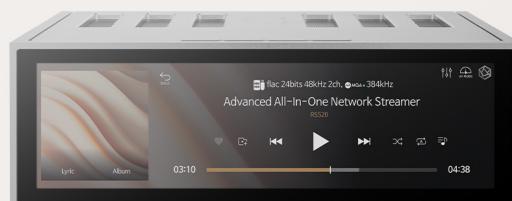




Beyond Audio, HiFi ROSE

rose

Advanced Hi-Fi Audio System, **HiFi ROSE**



HiFi ROSE is a Hi-Fi audio system that can play MQS (Mastering Quality Sound), Hi-Res (Hi-Resolution, Japan Audio Society), and MQA (Master Quality Authenticated) without distortion.

The ROSE name guarantees pure and clean sound. The current recording technology that has been developed through LPs, tapes, and CDs supports high-resolution music files which are 7 times larger than CD music files. Recording technology for mastering analog data without distortion is still evolving.

HiFi ROSE transforms high-resolution/high-quality digital sound recorded with the latest technology into analog without distortion, reproducing even the smallest parts of the original sound.

In addition, in step with the new audio era, it provides an environment where you can enjoy music and video at the same time, providing a sense of space and realistic sound as if you were in a concert hall. HiFi ROSE is continuing research and development to provide a variety of music services and a convenient environment for listening to high-quality audio.

Its unrivaled design, convenience, pure sound without distortion, and unique analog circuit design technology are recognized around the world.



RW800 ROSE AIR Lite

The RW800 is a USB-based high-performance streaming module that lets you add the latest streaming features to HiFi ROSE systems with ease. Expand your streaming capabilities by connecting to a HiFi ROSE streamer with just a USB-C cable, or use it standalone by connecting directly to an amplifier or active speakers. One connection provides the most practical upgrade solution for improved system versatility and overall performance.





KEY FEATURES

- Dual operation in Expansion Mode and Standalone Mode
- Up to PCM 32 bit/384 kHz and DSD128
- USB-based lossless audio transmission
- Dual-band Wi-Fi / Bluetooth 5.2 / Ethernet

DESIGN

- Dimension : 110(W) × 115.5(D) × 27(H) mm
- Weight : 245g
- Finish : Black

CONNECTIVITY

AirPlay 2, Bluetooth, Google Cast, Roon Ready, Spotify Connect, Tidal Connect, Qobuz Connect

MAIN FUNCTION

Hi-Res	DSD	DSD 128
	PCM	32bit/384kHz
In/Out Port	Digital In	Optical
	Digital Out	Optical
	Analog Out	Unbalanced
Network Connection	Ethernet	10/100 BASE-T
	WiFi	802.11 a/b/g/n/ac (2.4GHz/5GHz)
	Bluetooth	V.5.2

RS451 Master Fidelity Network Streamer

The RS451 is HiFi ROSE's next-generation network streamer, integrating the brand's advanced digital audio technologies. It inherits the high-performance architecture of the flagship RS151, while offering practical usability and space efficiency optimized for desktop audio setups. Equipped with a high-performance ES9027PRO DAC, the RS451 applies separate DAC circuits for both pre-out and headphone output, delivering refined, high-end sound tailored to each listening environment. The pre-out section is designed with precision DAC circuitry to integrate seamlessly into high-end audio systems, while the dedicated headphone DAC is paired with four high-performance amplifiers to achieve precise impedance matching, low noise, and powerful driving performance. The RS451 is a network streamer that strikes a finely tuned balance of performance, design, and usability. It sets a new standard for audio experiences from HiFi ROSE.



VELVET
SOUND
VERITA

MQA

MQS
Mastering Quality Sound

DSD
Direct Stream Digital

DXD
Digital eXtreme Definition

flac

AIFF

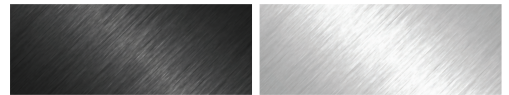


KEY FEATURES

- Semi-reference level all-in-one network streamer
- Compact design optimized for desktop HiFi environments
- Built-in high-power headphone amplifier
- ROSE DPC™ (Digital Processing Core) Module
- ROSE NRA™ (Noise Reduction Analog) Filter
- Ultra-fast 1300V/μs slew rate and 0.0003% THD minimize distortion
- Independent channel power supply reduces noise

DESIGN

- **Dimension** : 430(W) × 337(D) × 92(H) mm
- **Weight** : 7 kg
- **Display** : 8.8" IPS LCD & Capacitive Touch Screen (MIPI)
- **Finish** : Black, Silver



CONNECTIVITY

Bluetooth, DLNA, AirPlay, Spotify Connect, Roon Ready

MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital In	USB 2.0 Type-B, Optical, Coaxial, HDMI eARC
	Digital Out	USB 3.0 Type-A, Optical, Coaxial
	Analog In	Line In
	Analog Out	Unbalanced, Balanced
	HDMI Out	4K
	Headphone Out	XLR(Balanced), 4.4mm(Balanced), 6.35mm(Unbalanced)
Network Connection	Ethernet	10/100/1000 BASE-T
	WiFi	USB Dongle
	Bluetooth	V.5.4 AptX

RS151 High Performance Network Streamer Gen 2

The RS151 is a network streamer that achieves groundbreaking improvements in every aspect. ROSE's proprietary cutting-edge technologies developed during the RD160 project, combined with the latest flagship DAC chip and premium components, deliver revolutionary advancements in audio performance. The significantly enhanced processing power, based on a next-generation 8-core CPU, integrates seamlessly with the Full HD wide-view multi-touch display introduced in the RS130, delivering a smoother and more enjoyable playback experience. With upgrades in performance, functionality, and convenience, the RS151 sets a new standard for high-resolution audio and streaming.



