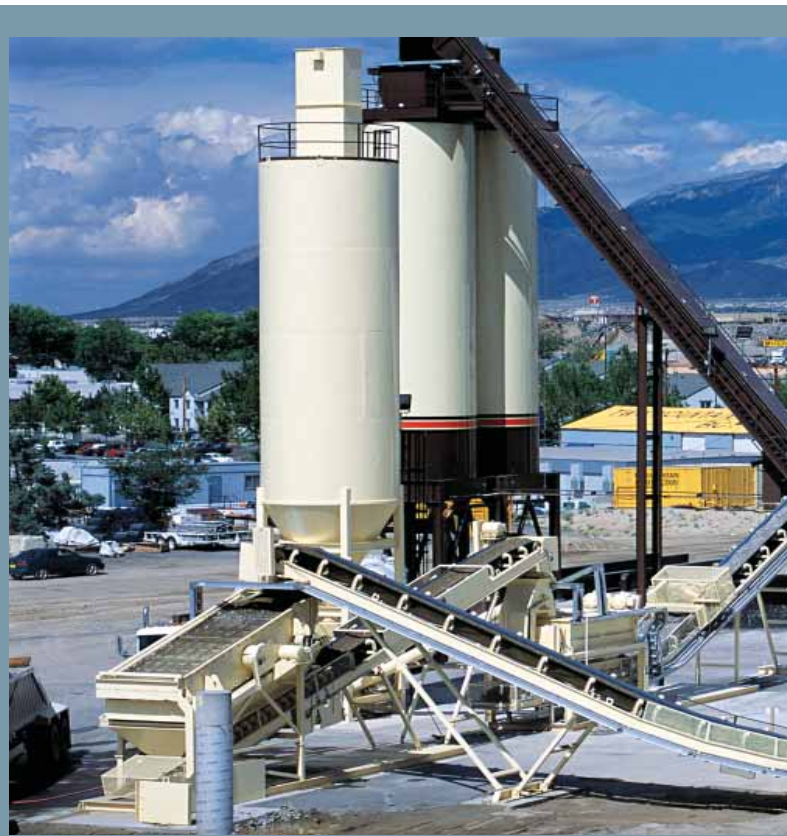
This data sheet describes only a few of the capabilities that WinPM.Net offers. Some applications may require third party software or configuration assistance.

Contact your local representative for a WinPM.Net demonstration.

**Custom alarms sent to your desktop or remote**

Display alarm messages that are designed specifically for a fault or piece of equipment. Access these alarms from your desktop, remote computer or through a web accessible device like a cell phone or PDA. This feature provides a fast method for retrieving alarms and acting on the situation without sitting at a computer.





## Ordering options

WinPM.Net is available in packages designed to meet almost any system or budget. It can be licensed to support as few as five devices to many hundreds of devices, and can present the information to as many users as required. With the included Web Reach remote client feature, your system is extended to everywhere you need it at no additional cost. Additional configuration/client copies can be purchased separately.

### Pre-configured computers

Siemens can pre-configure computers for you, so they come with Microsoft 32-bit and 64-bit versions of Server 2008, as well as 32-bit versions of Server 2003, Windows Vista (Business, Enterprise and Ultimate editions) and Windows XP Pro server and WinPM.Net already installed. Servers, workstations, or lap-tops are specially chosen for optimal, reliable operation.

### Primary server system requirements

The primary server computer should be Windows Server 2008 certified, according to the hardware compatibility list on the Microsoft website. Windows XP Professional or Windows Vista may be used for stand-alone Primary Server applications with 1-25 networked devices and no WinPM.Net Client computers.

**Number of devices:**<sup>1</sup> 1-25

**Number of clients:** 5 or less clients

**Operating system:**<sup>2</sup> Windows XP Professional or Windows Server 2003

**Minimum hardware requirements:** 2 GHz CPU, 1 GB RAM, 40 GB disk drive

**Number of devices:**<sup>1)</sup> 26-100

**Number of clients:** 15 or less clients

**Operating system:** 32-bit and 64-bit versions of Server 2008

**Minimum hardware requirements:** 2.4 GHz CPU, 2 GB RAM, 2 x 60 GB disk drives

**Number of devices:**<sup>1)</sup> 101-200

**Number of clients:** 15 or less clients

**Operating system:** 32-bit and 64-bit versions of Server 2008

**Minimum hardware requirements:** Dual 2.4 GHz CPU, 4 GB RAM, 2 x 146 GB storage on SCSI RAID-1

All computers or servers must have a CD-Rom drive and it is recommended that a UPS (uninterruptible power supply) and at least 17" or greater monitor be used.

<sup>1</sup> This guideline is based on the number of 9510/9610 meters in an Ethernet network.





### Secondary server

- Contact Technical Services for secondary server requirements

### Ordering information

Software	Order number
WinPM.Net V4.0 CD New (includes 5 Access meter device licenses)	3ZS67100CC400A0
WinPM.Net V4.0 CD Replacement	3ZS67100CC400C0
Device License	
ACCESS 9xxx meter device license limit 6...50	3ZS68120CC400A2
ACCESS 9xxx meter device license limit 51...100	3ZS68130CC400A2
ACCESS 9xxx meter device license limit 101...1000	3ZS68140CC400A2
ACCESS Comp. or Modbus/SeaBus device license limit 1...50	3ZS68220CC400A2
ACCESS Comp. or Modbus/SeaBus device license limit 51...100	3ZS68230CC400A2
ACCESS Comp. or Modbus/SeaBus device license limit 101...1000	3ZS68240CC400A2
Add Ons	
WinPM.Net Vista Client license limit 1...50	3ZS67220CC400A2
WinPM.Net OPC Server license	3ZS67520CC400A2
WinPM.Net SQL 2005 Base CPU license	3ZS67300CC400A0
WinPM.Net SQL 2005 additional CPU license	3ZS67400CC400A0
WinPM.Net PQDIF Exporter Module license Option	3ZS67600CC400A0
Allows remote configuration of base WinPM.Net software. Note: WinPM.Net software will support unlimited view-only client access when using IE5.0 (SP2) or higher. Excel is required for Reporter. Outlook is required for e-mailing reports.	
<b>Contact Siemens for upgrade information</b>	



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