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CRETONE AUDIO

RNN Series

Drag-and-drop Architecture Digital Audio Processor

Open a New Chapter in China's Audio DSP

Audio Algorithm Symbiosis Platform

Exclusive custom native UI

Diversified OEM/ODM

CATALOGUE

Product Overview

The RNN series is a drag-and-drop architecture digital audio processor independently developed by us. With technological innovation at its core, it combines high-quality craftsmanship and comprehensive functions. The product is easy to operate, and with its excellent sound quality and stable performance, it can flexibly adapt to various scenario needs. Whether it is small conference rooms, medium conference rooms, large conference rooms, multi-functional halls or extra-large stadiums, there are corresponding solutions to meet their usage requirements.

Hardware

The RNN series is a comprehensive product line, and you can choose between stand-alone and network versions. In the overall hardware design, we use the latest ADI SHARC 21569, utilizing parallel processing system architecture, ultra-low latency processing. The physical interface is designed to be compatible with GPIO, RS-232 and RS-485 serial ports as well as USB interface, allowing users to get more functions.

On the front OLED screen, we display a preview of the audio signal information of the input and output channels in addition to the system information. Considering the backup strategy we also designed the same model can achieve hot backup, so that the system is more secure and stable.

Software and Algorithm

In the software, we have prepared different programming templates for different application scenarios. You only need to choose according to the needs to complete the programming work. At the same time, we are also support reprogramming. You can add and delete on top of the application program, which is more flexible and convenient. Meanwhile, we have created dynamic visual effects in the algorithmic module so that signal flow is much more intuitive when going online status. In terms of algorithms, in addition to the conventional algorithm module, we have also developed multi-channel independent AEC, FIR filters and professional-grade reverb and delay effects. And support log query and event management, so that the equipment application scenarios more flexible.

32X32Dante	Automatic Wiring	Auto-generated FIR Filter	Dynamic Wiring
Dual-System Hot Backup	Gating Auto Mixer Based on ATS Algorithm	Log Query and Management	Event Manage
1000 Presets Customization	Reverb and delay effects	4 Channel AEC	Web GUI

RNN88

Drag-and-drop DSP Matrix Series

The RNN88 is a member of the RNN family, designed for standalone applications that do not require Dante network audio. The RNN has the same processing power as the network version RNND, provides the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

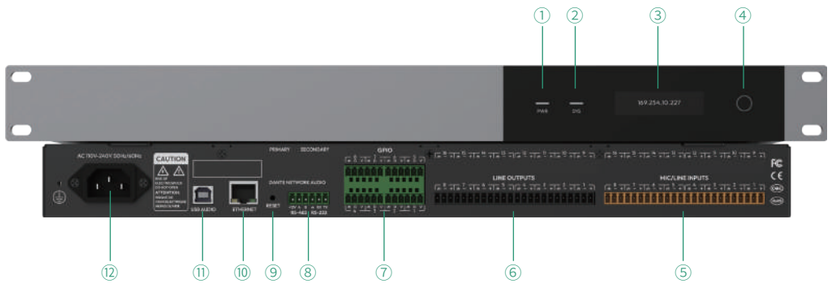
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 8-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 8-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	8x8	Input Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Output Dynamic Range	≥113dB
		Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
Phantom Power	48Vmax	Output Channel Crosstalk	-120dB@1kHz
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Input Impedance (Balanced Connection)	5.4KΩ
Maximum Level	+18dBu	Output Impedance (Balanced Connection)	100Ω
Sampling Rate	48 kHz	Operating Power Supply	110-240V AC，50Hz/60Hz
AD\DA Quantization Bit Depth	24Bit	Shipping Wight (N.W./G.W.)	2.9KG/3.88KG
THD+N	≤0.002%（1kHz，+4dBu A-weighted）	Dimensions (WxDxH)	482x260x44mm

RNN1208

Drag-and-drop DSP Matrix Series

The RNN1208 is a member of the RNN family, designed for standalone applications that do not require Dante network audio. The RNN has the same processing power as the network version RNND, provides the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

