

Waves SoundGrid Driver

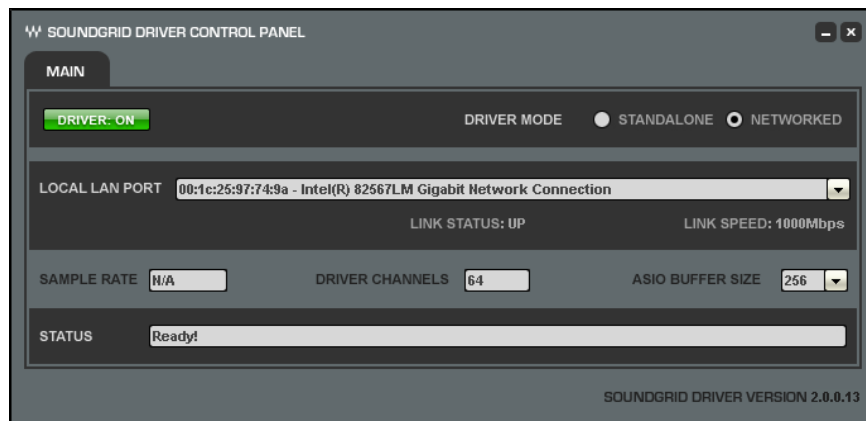


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Introduction

Thank you for choosing Waves. In order to get the most out of Waves SoundGrid Driver, please take the time to read through this manual.

In conjunction, we also suggest you become familiar with www.wavesupport.net. There you will find an extensive **Answer Base**, the latest **Tech Specs**, detailed **Installation** guides, new **Software Updates**, and current information on **Authorization** and **Registration**.

By signing up at www.wavesupport.net, you will receive personalized information on your registered products, reminders when updates are available, and information on your authorization status.

Product Overview

The SoundGrid Driver is an ASIO and CoreAudio driver that allows you to record and play audio to and from your favorite DAW software. The driver streams audio via Ethernet through your local LAN port.

The SoundGrid Driver has two modes:

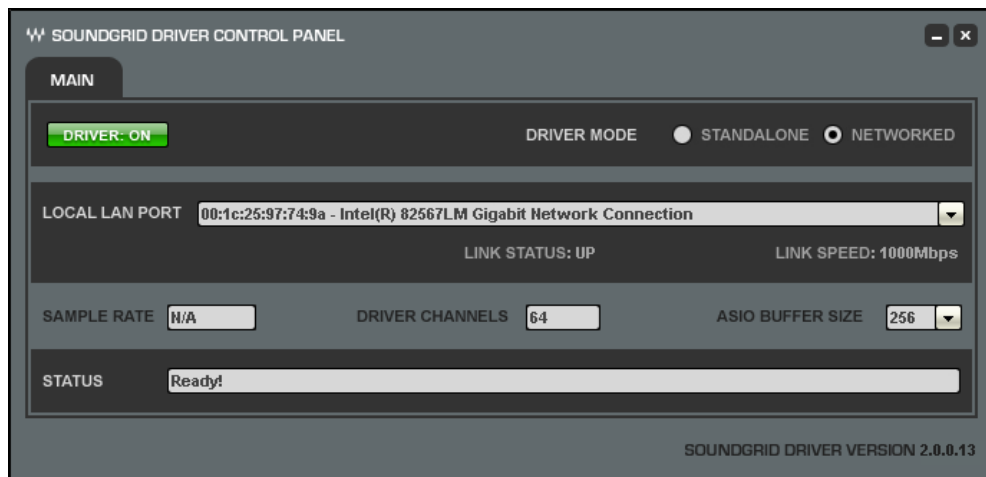
Networked – this mode is used when you wish to use your DAW as a recording and/or playback device in your SoundGrid network. IN this mode the driver appears to MultiRack SoundGrid as a regular I/O. Setting driver channels and audio routing is done on MultiRack's SoundGrid Inventory and Connections windows. See MultiRack SoundGrid manual for more information on how to set the driver in this mode.

Standalone – this mode is used when you wish to use the driver with your DAW without using MultiRack SoundGrid. In this mode the driver has its own Inventory tab allowing you to set up the I/O devices it will work with.

