

Quick Start Guide

GFK-3074F

Aug 2021

RXi2 – LP Industrial PC

QUICK START GUIDE



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.*

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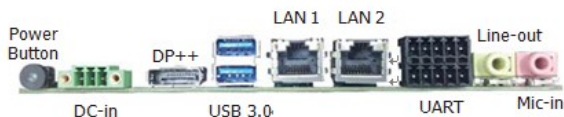
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Physical Connection Overview and Startup

The rear panel I/O port arrangement consists of the following:

Figure 1: Rear Panel Arrangements

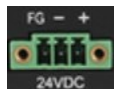


Power Input

The RXi2-LP can be powered with a DC power supply of 24 V (+/-25%) and at least delivering 1.8 A.

The corresponding plug is a Phoenix Contact, part number 1748367. The user must use the same connector type or equivalent.

Figure 2: Power Connector



Signal Name	Pin (left to right)
Power + (24V DC)	1
Power - (24V DC)	2
FGND	3

Connecting Input Power (24V DC-in)

To connect to power, follow these steps:

1. Verify that the power cable is not energized.
2. Loosen the screw clamps on the mating power connector.
3. Strip the insulation from the power cables.
4. Secure the power cable to the mating connector, noting polarity, and tighten the screw clamps. The torque for the attaching screws is 0.3 Nm (2.26 in-lb).
5. Apply dc power to the unit. During normal startup and operation, the LED status indicator will be solid green during normal operation.
6. Once power is applied, the unit will begin initializing.

Note: Be sure to connect a DC power cord to this 3-pin power connector. Using a voltage out of the range may fail to boot the system or cause damage to the system board.

DisplayPort

The RXi2-LP provides one DisplayPort (DP) output. It can be used to directly connect monitors with a DP input or to use standard off-the-shelf adapters to convert DP signals to HDMI or VGA.

Figure 3: DisplayPort



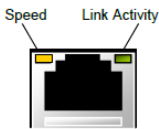
Ethernet Ports

The RXi2-LP provides two 2 Intel® I210IT PCI Express Gigabit Ethernet controllers (4 on larger box module). The LAN ports allow the system board to connect to a local area network through a network hub or router.

For a proper 100/1000 Mbps connection, Emerson recommends a CAT5 cable or better.

Figure 4: Ethernet Ports



	LED	LED State	Operating State
	Speed	Yellow, ON	10/100/1000
	Link Activity	Green, ON	Link Status


USB Ports

The RXi2-LP provides four USB ports. USB1 and USB2 support both USB 3.1 and USB 2.0 specifications.

Figure 5: USB Ports

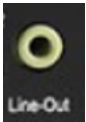
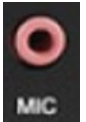


Serial Ports (UART)

Serial Connection	Pin	Function	
RS232	1	TXD	
	2	RXD	
	3	RTS	
	4	CTS	
	5	GND	
RS485	6	TX+	
	7	TX-	
	8	RX+	
	9	RX-	
	10	GND	

Audio

The system board is equipped with 2 audio jacks (Line-out and Mic-in). A jack is a one-hole connecting interface for inserting a plug.

Audio Jack	Description
 Line-Out	Line-out This jack is used to connect a headphone or external speakers.
 MIC	This jack is used to connect an external microphone.

Initial Startup

For the first startup, it is advisable to connect a monitor, keyboard, and mouse so that boot progress can be observed. For headless operation after the first startup, a directly attached monitor is not required.

Note: Please note that if RXi2- LP is being used without the monitor (headless configuration), it will beep three times right after power up. This is a normal condition, informing user that Monitor is not present.

After making the connections, power on the IPC. A few seconds after powering up, the RXi2-LP IPC system UEFI Firmware banner and Emerson logo will display on the screen. If the user does not see any error messages up to this point, the RXi2-LP IPC is running properly and ready to be configured for an application.

For more information on UEFI Setup, please see the RXi2-LP Hardware Reference Manual (GFK-3187).

If the RXi2-LP came with pre-installed software, the boot process will continue to load the operating system and application software.

Note: If the RXi2-LP IPC does not perform as described above, some damage may have occurred during shipment, or the IPC is not configured properly. Please contact Emerson for technical support. (Please see the contact information provided at the end of this document.)

RXi2-LP Pre-Installed Software Options

Software Options	Descriptions
RXi2-LP (No Pre-Installed Software)	The user is responsible for installing an operating system and application software. Please connect the power cable, monitor, USB keyboard, and mouse before powering-up the system. Please consult the RXi2-LP Hardware Reference User Manual (GFK-3187) for details on how to change the UEFI boot order and to install the operating system.
RXi2-LP Windows 10	The unit comes with a Windows 10 IoT operating system pre-installed. Please connect the power cable, monitor, USB keyboard, and mouse before powering-up the system. Follow the on-screen instructions for configuring Windows OS. Please consult Section <i>Windows 10 Startup</i> for more details.
RXi2-LP Movicon.NExT	The unit comes with Movicon.NExT software is pre-installed. Please connect the power cable, monitor, USB keyboard, and mouse before powering up the system. Please consult Section <i>Movicon.NExT Startup</i> for details.
RXi2-LP PACEdge	The unit comes with PACEdge software pre-installed. Please consult Section <i>PACEdge Startup</i> for details.