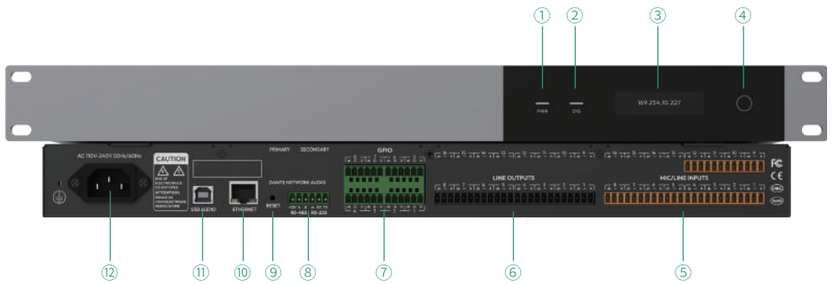
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 12-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 8-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	12x8	Input Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Output Dynamic Range	≥113dB
		Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
Phantom Power	48Vmax	Output Channel Crosstalk	-120dB@1kHz
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Input Impedance (Balanced Connection)	5.4KΩ
Maximum Level	+18dBu	Output Impedance (Balanced Connection)	100Ω
Sampling Rate	48 kHz	Operating Power Supply	110-240V AC，50Hz/60Hz
AD\DA Quantization Bit Depth	24Bit	Shipping Wight (N.W./G.W.)	2.5KG/3.41KG
THD+N	≤0.002%（1kHz，+4dBu A-weighted）	Dimensions (WxDxH)	482x260x44mm

RNN1212

Drag-and-drop DSP Matrix Series

The RNN1212 is a member of the RNN family, designed for standalone applications that do not require Dante network audio. The RNN has the same processing power as the network version RNND, provides the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

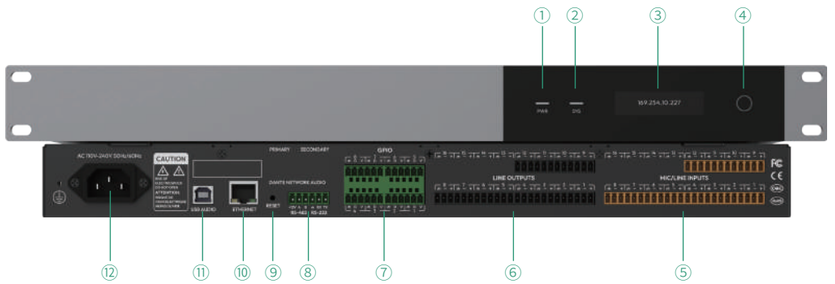
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 12-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 12-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	12x12	Input Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Output Dynamic Range	≥113dB
		Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
Phantom Power	48Vmax	Output Channel Crosstalk	-120dB@1kHz
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Input Impedance (Balanced Connection)	5.4KΩ
Maximum Level	+18dBu	Output Impedance (Balanced Connection)	100Ω
Sampling Rate	48 kHz	Operating Power Supply	110-240V AC，50Hz/60Hz
AD\DA Quantization Bit Depth	24Bit	Shipping Wight (N.W./G.W.)	2.5KG/3.41KG
THD+N	≤0.002%（1kHz，+4dBu A-weighted）	Dimensions (WxDxH)	482x260x44mm

RNN1608

Drag-and-drop DSP Matrix Series

The RNN1608 is a member of the RNN family, designed for standalone applications that do not require Dante network audio. The RNN has the same processing power as the network version RNND, provides the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

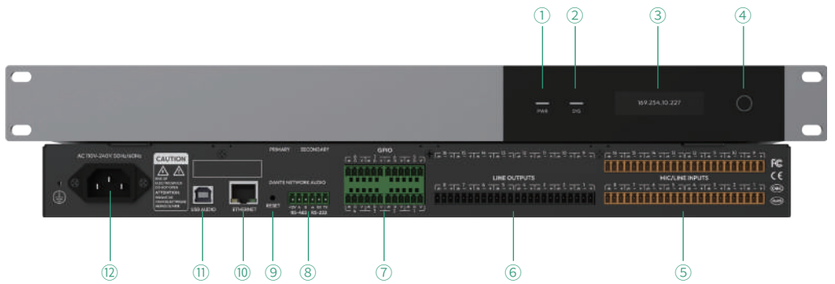
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 16-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 8-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	16x8	Input Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Output Dynamic Range	≥113dB
		Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
Phantom Power	48Vmax	Output Channel Crosstalk	-120dB@1kHz
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Input Impedance (Balanced Connection)	5.4KΩ
Maximum Level	+18dBu	Output Impedance (Balanced Connection)	100Ω
Sampling Rate	48 kHz	Operating Power Supply	110-240V AC，50Hz/60Hz
AD\DA Quantization Bit Depth	24Bit	Shipping Wight (N.W./G.W.)	2.5KG/3.41KG
THD+N	≤0.002%（1kHz，+4dBu A-weighted）	Dimensions (WxDxH)	482x260x44mm

