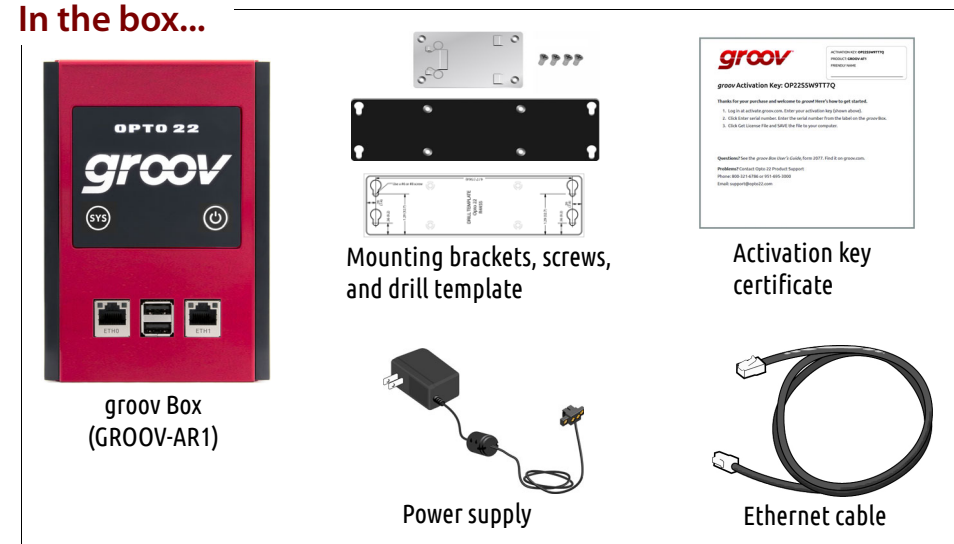# groov®

Quick Start

for GROOV-AR1

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1 Unpack the *groov* Edge Appliance

You need:

- A computer with a web browser on the same network you'll use for the *groov* Edge Appliance (*groov* Box). Use Chrome, Firefox, or Edge version 79 or newer. The network should have DHCP and DNS.
- One of the following on the same network: a Modbus/TCP device; a *groov* EPIC processor running a PAC Control strategy; an Allen-Bradley or Siemens S7 PLC; software that can use the *groov* API; an OPC UA-compatible server and drivers for your equipment; an Opto 22 SNAP PAC I/O unit; or an Opto 22 SNAP PAC controller with firmware R9.2a or newer running a PAC Control strategy.

In the box...

groov Box (GROOV-AR1)

Mounting brackets, screws, and drill template

Activation key certificate

Power supply

Ethernet cable

Open ➡

---

2 Get started

To set up the *groov* Box, you'll use the components shown below.

When deciding where to place the *groov* Box, make sure there is room around the front, top, and sides of the box to allow air to flow freely around the device. You need to be able to see the information on the bottom.
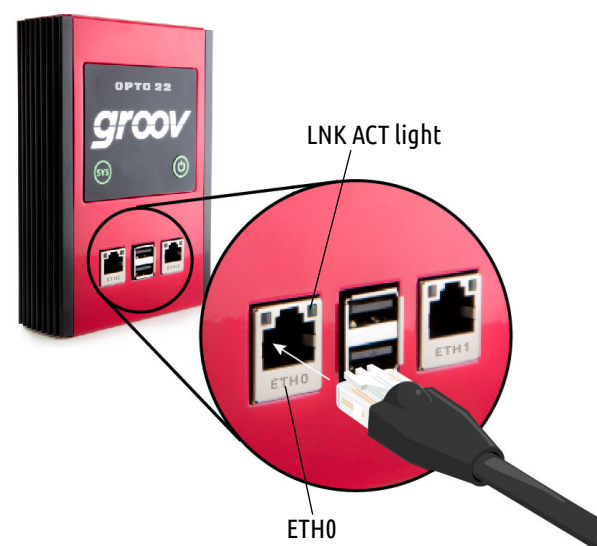
You'll need the activation key for step 6 when you activate your *groov* Edge Appliance, so make sure to put your activation key certificate in a safe place.

