PAC Productivity Suite

CONFIGURATION GUIDE

EMERSON

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In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.

⚠ CAUTION

Caution notices are used where equipment might be damaged if care is not taken.

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Acronyms

PPS   PAC Productivity Suite

EGD   Ethernet Global Data

Definitions

PPS Software Element – A software component within PAC Productivity Suite that provides specific functionality and that can be distributed onto PC based hardware based on the requirements of the application. PPS software components include Engineering Workstation, Application Server, and Operator Console.

I/O Points – The number of field I/O that an application uses to sense and actuate process equipment. PPS product structuring and pricing is based on the number of I/O points that a customer has in their application. This quantity does not necessarily equate to the number of SCADA points.

Contents

Section 1: Overview

PAC Productivity Suite (PPS) is an integrated control system for continuous, discrete, hybrid and batch applications. It provides customers with the integrated tools they need to design, implement, operate, and maintain a process control system.

PPS is comprised of hardware, software, and often services. This document describes the software elements of PPS and how to order them. There are no specific PPS part numbers for hardware, PPS hardware should be ordered using regular hardware part numbers.

PPS is sold based on I/O counts of 100, 250, 500, 1000, 2000, 3000, 5000, and 5000+. It combines the PACSystems programmer software with CIMPLICITY HMI/SCADA to provide unmatched solution

Section 2: Software Elements of PPS

PPS is made up of three software elements: Engineering Workstation, Application Server and Operator Console. Each software element is a functional entity that can be combined to run on one computer or distributed onto multiple computers depending on the requirements and size of the application.

Figure 1: Software Elements of PPS
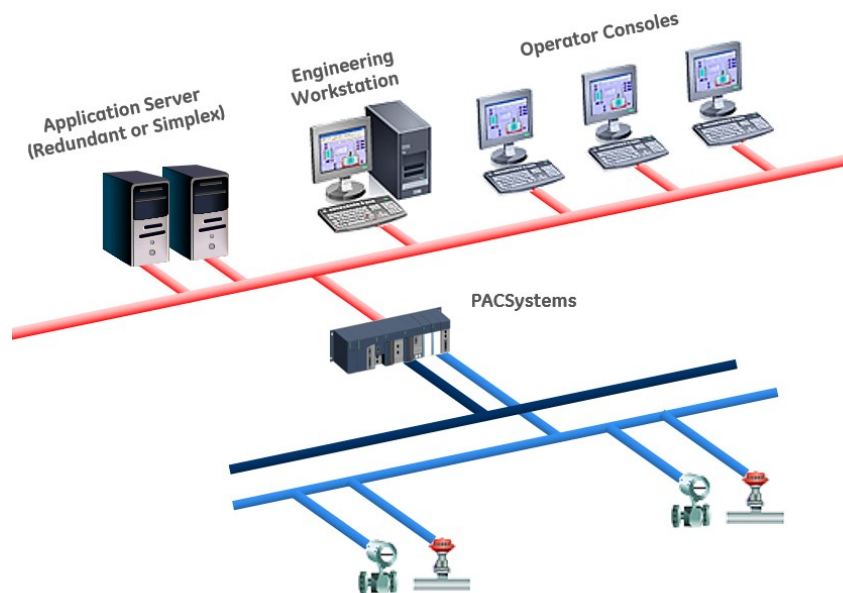
2.1   Engineering Workstation

The Engineering Workstation (EWS) software element is used to develop and configure the system. It includes a SCADA development/runtime server, PPS Logic Developer, and EGD system tools. Included in the SCADA system are PPS mimic and faceplate objects that allow consistent and efficient development of HMI screens. The EGD system tools includes a configuration server that provides a common database between the PPS Logic Developer and the SCADA development server.

