Waves Proton Duo

WAVES

Quick Start Guide

Proton Duo

This quick start guide provides basic instructions for setting up Proton Duo with a SoundGrid host. Consult your SoundGrid host application's user guide for detailed instructions concerning configuration.
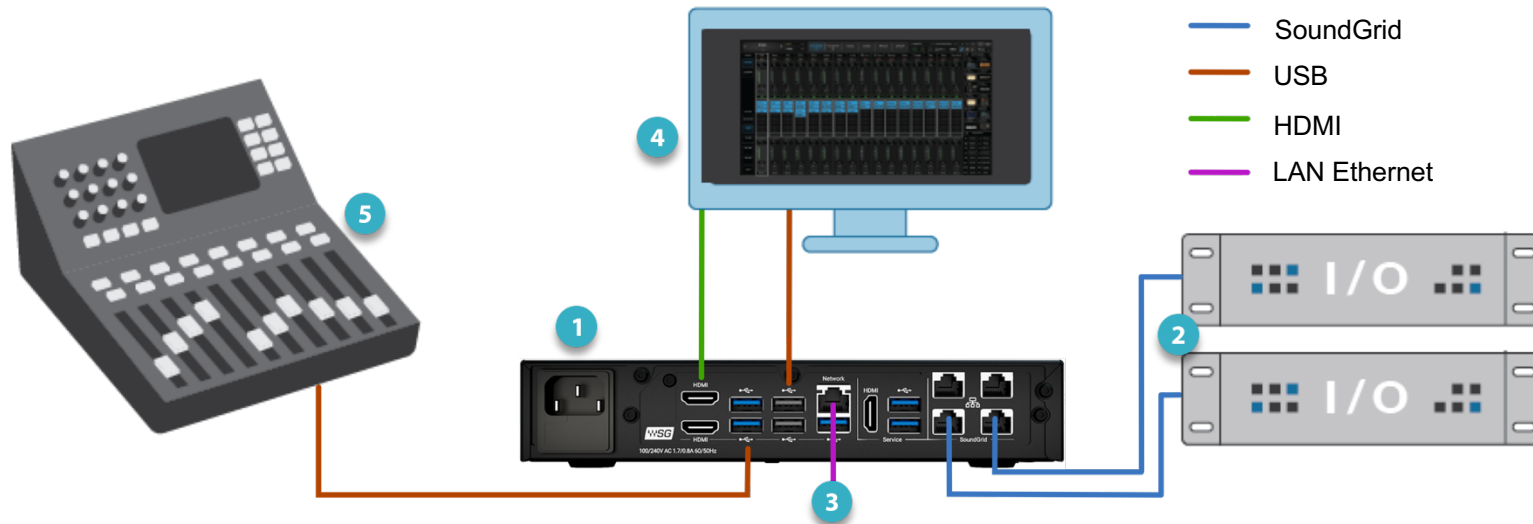
Proton Duo combines a Waves [Proton SoundGrid server](#), an [Axis Proton](#) audio-optimized computer, and a built-in 1 Gb network switch, in one compact device. This provides a robust, complete solution for on-the-go mixing. Preconfigured, wired, and working—straight out of the box—Proton Duo is designed for quick setup and reliable performance.

The Proton Duo's Axis Proton computer is built to run up to 32 channels of audio on the Waves [eMotion LV1](#) live mixer, the [SuperRack](#) live plugin host, as well as the [SoundGrid Studio](#) application. The built-in Proton server provides extra processing power for a high plugin count, and it enables you to efficiently move sound within a network.

How to Connect

Since Proton Duo combines a host computer, a server, and an Ethernet switch in one package, all that's left to do is to connect one or more SoundGrid I/Os, add a computer display and, if needed, an external control surface.

1 PROTON DUO (REAR PANEL)

2 SOUNDGRID I/O DEVICES

Use the four-port SoundGrid switch to connect to one or more SoundGrid I/Os. Use Cat 6 (or better) Ethernet cable.