SYS LED

On/Off button and Power LED

ETH0

Power terminal

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3 Connect to the network

Connect ETH0 to your computer's network.

If you have a separate control network, see form 2104, the *groov Box User's Guide*, available on our website, opto22.com.

LNK ACT light

ETH0

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4 Connect the power supply

Plug the small connector on the power supply into the power terminal on the bottom of the *groov* Box, and tighten the screws.

Plug the other end into a standard 120 or 240 VAC outlet.
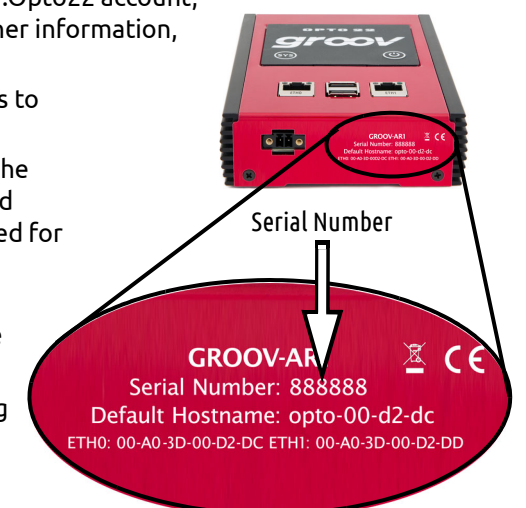

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5 Turn on the *groov* Edge Appliance

Firmly press the On/Off button until the SYS LED lights up (in about one second), then release. Take a look at the LNK ACT light for ETH0; if the cable is properly connected, the LNK ACT light should be on or blinking. (See the illustration in step 3 to locate the light.)

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6 Activate the *groov* Edge Appliance and get the license file

a. Open a web browser and go to manage.groov.com.

b. Log in using your email address and your My.Opto22 password.

   You may have set up your free My.Opto22 account when you purchased your *groov* Box. If you don't have a My.Opto22 account, enter your email address and other information, and the account will be created.

c. Follow the on-screen instructions to activate your *groov* Box.

   The activation key is printed on the activation key certificate included with the *groov* Box. You'll be asked for the serial number; it's on the label on the bottom of the Box.

d. Download your *groov* license file and save it to your computer.

e. After activating and downloading the license file, return to this Quick Start and continue with step 7.

Serial Number

GROOV-AR1
Serial Number: 888888
Default Hostname: opto-00-d2-dc
ETH0: 00-A0-3D-00-D2-DC ETH1: 00-A0-3D-00-D2-DD

---

7 Open *groov* View

a. Make sure the SYS LED has stopped blinking.

b. In your browser, enter https:// and your *groov* Box's hostname as the URL. For example, if the hostname is opto-00-d2-dc, you type: `https://opto-00-d2-dc`

c. Accept the security warning.

NOTE: If the security warning does not appear, your network configuration is different. Please see the groov Box User's Guide, form 2104, available on opto22.com.
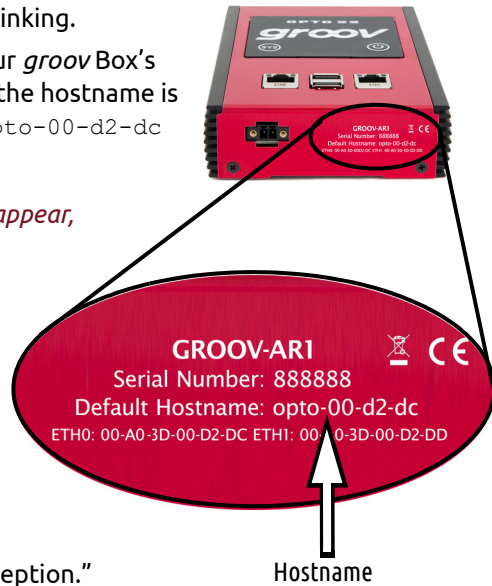
For Chrome: Click "Proceed anyway."
For Firefox:
- Expand "I Understand the Risks."
- Click Add Exception to open the Add Security Exception dialog box.
- Select "Permanently store this exception."
- Click Confirm Security Exception.

