

PACEdge

IMPORTANT PRODUCT INFORMATION



Warnings and Caution Notes as Used in this Publication

WARNING

Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use.

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.

Note: Notes merely call attention to information that is especially significant to understanding and operating the equipment.

These instructions do not purport to cover all details or variations in equipment, nor to provide for every possible contingency to be met during installation, operation, and maintenance. The information is supplied for informational purposes only, and Emerson makes no warranty as to the accuracy of the information included herein. Changes, modifications, and/or improvements to equipment and specifications are made periodically, and these changes may or may not be reflected herein. It is understood that Emerson may make changes, modifications, or improvements to the equipment referenced herein or to the document itself at any time. This document is intended for trained personnel familiar with the Emerson products referenced herein.

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Introduction

PACEdge processing maximizes the value of your data by improving operational reliability, safety, and energy. PACEdge provides all aspects of edge processing and simplifies your IIoT application development, deployment, and administration. All components necessary in the IIoT application lifecycle are brought together in one package to provide a unified interface to decrease your development time and increase your deployable footprint.

This document serves as a resource for users who wish to quickly locate notes about improvements, bugs, or resolved issues, as well as any auxiliary information about the PACEdge software.

Current Release Information

Component	Version Number
PACEdge	3.0.0
Movicon.NEXt Editor Support	4.4 build 824 or newer
Containers	Version Number
MQTT	2.0.22
MariaDBMQTT Explorer	1.0.3
Node-RED	4.1.5.1
InfluxDB	1.12.2
Chronograf	1.10.7
Grafana	12.3.1
Portainer	2.31.3
NGINX	1.28.0
Traefik	3.4.4
Telegraf	1.37.1
TimescaleDB	2.24.0
pgAdmin	9.11.0
Connex/WebHMI	4.4
python/jupyter	3.12
flecs-daemon	4.1.2
flecs-webapp	4.1.2

Related Information

Document Title	Document Number
PACEdge User's Manual	GFK-3178
IPC6010/7010/8010 Quick Start Guide	GFK-3074
CPE400/CPL410 Quick Start Guide	GFK-3196
IPC2010 Quick Start Guide	GFK-3268
PACEdge Secure Deployment Guide	GFK-3197

Field Upgrades

Upgrades are available for download on the Software Orders and Downloads page.

Upgradeable Component	New Version	Part Number	Notes
All PACEdge versions: IPC6010/7010/8010 IPC2010 CPE400/CPL410 RXi2-BP	3.0.0		PACEdge Factory Image install (clean install, no user data retention)
PACEdge 2.3.0 (all HW) PACEdge 2.4.0 (all HW) PACEdge 2.5.0 (all HW) PACEdge 2.6.0 (all HW) PACEdge 2.7.0 (all HW) PACEdge 2.8.0 (all HW) (Free update)	PACEdge 2.9.0	PEv290UpdateUSBUtil.zip PEv290UpdateGMUtil.tgz	Available to download from the Customer Center
PACEdge 2.2.0 (all HW) (Free update)	PACEdge 2.3.0	PEv230UpdateGMUtil PEv230UpdateUSBUtil	Two packages for upgrading from PACEdge version 2.2.0 to version 2.3.0. Upgrade your device using the Group Manager (GM Util) function or a USB (USB Util) stick/Cockpit Navigator.
PACEdge 2.3.0 (CPE400) (For purchase)	No change	IC695ACCTP0-AA	RX3i CPE400 Telemetry Protocol Option
PACEdge 2.3.0 (CPL410) (For purchase)	No change	IC695ACCTP1-AA	RX3i CPL410 Telemetry Protocol Option
PACEdge 2.3.0 (CPE400) (For purchase)	No change	IC695ACCFP0-AA	RX3i CPE400 Facilities Protocol Option

Upgradeable Component	New Version	Part Number	Notes
PACEdge 2.3.0 (CPL410) (For purchase)	No change	IC695ACCFP1-AA	RX3i CPL410 Facilities Protocol Option
PACEdge 2.3.0 (CPE400) (For purchase)	No change	IC695ACCMD0-AA	RX3i CPE400 Multi Drivers Option
PACEdge 2.3.0 (CPL410) (For purchase)	No change	IC695ACCMD1-AA	RX3i CPL410 Multi Drivers Option
PACEdge 2.3.0 (Rxi2-BP, -LP, IPC2010) (For purchase)	PACEdge 2.3.0 + Connex	UPGRADE_CONNEX_T_LPB	Applicable to Rxi2-BP, -LP and IPC2010
PACEdge 2.2.0 (Rxi2-BP, IPC2010) (For purchase)	PACEdge 2.3.0 + WebHMI	UPGRADE_WEBHMI_BP	Applicable to Rxi2-BP, and IPC2010
UEFI	V1.10	N/A	Contact technical support