VELVET
SOUND
VERITA

MQA

MQS
Mastering Quality Sound

DSD
Direct Stream Digital

DXD
Digital eXtreme Definition

flac

AIFF

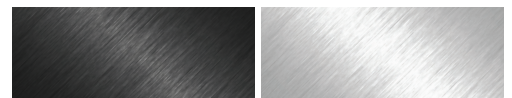


KEY FEATURES

- Flagship Network Streamer
- Network Transport + DAC
- Advanced DAC Design with Extremely Low Noise and Distortion
- ROSE DPC™ (Digital Processing Core) Module
- ROSE NRA™ (Noise Reduction Analog) Filter
- Highly Precise Femto Clock
- Linear Power Supply for Significant Noise Reduction

DESIGN

- **Dimension** : 430(W) × 319(D) × 125(H) mm
- **Weight** : 11 kg
- **Display** : 15.4" wide touch screen (FHD, eDP)
- **Finish** : Black, Silver



CONNECTIVITY

Bluetooth, DLNA, AirPlay, Spotify Connect, Roon Ready

MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital In	USB 2.0 Type-B, Optical, Coaxial, AES/EBU, HDMI eARC
	Digital Out	USB 3.0 Type-A, Optical, Coaxial, AES/EBU, I ² S-HDMI
	Analog In	Line In
	Analog Out	Unbalanced, Balanced
	HDMI Out	4K
Network Connection	Ethernet	10/100/1000 BASE-T
	WiFi	USB Dongle
	Bluetooth	V5.4 AptX

RS130 Ultimate Network Transport

The RS130 is a network transport which can be digitally connected to an external DAC product. It features Fiber Optic Ethernet and Fiber Optic USB connectivity, which effectively block digital noise, and also has a high-precision OCXO clock to optimize stable digital output. The RS130 supports external master clock input ensuring compatibility between devices in different usage environments and enabling playback of network audio at the highest level of sound quality. The RS130 is the first network transport developed by ROSE with a user-friendly lineup in mind, based on their unique design know-how and functions accumulated over many years.





KEY FEATURES

- Linear Power Supply Utilizing Supercapacitor for Battery-Level Noise Reduction
- High-Precision OCXO Clock for Long-Term Jitter Reduction
- External Master Clock Input
- Network Streaming with SSD Caching Playback
- Fiber Optic Ethernet & USB Connectivity

DESIGN

- **Dimension** : 430(W) × 317(D) × 125(H) mm
- **Weight** : 11.7kg
- **Display** : 15.4" wide touch screen (FHD, eDP)
- **Finish** : Black, Silver



MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital Out	USB 2.0 Type-A, Optical, Coaxial, AES/EBU, I ² S-HDMI
	Clock In	BNC 75Ω, 50Ω
	HDMI Out	4K
Network Connection	Ethernet	10/100/1000 BASE-T (SFP COPPER Type)
	WiFi	USB Dongle
	Bluetooth	USB Dongle V.4.2

RD160

Absolute True Fidelity DAC

The RD160 takes every single detail of sound to a new level.

The precise design and innovative technologies of HiFi ROSE, all concentrated on our product RD160, will guide you into a world of purer and more genuine sound. The RD160 offers a digital processing core module that precisely processes digital signals, an architecture to separate digital and analog signals and convert them transparently and precisely without distortion, a fully balanced design to maintain the highest signal purity, three power supply units to independently supply power to each circuit for clearer and more dynamic sound, and even a noise filter to vividly convey the finest details of the sound. Discover the RD160 and elevate your audio experience to a whole new level.



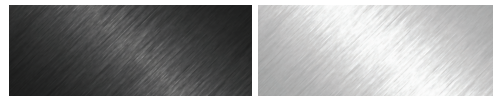


KEY FEATURES

- ROSE DPC™ (Digital Processing Core) Module
- ROSE CIM™ (Completely Isolated & Moduled) Architecture
- Three Customized Reference Linear Power Units
- ROSE NRA™ (Noise Reduction Analog) Filter
- High-Precision OCXO Clock
- Lavish Internal Wiring with High-Purity OFC & OCC
- Fiber Optic USB Connectivity

DESIGN

- **Dimension** : 430(W) × 330(D) × 88(H) mm
- **Weight** : 10kg
- **Display** : AMOLED hidden screen
- **Finish** : Black, Silver



MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital In	USB SFP, USB 2.0 Type-B, Optical, Coaxial 1(RCA), Coaxial 2(BNC), AES/EBU, I²S-HDMI
	Analog Out	Unbalanced, Balanced
	Clock In	BNC 75Ω, SMA 50Ω

RA180 Absolute Pure Sound Integrated Amplifier

The RA180 is a state-of-the-art integrated amplifier using the latest innovative technologies. Power damping and dead times were reduced to 1/10 or less. Linearity was dramatically improved to create a near-perfect sound that transcends the boundaries between digital and analog. Enjoy the pure sound of nature provided by the RA180.





KEY FEATURES

- Class AD Amplifier with Next-Generation GaN FET
- Multi-Output Component
- Designed to Play Up to the Super Tweeter Realm
- Balanced Power Supply
- Phono Amplifier with Variable EQ

DESIGN

- Dimension : 430(W) × 391(D) × 124(H) mm
- Weight : 16.7kg
- Material : Aluminum, Rust-proof Steel
- Finish : Silver

MAIN FUNCTION

In/Out Port	Analog In	LINE1, LINE2, LINE3(Bypass), BALANCED, PHONO(MM/MC)
	Analog Out	Sub Woofer
Speaker Out	Stereo(A/B)	200W × 4ch(8Ω)
	Stereo(A), BTL(B)	Stereo(A): 200W × 4ch(8Ω) BTL(B): 400W × 2ch(8Ω)
	BTL(A/B)	BTL(A): 400W × 2ch(8Ω) BTL(B): 400W × 2ch(8Ω)

RA280 Top-notch Master Integrated Amplifier

The RA280 is an integrated amplifier that inherits the innovative technologies used in RA180.