The **Welcome to *groov* View** window opens in your web browser.

d. Click Next.

GROOV-AR1
Serial Number: 888888
Default Hostname: opto-00-d2-dc
ETH0: 00-A0-3D-00-D2-DC ETH1: 00-A0-3D-00-D2-DD

Hostname

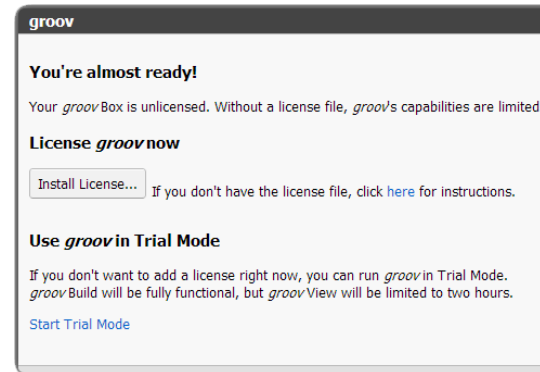## 8 Create a *groov* Admin account and install your license

Follow the on-screen instructions to create a username and password for *groov* Admin. The Admin account is used for changing or editing network connections, updating the *groov* Box software, backing up and restoring your projects, using Node-RED, and using Ignition Edge.

CAUTION: Write down your Username and Password, and keep them in a safe place. You will need this information each time you log in. If you lose your login information, you will have to reset the groov Box to factory defaults, which will erase your project. There is no password recovery option.

Make sure to install your license file. Without an installed license, *groov* will only work for two hours.

a. When prompted, click Install License.

b. Browse to the license file, then click Open.

Your license is now installed.

groov

You're almost ready!

Your *groov* Box is unlicensed. Without a license file, *groov*'s capabilities are limited.

License *groov* now

Install License... If you don't have the license file, click here for instructions.

Use *groov* in Trial Mode

If you don't want to add a license right now, you can run *groov* in Trial Mode. *groov* Build will be fully functional, but *groov* View will be limited to two hours.

Start Trial Mode

9 Create a *groov* View account

A *groov* View account lets you create and edit an operator interface in Build mode.

a. When prompted, enter a new username and password. Enter the password again to confirm. *Again, keep your credentials in a safe place!* There is no password recovery option.

b. Click Create *groov* View Account.

c. Click Go to Build mode. *groov* View opens in Build mode in your browser.

If you have any trouble opening *groov*, see Troubleshooting in form 2027, the *groov View User's Guide*, available on opto22.com.

Welcome to
groov®
mobile made simple.™

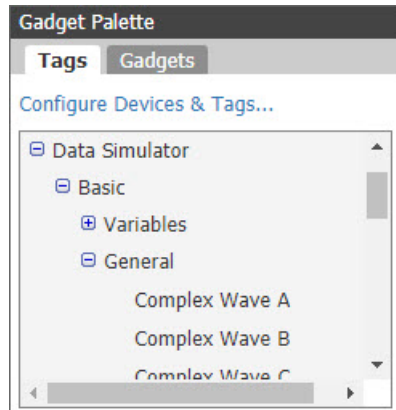That's it! You're finished with initial setup and ready to create your *groov* project.

Go to *groov* Build!

