

Technical Specifications

CPU	Intel Pentium 4 Mobile 2.2 GHz
Supervisory network	Ethernet 10/100 Mb Single or redundant TCP/IP, routable over LANs Secure access to data
Operating System	Windows NT with hard real-time extensions (VenturCom RTX)
Execution Engine	ControlCore – Cooperative multitasking
Mass storage	64MB Flash disk
Application program	Dual bank 2x5 MB
User tasks	Up to 1024
Execution cycle	5 to 500ms. 20 to 500ms in redundant configurations
Program upload	Available during operation (hot program change)
User variables	192KB Battery backed up non-volatile memory
Real-time clock	Yes
Clock synchronization	From ES/OS or another controller or through GPS
Programming languages	ST, LD, FB available in the Programming Development Environment
Subroutines	Up to 7 levels of call stack – available language to language
I/O capability	Maximum 2048 I/O divided in: Maximum 384 AI Maximum 128 AO Maximum 1024 DI Maximum 512 DO
PROFIBUS DP interface	Two interfaces available per module in redundant configuration - 1 interface available in single configuration
PROFIBUS Tx rate	Max. 12Mbit/s
Power supply	24VDC / 70W. Power good detection included.
Operating temperature	5 to 55°C
Dimensions	388 x 331 x 165 (W x H x D in mm incl. mounting rails)

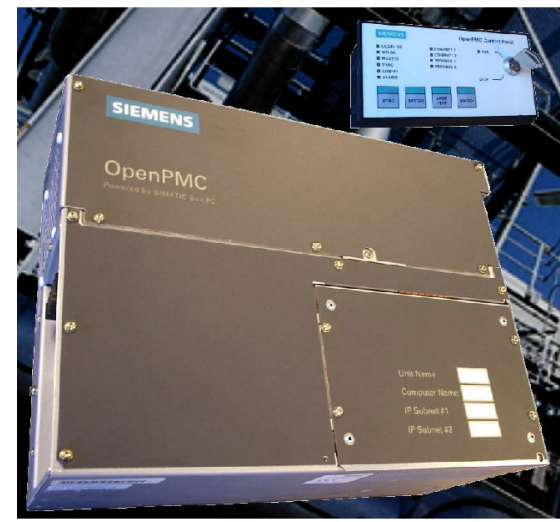
Additional information on the OpenPMC can be found on the Internet:
www.siemens.com/openpmc



The information provided in this brochure contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products.

An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. Availability and technical specifications are subject to change without notice.