Enjoy pure natural sound as close to the original sound as you can get with the RA280, a near-perfect sound that transcends the boundaries between digital and analog technologies with excellent linearity achieved through strong power damping and short dead time.

The RA280 offers a special listening experience that lets you feel the true essence of music.



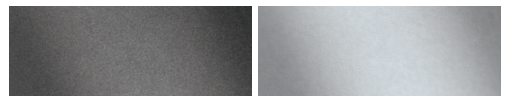


KEY FEATURES

- Class AD Amplifier with Next-Generation GaN FET
- Independently Developed LC Filter by HiFi ROSE
- Highly Efficient and Stable Power Supply
- Powerful 250W Output
- Phono Amplifier for MM
- Bass/Treble Control Volume

DESIGN

- **Dimension** : 430(W) × 355(D) × 103(H) mm
- **Weight** : 9.5kg
- **Material** : Aluminum, Rust-proof Steel
- **Finish** : Black, Silver



MAIN FUNCTION

In/Out Port	Analog In	LINE1, LINE2, LINE3, BALANCED, PHONO(MM)
	Analog Out	Sub Woofer
Speaker Out	4Ω	250W × 2ch (500W)
	8Ω	
Sub Woofer Out	Mono	1Vrms (2.218dBu)

RS520 Advanced All-In-One Network Streamer

RS520 is an all-in-one product with built-in network player, DAC, and amplifier.

For DAC and amplifier module, it is equipped with ES9038PRO DAC, the flagship DAC chip of ESS technology and Class AD amplifier module developed by applying new material GaN FET are mounted. RS520 is an advanced all-in-one network streamer that consolidates the main functions of existing all-in-one streamers into one based on ROSE's unique design know-how and functions accumulated over many years.



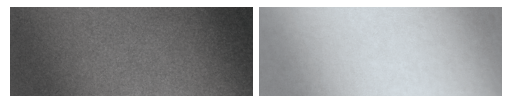


KEY FEATURES

- Reference Grade Network Streaming All-in-One
- Network Transport + DAC + Class AD Amplifier with Next-Generation GaN FET
- High-Resolution Music Playback (DSD512, PCM 32bit/768kHz)
- Highly Precise Femto Clock
- Linear Power Supply for Significant Noise Reduction

DESIGN

- **Dimension** : 346(W) × 328(D) × 127(H) mm
- **Weight** : 8.1kg
- **Display** : 12.6" Wide LCD Touch Screen
- **Finish** : Black, Silver



MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital In	USB 2.0 Type-B, Optical, Coaxial, HDMI eARC
	Digital Out	USB 3.0 Type-A, Optical, Coaxial
	Analog In	Line In
	Analog Out	Unbalanced
	HDMI Out	4K
	Speaker Out	250W × 2ch(4Ω, 8Ω)
Network Connection	Ethernet	10/100/1000 BASE-T
	WiFi	USB Dongle
	Bluetooth	USB Dongle V.4.2

RS250A Complete HiFi Network Streamer

RS250A with built-in high performance DAC(ES9028PRO) and Discrete OP AMP provides the best of wide bandwidth, separation and audio clarity. The wide LCD screen and multi-touch function provide a new audio device experience and add perfection for those seeking simplicity. The harmonious design of the stylish aluminum body, which emphasizes the same edge as the previous product, and the cool wide-view angle touch screen placed on the front side make your music space stand out even more. The power button and volume control knobs are designed with visual effects and practicality in mind, displaying the delicateness of ROSE.



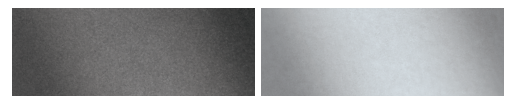


KEY FEATURES

- Reference Grade Network Streamer
- Network Transport + DAC
- High-Resolution Music Playback (DSD512, PCM 32bit/768kHz)
- Highly Precise Femto Clock
- Linear Power Supply for Significant Noise Reduction

DESIGN

- **Dimension** : 278(W) × 231(D) × 83(H) mm
- **Weight** : 3.2 kg
- **Display** : 8.8" wide angle touch screen
- **Finish** : Black, Silver



CONNECTIVITY

Bluetooth, DLNA, AirPlay, Spotify Connect, Roon Ready

MAIN FUNCTION

Hi-Res	DSD	Native DSD 512
	PCM	32bit/768kHz
In/Out Port	Digital In	USB 2.0 Type-B, Optical, Coaxial
	Digital Out	USB 3.0 Type-A, Optical, Coaxial
	Analog In	Line In
	Analog Out	Unbalanced
	HDMI Out	4K
	Headphone Out	3.5 mm
Network Connection	Ethernet	10/100/1000 BASE-T
	WiFi	802.11 a/b/g/n/ac (2.4GHz/5GHz)
	Bluetooth	V4.0 / V3.0+HS

RSA720

HiFi ROSE USB Fiber Optical Hub

The RSA720 uses an optical USB to fundamentally block vibration and electrical noise from external storage devices and provides the best solution for reliable use by allowing multiple devices to be connected simultaneously with four independent USB ports.