Networked Mode

Setting Up the Driver

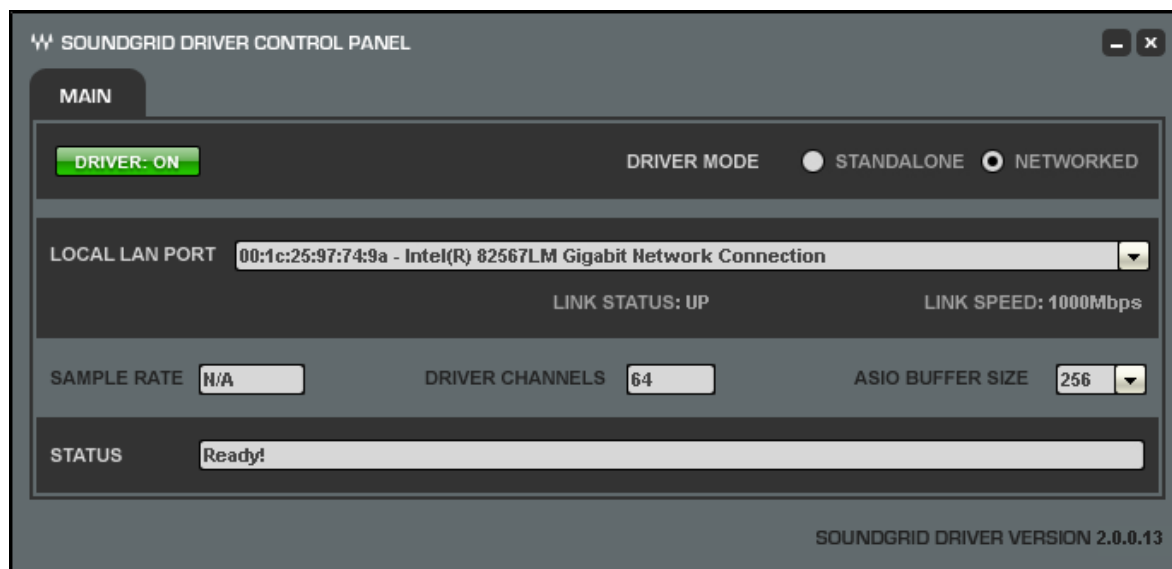
1. Install the driver. The driver can be installed on the same computer running MultiRack SoundGrid or on a separate computer.
2. Open the SoundGrid Driver Control Panel after connecting it to the network and turning all devices on.
3. Open the Main tab and set Driver Mode to **Networked** (If you are using SG MultiRack on this setup).
4. From the Local LAN Port menu, select the port that the network is connected to. The LAN port is identified by its MAC address and name. When you select the correct port, the driver will scan the network and display “SoundGrid Network found”.



5. Turn the driver On. The driver is now ready.
6. Channel settings and audio routings to and from the driver are done on MultiRack SoundGrid's Inventory and Connections windows. For more information refer to MultiRack SoundGrid manual.

Using the SoundGrid Driver and Audio Routing

This section explains how to set and use the SoundGrid Driver within a SoundGrid network.



The Main tab is the driver's main panel. In **Networked** mode only this tab is shown. In this Window you set Driver Mode, choose LAN port and set ASIO Buffer size.

Driver: On. This button turns the driver on and off.

Driver Mode. Sets to the driver to either Networked or Standalone mode. Networked mode should be selected when the driver is to operate as a part of a larger SoundGrid network. When the driver is part of a SoundGrid network, the network is configured by MultiRack SoundGrid.

Standalone mode should be selected if you intend to work without MultiRack SoundGrid, i.e. directly with the SoundGrid I/Os, without processing. In this case select Standalone mode and the driver panel will open an additional tab for setting and assigning the I/Os to use.

Local LAN Port. This drop-down menu lists the available network adapters on your host machine. Choose the adapter that is connected to the SoundGrid network. Network adapters are displayed by MAC addresses and port name. When you select the correct port a "SoundGrid network found" message is displayed on the panel.

Driver Channels. A display of the driver's channel count as set in MultiRack SoundGrid Inventory panel (Networked mode) or according to the I/O devices that are connected (Standalone mode).

ASIO Buffer Size (PC only). Adjust DAW ASIO latency from the pull-down menu. Higher values result usually in a more stable performance, especially on slower computers.

Status. Displays Driver status.