3 LAN PORT

Connect to non-SoundGrid networks

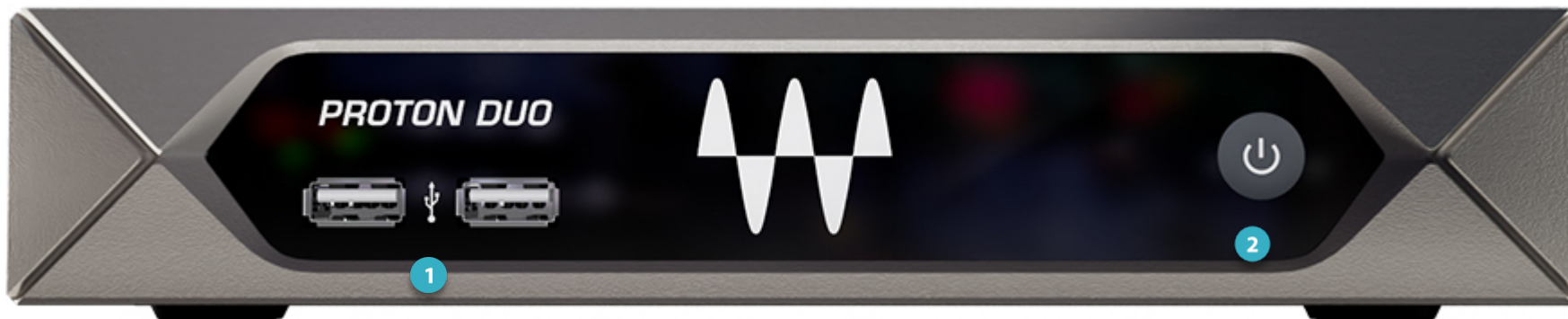**4** COMPUTER DISPLAY

Connect HDMI. Use USB for touch screen.

5 REMOTE SURFACE (FIT)

Connect via USB

Connections and Controls

Proton Duo: Front Panel

1	2x USB 2 ports	
2	Power switch and light	Hold for five seconds to shut down the Proton Duo completely. Hold for three seconds to reset the host computer.

Proton Duo: Rear Panel

1	IEC power connector	100~240 VAC 50/60 Hz, 65 W; auto switching
2	2x HDMI ports	The port support resolutions from 1280x768 to 1920x1080.
3	3x USB 3.0 ports	
4	2x USB 2.0 ports	
5	Network port	RJ-45 Gb Ethernet connector. Use this 1 Gb port for all non-SoundGrid networks, including internet.
6	Service ports	1x HDMI and 2x USB 3 ports. The service section is used for server debugging and troubleshooting. Do not use these ports for normal operation.
7	Waves SoundGrid switch	The 1 Gb 4-port switch connects to SoundGrid I/Os and other SoundGrid networks. For additional connections, add an approved 1 switch. Do not use this port for other purposes.

Setup Guide

Follow these steps to prepare your Proton Duo for operation with Waves applications.

HARDWARE CONNECTIONS

1. Connect the power cable to mains of the computer and all other devices. All SoundGrid hardware devices must be grounded (earthed) according to local regulations.
2. Connect up to four SoundGrid IOs to the SoundGrid switch. If you need additional SoundGrid ports, use an additional SoundGrid switch. Do not use this port for any other networks, such as internet. Once you have at least one SoundGrid I/O connected, you can connect non-SoundGrid I/O devices using SG Connect, which is part of the SoundGrid driver.
3. Use the Network port to connect to your LAN. You can use this port, among other purposes, to download software, activate additional licenses, and update the computer and server firmware. You can also use the Network port to run mobile apps over WiFi. Uses include artists' monitor mixing, remote FOH control, and remote scene/snapshot recall. *Do not use this port for the SoundGrid network.*

To the left of the SoundGrid ports are two USB 3.0 ports and an HDMI port. This is the Service section. If you are experiencing technical problems, a Waves tech support specialist may instruct you connect to these ports for debugging and troubleshooting. Under normal working conditions, do not use these ports.

DISPLAY SETUP

1. If you're using touch screen displays to control the host application, connect the one or two displays via the HDMI ports. Additionally, connect USB cables between the computer and each display. Install the relevant display drivers and refer to display's user guide for details.
2. Calibrate the screen for touch input with the Tablet PC Settings in the Windows Control Panel. Set resolution for each display.
3. When using more than one display, you may want to see a different application window on each display. To "tear off" a window in eMotion LV1, grab a window tab at the top of the page and drag it down. The detached window is now a freestanding panel that you can move to any display. Refer to the host application's user guide to learn more about floating windows.
4. You can also want to connect a keyboard and mouse.