KEY FEATURES

- Compact Design Maximizing Usability and Functionality
- Optical USB Port
- Supports USB 3.0/2.0 via Four Independent USB Ports
- Guaranteed Stable Data Transmission Speed
- Supports Long-Distance Transmission

DESIGN

- Dimension : 152(W) × 153.5(D) × 33.5(H) mm
- Weight : 1.2 kg
- Finish : Silver

CONNECTIVITY

- Input : USB 3.0 Type-B, SFP(10G)
- Output : USB 3.0-2ports, USB 2.0-2ports



RSA780E HiFi ROSE CD Drive

The RSA780E CD Drive for HiFi ROSE provides CD playback and ripping functions by connecting to RS201A, RS250, or RS150B products via USB. Increasing the weight of the CD drive to 900g guarantees stable CD rotation without shaking, and a built-in USB isolator significantly reduces rotation motor noise and electrical noise.





900g
Aluminium

KEY FEATURES

- USB Isolator Adopted to Block Motion Noise
- USB B-Type Port for HiFi Audio
- 900g Weight for Stable CD Playback
- Minimized Motion Noise with Insulators
- CD Ripping Features Included

DESIGN

- **Dimension** : 152(W) × 152(D) × 24(H) mm
- **Weight** : 0.9 kg
- **Finish** : Silver

CONNECTIVITY

Rear : USB Type-B



Isolation, Normal Mode Switch

Innovative ROSE OS System

HiFi ROSE OS will show users a new way to enjoy music comfortably and easily. It provides a variety of ways to enjoy music and provides a library to conveniently manage your music files. You can create your own playlist and share it with your friends. ROSE OS will continue to develop through communication with customers and convergence with the latest technologies. New features and services are available to users through online updates.



TIDAL

Enjoy music streaming and videos with TIDAL's unique features. Supports MQA Full Decoder, so you can enjoy high-resolution music.



RoseTube

You can enjoy all content and music on YouTube.



Spotify Connect

Spotify Connect allows you to play and wirelessly control Spotify music on your ROSE OS over a network. With the Spotify Connect function, you can enjoy a variety of music with HiFi sound quality on your ROSE device.



Roon Ready

ROSE OS is fully compatible with Roon Core, with Roon Ready certification in compliance with all requirements of Roon Labs. You can enjoy HiFi sound quality on your ROSE device with the powerful music management capabilities of Roon.



Hi-Res Audio

HiFi ROSE devices are certified with a 'High-Resolution Audio' license from the JAS(Japan Audio Society).



4K Video

You can enjoy high-definition videos on YouTube and TIDAL, and play video files in various formats.



Play CD

Play CDs by connecting an external USB CD-ROM.



CD Ripping

Rip CDs by connecting an external USB CD-ROM and save them on a storage device.



Qobuz

Enjoy music streaming with Qobuz's various functions. Support for Hi-Res Audio(24bit/192kHz) means you can enjoy high-resolution music.



Apple Music

Enjoy curated playlists divided by Apple Music's own musical tastes. You can enjoy various tracks in Apple Music.



Qobuz Connect

You can enjoy high-resolution streaming on ROSE OS using Qobuz Connect. Start playback on the Qobuz app from your smartphone or tablet, and then continue listening and controlling playback on your ROSE device in Hi-Fi quality.



Audirvana

Enjoy the immersive world of high-resolution music with Audirvana. You can experience your favorite tracks in greater depth.



Rose Radio

Enjoy Rose Radio, which comes with about 30,000 radio channels from 200 countries around the world. Channels are organized into various categories, and you can easily search for channels using the genre/region/language filters.



File Manager

You can perform file and folder management tasks, such as moving, copying, and deleting, on storage devices.



Clock

Various design clock functions are provided, such as alarms and weather information.



Music Library

Organize your music under various categories, such as album, artist, or genre.



My Playlist

Create your own playlist. You can also register your friends and share it with them.

ROSE Connect Remote Application

A dedicated Remote App is provided that allows users to conveniently control and smartly manage their ROSE device. The Remote App is supported on various platforms, including the iPhones, iPads, Android devices and PCs.

Control

You can freely and conveniently control various HiFi ROSE functions wirelessly.

Control You can control a variety of functions remotely, including Music, RoseTube, TIDAL, Qobuz, Radio, Apple Music and CD Ripping.

Remote ROSE Connect includes a remote control function.

Search You can conveniently search for a variety of music in the Media Library.

Share with Friends

You can share your playlists with your friends or listen to music they recommend. Communicate with your friends through music.

Media Library

Scan the music in your local memory to organize it into various categories.

Streaming

You can simply and easily play music stored on your phone on your ROSE device. Enjoy a lossless, high-quality streaming service.

Playlist

You can create your own playlist. Create playlists in Music and RoseTube, and access them under Home - My Music.