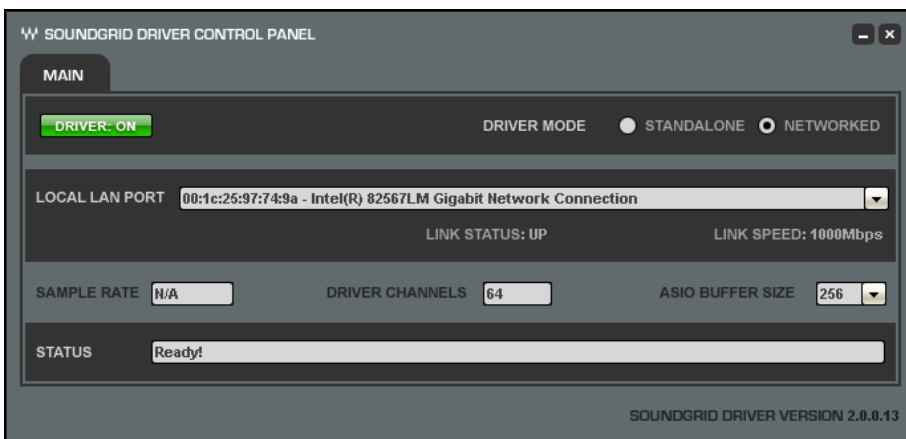
Routing Audio Example

General Notes

In general, routing audio comprises the following steps. We are assuming you have installed MultiRack SoundGrid and the SoundGrid driver:

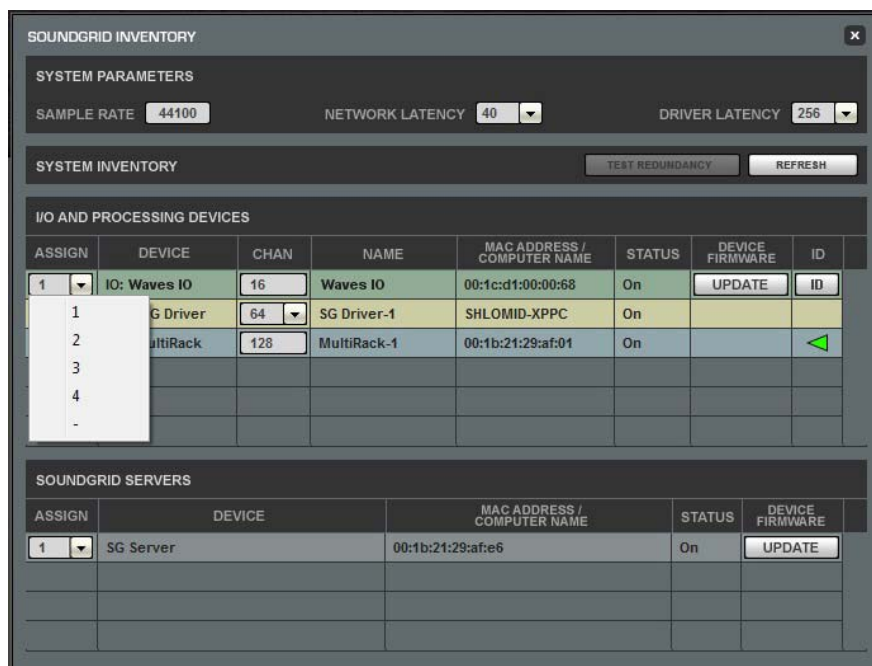
The below are basic step-by-step instructions on how to set up routing:

1. Make sure all your SoundGrid devices are up, running and connected.
2. Open the SoundGrid Driver Control Panel.
3. In Driver Mode area select Networked.
4. Select the correct LAN port from the Local LAN Port pull down menu - the port your computer is connected to the network by. See the below screen shot for reference.



5. Close the SoundGrid Driver panel.
6. Launch MultiRack SoundGrid.
7. From the Edit menu, select the “SoundGrid Inventory” item, or press F2 to open the SoundGrid Inventory window.
8. Set your Network and Driver Latency to the setting you wish to operate with.
9. Now we’ll assign devices to our network using the Inventory table:
In the “Assign” column select the devices you intend to use by assigning each them a number:
 - 1 for first I/O device or card
 - 1 for the processing SG Server

- 2 for a redundant SG Server. If you are using a redundant server, it is recommended to verify that the redundant server can carry the session load (applicable when the two servers are not identical) by pressing the Test Redundancy button.
- 1 for MultiRack
- 1 for SG Driver. Remember to set the number of channels you intend to use in the driver for recording and/or playback in the Chn column. See the below screen shot for reference.