Windows 10 Startup

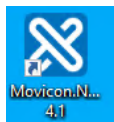
RXi2-LP with pre-installed Windows 10 Operating System, when powered up for the first time, will start with standard self-guiding Windows screens and dialogues, allowing the user to configure username, password, geographical location, and keyboard layout.

Movicon.NExT Startup

The RXi2-LP with pre-installed Movicon.NExT software, when first powered up will start with Windows 10 self-guiding dialogues and configuration options, allowing the user to configure username, password, geographical location, and keyboard layout.

Once Windows operating system has been personalized as desired a Windows desktop will automatically open up. To start Movicon.NExT please double click on Movicon.NExT icon or go to Start->Movicon.NExT->Movicon.NExT

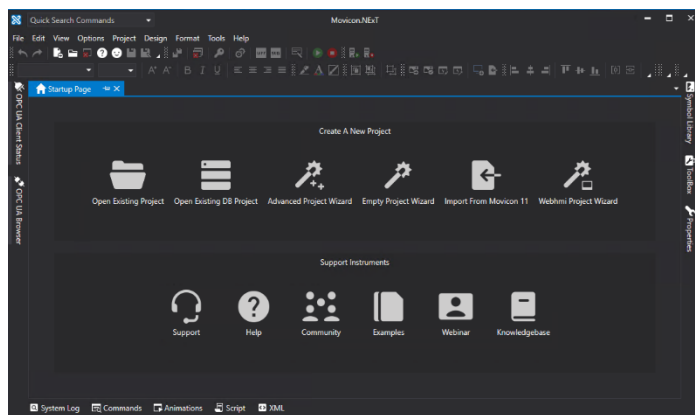
Figure 6: Movicon NExT Icon



Once started a default window will open up allowing the user to open an existing project or to start new projects. A starting Movicon.NExT window will also have links to Support, Help, Community, Examples, Webinars, and KnowledgeBase (Figure 7).

Note: The RXi2-LP with pre-installed Movicon.NExT software also has a pre-installed and ready-to-go software license. To check which features are licensed please go to: **Options->License->Check License**. To enable additional licenses, please contact your Emerson sales representative for the necessary activation key.

Figure 7: Movicon.NExT Help



PACEdge Startup

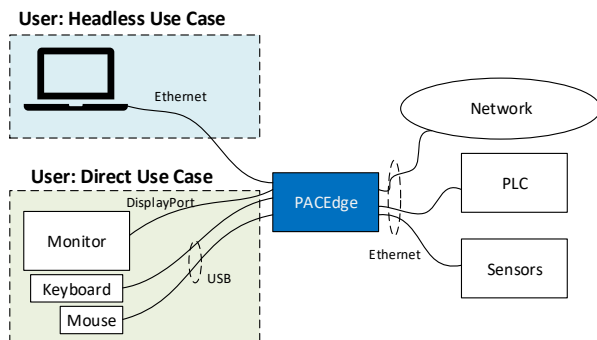
This section applies to the units pre-installed with the PACEdge software.

PACEdge Usage Model

PACEdge software has two usage models:

- 1) Direct Use Model: Running on the Industrial PC, which has a directly attached Monitor, keyboard, and mouse.
- 2) Headless Use Model: Running on the Industrial PC, which is operating in a headless mode, with the user accessing it remotely via Ethernet using a web interface.

Figure 8: Use Case Models



PACEdge in a Direct-Use Configuration

In a Direct-Use case, the user interfaces with the PACEdge system via the monitor, keyboard, and mouse.

Getting Started

1. Connect the monitor to the RXi2-LP device by using a DP cable.
Note: If the monitor of choice has an HDMI or VGA input, use a standard off-the-shelf DP-HDMI or DP-VGA adapter.
2. Connect a keyboard and mouse to any of the four USB ports
3. Power up the PACEdge unit (please consult the initial startup section for details) and wait until it boots.

4. The boot process will pause and ask for login details. Login as **admin** with password **edgestack**.

Note: The user will be asked to change the default password to a unique password at the first login.

5. Most interactions with PACEdge are done via a browser-based interface. To get started, click on **Activities->Show Applications** and start the Firefox browser.
6. Within the Firefox browser, go to <https://localhost>
7. Proceed to the section entitled *Initial Login*.

PACEdge in Headless Configuration

In a Remote Headless configuration, the user interfaces with PACEdge via Ethernet using a separate device's web browser.

Getting Started

1. Connect the Ethernet cable to the Ethernet port labeled ETH0 next to the 24 V power connector on the RXi2-LP.
2. Setup the User PC Ethernet port IP address to be statically assigned as follows:
 - a. **Pv4 Static IP: 192.168.3.10**
(or similar in the same subnet)
 - b. **Netmask: 255.255.255.0**
3. Power up the PACEdge unit (please consult the initial startup section for details) and wait until it boots.
4. Open a web browser and type in **192.168.3.100** in the address bar.

