Waves SoundGrid®

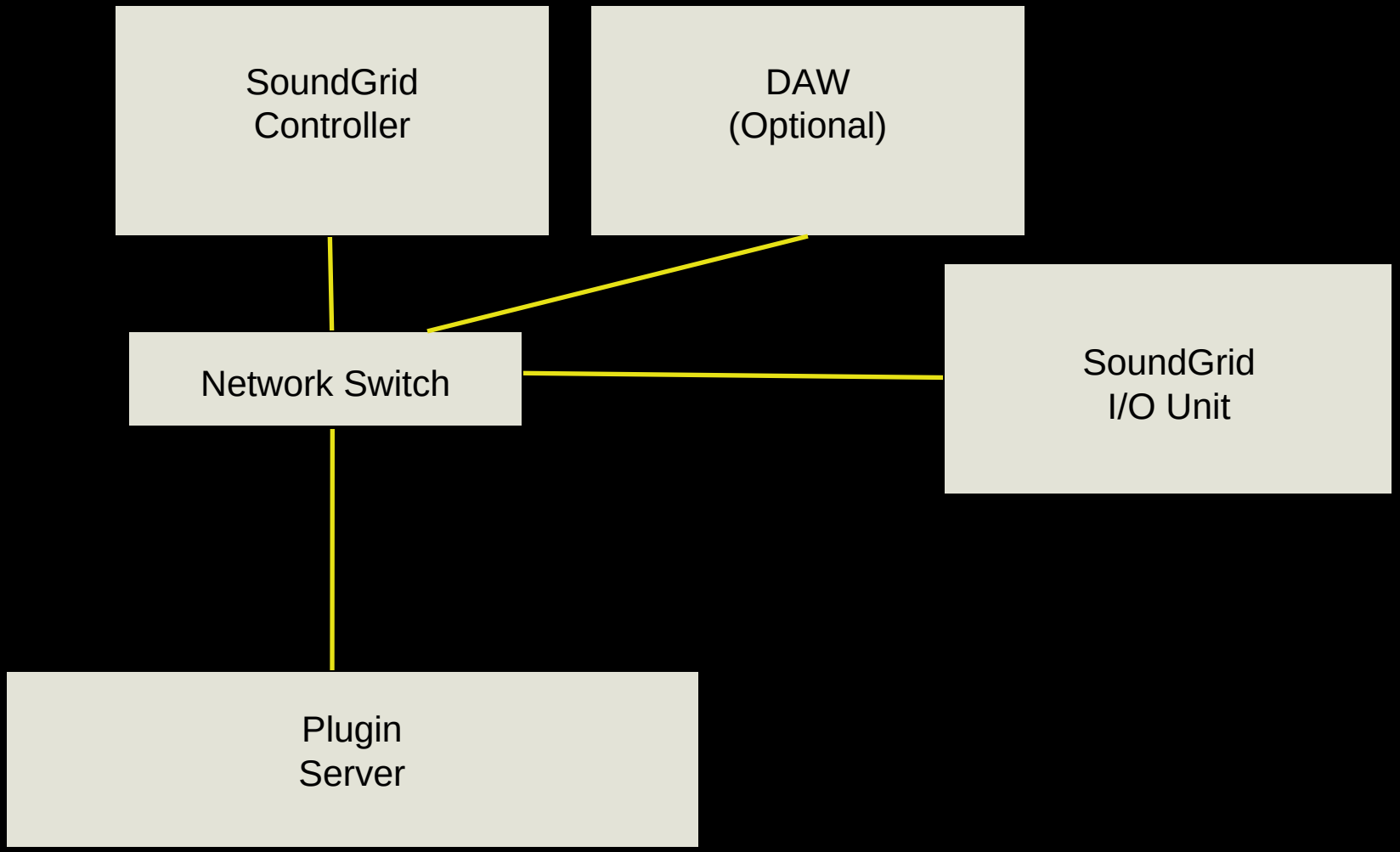
Waves proprietary technology for low latency live sound processing with Waves plugins using standard CPUs and networking