Figure 2: PPS EWS
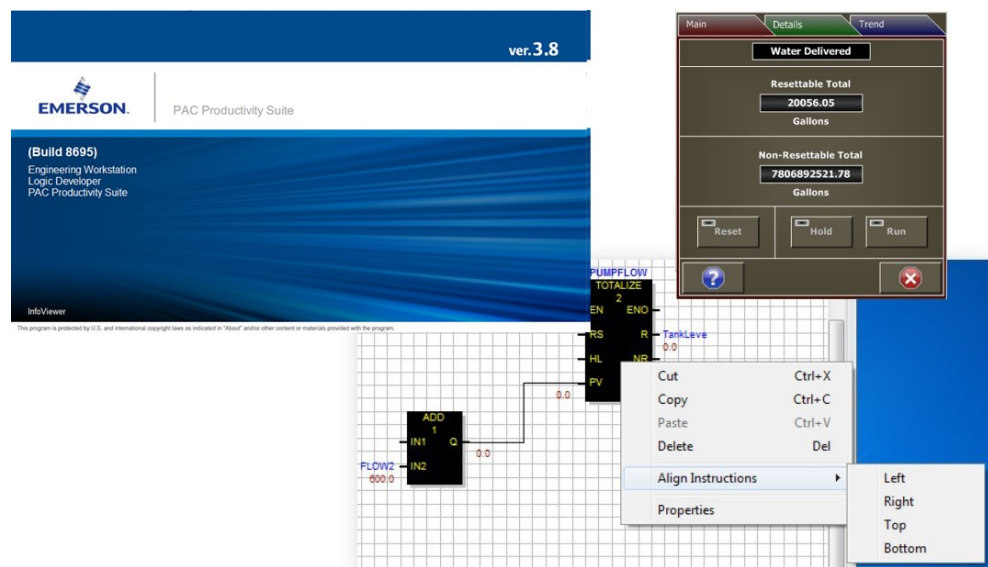
2.2   Application Server

The Application Server serves as the CIMPLICITY SCADA server and communicates to the PACSystems controller(s) during runtime. The Operator Consoles receive data from the Application Server (CIMPLICITY) and do not communicate directly with the controller(s). The Application Server also allows 3rd party device connectivity with PPS. The option to have redundant CIMPLICITY Application Servers is included in all offerings except the 100 I/O Point System.

To display 3rd party device data in PPS visualization software, users will use OPC or native drivers in the Application Server. The Application Server will collect data from the 3rd party devices and serve the data to the Operator Consoles.

2.3   Operator Console

Operator Console (OC) software element is used by operators to monitor and control the process.

Section 3: PPS Base Bundle

PPS is a great offering because it is packaged to offer customers value and flexibility. The packaged offering is called the PPS base bundle. It is typical to buy one base bundle per system and then, if necessary, add other software elements to it.

3.1 The Software Elements in Base Bundle

The PPS base bundle includes the following software elements:

- 1 x Engineering WorkStation (EWS)

- 1 x Operator Console (OC)

- 1 x Application Server, (APP)

- 1 x Redundant Application Server, if redundancy is required (APP)

When ordering PAC Productivity Suite Standard Edition for 250 or more I/O, these functions can be split into multiple activations (up to 3 activations with an option for a Redundant Application Server activation).

PAC Productivity Suite Standard Edition 100 I/O Point is for a single node system. Only one activation is allowed and redundant servers is not an available option. Additional Operator Console, Engineering Workstation, or Application Server can be purchased.

Section 4: Quoting PAC Productivity Suite

There are some basic things you will need to know about your customer's application to quote a PPS system. The key ones are the type of controllers they will use, the software architecture, the number of I/O points required , and the software redundancy requirements.

4.1   Determine I/O Count

PPS is sold based on the number of I/O points. We offer 8 different I/O count options; they are 100, 250, 500, 1000, 2000, 3000, 5000, and 5000+.

The following defines what is an I/O point in PPS:

- Each wired I/O to a local or remote rack. If you have 200 local I/O (analog and/or discrete) and 2000 remote I/O (analog and/or discrete), you have a total of 2200 I/O points.

- Each Fieldbus device (Foundation Fieldbus, PROFIBUS, or others) connected to the system, regardless of the number of internal variables used. If you have 300 Foundation Fieldbus instruments and 200 PROFIBUS instruments, you have a total of 500 I/O points.

Note: Internal variables or registers are not counted as I/O points in PPS.

It is important to realize that the number of SCADA tags ≠ I/O Points. Typically, each I/O point will generate several SCADA tags.

4.2   Define the Architecture

You must work with your customer to determine the architecture of the system. PAC Productivity Suite provides the flexibility for the customer to choose how to architect their system and the number of computers it will run on.

A PPS base bundle provides the ability to run one Engineering Workstation, one Operator Console, and one Application Server (plus redundant Application Server if requested).