Waves Software

All Waves V13 applications, plugins, and drivers are preinstalled on your Proton Duo. Your software license determines which products are available to you. If you keep your Waves licenses on a USB flash drive ("disk on key"), simply insert the drive into a USB port and then open your Waves application. The host will locate the licenses.

Waves Central

To manage your licenses, install new software, update your existing software, or try a plugin demo, use the Waves Central application, which is preinstalled on your Proton Duo computer. We suggest that you regularly visit Waves Central to check that your installed software is up to date.

To activate or move licenses, follow these steps:

1. Open the Waves Central app and enter your Waves account credentials. Waves Central may update when launched. This is normal. If you see a notice at the top of the screen, "Updates Available," you can update all your products now or wait for a more convenient time. A large update can take several minutes.

2. On the left sidebar, choose to manage licenses or install software products. Licenses and products are installed in a very similar manner. Please refer to the Waves Central user guide for [instructions](#).

3. Activate your Waves licenses on your Proton Duo host computer or a removable flash drive. Using a portable flash drive makes it easier to move from one computer to another, or from one venue to another. Say, for example, that you built a session on your studio computer and now you want to use the session in a concert setting. Install the necessary plugins and presets in the computer at the new venue (this can be done without your license). Plug in your USB flash drive, and you're ready to go.

4. You can also use Waves Central to move licenses between host computers (without using a flash drive) using the Waves Central License Cloud. Visit this article for more about [moving licenses](#) with Waves Central:

If ever you need to reinstall the Waves Central app, you can find it here: www.waves.com/downloads.

If your production computer is not connected to the internet, prepare an offline installer on an internet-connected computer, and then install to your host computer from that file. Refer to the Waves Central user guide for details.

Setting up Proton Duo in a Host Application

All SoundGrid host applications are configured in a very similar manner. Here, eMotion LV1 is used an example.

All devices should be properly connected and powered on. If your Waves licenses are on a USB flash drive, insert it now into a USB port. Launch LV1 and open the Setup window. Go to the System Inventory page.

Start Auto-Configure. This function locates the computer's Ethernet port that's connected to the SoundGrid network, discovers and assigns devices, and then patches audio. If Auto-Configure cannot locate the correct port, use the Network Port drop-down menu to assign it manually. Then re-run Auto-Configure.

When Auto-Configure is complete, The connected I/O devices will appear in the Devices rack. One or more of them may need a firmware update. This is indicated by a blue FW button on the device icon. Click the button to start. Follow the prompt and restart the I/O computer and I/O when the update is finished.[1] Follow the same procedure if the server needs a firmware update. You do not need to restart the computer after you update server firmware.

Please refer to the eMotion LV1 user guide, or the user guide for other host applications, for comprehensive instructions about setting up and using the mixer.

Proton Duo Power Cycle

- Proton Duo will auto-boot when connected to an AC power source.
- Press and hold the Power button for five seconds to shut down the Proton Duo completely (host and server).
- If for any reason the host side is frozen, you can force restart (Reset) the host side of Proton Duo independently from the server. Press and hold the Power button for three seconds (not more) and the host will reset. The audio should not be interrupted by the reset, as this facilitated by SoundGrid's Warm Connectivity feature.

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[1] For the SoundGrid network to operate properly, device firmware must be up to date with the eMotion LV1 application software that's currently running. If these are not in sync, you will be prompted to update the firmware.

Specifications

Axis Proton Host Computer

CPU: Celeron J4125

RAM: 8 GB
Internal storage: 256 GB SSD
3x USB 3.0, 4x USB 2.0
2x HDMI
1x LAN port for external network, RJ45

Proton Server

CPU: Celeron J4125 RAM: 4 GB
2 x USB 3.0 ports (Service)
1 x HDMI port (Service)

Network Switch

4x RJ45 SoundGrid network ports

Sampling Rates

44.1 kHz, 48 kHz

Physical

Case:
Width: 22 cm / 8.7 in
Height: 4.2 cm / 1.7 in
Depth: 27.7 cm / 10.9 in

Rubber Feet:
Height: 4 mm / 0.15 in

Device weight: 2.3 Kg / 5.1 lb
Shipping weight: 3.4 Kg / 7.6 lb

Max environmental temp: 40ºC / 104ºF

Electrical

100~240 VAC 50/60 Hz, 30 W
auto switching

Software Enclosed

Windows 10
Waves V13 software
Waves host applications software
Waves Central application

Compliance

UL, CE, FCC, CB