Preamp Outputs	Input Sensitivity	0dB 1kHz(Digital), 2Vrms(Analog)				
	Output Impedance	1.5Ω(XLR), 1.3Ω(RCA)				
	Output Level	10Vrms(XLR), 5Vrms(RCA)				
	THD+N	0.00025%(XLR) (1kHz, 10Vrms), 0.00025%(RCA) (1kHz, 5Vrms)				
	Signal to Noise Ratio	129dB(XLR), 126dB(RCA)				
	Dynamic Range	130dB				
	Residual Noise	n/a				
	Stereo Crosstalk	140dB (20Hz – 20kHz)				
Frequency Response	10Hz – 80kHz (+/-1dB)					
HP Outputs	Jack	XLR(Balanced), 4.4mm(Balanced), 6.35mm(Unbalanced)				
	Output Level		16Ω	32Ω	300Ω	600Ω
		XLR	2,700mW	2,600mW	650mW	350mW
		4.4mm	2,700mW	2,600mW	650mW	350mW
		6.35mm	1,300mW	1,000mW	175mW	90mW
	THD+N	0.00065% 0.00060% 0.00035% 0.00030%				
	Signal to Noise Ratio	128dB(XLR), 128dB(4.4mm), 118dB(6.35mm)				
	Dynamic Range	140dB(XLR), 140dB(4.4mm), 120dB(6.35mm)				
Frequency Response	10Hz – 80kHz (+/-1dB)					
Sampling Rate	PCM	8kHz – 768kHz(8/16/24/32bit per Sample)				
	DSD	DSD64(2.8MHz)/DSD128(5.6MHz)/DSD256(11.2MHz)/DSD512(22.6MHz)				
Supported File Formats	Audio	WAV, FLAC, ALAC, AIFF, WMA, OGG, APE, DFF, DSF, CDA, M4A, MP3, AAC, AMR, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA				
	Video	ASF, AVI, MKV, MP4, WMV, MPEG-1/2/4, H.263, H.264/AVC, H.265/HEVC, VC-1, VP8/9, MVC H.264/AVC (Base/Main/High/High10, Level 5.1): Up to 4Kx2K@30fps, H.265/HEVC (Main/Main10, Level 5.1 High-tier): Up to 4Kx2K@60fps, VP9/H.264/H.265: Up to 4Kx2K@60fps, H.264/MVC/VP8 Encoding: Up to 1080p@30fps				
Technical	PSU	Toroidal Linear Power Supply				
	CPU	Quad core Cortex-A76 + Quad-core Cortex-A55				
	RAM	LPDDR4X 8GB				
	GPU	ARM Mali-G610 MC4(OpenGL, Vulkan, OpenCL)				
	DAC	ES9027 PRO(ESS)				
	HP DAC	ES9027 PRO(ESS)				
	Flash	n/a				
	Oscillator	Highly Precise Femto Clock				
Inputs	Digital	USB 2.0 Type-B	PCM 32bit/768kHz, DSD512(22.6MHz)			
		Coaxial	PCM 32bit/384kHz, DSD128(5.6MHz) (DoP)			
		Optical	PCM 32bit/192kHz, DSD64(2.8MHz) (DoP)			
		HDMI eARC	PCM 24bit/192kHz			
	Analog	Line In				
	Service	USB 3.0 Type-C				
	Trigger	DC 3.3V – 12V				
	External Clock	n/a				
Outputs	Digital	USB 3.0 Type-A	PCM 32bit/768kHz, DSD512(22.6MHz)			
		Coaxial	PCM 24bit/384kHz, DSD128(5.6MHz) (DoP)			
		Optical	PCM 24bit/192kHz, DSD64(2.8MHz) (DoP)			
	Analog	Unbalanced, Balanced				
	Video	HDMI 2.0 (4K UHD / 60Hz)				
	Trigger	DC 12V				
	Network	Connectivity	Ethernet	10/100/1000 BASE-T(1Port)		
			WiFi	USB Dongle		
Bluetooth			5.4 aptX (A2DP1.4, Sink, AVRCP v1.6.2)			
Streaming Protocol			Bluetooth, AirPlay, DLNA/UPnP, Roon Ready, Spotify Connect			
Storage		SMB, FTP, WebDav				
Storage		Internal	n/a			
		External	3 × USB 3.0 Type-A 1 × 2.5" SSD(SATA 3.0, NTFS, exFAT)			
Feature		CD Ripping	Support(By external USB CD Drive)			
	PCM Filter	n/a				
Power	Pre-Out Level	n/a				
	Input Voltage	AC 110–120V, 220–240V, 50/60Hz				
	Power	Standby	0.5W			
	Consumption	Idle	5W			
Environmental	Protection	Playback 20W 3A Thermal Circuit Breaker				
	Operating °C	0°C – 40°C				
	Storage °C	-10°C – 50°C				
Physical	Display	8.8" IPS LCD & Capacitive Touch Screen (MIPI)				
	Dimension	430(W) × 337(D) × 92(H) mm				
	Weight	7kg				
	Material	Aluminum / Rust-proof Steel / ABS				
	Finish	Silver, Black				
	IR	38kHz IR Receiver				