SoundGrid Benefits

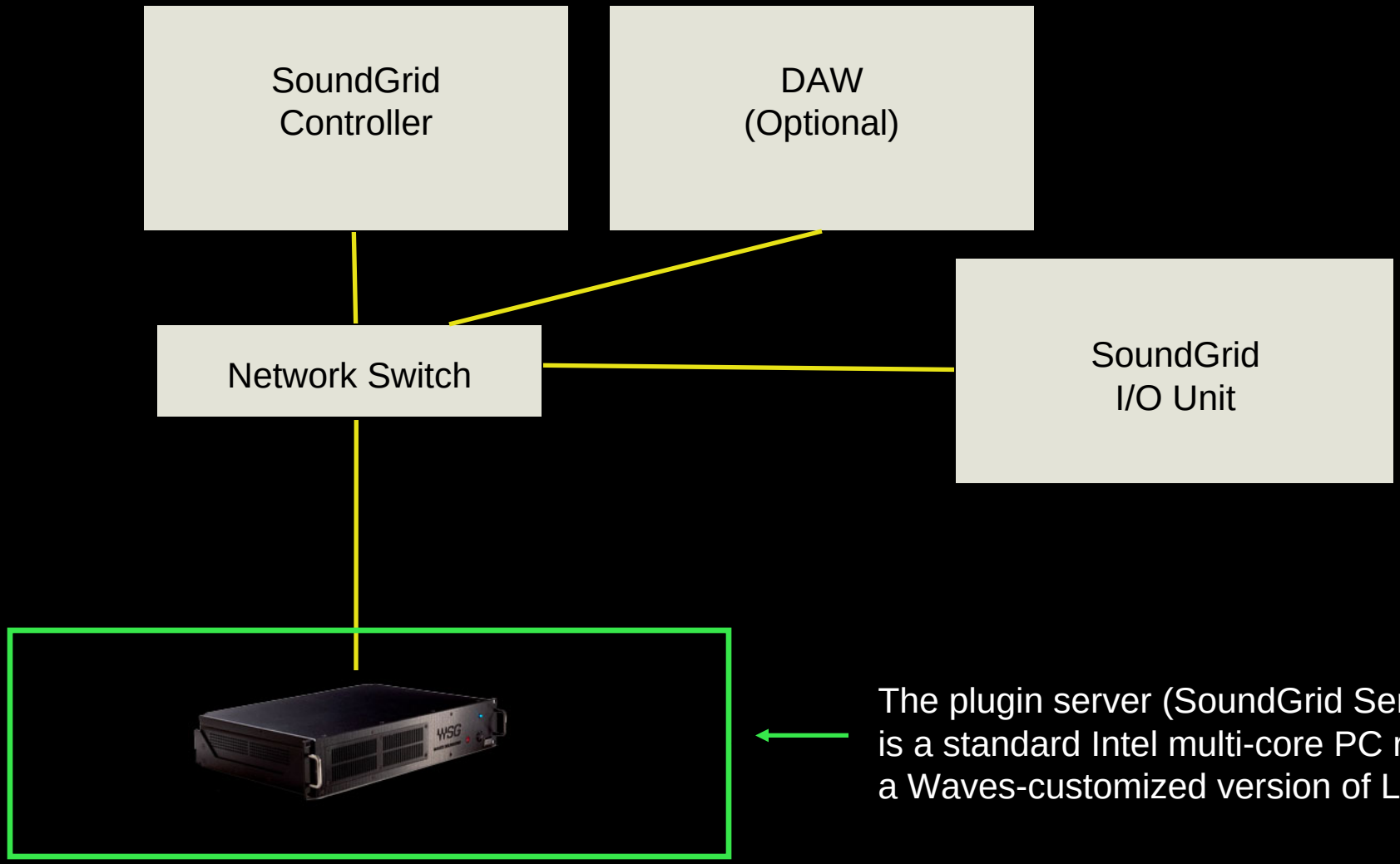
- Reliable low latency (~1ms in-to-out) platform for running many Waves plugins
- Uses standard computers, switches and cables
- Bridges the worlds of studio production and live sound
- Audio distribution, processing, recording and playback on one computer
- Software recovery, mirrored/redundant setup options
- Over 70 Waves live sound plugins now available