RNN1616

Drag-and-drop DSP Matrix Series

The RNN1616 is a member of the RNN family, designed for standalone applications that do not require Dante network audio. The RNN has the same processing power as the network version RNND, provides the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

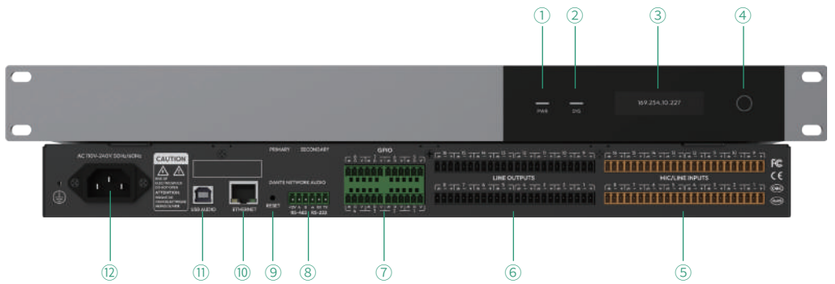
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 16-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 16-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	16x16	Input Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Output Dynamic Range	≥113dB
		Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
Phantom Power	48Vmax	Output Channel Crosstalk	-120dB@1kHz
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Input Impedance (Balanced Connection)	5.4KΩ
Maximum Level	+18dBu	Output Impedance (Balanced Connection)	100Ω
Sampling Rate	48 kHz	Operating Power Supply	110-240V AC，50Hz/60Hz
AD\DA Quantization Bit Depth	24Bit	Shipping Wight (N.W./G.W.)	3.1KG/4.1KG
THD+N	≤0.002%（1kHz，+4dBu A-weighted）	Dimensions (WxDxH)	482x260x44mm

RNN88D

Drag-and-drop DSP Matrix Series

The RNN88D is a member of the RNN family, provides 32X32 channels of Dante audio. It has the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

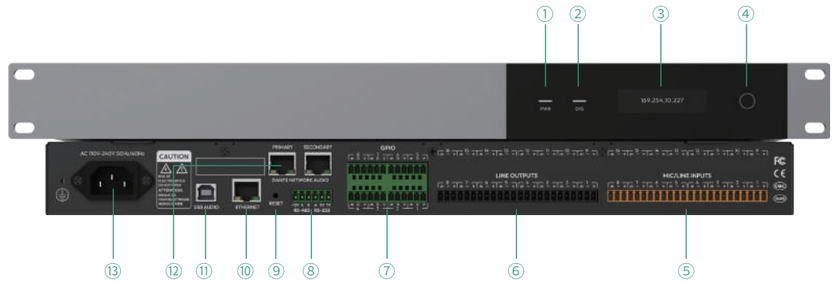
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 8-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 8-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Dante Ports: Redundant 1000 Base-T Ethernet ports provides 64 (32x32) channels of Dante network audio.

⑬ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	8x8	Input Dynamic Range	≥113dB
Dante\AES67 input/output channels	32x32	Output Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
		Output Channel Crosstalk	-120dB@1kHz
Phantom Power	48Vmax	Input Impedance (Balanced Connection)	5.4KΩ
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Output Impedance (Balanced Connection)	100Ω
Maximum Level	+18dBu	Operating Power Supply	110-240V AC，50Hz/60Hz
Sampling Rate	48 kHz	Shipping Wight (N.W./G.W.)	2.97KG/3.95KG
AD\DA Quantization Bit Depth	24Bit	Dimensions (WxDxH)	482x260x44mm
THD+N	≤0.002%（1kHz，+4dBu A-weighted）		

RNN1208D

Drag-and-drop DSP Matrix Series

The RNN1208D is a member of the RNN family, provides 32X32 channels of Dante audio. It has the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

