



SILENT ANGEL

# PRODUCT SELECTION GUIDE 2022 H1

The comprehensive digital audio network solution for HiFi systems

<http://www.slientangel.com>

Silent Angel's solution is born for music lovers who want to build the high-quality HiFi network and pursue the purest audio quality possible. All the solutions were created to pursue superior audio quality by improving many details without compromise.

## Use Silent Angel's solution to:

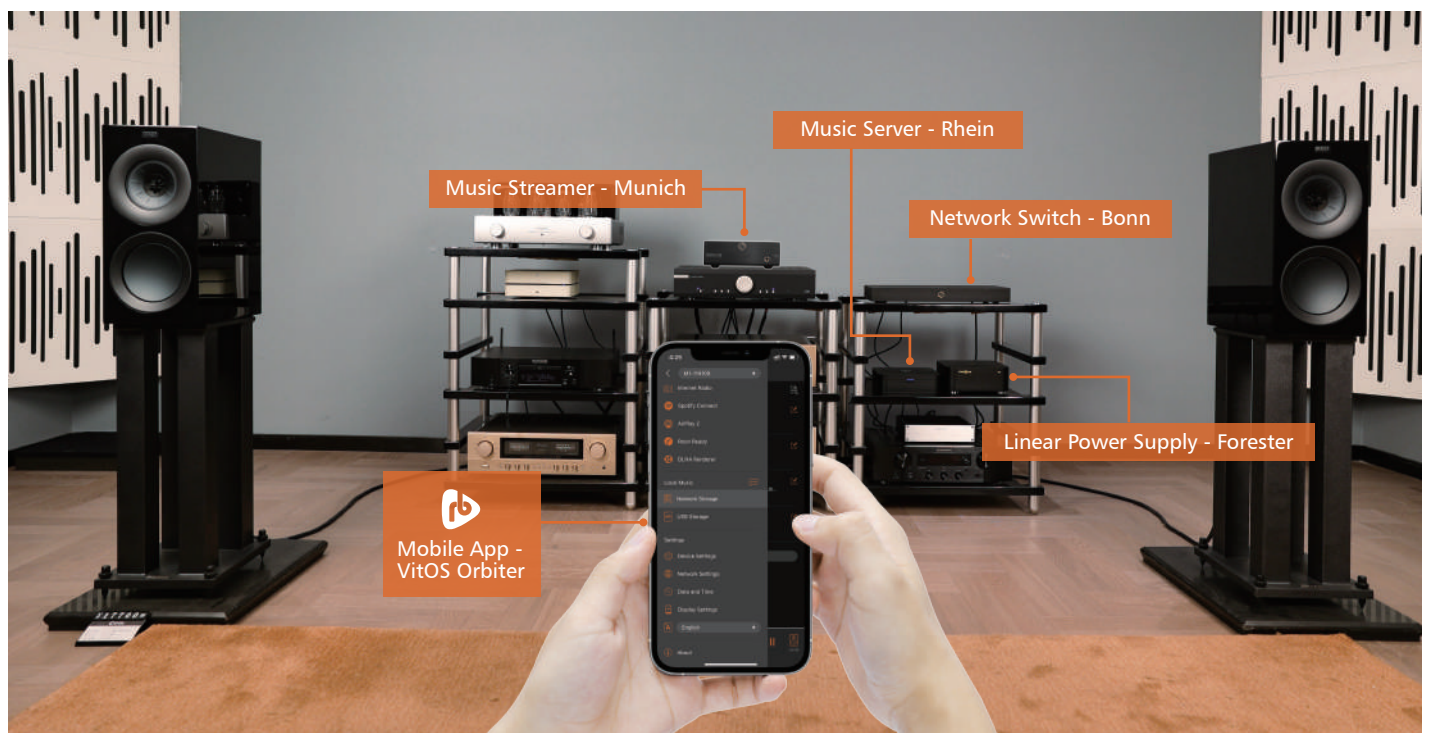
- Build up a digital audio network.
- Acquire more audio sources.
- Enjoy by existing HiFi systems with pleasant experience.

## Applications & Services

1. Room infrastructure.
2. High-resolution streaming services (such as Tidal, Qobuz, Spotify, Amazon Music,...and more.).
3. Playing music collections from local or network shared storage.

## Components Used

- Audio Network Switch- **Bonn Series**
- Music Streamers (Transporter)- **Munich, and Bremen Series**
- Linear Power Supply- **Forester Series**
- Music Server- **Rhein Series**



# Music Server

## Rhein Z1



### Your Center of Digital Music, An Audiophile's Ultimate Dream

High-performance music server with an advanced hardware mainboard, high-quality CNC aluminum alloy chassis, and optimized music server OS & software giving the pleasant user experience. Z1 is the ideal digital music center for your home audio network, as well as a solid computing node to serve versatile streaming services.