How SoundGrid Works

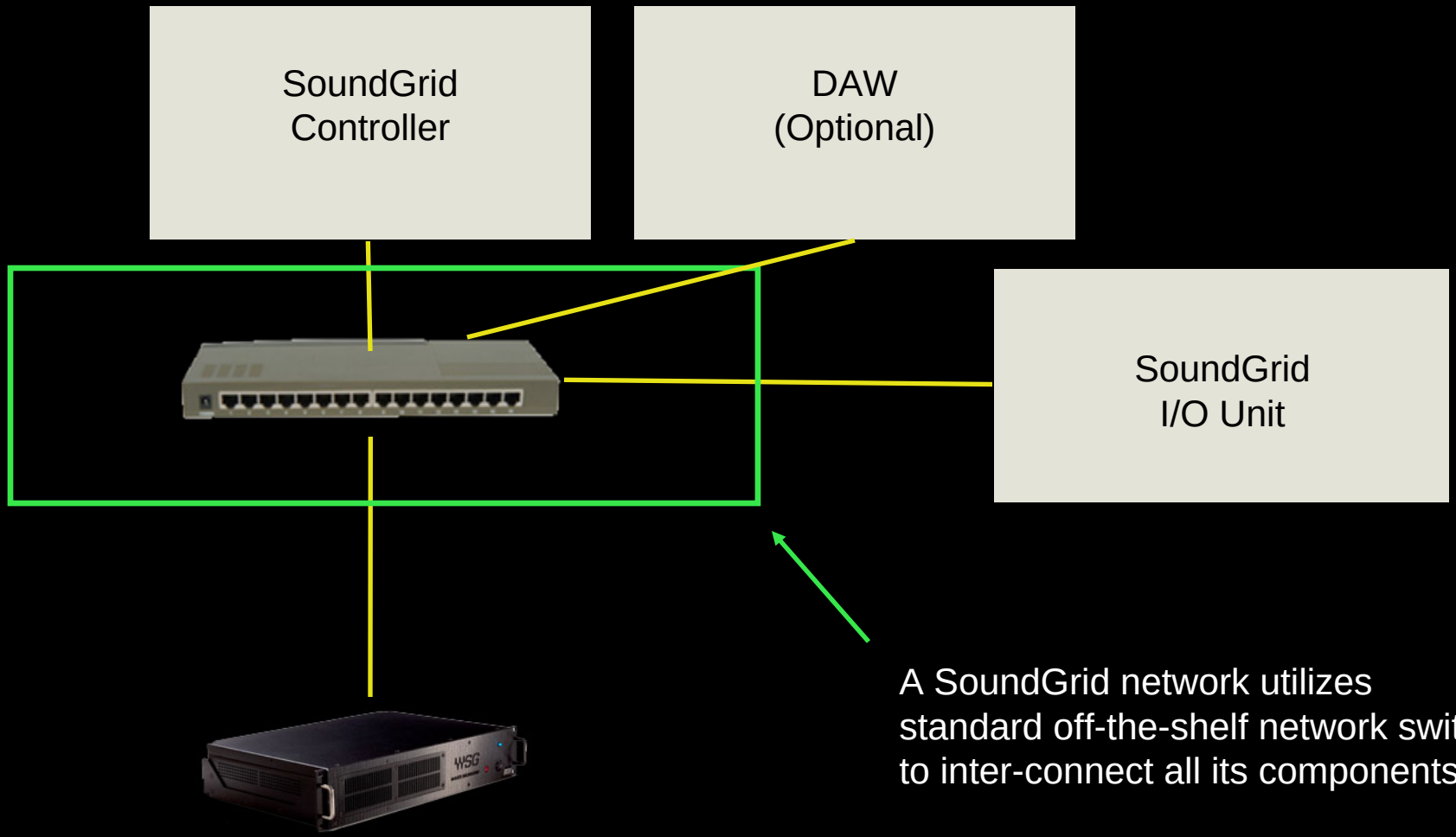
Waves SoundGrid Basic Block Diagram



Waves SoundGrid Basic Block Diagram



Waves SoundGrid Basic Block Diagram



A SoundGrid network utilizes standard off-the-shelf network switches to inter-connect all its components.

