

# PAC Machine Edition 10

## Integrated Software for PACSystems™ Devices

### Introduction

PAC Machine Edition (PME) provides users with an integrated development environment to configure and maintain control applications. This environment provides the tools to program and configure a wide range of devices such as PACSystems QuickPanel+™ operator interface, programmable automation controllers (PACs), variable frequency drives, servos, and edge devices. Once configuration is done, the same environment provides tools to monitor, troubleshoot, and maintain control applications throughout their lifecycle.

### Integrated Environment

In addition to sharing common development tools, all PAC Machine Edition components — View, Logic Developer, and Motion Developer — share a common database and common objects across applications. This means logic, scripts, and HMI panels all share a common data model that doesn't require duplicating configuration in multiple spots.

### Troubleshoot Across Multiple PLCs

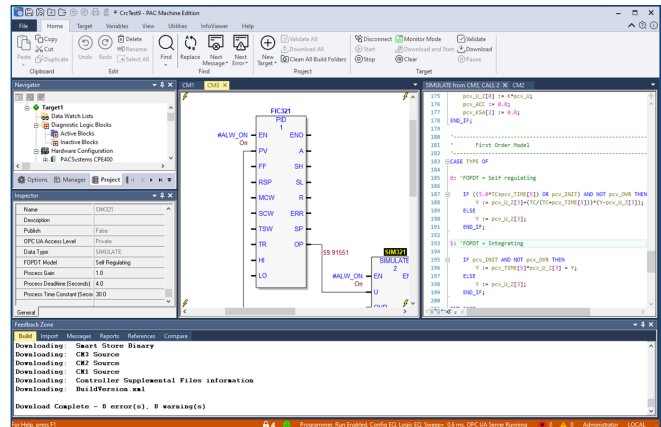
PAC Machine Edition allows the user to open multiple PME sessions on one PC and then connect each session to a separate controller simultaneously. This allows the user to view multiple, operating application programs at the same time, from a single PC.

### Boost Productivity Through Reusable Modules

Combining the best of traditional programming and graphics applications, PME features Object Oriented Reusability to save time during configuration. Users can build applications rapidly with user defined function blocks, user defined types, and control modules. These reusable type definitions allow the development of controls logic to be done in an object-oriented fashion.

### Built-in Change Management Client

Seamless integration with PAC Change Management allows end users to safely configure and manage small to



large applications. Check projects out, make the appropriate changes and then document your changes when checking the project back into the PAC Change Management server. If circumstances make it necessary to roll back to a previous version, then that version can be selected from the PAC Change Management server and made the current version. The roll back is done!

### Flexible Project Structure

PME can support one to multiple targets in a single project, allowing you to scale appropriately based on the application. Therefore, you can have one project for each controller or one project for multiple controllers depending on the needs of the engineering and operations personnel that configure and maintain the projects.

### Versatility

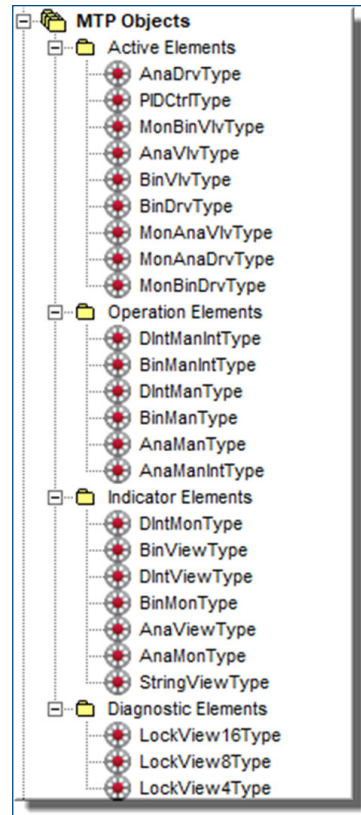
Due to its support of extensive communication protocols, PME excels in a variety of industrial markets, including water and wastewater, oil and gas, power renewables, mining and marine. Built-in diagnostics allow users to display controller status, timestamp data and faults. In addition, Logic Developer provides comprehensive configuration for controllers and I/O. The result is a flexible system that can meet your control needs.

## The Right Programming Languages

PME supports IEC-61131-3 editors including ladder logic, structured text, and function block diagrams. In addition, C blocks can be created and merged easily into PME. This gives you the freedom to use the best language for your application. The sequence function blocks bring the benefits of sequential function charts into the function block diagram editor allowing equipment control and its associated sequencing to be merged into one editor.

## Module Type Packages

Modularization is important to facilitate flexible manufacturing and to accelerate the construction and planning of plants. PME enables modular automation by providing a library of data objects with interfaces that semantically define the data to be exchanged between equipment controlled by a PACSystems controller and a process orchestration layer (POL) per the VDI/VDE/NAMUR 2658 specification. The library is realized as a set of function blocks each with an OPC UA interface that forms the data object to be exchanged with the POL. The POL coordinates the plant level control by issuing commands and receiving state information by means of the data objects. PME can export the definition of data objects used by a single controller target as a Module Type Package that can be imported into a POL such as Emerson’s DeltaV.