10 Connect to a device

You can connect to Opto 22 *groov* EPIC processors, SNAP PAC controllers and I/O units, A-B and Siemens PLCs supported by Ignition Edge in the *groov* Box, OPC UA-compatible servers, Modbus/TCP slave devices, and *groov* View Data Stores you create. For more information, see the *groov View User's Guide*.
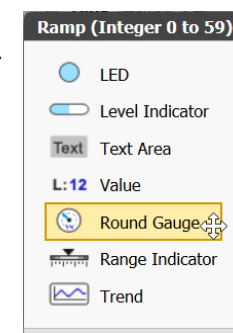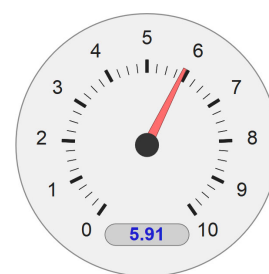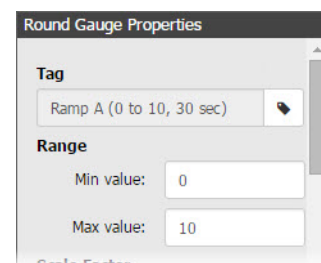
For this quick start, we'll use tags from *groov* View's built-in Data Simulator. These tags are already added for you.

a. In Build mode, find the Gadget Palette in the lower right and click the Tags tab.

b. Click the plus sign next to Data Simulator and continue expanding the tree to see all the Data Simulator tags.

Gadget Palette

Tags | Gadgets

Configure Devices & Tags...

⊟ Data Simulator
　⊟ Basic
　　⊞ Variables
　　⊟ General
　　　Complex Wave A
　　　Complex Wave B
　　　Complex Wave C

11 Visualize data

a. On the left side under Pages, click Add Page. Type a new name for the page, then click OK.

b. With the Tags tab selected in the Gadget Palette (lower-right corner), expand the list of tags for Data Simulator > Basic > General.

c. Choose Ramp A (0 to 10, 30 sec). Double-click Round Gauge in the pop-up menu.

d. Select the Gauge. In Gauge Properties (upper right), enter 0 as the Min Value and 10 as the Max Value.

Round Gauge Properties

Tag
Ramp A (0 to 10, 30 sec)

Range
Min value: 0
Max value: 10
Scale Factor

Ramp (Integer 0 to 59)
- ⬤ LED
- ▭ Level Indicator
- Text　Text Area
- L:12　Value
- ⏱ Round Gauge
- Range Indicator
- Trend

5.91

e. Select File > Save All Changes and Switch to *groov* View.

You see the Round Gauge running in View. The needle shows the tag's value.

To see it on your mobile, make sure your mobile is on the same network as the *groov* Box. Open a browser on the mobile. Enter https:// and your *groov* Box's hostname as the URL, just as you did on your computer in step 7.

12 Handle data

For lots more on connecting with devices, building pages, and setting up users, see the *groov View User's Guide*.

Also included in the *groov* Edge Appliance:
- Node-RED for building simple logic flows to move data, using pre-built nodes
- Ignition Edge, with OPC-UA server and drivers for Allen-Bradley and Siemens, plus MQTT with Sparkplug messaging for efficient IIoT communications. Run the free trial for 2-hour periods as often as you like. To use Ignition Edge fully, you'll need an Ignition Edge license (part number GROOV-LIC-EDGE).

Explore Node-RED

a. Log into *groov* Admin—enter URL: `https://[groov hostname]:10000`

b. In the left navigation pane, click Node-RED and log in with your *groov* Admin username and password. Click the big Node-RED button and log in again.

c. See Chapter 4 in the *groov Box User's Guide* to get started building flows.

Explore Ignition Edge

a. Log into *groov* Admin—enter URL: `https://[groov hostname]:10000`

b. In the left navigation pane, click Ignition Edge. Check the box to start Edge, then come back and click Open Ignition Edge. Default login: username `admin` and password `password`

c. See Chapter 5 in the *groov Box User's Guide* to configure the server and get started using OPC-UA drivers and MQTT/Sparkplug.