10. You have now set the inventory. Close the SoundGrid Inventory window.

11. From the Edit menu, select the "SoundGrid Connections" item, or press F3 to open the SoundGrid Connections window.

Double-click to create new connections. For each connection, set the Source or sender device and the channels it will output and the respective Destination or receiver device and channels it will receive audio from the Source device on. See the below screen shot for reference.

Example: Processing , recording and playing back

Inventory:

- IO Device is assigned as “1” and named “My 1st IO Device”. The device has 32 channels.
- SG Server is assigned “1” (without a server there is no processing)
- SG Driver is assigned “1” and named “SG Driver”
- MultiRack is assigned “1” and named “MultiRack”

Connections:

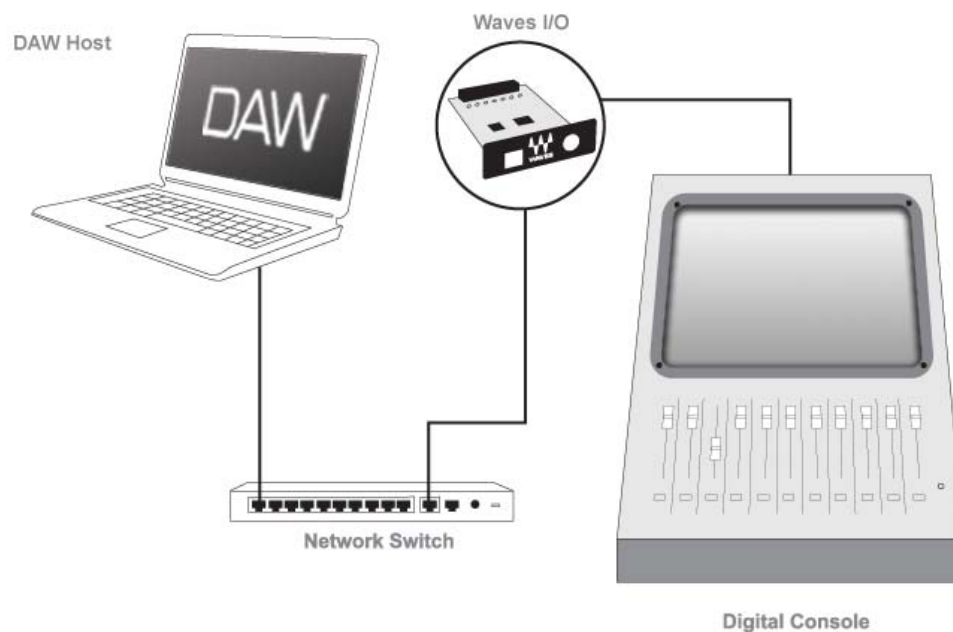


The below Connections table shows which connections to make to realize processing and recording of 32 channels.

Source		Destination	
Waves IO	1-32	MultiRack	1-32
Waves IO	1-32	SG Driver	1-32
MultiRack	1-32	Waves IO	1-32
SG Driver	1-32	Waves IO	33-64