Important Product Information for this Release

Release History

PACEdge SW Version	Date	Description
3.0.0	May 2026	<ul style="list-style-type: none"> • PACEdge major version new release. Changes: <ul style="list-style-type: none"> ○ New GUI, including GM functionality ○ New Licensing mechanism ○ Online Marketplace and software updates ○ Updated Linux host OS v24.04 ○ New Services container versions ○ Added pgAdmin, MQTT Explorer, Python/Jupyter ○ Removed: MySQL
2.9.0	Aug 2025	<ul style="list-style-type: none"> • PACEdge Security update for Linux
2.8.0	Apr 2025	<ul style="list-style-type: none"> • PACEdge Security update for Linux
2.7.0	Dec 2024	<ul style="list-style-type: none"> • PACEdge Security update for Linux
2.6.0	Sep 2024	<ul style="list-style-type: none"> • PACEdge Security update for Linux

PACEdge SW Version	Date	Description
		<ul style="list-style-type: none"> Removed a feature that allowed the use of the sudo command without a password Added a memory limit for the Docker container log files Fixed an IPC 2010 issue of losing the current time during reboot when NTP servers are not present
2.5.0	June 2024	<ul style="list-style-type: none"> PACEdge Security update for Linux Updated Ansible version in IPC2010 Fixed root path issue when adding an optional Python container Special character \$ is no longer supported in passwords Console access to inside the container via Portainer on IPC2010 is not supported
2.4.0	Apr 2024	PACEdge Security update for Linux OS
2.3.0	Oct 2023	<ul style="list-style-type: none"> Added support for new IPC2010 Industrial PC Added Basic Group Manager functionality Added Security Certificate management functionality Added TimescaleDB database Added phpMyAdmin MySQL manager Added optional Python container Added P4NR OPCUA Node-RED nodes Added Cloud Node-RED nodes Updated various utilities to the new versions
2.2.0	Mar 2023	<p>Added instructions on the following under Restrictions and Open Issues:</p> <ul style="list-style-type: none"> Replacing passwords that have the dollar sign "\$" in them to prevent issues accessing databases and PACEdge applications. ModbusRTU in Node-RED over RS485 2-wire using the built-in serial port is not working. ModbusRTU in Node-RED over RS232 using the built-in serial port is not working PACEdge applications unresponsive after Password Change Password Management utility fails
	Oct 2022	<p>PACEdge v2.2.0 release.</p> <p>Main Updates:</p> <p>Support for Movicon v4.2</p> <p>Updated Node-RED to version v2.2.2</p> <p>Updated Grafana to version v9.0.2</p>

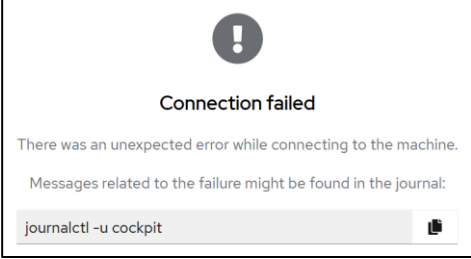
PACEdge SW Version	Date	Description
		<p>Updated Telegraf to version v1.23.2</p> <p>Updated other applications to newer versions</p> <p>Improved PACEdge usability: (simplified password management tool, that now covers all PACEdge applications, OPC UA Port forwarding feature, PACEdge update split into OS and Application updates, PACEdge update utility that now backs up and then restores user data during an update, pre-configured databases in Grafana, Emerson Node-RED nodes, and built-in examples to simplify MQTT, InfluxDB, and MySQL access)</p> <p>The Progea name was changed to Movicon, including use in browser paths and Docker container names.</p>
2.1.1	Feb 2022	<p>Updates, applied via Patch file:</p> <p>Updated Movicon container (Connex, WebHMI)</p> <p>Update to the license. Connex and WebHMI SKUs now enable 3 drivers and support the MQTT protocol.</p> <p>The update allows users to purchase protocol upgrades for CPL410 and CPE400 products.</p> <p>Bug fix in password management utility allows the use of special characters in the password.</p>
2.1.0	Dec 2021	Release of PACEdge version 2.1
2.0.1	Oct 2021	Updates to Restrictions and Open Issues Section: PACEdge container logging mechanism, especially for InfluxDB, will continue to write logs into the disc, eventually filling it up.
2.0.1	Sep 2020	Initial Release

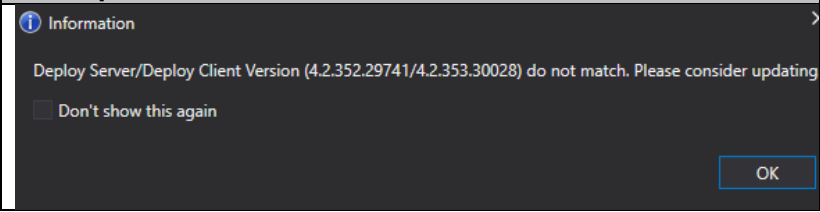
Functional Compatibility

Compatibility Issue	Description
Minimum PACs runtime version (CPL410/CPE400)	Minimum PACSystems CPL410 & CPE400 version 10.15.
Minimum Movicon.NEXt Editor version	Movicon.NEXt Editor version is 4.4 build 824.