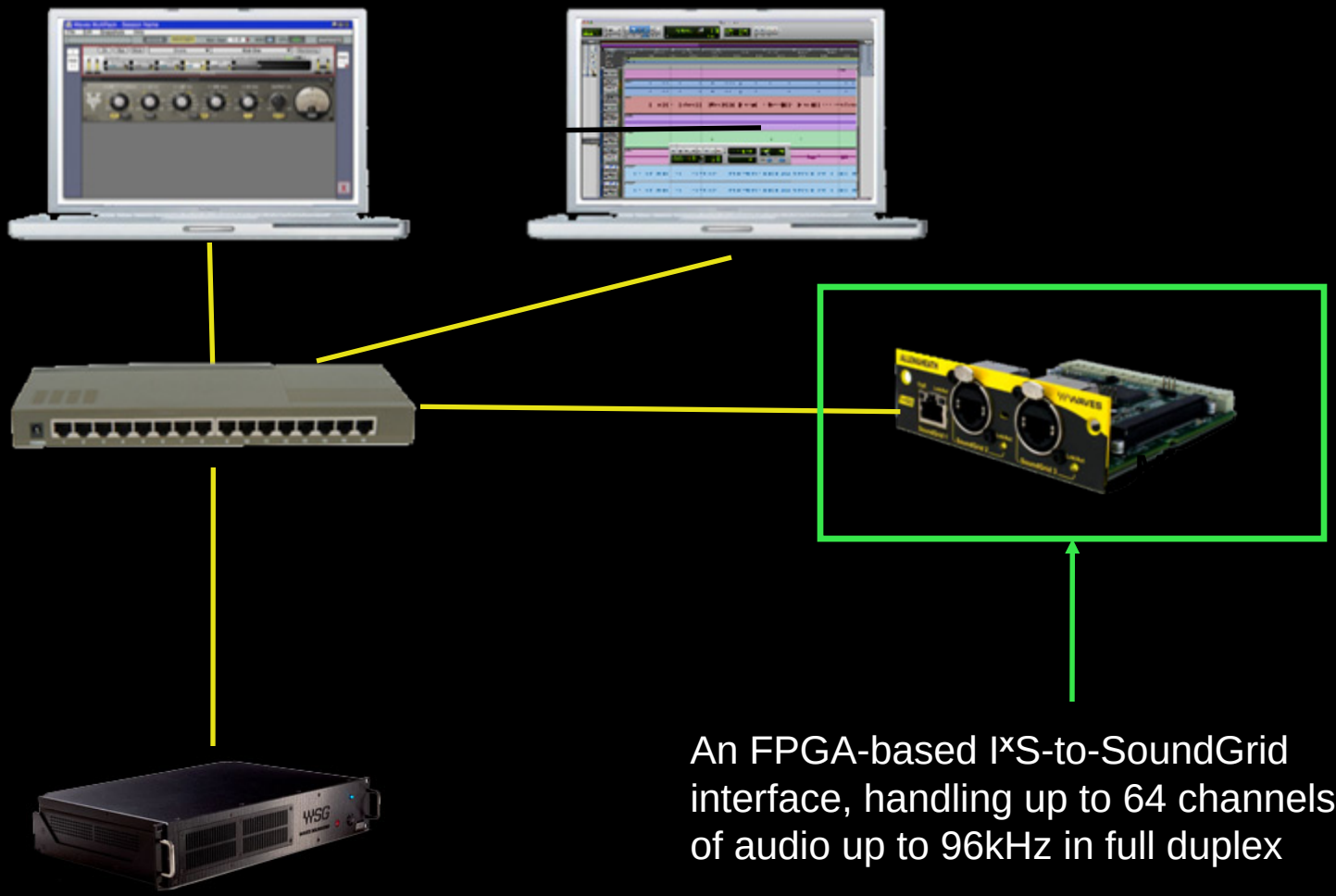
Waves SoundGrid Basic Block Diagram

Record processed tracks and/or direct-to-DAW on the same or another computer

SoundGrid I/O Unit

SoundGrid is controlled by a **MultiRack SoundGrid**, a Windows and OS X compatible user interface for creating sessions, loading plugins, setting snapshots, and more.

Waves SoundGrid Basic Block Diagram



An FPGA-based IˣS-to-SoundGrid interface, handling up to 64 channels of audio up to 96kHz in full duplex

MultiRack SoundGrid Features

MultiRack Features

Main Window

- Up to 64 mono, stereo, and mono-to-stereo Racks
- Up to 8 plug-ins per Rack in any order