RS151



RD160



0dB 1kHz(Digital), 2Vrms(Analog)		0dB 1kHz	
2.84Ω		300Ω	
9.0Vrms(XLR), 4.5Vrms(RCA)		9Vrms(XLR), 4.5Vrms(RCA)	
0.0002%(XLR), 0.0003%(RCA) (1kHz, 0dB)		0.005%(XLR), 0.005%(RCA) (1kHz, 0dB)	
131dB(XLR), 124dB(RCA)		124dB(XLR), 124dB(RCA)	
150dB			n/a
	n/a	0.4mV(XLR), 0.3mV(RCA)	
143dB (20Hz – 20kHz)		124dB(XLR), 124dB(RCA) (1kHz, 0dB)	
20Hz – 75kHz (+/-0.5dB)		10Hz – 20kHz (-0.3dB), 10Hz – 50kHz (-1.5dB), 10Hz – 73kHz (-3.0dB)	
	n/a		n/a
44.1kHz – 768kHz(8/16/24/32bit per Sample)		8kHz – 768kHz(8/16/24/32bit per Sample)	
DSD64(2.8MHz)/DSD128(5.6MHz)/DSD256(11.2MHz)/DSD512(22.6MHz)		DSD64(2.8MHz)/DSD128(5.6MHz)/DSD256(11.2MHz)/DSD512(22.6MHz)	
WAV, FLAC, ALAC, AIFF, WMA, OGG, APE, DFF, DSF, CDA, M4A, MP3, AAC, AMR, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA			
ASF, AVI, MKV, MP4, WMV, MPEG-1/2/4, H.263, H.264/AVC, H.265/HEVC, VC-1, VP8/9, MVC			
H.264/AVC (Base/Main/High/High10, Level 5.1):			n/a
Up to 4Kx2K@30fps, H.265/HEVC (Main/Main10, Level 5.1 High-tier): Up to 4Kx2K@60fps,			
VP9/H.264/H.265: Up to 4Kx2K@60fps,			
H.264/MVC/VP8 Encoding: Up to 1080p@30fps			
Toroidal Linear Power Supply		3 × Independently Customized Reference Linear Toroidal	
Octa core RK3588		RK3128 Quad core Cortex-A7mp	
LPDDR4X 8GB		DDR3 1866MHz 1GB	
ARM Mali-G610 MC4(OpenGL, Vulkan, OpenCL)			n/a
ES9039 PRO(ESS)		2 × AK4499EXEQ + 2 × AK4191EQ	
	n/a		n/a
	n/a	8GB eMMC	
Highly Precise Femto Clock		High Precision OCXO clock	
USB 2.0 Type-B	PCM 32bit/768kHz, DSD512(22.6MHz)	USB SFP Module	PCM 32bit/768kHz, DSD512(22.6MHz)
Coaxial	PCM 24bit/384kHz, DSD128(5.6MHz) (DoP)	USB 2.0 Type-B	PCM 32bit/768kHz, DSD512(22.6MHz)
Optical	PCM 24bit/192kHz, DSD64(2.8MHz) (DoP)	I ² S-HDMI	PCM 32bit/768kHz, DSD512(22.6MHz)
AES/EBU	PCM 24bit/384kHz, DSD128(5.6MHz) (DoP)	Coaxial RCA	PCM 32bit/384kHz, DSD128(5.6MHz) (DoP)
		Coaxial BNC	PCM 32bit/384kHz, DSD128(5.6MHz) (DoP)
HDMI eARC	PCM 24bit/192kHz	Optical	PCM 32bit/192kHz, DSD64(2.8MHz) (DoP)
		AES/EBU	PCM 32bit/384kHz, DSD128(5.6MHz) (DoP)
Line In			n/a
USB 3.0 Type-C			n/a
DC 3.3V – 12V			n/a
	n/a	BNC 75Ω(10MHz), SMA 50Ω(10MHz)	
USB 3.0 Type-A	PCM 32bit/768kHz, DSD512(22.6MHz)		
Coaxial	PCM 24bit/384kHz, DSD128(5.6MHz) (DoP)		
Optical	PCM 24bit/192kHz, DSD64(2.8MHz) (DoP)		n/a
AES/EBU	PCM 24bit/384kHz, DSD128(5.6MHz) (DoP)		
I ² S-HDMI	PCM 32bit/768kHz, DSD512(22.6MHz)		
Unbalanced, Balanced		Unbalanced, Balanced	
HDMI 2.0 (4K UHD / 60Hz)			n/a
DC 12V			n/a
Ethernet	10/100/1000 BASE-T(1Port)		
WiFi	USB Dongle		
Bluetooth	5.4 aptX (A2DP1.4, Sink, AVRCP v1.6.2)		n/a
Bluetooth, AirPlay, DLNA/UPnP, Roon Ready, Spotify Connect			
SMB			
eMMC Flash 32GB (System Use Only)			
3 × USB 3.0 Type-A			n/a
1 × 2.5" SSD(SATA 3.0, NTFS, exFAT)			
Support(By external USB CD Drive)			n/a
	n/a	Sharp, Slow, Short Sharp (default), Short Slow, Super Slow, Low Short	
	n/a	1V – 9V	
AC 110–120V, 220–240V, 50/60Hz		AC 110–120V, 220–240V, 50/60Hz	
Standby	0.3W	Standby	0.3W
Idle	5W	Playback	30W
Playback	55W		
6A Thermal Circuit Breaker			n/a
0°C – 40°C		0°C – 40°C	
-10°C – 50°C		-10°C – 50°C	
15.4" TFT LCD & Capacitive Touch Screen (FHD, eDP)		AMOLED hidden screen	
430(W) × 319(D) × 125(H) mm		430(W) × 330(D) × 88(H) mm	
11kg		10kg	
Aluminum / Rust-proof Steel		Aluminum / Rust-proof Steel	
Silver, Black		Silver, Black	
38kHz IR Receiver		38kHz IR Receiver	