Restrictions and Open Issues

Subject	Description
License is corrupted after backup restore (USB)	<p>When restoring a complete PACEdge from the USB backup, the licensing utility is corrupted, resulting in errors when trying to install a valid license. To fix the problem:</p> <ul style="list-style-type: none"> • using Cocpit-> Navigator delete folder (and all subfolders): /home/admin/.hasplm Note: turn on Show Hidden Files in the bottom-right corner. • Using the Licensing page, issue a new HW Fingerprint and email it, as well as the device's serial number and part number, to Emerson support, asking for the new license. • Install a new license.
Not able to enable all the optional services on the CPE400/CPL410/IPC2010	<p>When trying to enable all the services on the CPU and memory-limited platforms, the process takes a very long time or locks up. On weak hardware, enable only the services needed and do not enable both Movicon and Python at the same time.</p>
The Firefox browser continuously reloads	<p>If the Firefox browser gets stuck in the loop of continuous page reloads, hit the browser's refresh button</p>
Restricting disc usage for Linux user operators	<p>PACEdge provides an optional Linux user operator feature that is initially turned off. If the password for the operators' account is set via Cockpit, this feature will be enabled. (Note: Linux users are separate from PACEdge users. For security reasons, it is recommended to keep Linux user operator accounts disabled by either:</p> <ol style="list-style-type: none"> 1) Not setting a password 2) Configuring the operator's account to expire (via Cockpit->Accounts->operators->Options) <p>If PACEdge usage requires user operators in Linux, then restrict how much disc space the user can consume by performing the steps below:</p> <ol style="list-style-type: none"> 1. Open the Cockpit and log in as admin 2. Set the password for the Linux user: operators 3. Open the Terminal and enter the following commands: <ol style="list-style-type: none"> a. <code>sudo mkdir /media/users/</code> b. <code>sudo dd if=/dev/zero of=/media/users/operators.img bs=512K count=200</code> c. <code>sudo mkfs.ext4 /media/users/operators.img</code> d. <code>sudo chown operators: operators /media/users/operators.img</code> 4. Using Navigator, edit the file: /etc/fstab and append the line: <ol style="list-style-type: none"> a. <code>/media/users/operators.img /home/operators ext4 loop 0 2</code> 5. Open the Terminal and enter the following commands:

Subject	Description
	<ul style="list-style-type: none"> a. <code>mount -a</code> b. <code>sudo chown -R operators: operators /home/operators</code>
<p>Cockpit access using Hostname returns an error.</p>	<p>When accessing Cockpit via the hostname (as opposed to IP address), a “Connection failed” error might be displayed. In such cases, please refresh the browser.</p> 
<p>Heavy CPU and memory utilization when upgrading via Navigator</p>	<p>When upgrading PACEdge via Navigator, large files (multiple Gigabytes) need to be copied onto the PACEdge device. CPL410, CPE400, and IPC2010 have relatively weak processors and a lower amount of memory, resulting in heavy memory paging and high CPU load. When performing these operations, expect that it will take some time to copy the files and for the CPU to settle down. Wait until copied files show up in the Navigator window, optionally observe CPU and memory utilization, and give some time to settle down. It could take 15-20 min.</p>
<p>The cockpit shows failing services.</p>	<p>PACEdge is based on a Linux server operating system, which comes with some services that require Internet connectivity. Since PACEdge is frequently installed in networks that do not have internet access, Cockpit might report that some services, such as Network Manager Wait Online, have failed. This is normal and will not degrade PACEdge operation.</p>
<p>Time and Time Zone setting</p>	<p>PACEdge, by default, is configured to get local time and time zone via the NTP protocol. If installed in a network that does not have an NTP server, please verify the time and time zone settings and adjust as necessary. Failure to do so might result in Grafana not showing the data as expected.</p>
<p>Restoring PACEdge from the USB image requires reloading the Movicon project.</p>	<p>When restoring PACEdge from backup on a USB stick, the MQTT Client driver in ConnexT may fail to connect to the MQTT broker. In such a case, reload the Movicon project using Movicon.NEXt Editor.</p>
<p>Movicon.NEXt DeployServer version discrepancy</p>	<p>When deploying a Movicon project, a message stating Deploy Server version discrepancy will appear. Please ignore this message and check the Don't show this again check box.</p>

Subject	Description
	

Problems Resolved in Current Release

Subject	Description
N/A	

Operational Notes

PACEdge v3.0.0 Notes




PACEdge users can upgrade any version of PACEdge to v3.0.0. Note that neither user data nor licenses are preserved during the upgrade. Please consult the PACEdge User Manual for the upgrade procedure.

Contact Information and Support Guide

Questions? We are here to help.

Before starting a case or making a call, try searching our Knowledge Base on the Customer Center website—it might have the answer you need right away.

If you have a question, try the following steps:

Search our Knowledge Base	Open a Support Ticket	Register for a Customer Account
 pacsystems.co/knowledge	 pacsystems.co/support	 pacsystems.co/signup

Other Helpful Links

Customer Center Home Page	Commercial Website	Contact Information
 pacsystems.co/customercenter	 pacsystems.co/commercial	 pacsystems.co/contactus

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