- Flexible input/output setup for each Rack
- On/Off, Bypass, Side-Chain, Naming and Grouping for each Rack
- Top Bar: Setup/Show Modes, Snapshot Control, System Monitoring
- Assign up to 8 “Hot” plugins for one-click access and immediate control

MultiRack Features

Snapshot Pane

1000 Snapshots • Store/Recall • Global Paste • Recall-Safe

MultiRack Features

Rack Window

Plugin parameter editing and control • Remote control via MIDI

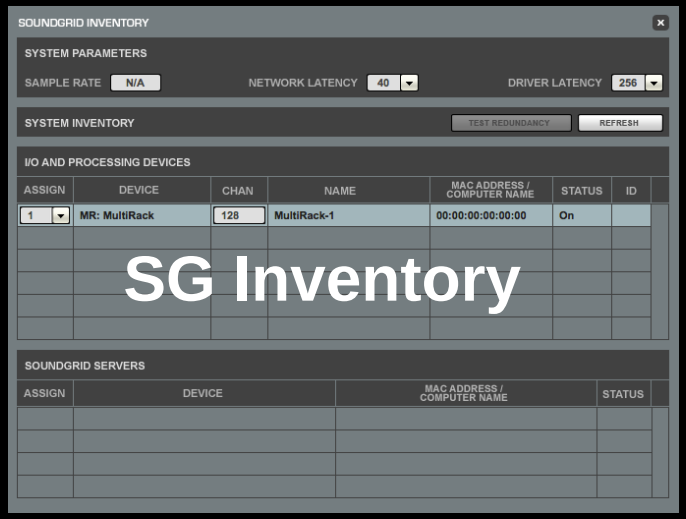
MultiRack Features

Group Properties Window

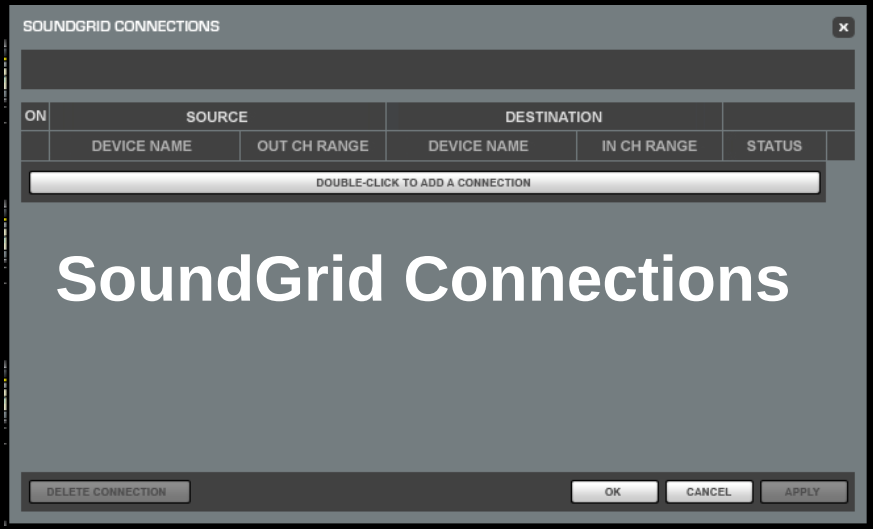
- Assign Racks to up to 16 groups
- Independent automatic/manual latency alignment for each group