### Hardware

- High-performance yet low-power (6W) Intel CPU.
- High quality circuitry and components.
- Audio-grade SSD for system (250GB) and music data storage (with 1TB and 2TB Options).
- Noise reduction via SATA signal optimization.
- Special-picked SSD modules with EMI absorber.
- Special power regulation circuit inside to isolate the power noise from the SSD controller chip.

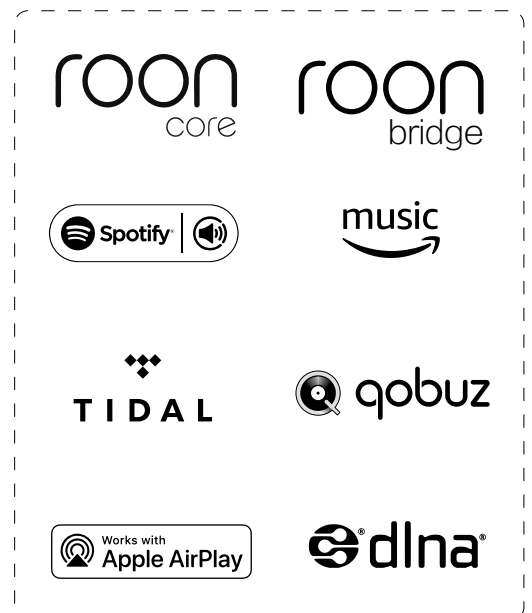
### Software Features And Application

- Optimized OS, VitOS.
- Mobile app, VitOS Manager.
- Install and enjoy various applications seamlessly.
- Support Roon Core Server.
- Support Roon Bridge mode(Connect USB-Audio digital output to DAC).

### Mechanical stability and craftsmanship

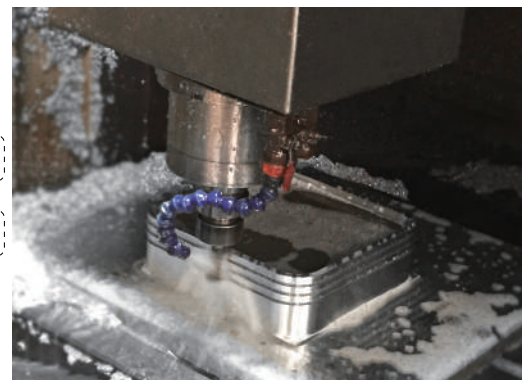
- Highest-grade CNC aluminum alloy chassis. Robust, vibration- and dust- free.
- Fanless, well-structured internal design.
- High permeability EMI absorbers applied.

### Features and Services Supported



Aerospace industry grade aluminum alloy upper case

Two patent protected appearance and internal structure design



# Audio Network Switch

## Bonn Series

The Bonn Series enables HiFi system owners to create a stable and isolated audio network zone. It is optimized for transmitting data with less interference, sending over accurately timed data, and maximizing the potential of HiFi systems.

### N8 Pro



The 8-Port Audiophile Grade Network Switch

- High quality circuitry and components.
- Gold-plated enclosed Gigabit Ethernet ports.
- Class-leading Radar-Grade internal switching power supply.
- Noise reduction by high-permeability EMI absorbers.
- TCXO (Temperature Compensation Crystal Oscillator) greatly lowering network latency issues and jitter effects.
- 12V DC power jack (12V) for an external linear power supply upgrade.
- A gold-plated ground connector for an external grounding box.
- LED switch for turning off the port status indicators.
- Class-leading clock receiving module for an external clock input. (Optional)

### N8



The 8-Port Audio-Grade Network Switch

- High quality circuitry and components.
- Noise reduction by high-permeability EMI absorber.
- Medical-grade power adapter.
- Exclusive clock module, TCXO, lowering latency issues and jitter effects.

### N16 LPS



The 16-Port Audio-Grade Network Switch With Two Zones

- Dual zones consist of two Individual 8-Port subsystem modules.
- Noise reduction by high-permeability EMI absorber.
- Built-in advanced linear power supply.
- Linear powered TCXO clock module lowering latency issues and jitter effects.
- Parallel Connection mode, deploy audio devices in a separate zone.
- Series Connection mode, daisy chaining both zones helps to further purify network signals.