OpenPMC The Distributed, Open Control System

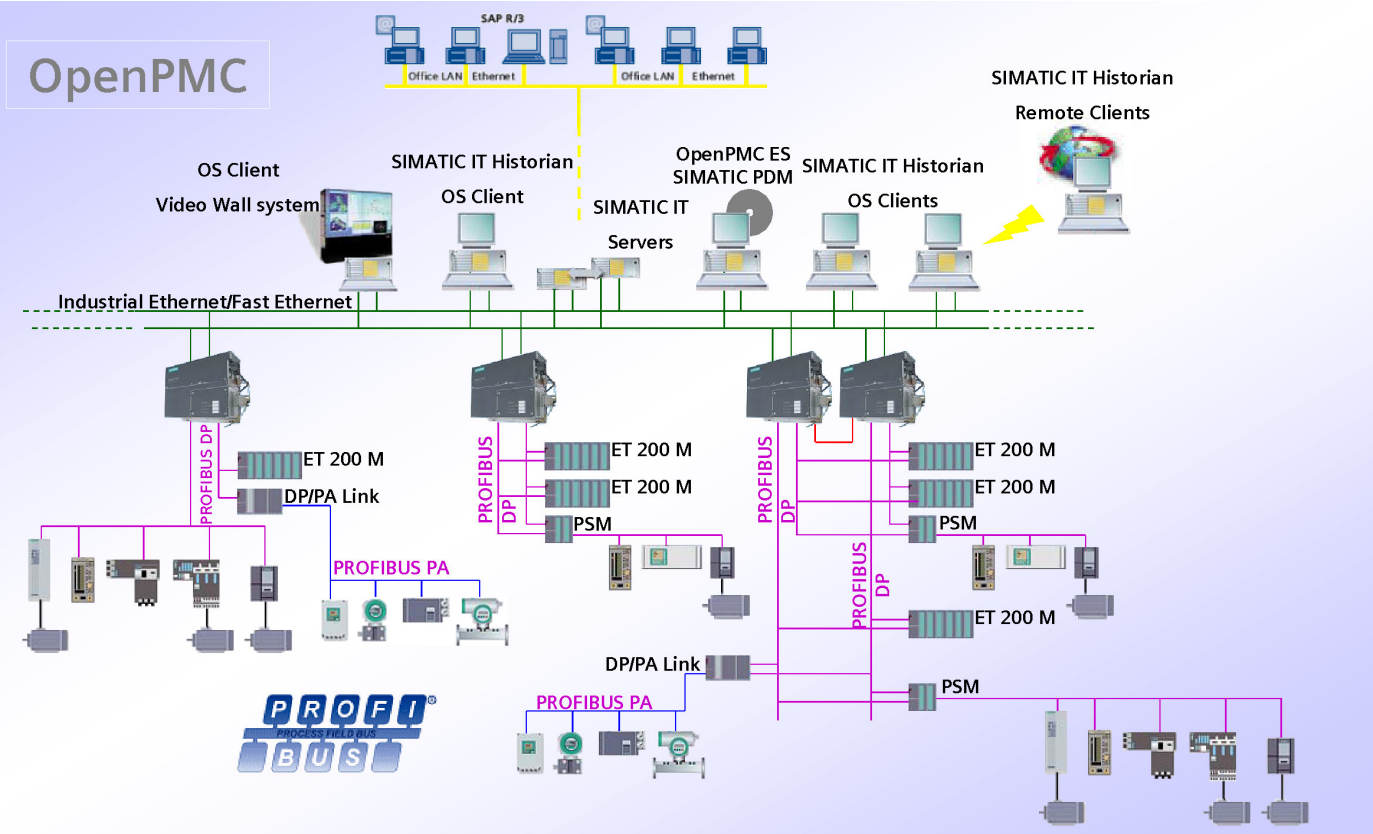


OpenPMC

SIEMENS

OpenPMC

The Distributed, Open Control System



OpenPMC® is a PC based, low cost, high performance Distributed Control System suite, designed for applications where system availability and capability of closing multiple control loops in a short time are key issues.

OpenPMC can be used in optional redundant configuration, in plants and for applications where downtimes are scarcely tolerable. Some OpenPMC application fields are:

- Cogeneration Plants
- Combined Cycles
- Chemical Plants
- Pharmaceutical Plants

OpenPMC is a Client/Server architecture; an integrated DCS suite including shop floor devices, controller hardware, networking and Human Machine Interface. Also, thanks to the common development root, the OpenPMC suite is natively integrated with the

SIMATIC® IT MES Suite.

The OpenPMC suite is entirely integrated thanks to a unique and centralized database of information, so that any data entry at any software level is automatically available from the entire suite.

The OpenPMC system achieves a high degree of reliability by means of redundancies. It is possible to reconfigure the connection to the control network, the controller and the PROFIBUS connection to the field. It is also possible to reconfigure the SIMATIC® IT servers. The bump less switchover from one redundant object to its backup partner is automatically managed by the operating system, without the need of configuration or programming actions from the user.

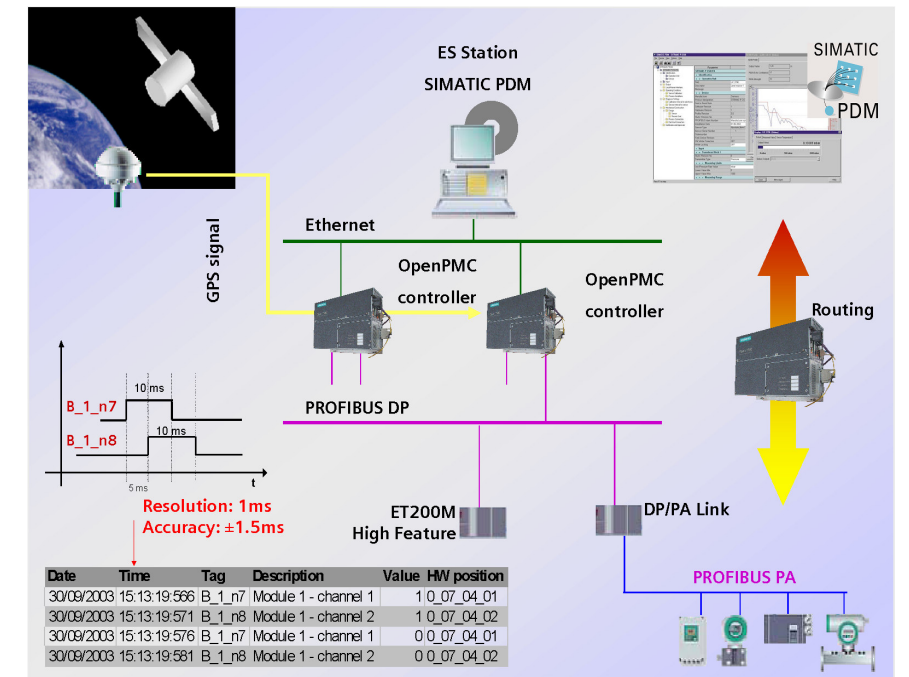
It is possible to replace all redundant components during normal operations. Program changes are allowed without interrupting the process.