MultiRack Features

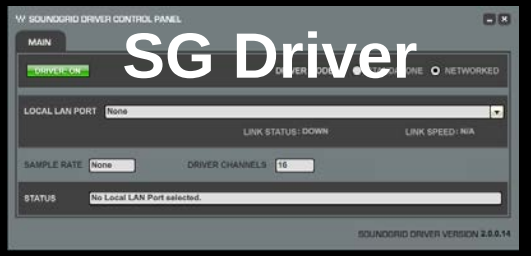
Sets up the SG network, displays and assigns all available SG components



Manage and route audio in the SoundGrid network



A CoreAudio/ASIO driver using the computer's Gigabit Ethernet port to record/play audio



High Profile Users

Beyoncé • Rihanna • Katy Perry • Lady Gaga • Celine Dion • Shakira • Taylor Swift • Britney Spears • Coldplay • Bon Iver • White Stripes • Linkin Park • Beastie Boys • Aerosmith • Norah Jones • Beck • Christina Aguilera • Bruce Springsteen • Snoop Dog • Maroon 5 • Paul Simon • James Taylor • Carole King • Rush • Nine Inch Nails • Phish • Arctic Monkeys • Ozzy Osbourne • Kelly Clarkson • Shania Twain • Iron Maiden • Jane's Addiction • and many more...

Integrated SoundGrid I/O Solutions

- WSG-Y16 mini-YGDAI card for **Yamaha** consoles
- Waves card for **DiGiCo** SD-series consoles
- M-Waves card for **Allen & Heath** iLive consoles

SoundGrid

Plugins, Bundles & Servers

WAVESLIVE

MODELING
The Science of Sound

Analog Modeling

SSL 4000 Collection

The API Collection

V-Series

WAVESLIVE

MODELING
The Science of Sound

Artist Collaborations

Chris Lord-Alge
Classic Compressors

Jack Joseph Puig
Analog Legends

Eddie Kramer
Tape, Tubes &
Transistors

About SoundGrid Plugins

- SoundGrid runs TDM plugins which require TDM licenses
- TDM owners can use SoundGrid-compatible plugins
- Native owners need TDM upgrade
- SoundGrid bundles customized for live sound

  SG Prelude, SG Essentials, SG Pro & SG SD7 Pro
- Available online and worldwide from Waves dealers

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SoundGrid Bundles

SG Prelude

12 PLUGINS

- ✓ **H-Comp**
- ✓ **H-Delay**
- ✓ **L1 Ultramaximizer**
- ✓ **Renaissance Axx**
- ✓ **Renaissance Bass**
- ✓ **Renaissance Channel**
- ✓ **Renaissance Compressor**
- ✓ **Renaissance DeEsser**
- ✓ **Renaissance Equalizer**
- ✓ **Renaissance Reverb**
- ✓ **Renaissance Vox**
- ✓ **Trans-X**

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SoundGrid Bundles

SG Essentials

28 PLUGINS

- ✓ AudioTrack
- ✓ C1 Compressor
- ✓ C4 Multiband Compressor
- ✓ DeEsser
- ✓ H-Comp
- ✓ H-Delay
- ✓ L1 Ultramaximizer
- ✓ MaxxBass
- ✓ MetaFlanger
- ✓ MondoMod
- ✓ MV2
- ✓ SuperTap
- ✓ Trans-X
- ✓ TrueVerb
- ✓ Renaissance Axx
- ✓ Renaissance Bass
- ✓ Renaissance Channel
- ✓ Renaissance Compressor
- ✓ Renaissance DeEsser
- ✓ Renaissance Equalizer
- ✓ Renaissance Reverb
- ✓ Renaissance Vox
- ✓ PAZ Analyzer
- ✓ Q10 Paragraphic Equalizer
- ✓ V-Comp
- ✓ V-EQ3
- ✓ V-EQ4
- ✓ Vocal Rider