Product Specifications		RA280		RA180	
					
Design	Dimension	430(W) × 355(D) × 103(H) mm		430(W) × 391(D) × 124(H) mm	
	Weight	9.5kg		16.7kg	
	Material	Aluminum / Rust-proof Steel		Aluminum / Rust-proof Steel	
Power	Output Power	500W (SMPS) (* Maximum Output: 600W)		800W (SMPS) (* Maximum Output: 1100W)	
	Input Voltage	AC100-230V, 50/60Hz (* Standby Mode Power Consumption < 0.5W)		AC100-230V, 50/60Hz (* Standby Mode Power Consumption < 0.5W)	
Amplifier Output	4Ω	250W × 2ch (500W)		200W × 4ch (800W)	
	8Ω	250W × 2ch (500W)		200W × 4ch (800W)	
	BTL Mode On	n/a		400W × 2ch (800W) (* 400W × 2ch)	
Sub Woofer Output	Mono	1Vrms (2.218dBu)		1Vrms (2.218dBu)	
Input Sensitivity	Balance Input	600mV (* 250W × 2ch)		2,000mV (* 200W × 4ch)	
	Unbalance(Line1,2,3) Input	335mV (* 250W × 2ch)		1,000mV (* 200W × 4ch)	
	Phono Input	5mV (MM) (* 250W × 2ch)		5mV/0.5mV (MM/MC) (* 200W × 4ch)	
Input Impedance	Balance Input	47kΩ (MM)		44kΩ	
	Unbalance(Line1,2,3) Input			47kΩ	
	Phono Input			47kΩ (MM / MC)	
Bandwidth (* 8Ω Speaker Output)	Speaker Output	20Hz – 20kHz (* 200W × 2ch)	+0, 0dB	10Hz – 90kHz (* 100W × 2ch)	+0, ±3dB
		10Hz – 65kHz (* 200W × 2ch)	+0, -1dB		
		10Hz – 80kHz (* 200W × 2ch)	+0, -3dB		
	H/F Speaker Output	n/a			
Frequency Response (* 8Ω Speaker Output)	Speaker Output	20Hz – 20kHz (* 1W × 2ch)	+0, 0dB	10Hz – 90kHz (* 1W × 2ch)	+0, ±3dB
		10Hz – 66kHz (* 1W × 2ch)	+0, -1dB		
		10Hz – 85kHz (* 1W × 2ch)	+0, -3dB		
	H/F Speaker Output	n/a			
THD (Total Harmonic Distortion)	Balance & Unbalance(Line1,2,3) Input	0.007% (125W) (* 250W × 2ch)		0.005% (50W) (* 200W × 4ch)	
Damping Factor	Speaker & H/F Speaker Output	>250 (* 250W × 2ch)		>150 (* 200W × 2ch)	
S/N (Signal to Noise Ratio)	Balanced / Unbalanced / Phono	109dB / 109dB / 85dB (MM) (* 250W × 2ch)		107dB / 105dB / 80dB (MM), 60dB (MC) (* 200W × 4ch)	
Output Impedance	Speaker Output	30mΩ (* 250W × 2ch)		53mΩ (* 200W × 4ch)	
Subsonic Filter with On/Off Switch	-3dB	n/a		50Hz (* 1W × 4ch)	
Tone Control	Bass(100Hz) / Treble(10kHz)	±15dB (* 1W × 2ch(Speaker Output))		±15dB (* 1W × 2ch(Speaker Output))	
X-Over with On/Off Switch	HPF(-3dB)	n/a		600Hz – 6kHz (* 1W × 2ch(H/F Speaker Output))	
Phono	Turnover	500Hz (+13dB@100Hz) (* RIAA)		Flat	
				300Hz (+7.7dB@100Hz)	
				400Hz (+11.7dB@100Hz)	
				500Hz (+13dB@100Hz) (* RIAA)	
				700Hz (+14.5dB@100Hz)	
	Roll-Off	2.1kHz (-13.7dB@10kHz) (* RIAA)		Flat	
				1.6kHz (-16dB@10kHz)	
Signal In/Out on Rear	Trigger In	Trigger input voltage range: 3.3V – 12V		Trigger input voltage range: 3.3V – 12V	
	Trigger Out	Trigger output voltage: 12V		Trigger output voltage: 12V	
Remote Control	IR Input	38kHz IR Receiver		38kHz IR Receiver	