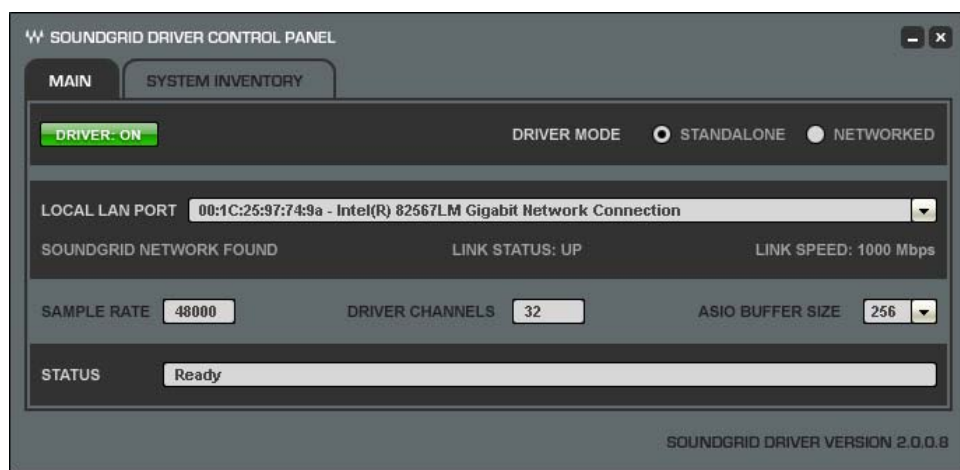
Standalone Mode

Using the SoundGrid Driver in its Standalone mode allows you to use SoundGrid I/Os devices as regular sound cards with standard off the shelf Digital Audio Workstations. The Standalone Driver also allows you to use Waves MultiRack Native for processing audio natively (at higher throughput latency than MultiRack SoundGrid).

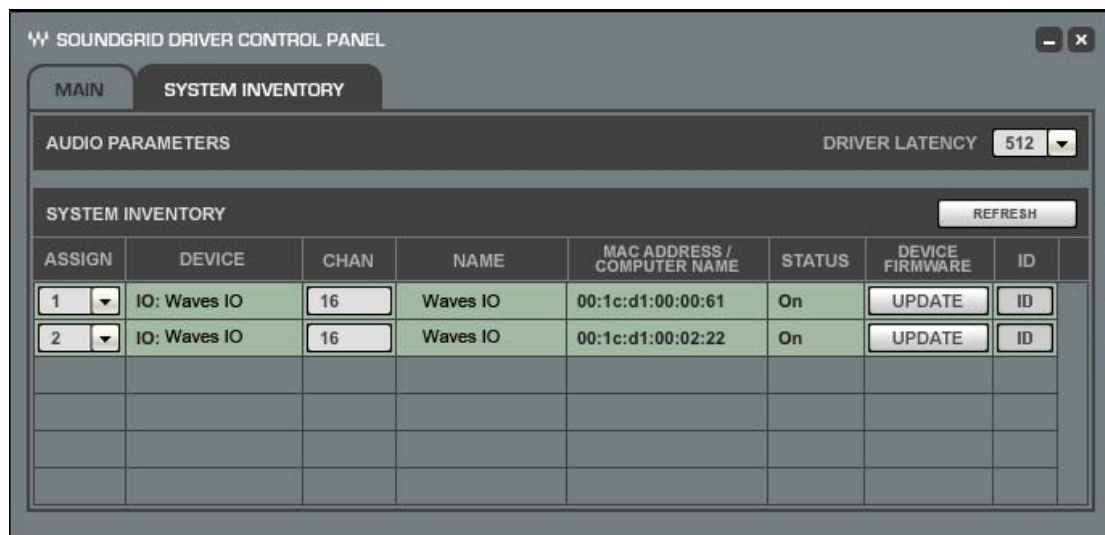


Setting Up the Driver

1. Make sure your I/O devices are powered and connected to your computer via Ethernet.
2. Open the SoundGrid Driver Control Panel.
3. In the Driver Mode area, select Standalone Mode.
4. From the Local LAN Port drop down menu, select the LAN port to which your devices are connected. Note that when you select the correct port, a “SoundGrid Network found” message is displayed.



5. Select the System Inventory Tab. This tab displays all SoundGrid I/O devices connected to your network.



6. **Device Firmware:** This column holds an Update button for each I/O or server device. Click the button to update the device's firmware if incompatible with the SoundGrid driver version you are using. The Update process will display a progress bar and status messages. Follow the status messages and instructions carefully. At the end of the process (in some cases requiring you to reboot the device), click the window's Refresh button.

7. In the Assign column, assign the devices you intend to use by numbering them, same as you've done in MultiRack SoundGrid's Inventory window:
 - 1 for the first I/O device.
 - 2 for the second I/O device.
 Pressing the ID button will cause the respective I/O device to light its network Link and Activity LEDs to allow you to identify it easily.

8. Set the Network to Driver Latency value you intend to work with. Usually higher values result in higher latency and higher performance, lower values in lower latency and lower performance, depending on your host computer capabilities. A setting of 256 samples will work well on most computers.



Driver Latency is added between the I/Os and the host computer on which the driver is installed. This latency is added to the ASIO (PC) or CoreAudio (Mac) buffer-size setting which induces latency between the driver and the DAW host software.