Two possible configurations of the controller are available. The controller can be either redundant or simple. When configured for simple operations, it is possible to configure its PROFIBUS interfaces as two independent field bus networks or a single, redundant network.

The OpenPMC controller exploits the PC calculation power providing unparalleled control capability:

Typical motor LD rung	40 µsec.
Typical PID control loop	150 µsec.
200 element array filling	190 µsec.

OpenPMC supports Process Instruments on PROFIBUS PA through the SIEMENS DP/PA link, a gateway which interconnects PROFIBUS-DP and PA while adapting the data transmission rates. Using the standard SIMATIC PDM software, it is possible to configure, parameterize, commission and maintain all PA devices from the control room. Routing from Ethernet to PROFIBUS DP and PA is performed through the OpenPMC controllers, over the first and second PROFIBUS interface and regardless of redundancy. Over 1000 different field device types from more than 150 different manufacturers are integrated with SIMATIC PDM. Device definitions can be imported in PDM thanks to the adoption of the Electronic Device Description Language (EDDL).

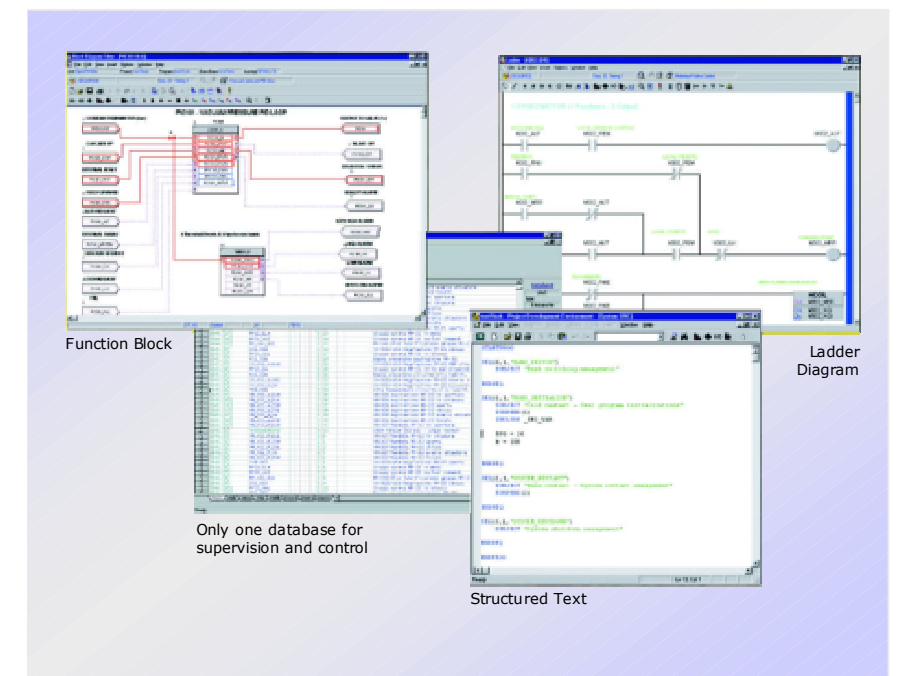


EDDL Distributed Time Stamping of Digital Inputs and PDM routing

OpenPMC supports Distributed Time Stamping of Digital Inputs with 3ms resolution. The detection of changes in the state of digital input signals and the assignment of time information is automatically performed by the OpenPMC system. The Time Stamping function can be distributed over multiple PROFIBUS lines and multiple controllers. The time-alignment between controllers is managed through GPS.

Possible applications include:

- Accurate time information when detecting a problem in a processing plant. With time stamps, it is possible to identify signals that indicate the cause of the failure of a unit.
- Analysis of interrelationships within a plant
- Detection and reporting the sequence of time-critical signal changes



Configuration Environment overview