Starting with PPS 3.8, Emerson software licensing is used. Part numbers will indicate version, type and number of activation codes required. An activation code is required per PPS component (Engineering Workstation, Operator Console, Application Server). As an example:

PS38PP00500C3

- "PS" stands for PAC Productivity Suite ,

- "38" represents version of product (3.8 in this example)

- "PS" stands for Standard Edition.

- "00500" stands for 500 I/O points, options are 100, 250, 500, 1000, 2000, 3000, 5000, +5000.

- "C" is based on CIMPLICITY.

- "3" indicates number of activation codes required, in this example, all components are needed (an Engineering Workstation, Operator Console, and Application Server).   PPS with 100 I/O point is standalone system, only 1 activation code can be selected.

4.3   Determine Software Redundancy Requirements

PAC Productivity Suite provides redundant Application Server support (except for 100 I/O) for CIMPLICITY visualization. You can obtain an additional activation code for a redundant Application Server by adding an "R" to the part number. (ex. PS38PS00500C3R).

Section 5: PPS Part Numbers

5.1　　　Base Bundle

Catalog Number	Description
PS38PS00100C1	PPS v3.8 PPS Standard 00100 Points CIMPLICITY 1 Activation
PS38PS00250C3R	PPS v3.8 PPS Standard 00250 Points CIMPLICITY 3 Activation
PS38PS00500C3R	PPS v3.8 PPS Standard 00500 Points CIMPLICITY 3 Activation
PS38PS01000C3R	PPS v3.8 PPS Standard 01000 Points CIMPLICITY 3 Activation
PS38PS02000C3R	PPS v3.8 PPS Standard 02000 Points CIMPLICITY 3 Activation
PS38PS03000C3R	PPS v3.8 PPS Standard 03000 Points CIMPLICITY 3 Activation
PS38PS05000C3R	PPS v3.8 PPS Standard 05000 Points CIMPLICITY 3 Activation
PS38PS05001C3R	PPS v3.8 PPS Standard 05000+ Points CIMPLICITY 3 Activation

Note: PPS 100 I/O is for single node PPS system only. No additional activation code or redundant Application Server key is allowed.

Note: PPS CIMPLICITY can have redundant Application Servers, excluding the 100 I/O system, as part of the base system by appending the part number with an "R".

5.2　　　Additional Engineering Workstations

Catalog Number	Description
PS38EC	PPS v3.8 Engineering Workstation – CIMPLICITY

5.3　　　Additional Application Servers

Catalog Number	Description
PS38AC	PPS v3.8 Application Server – CIMPLICITY

Note: PPS CIMPLICITY Application Server has Host Redundancy option included.

5.4 Additional Operator Consoles

Catalog Number	Description
PS38OC	PPS v3.8 Operator Console – CIMPLICITY

Note: PPS CIMPLICITY Operator Console is a Development Viewer.

5.5 Optional EGD OPC Server

Catalog Number	Description
PS38SI	PPS v3.8 EGD OPC Server

Section 6: PPS Media

Emerson delivers software electronically by providing access to the Emerson cloud to download the software. Nevertheless, if physical media is required, it can be purchased separately.

Catalog Number	Description
Media	Media for PPS v3.8

General Contact Information

Home link: http://www.emerson.com/industrial-automation-controls

Knowledge Base: https://www.emerson.com/industrial-automation-controls/support

Technical Support

Americas
Phone: 1-888-565-4155
            1-434-214-8532 (If toll free option is unavailable)

            Customer Care (Quotes/Orders/Returns): customercare.mas@emerson.com
            Technical Support: support.mas@emerson.com

Europe
Phone: +800-4444-8001
            +420-225-379-328 (If toll free option is unavailable)

            Customer Care (Quotes/Orders/Returns): customercare.emea.mas@emerson.com
            Technical Support: support.mas.emea@emerson.com

Asia
Phone: +86-400-842-8599
            +65-6955-9413 (All other Countries)

            Customer Care (Quotes/Orders/Returns): customercare.cn.mas@emerson.com
            Technical Support: support.mas.apac@emerson.com

Any escalation request should be sent to: mas.sfdcescalation@emerson.com

Note: If the product is purchased through an Authorized Channel Partner, please contact the seller directly for any support.

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