## Comparison Table

Module / Feature	N8 Pro	N8	N16 LPS
Product	8-Port Audiophile Grade Network Switch	8-Port Audio Grade Network Switch	16-Port Audio Grade Network Switch With Two Zones
Ethernet	8-Port Gigabit Ethernet Gold plated ports Spacing out ports physically	8-Port Gigabit Ethernet	16-Port Gigabit Ethernet consists of 2 individual switch module. Each Zone has 8 ports.
Noise Reduction By EMI Absorber	Yes	Yes	Yes
TCXO, Highly Accurate Clock	Yes	Yes	Yes. Linear powered
Power	Radar Grade internal switching power AC 100-240V	Medical Grade power adaptor DC 5V power input	Built-in linear power supply (Powered by Forester technology) AC 100-240V
Power Source Upgrade	by F2 Lindear Power Supply	by F1 or F2 Lindear Power Supply	N/A
Advanced Options	1. Additional DC 12V power jack for upgrade 2. Gold-plated ground connector 3. LED indicator on/off switch 4. Class-leading clock receiving module reserved for external clock input (option)		

# Music Streamer & Transporter

## Munich Series

Munich Series, a compact, feature-rich, high-quality network streamer (& transporter). The Munich series' hardware and software are optimized for better sound quality by improving many details without compromise.

M1



M1T



The Network Music Streamer With DAC and Headphone Amp

The Network Music Transporter

## Hi-res Streaming Services



## Hardware

- High-performance, low-power CPU, 4-core 1.5GHz ARM Cortex-A72.
- Large-size system RAM (option of up to 8GB).
- High quality circuitry and components.
- Fan-less, highly efficient heat-sink.
- A high permeability EMI absorber.

## Software Features And Application

- Certified Roon Ready player.
- Tidal, Qobuz, Spotify Connect, Amazon Music, Internet radio stations.
- DLNA renderer (player).
- Mobile app, VitOS Orbiter.

## Digital Outputs And Audio Format

- Music Format: AAC, M4A, MP3, OGG, FLAC, WAV, ALAC, WAV64, AIFF, CUE, WMA, DSF, DFF (SACD files, native DSD up to DSD256, and DoP up to DSD128).
- Digital Outputs: AES/EBU; I2S; Coaxial ports: Supports up to PCM 384KHz and DSD 5.6M (DSD128).
- Digital USB-Audio output: Supports up to PCM 768KHz and DSD 11.2M (DSD256).

## Analog Outputs And Headphone Connection\*

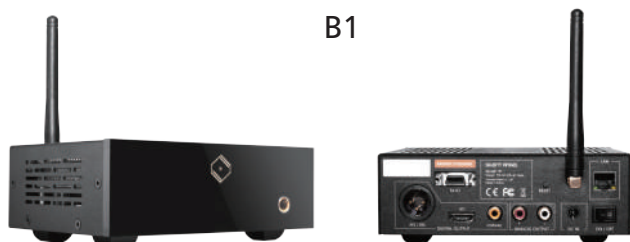
\* NOT supported on Transporter M1T

- Integrates a headphone Amp with a 6.35mm jack.
- Analog Output: RCA (L+R).

## Bremen Series For HiFi Entry

The Bremen is born to pursue HiFi-level audio performance without any compromise.

B1



B1T



The Network Music Streamer With Headphone Amp For HiFi Entry

The Network Music Transporter For HiFi Entry

## Hi-res Streaming Services



## Hardware

- Elegant metal enclosure.
- 2-core 1.2GHz ARM Cortex-A7 CPU.
- High quality circuitry and components.
- Highly permeable EMI absorber to reduce electrical interference.
- WiFi 802.11 a/b/g/n/ac 2.4GHz, 5GHz (client mode) for ease of deployment.
- Supports Bluetooth 4.2 for phones and tablets.

## Software Features And Application

- Tidal Connect, Qobuz, Spotify Connect, Airplay, Amazon Music, Deezer, Napster, Tune-in radio, Sound Machine.
- DLNA renderer (player).
- Mobile app, VitOS Lite.

## Digital Outputs And Audio Format

- Digital output: AES/EBU, I2S, Coaxial.

## Analog Outputs And Headphone Connection\*

\* Not supported on Transporter B1T

- Analog output: RCA (L+R), gold plated ports.
- Integrates a headphone Amp with a 6.35mm jack.