Product Specifications		RS130	RS250A	RS520
				
Physical	Display	15.4" TFT LCD & Capacitive Touch Screen (FHD, eDP)	8.8" TFT LCD & Capacitive Touch Screen (MIPI-DSI)	12.6" TFT LCD & Capacitive Touch Screen (eDP)
	Dimension	430(W) × 317(D) × 125(H) mm	278(W) × 231(D) × 83(H) mm	346(W) × 328(D) × 127(H) mm
	Weight	11.7kg	3.2 kg	8.1 kg
OS		Customized Android 7.1 based ROSE OS	Customized Android 7.1 based ROSE OS	Customized Android 7.1 based ROSE OS
Power	Input Voltage	AC100~120V, 220~240V, 50/60Hz	AC100~120V, 220~240V, 50/60Hz	AC100~240V, 50/60Hz
	Input Power	40W	50W	
Audio	Supported Codec	WAV, FLAC, ALAC, AIFF, WMA, MP3, OGG, APE, DFF, DSF, AAC, CDA, AMR, APE, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA, M4A	WAV, FLAC, ALAC, AIFF, WMA, MP3, OGG, APE, DFF, DSF, AAC, CDA, AMR, APE, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA, M4A	MQA, WAV, FLAC, AIFF, WMA, MP3, OGG, APE, DFF, DSF, AAC, CDA, AMR, APE, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA, M4A, ALAC
	Supported Sampling Rate	PCM: 8kHz – 768kHz (8/16/24/32bit per Sample) DSD: DSD64(2.8MHz) DSD128(5.6MHz) DSD256(11.2MHz) DSD512(22.6MHz)	PCM: 8kHz – 768kHz (8/16/24/32bit per Sample) DSD: DSD64(2.8MHz) DSD128(5.6MHz) DSD256(11.2MHz) DSD512(22.6MHz)	PCM: 8kHz – 768kHz (8/16/24/32bit per Sample) Native DSD: DSD64(2.8MHz) DSD128(5.6MHz) DSD256(11.2MHz) DSD512(22.4MHz)
	MQA	Full Decoding	Full Decoding	Full Decoding
Video	Supported Codec	ASF, AVI, MKV, MP4, WMV, MPEG-1, MPEG-2, MPEG-4 H.263, H.264, H.265, VC-1, VP9, VP8, MVC, H.264/AVC(Base/Main/High/High10 profile@level5.1 upto 4Kx2K@30fps)H.265/HEVC (Main/Main10 profile@ level 5.1 High-tier upto 4Kx2K@60fps)	ASF, AVI, MKV, MP4, WMV, MPEG-1, MPEG-2, MPEG-4 H.263, H.264, H.265, VC-1, VP9, VP8, MVC, H.264/AVC(Base/Main/High/High10 profile@level5.1 upto 4Kx2K@30fps)H.265/HEVC (Main/Main10 profile@ level 5.1 High-tier upto 4Kx2K@60fps)	ASF, AVI, MKV, MP4, WMV, MPEG-1, MPEG-2, MPEG-4 H.263, H.264, H.265, VC-1, VP9, VP8, MVC, H.264/AVC(Base/Main/High/High10 profile@level5.1 upto 4Kx2K@30fps)H.265/HEVC (Main/Main10 profile@ level 5.1 High-tier upto 4Kx2K@60fps)
H/W	CPU	Hexa Core Dual-core Cortex-A72 up to 1.8GHz Quad-core Cortex-A53 up to 1.4GHz	Hexa Core Dual-core Cortex-A72 up to 1.8GHz Quad-core Cortex-A53 up to 1.4GHz	Hexa Core Dual-core Cortex-A72 up to 1.8GHz Quad-core Cortex-A53 up to 1.4GHz
	Memory	LPDDR4 4G Byte	LPDDR4 4G Bytes	LPDDR4 4G Byte
	Flash	8GB High-Speed eMMC, Cache Memory: M.2 NVMe 256GB	8GB High-Speed eMMC	8GB High-Speed eMMC
	GPU	Mali-T864 GPU, OpenGL ES 1.1/2.0/3.0/3.1, OenVG1.1, OpenCL, DX11	Mali-T864 GPU, OpenGL ES 1.1/2.0/3.0/3.1, OenVG1.1, OpenCL, DX11	Mali-T864 GPU, OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11
	DAC	n/a	ES9028 PRO	ES9038 PRO
	Oscillator	High Precision OCXO clock	High Precision Femto Clock	High Precision Femto Clock
Pre Out	Output Level	n/a	2.2Vrms (Unbalanced)	2Vrms (Unbalanced)
	THD	n/a	0.00028% (Unbalanced) (1kHz, 2.25Vrms)	n/a
	THD+N	n/a	0.0003% (Unbalanced) (1kHz, 2.25Vrms)	0.00033% (1kHz, 600Q, 2Vrms)
	IMD	n/a	n/a	0.023% (SMPTE4:1, 60Hz – 7kHz)
	Signal to Noise Ratio	n/a	122dB	124dB (1kHz, 600Q, 2Vrms)
	Dynamic Range	n/a	135dB	n/a
	Stereo Crosstalk	n/a	137dB (20Hz – 20kHz)	n/a
	Output Frequency Response	n/a	17Hz – 80kHz (+/-1dB)	10Hz – 83kHz
	Input Impedance	n/a	100kQ	n/a
	Output Impedance	n/a	150Q	50mQ
Speaker Out	Output Power	n/a	n/a	250W + 250W @ 8Q, 4Q
	THD+N	n/a	n/a	0.007% @ 50W, 0.01% @ 100W, 0.1% @ 250W, x2/8Q
	Signal to Noise Ratio	n/a	n/a	109dB, 1kHz, 8Q, 250W
Network Connectivity	Bluetooth	USB Dongle V.4.2	V4.0 / V3.0+HS (A2DP Sink, AVRCP v1.3)	USB Dongle V.4.2
	WiFi	USB Dongle	802.11 a/b/g/n/ac (2.4GHz/5GHz)	USB Dongle
	Ethernet	10/100/1000 BASE-T (SFP COPPER Type)	10/100/1000 BASE-T	10/100/1000 BASE-T
In/Out Port	Digital In	n/a	USB 2.0 Type-B, Optical, Coaxial	USB 2.0 Type-B, Optical, Coaxial, HDMI eARC
	Digital Out	USB 2.0 Type-A, Optical, Coaxial, AES/EBU, I ² S-HDMI	USB 3.0 Type-A, Optical, Coaxial	USB 3.0 Type-A, Optical, Coaxial
	Analog In	n/a	Line In	Line In
	Analog Out	n/a	Unbalanced	Unbalanced
	Speaker Out	n/a	n/a	250W × 2ch(4Q, 8Q)
	Headphone Out	n/a	3.5mm	n/a
	HDMI Out	4K	4K	4K
	SSD	SATA 3.0, SSD × 1 (NTFS, Supported protocol - FTP/WebDav)	SATA 3.0, SSD × 1 (NTFS, Supported protocol - FTP/WebDav)	SATA 3.0, SSD × 1 (NTFS, Supported protocol - FTP/WebDav)
	Clock In	BNC 75Q, 50Q	n/a	n/a
Storage	SATA	4TB	4TB	4TB
	USB	10TB	10TB	10TB
	File System	NTFS / exFAT / FAT32	NTFS / exFAT / FAT32	NTFS / exFAT / FAT32
Connectivity	Roon Ready	Support	Support	Support
	Spotify Connect	Support	Support	Support
	Streaming Protocol	AirPlay / DLNA Service / Bluetooth	AirPlay / DLNA Service / Bluetooth	AirPlay / DLNA Service / Bluetooth
	Network Storage	SMB / FTP / WebDav	SMB / FTP / WebDav	SMB / FTP / WebDav
Feature	CD Ripping	Support (By External USB CD Drive)	Support (By External USB CD Drive)	Support (By External USB CD Drive)



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