Note: All Ethernet ports are also configured to get IP addresses assigned by the DHCP server. This dynamically assigned IP address can also be used to access PACEdge. In case DHCP server also supports DNS service, PACEdge unit dynamically assigned IP address can be obtained by using command shell and **ping pacedge**

5. Proceed to the section entitled *Initial Login*.

Initial Login

When the user connects to PACEdge for the first time (using the instructions outlined in *PACEdge in a Direct-Use Configuration* or *PACEdge in Headless Configuration*), a warning message will display due to the self-signed certificate on the unit. The message will state that the identity of the device could not be confirmed. Please click on **Advanced** and **Accept** to proceed.


Please read and accept the Emerson End User License Agreement (EULA).

Once EULA has been accepted, the user will be redirected to the Password Services screen. PACEdge software consists of multiple software tools and applications, each having its user management and password settings. To simplify this task, PACEdge comes with pre-configured users: *admin*, *developer*, and *operators*, each having its own password. Use the Password Services screen to change passwords for the whole group of services. This will be displayed on the left side of the screen. (Figure 9). Additionally, change the Portainer and Cockpit/Linux passwords individually (Figure 10).

Note: For cybersecurity reasons, the user must change the default passwords at the first login.

Important: Please consult the PACEdge Secure Deployment Guide (GFK-3197) for recommended password changes and other cybersecurity-relevant settings.

Figure 9: Password Services Screen (The Left Side will Display the User Level Passwords)


Emerson PACEdge

Services

Attention: For security purposes all default pa

Group Managed Profile Services
Node-RED, InfluxDB, MySQL, Chronograf,
Grafana Password Management

User	Node-Red	InfluxDB	MySQL	Chronograf	Grafana	Update Password
admin	R/W	R/W	R/W	R/W	admin rights	Update
developer	R/W	R/W	R/W	R/W	editor rights	Update
operators	R	-	-	-	viewer rights	Update

Figure 10: Password Services Screen (The Right Side will Display the Portainer and Cockpit/Linux Passwords)

?

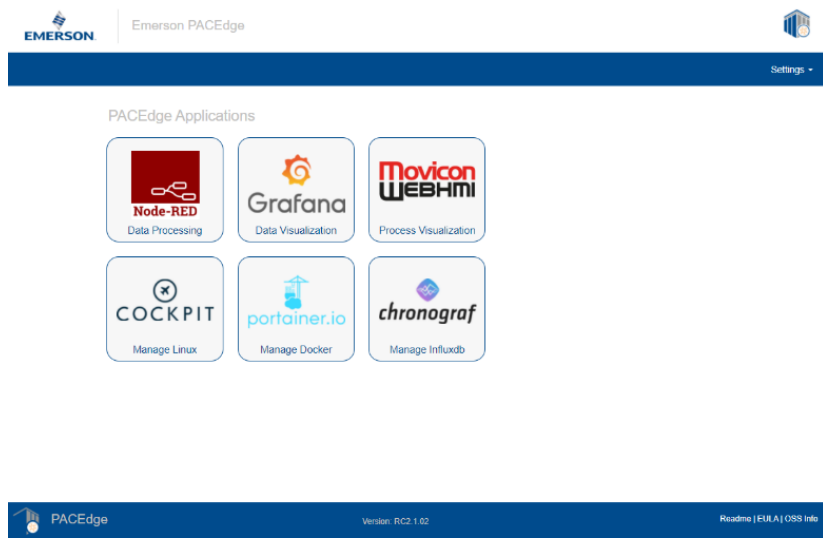
swords shall be changed!

Individually Managed Profile Services
Portainer, Cockpit/Linux Password
Management

User	Portainer	Cockpit/Linux
admin	R/W	sudo
developer	R/W	sudo
operators	-	limited
	Update Psw.	Update Psw.

Once the passwords have been changed, click on the Emerson logo in the upper-left corner. The logo is a shortcut to the PACEdge Landing Page, which has further shortcuts to Node-RED, Grafana, Cockpit, Portainer, and other applications. The user can return to the Password Services screen from the PACEdge landing page by clicking **Password Management** in the Settings drop-down list on the right side.

Figure 11: PACEdge Landing Page



To explore PACEdge, click on Node-RED and log in with:

- **user:** admin
- **password:** edgestack (or the password that was set on the Password Services page)

Start exploring example flows or create a new flow. Consult the PACEdge User Manual (GFK-3178) for example details.

Important: Please consult the PACEdge Secure Deployment Guide (GFK-3197) for recommended password changes and other cybersecurity-relevant settings.

Mounting Information

For instructions on wall mounting instructions, DIN rail mounting instructions, or minimum clearances required, please consult GFK-3068, RXi2-LP Hardware Reference Manual.

General Contact Information

Website

<http://www.emerson.com/industrial-automation-controls/>

Technical Support

<http://www.emerson.com/industrial-automation-controls/support>

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