## Comparison Table

Module / Feature	M1	M1T	B1	B1T
Product	Network Music Streamer	Network Music Transporter	Network Music Streamer For HiFi Entry	Network Music Transporter For HiFi Entry
Applications	<ol style="list-style-type: none"> <li>1. Hi-res music streaming services</li> <li>2. Room Ready Player</li> <li>3. Local or LAN music via SMB (NAS), DLNA</li> <li>4. Digital &amp; Analog Audio Outputs</li> <li>5. Play DSD files</li> <li>6. Headphone</li> </ol>	<ol style="list-style-type: none"> <li>1. Hi-res music streaming services</li> <li>2. Room Ready Player</li> <li>3. Local or LAN music via SMB (NAS), DLNA</li> <li>4. Digital Audio Outputs (to DAC)</li> <li>5. Play DSD files</li> </ol>	<ol style="list-style-type: none"> <li>1. Hi-res music streaming services</li> <li>2. Digital &amp; Analog Audio Outputs</li> <li>3. DLNA renderer (player)</li> <li>4. Headphone</li> </ol>	<ol style="list-style-type: none"> <li>1. Hi-res music streaming services</li> <li>2. Digital Audio Output (to DAC)</li> <li>3. DLNA renderer (player)</li> </ol>
Operating System	VitOS	VitOS	VitOS Lite	VitOS Lite
CPU	Dual Cortex-72 18GHz Qual Cortex-A53 1.4GHz	Dual Cortex-72 18GHz Qual Cortex-A53 1.4GHz	2 Cores 1.2GHz ARM Cortex-A72	2 Cores 1.2GHz ARM Cortex-A72
DRAM	4GB	4GB	128 MB	128 MB
Flash	32 GB High Speed	32 GB High Speed	128 MB	128 MB
LAN	Gigabit Ethernet (max 1000Mbps)	Gigabit Ethernet (max 1000Mbps)	Fast Ethernet (max 100Mbps)	Fast Ethernet (max 100Mbps)
BlueTooth	N/A	N/A	BlueTooth 4.2 with EDR and BLE	BlueTooth 4.2 with EDR and BLE
Wi-Fi	N/A	N/A	802.11 a/b/g/n/ac 2.4GHz, 5GHz	802.11 a/b/g/n/ac 2.4GHz, 5GHz
Digital Audio Outputs	AES/EBU Coaxial I2S USB Audio	AES/EBU Coaxial I2S USB Audio	AES/EBU Coaxial I2S	AES/EBU Coaxial I2S
Analog Audio Outputs	RCA L+R 6.35mm Headphone Jack	N/A	RCA L+R 6.35mm Headphone Jack	N/A

# Linear Power Supply

## Forester Series. Power Source Upgrade Solution

There are various details in a HiFi system that might affect the audio quality. An extremely stable power source is an essential factor to the goal of pursuing ultimate sound quality.

### Forester F1, Linear Power Supply With Dual 5V DC Outputs



Employs two DC 5V-2A outputs, compatible with these models:

- Bonn N8, Munich M1, Bremen B1, Munich M1T.

### Forester F2, Linear Power Supply With Multiple 12V & 5V DC Outputs



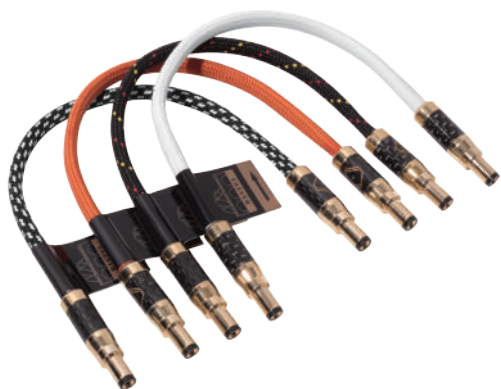
Employs 12V-3A , 12V-1A, 5V-2A , and 5V-1A (DC jack or USB) outputs, compatible with these models:

- 5V DC output: Bonn N8, Munich M1, Bremen B1, Munich M1T.
- 12V DC output: Bonn N8 Pro.

## Accessories

### DC Upgrade Cable - Bastei Series

Connect to the Forester F1 or F2 linear power supply to further improve its power source.



- Product Specifications -	
Color	Light Orange 🍊 ; Zebra Plaid 🐘 ; Black Tiramisu 🍷 ; Snowy White ❄️
Power Input	(DC) 5V
Interface	5.5 x 2.1 mm DC plug
Temperature	Operating 0 ~ 35 °C; Storage -20 ~ 70 °C
Humidity	Operating: 10% ~ 90% RH (non-condensing) Storage: 5% ~ 95% RH (non-condensing)
Model Name	<b>Light Orange</b> - B05V02ORR (20 cm); B05V05ORR (50 cm); B05V15ORR (150 cm) <b>Zebra Plaid</b> - B05V02ORS (20 cm); B05V05ORS (50 cm); B05V15ORS (150 cm) <b>Black Tiramisu</b> - B05V02OSR (20 cm); B05V05OSR (50 cm); B05V15OSR (150 cm) <b>Snowy White</b> - B05V02OSS (20 cm); B05V05OSS (50 cm); B05V15OSS (150 cm)

### Foot Stand- Vibration Suppression

Minimize vibration and reduce noise by using S28 stainless steel stands.



### Streaming Cable (Ethernet)

Use with Bonn series to gain the quality network.