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SoundGrid Bundles

SG Pro

SG SD7 Pro

(includes dual licenses)

50 PLUGINS

- ✓ API 2500
- ✓ API 550A
- ✓ API 550B
- ✓ API 560
- ✓ AudioTrack
- ✓ Bass Rider
- ✓ C1 Compressor
- ✓ C4 Multiband Compressor
- ✓ C6 Multiband Compressor
- ✓ Center
- ✓ CLA-2A
- ✓ CLA-3A
- ✓ CLA-76
- ✓ DeEsser
- ✓ Doppler
- ✓ Doubler
- ✓ Enigma
- ✓ GTR3 Amps
- ✓ GTR3 Stomps
- ✓ H-Comp
- ✓ H-Delay
- ✓ H-EQ
- ✓ HLS Channel
- ✓ InPhase
- ✓ InPhase LT
- ✓ L1 Ultramaximizer
- ✓ L2 Ultramaximizer
- ✓ L3-LL Multimaximizer
- ✓ L3-LL Ultramaximizer
- ✓ Linear Phase Equalizer
- ✓ Linear Phase Multiband
- ✓ MaxxBass
- ✓ MaxxVolume
- ✓ MetaFlanger
- ✓ MondoMod
- ✓ MV2
- ✓ OneKnob Brighter
- ✓ OneKnob Driver
- ✓ OneKnob Filter
- ✓ OneKnob Louder
- ✓ OneKnob Phatter
- ✓ OneKnob Pressure
- ✓ PAZ Analyzer
- ✓ PuigChild 660/670
- ✓ PuigTec EQP-1A
- ✓ PuigTec MEQ-5
- ✓ Q10 Paragraphic EQ
- ✓ Renaissance Axx
- ✓ Renaissance Bass
- ✓ Renaissance Channel
- ✓ Renaissance Compressor
- ✓ Renaissance DeEsser
- ✓ Renaissance EQ
- ✓ Renaissance Reverb
- ✓ Renaissance Vox
- ✓ S1 Stereo Imager
- ✓ SSL E-Channel
- ✓ SSL G-Channel
- ✓ SSL G-Equalizer
- ✓ SSL G-Master Buss Compressor
- ✓ SuperTap
- ✓ Trans-X
- ✓ TrueVerb
- ✓ V-Comp
- ✓ V-EQ3
- ✓ V-EQ4
- ✓ Vocal Rider
- ✓ W43 Noise Reduction
- ✓ WLM Loudness Meter
- ✓ WNS Noise Suppressor

Waves SG Server Benchmarks (@48 kHz)

Server One

CPU: i7

RAM: 4GB

Channel count: 32 mono channels

Throughput latency: 40 samples (<1ms)

Plugin instances (tested with 32 channels):

C4 Multiband	256 instances
or	
SSL 4000 Channel	256 instances
or	
TrueVerb (Rverb ST)	160 instances

Compact Server

CPU: ATOM

RAM: 1GB

Channel count: 16 mono channels

Throughput latency: <2ms

Plugin instances (tested with 16 channels):

C4 Multiband	36 instances
or	
TrueVerb (Rverb ST)	16 instances
or	
SSL 4000 Channel	48 instances
or	
H-Delay	28 instances

Waves SG Server Benchmarks (@48 kHz)

Impact Server

CPU: i3

RAM: 4GB

Channel Count: 64 mono channels

Throughput latency: 56 samples

Plugin instances (tested with 64 channels):

C4 Multiband	232 instances
or	
SSL 4000 Channel	321 instances
or	
TrueVerb (Rverb ST)	96 instances

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THANK YOU