Feature	Benefit
<b>Single Toolchain</b>	The entire automation portfolio is programmed, configured, and maintained by a single toolchain
<b>Fully Integrated Development System</b>	Allows building HMI panels and controls logic in one integrated development environment
<b>Hardware Configuration</b>	Configure controller and I/O
<b>Control Logic</b>	IEC-61131 compliant
	Structured text, relay ladder diagrams, function block diagrams, native C blocks support
<b>Object Oriented Reusability</b>	Build applications rapidly with preconfigured objects from the Tool Chest, a storage system for objects including their associated logic or HMI elements and data structures
<b>Built-in Diagnostics</b>	Allows users to display controller status, timestamp data and faults
<b>Common Data Base</b>	Improved productivity with share tags across multiple targets
<b>Common Tool for Control and Visualization</b>	Simple integration for asset management
<b>Multiple Sessions</b>	Increased system uptime by reducing commissioning time and debugging
<b>PROFINET Integration</b>	Fast & simple configuration and diagnostic of distributed I/O networks
<b>Supported Communication</b>	EGD, SRTP, Modbus, DNP3, and OPC UA (Non-Transparent Server Redundancy) among others

## System Requirements

### Supported Operating Systems

Only 64-bit versions of the following operating systems are supported. 32-bit operating systems are not supported.

- MS Windows Server 2016
- MS Windows Server 2019
- Windows 10
- Windows 10 IoT Enterprise
- Windows 11

### Computer Hardware Recommendations

The minimum processor and memory should be comparable to:

- Intel Core i5 with 8 GB RAM.
- AMD FX or Phenom II X6 with 8 GB RAM

The recommended processor and memory should be comparable to:

- Intel Core i5 with 16 GB RAM.
- AMD Higher FX or Phenom II X6 with 16 GB RAM

## Licensing Options

When ordering PAC Machine Edition 10, the Key Type must be selected to be either Leased Key (PAC License Server), Computer Locked (Software Key), or Hardware (M7 or Legacy).

### Leased (PAC License Server)

The Leased Key enables users to lease a license from a centralized server. The centralized server is called the PAC License Server. The PAC License Server must be installed on a physical machine. The client that runs PAC Machine Edition can be a virtual machine managed by either a type 1 or type 2 hypervisor or a physical machine.

### Computer Locked (Software Key)

The license is locked to a specific physical computer. The license can be used by PAC Machine Edition that is running on that computer or on a guest virtual machine managed by a type 2 hypervisor hosted on that computer.

### Hardware (M7)

The license is bound to an M7 USB hardware dongle. The license can be used by machines that have access to the USB drive.

## Product Selection Guide

PAC Machine Edition has four separate product configurations that can be selected when ordering. The following table lists the products and the features that are included and, where applicable, options for the number of points and the inclusion of the View OPC Driver.

Products	Features												Part Number	
A6500-UM	PACSystems RX3i & RX7i	PACSystems RSTI-EP	Series 9030 & Series 9070	QuickPanel & QuickPanel+	VersaMax	RIO VersaMax & 90-30	View Runtime	View Development	PC Control Runtime	PC Control Development	View OPC Driver	Module Type Packages	View and PC Control Points	
ProPlus Development Suite	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	700 (standard) 1500 (O), 8000 (O), 35000 (O)	ME10MBPP001-O
Professional Development Suite	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	O		700 (standard) 1500 (O), 8000 (O), 35000 (O)	ME10MBP001
Lite Development Suite		✓		✓	✓	✓		✓		✓			None	ME10MBL001
QuickPanel CE Development Suite				✓		✓		✓		✓			None	ME10CSCEMK

- Included in product. O – Optional feature (selection made in configurator)

*\*Professional and ProPlus Development Suites come with 700 points. There is an option to increase the points to either 1500 or 8000 or 35000. The 35000 option is applicable to View applications that run on a PC, not a QuickPanel+. The View OPC Driver can be ordered as an option for the Professional Development Suite. It is included with ProPlus Development Suite.*

## Ordering Information

Part Number	Description
ME10CSCEMK	PAC Machine Edition QuickPanel (CE) Development Suite
ME10MBL001	PAC Machine Edition Lite Development Suite
ME10MBP001	PAC Machine Edition Professional Development Suite
ME10MBPP001-O	PAC Machine Edition ProPlus Development Suite

**Americas Support – Technical and Commercial**

Phone: 1-888-565-4155 or 1-434-214-8532 (if toll free 800 option is unavailable)

Email for Technical Support: [support.mas@emerson.com](mailto:support.mas@emerson.com)

Email for Commercial Support: [customercare.mas@emerson.com](mailto:customercare.mas@emerson.com)

Primary language of support: English

**Europe, Middle East, & Africa Support – Technical and Commercial**

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(if toll free 800 option is unavailable or dialing from a mobile telephone)

Email for Technical Support: [support.mas.emea@emerson.com](mailto:support.mas.emea@emerson.com)

Email for Commercial Support: [customercare.emea.mas@emerson.com](mailto:customercare.emea.mas@emerson.com)

Primary languages of support: English, German, Italian, Spanish

**Asia Support – Technical and Commercial**

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Email for Commercial Support Asia: [customercare.cn.mas@emerson.com](mailto:customercare.cn.mas@emerson.com)

Primary languages of support: Chinese, English

**Support Website:** [www.Emerson.com/IAC-Support](http://www.Emerson.com/IAC-Support)

**Home Website:** [www.Emerson.com/PACSystems](http://www.Emerson.com/PACSystems)

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