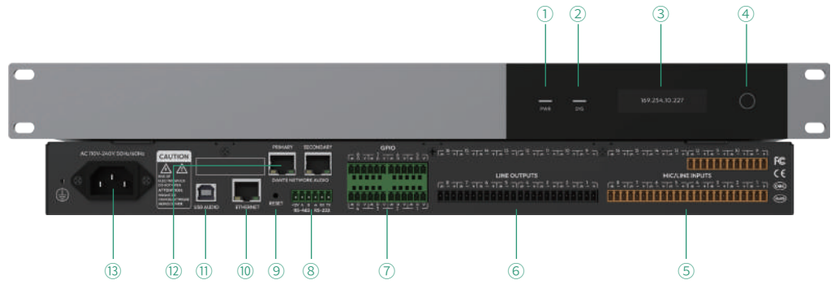
Scenario Adaptation and Simultaneous Operation

There are 3 deployments to choose from according to your needs: local meeting, local + remote meeting, and BGM system. At the same time, multiple DSPs can be operated and managed in one single program file, and you can copy and paste parameters across devices.

Dual-machine hot backup

It supports dual-machine hot backup function, and uses the detection heartbeat packet mechanism to detect each other through network or serial port protocols, and automatically switch when the device fails. At the same time, manual switch is supported to ensure the safety and stability of system operation.

Panel Overview



① Power Indicator: steady white light indicates normal operation.

② Operation Status Indicator: blinking white light indicates normal operation.

③ OLED Display: display device status information, IP address, overview information, etc.

④ Wake Up / Navigation Button: this transient button can switch the system dashboard display.

⑤ Analog Mic / line Input: 12-channel balanced analog audio input, independent preamp, phantom power.

⑥ Analog Line Output: 8-channel balanced analog output, you can use the software to independently control the level and the mute.

⑦ GPIO: Used to connect the control terminal or central control equipment.

⑧ RS-232/RS-485: Used for the third-party device to control this equipment or for the equipment to control the third party device.

⑨ RESET switch: Restore factory setting.

⑩ Ethernet Port: used to connect the Open Designer software for programming, management and control of equipment

⑪ USB-B sound card: to provide 2x2 audio, used to connect to the PC for remote meetings or for recording and playback.

⑫ Dante Ports: Redundant 1000 Base-T Ethernet ports provides 64 (32x32) channels of Dante network audio.

⑬ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	12x8	Input Dynamic Range	≥113dB
Dante\AES67 input/output channels	32x32	Output Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
		Output Channel Crosstalk	-120dB@1kHz
Phantom Power	48Vmax	Input Impedance (Balanced Connection)	5.4KΩ
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Output Impedance (Balanced Connection)	100Ω
Maximum Level	+18dBu	Operating Power Supply	110-240V AC，50Hz/60Hz
Sampling Rate	48 kHz	Shipping Wight (N.W./G.W.)	3.14KG/4.14KG
AD\DA Quantization Bit Depth	24Bit	Dimensions (WxDxH)	482x260x44mm
THD+N	≤0.002%（1kHz，+4dBu A-weighted）		

RNN1212D

Drag-and-drop DSP Matrix Series

The RNN1212D is a member of the RNN family, provides 32X32 channels of Dante audio. It has the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

Scenario Adaptation and Simultaneous Operation

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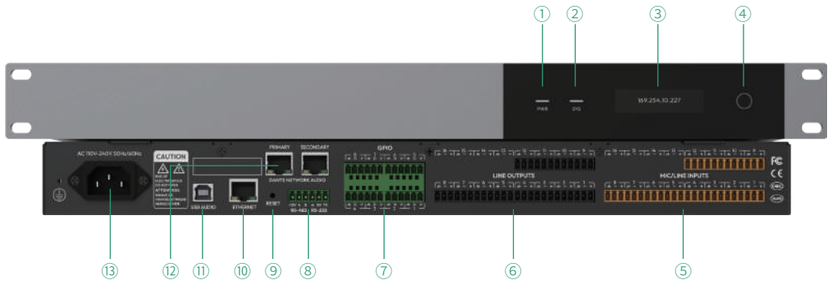

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⑬ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	12x12	Input Dynamic Range	≥113dB
Dante\AES67 input/output channels	32x32	Output Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
		Output Channel Crosstalk	-120dB@1kHz
Phantom Power	48Vmax	Input Impedance (Balanced Connection)	5.4KΩ
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Output Impedance (Balanced Connection)	100Ω
Maximum Level	+18dBu	Operating Power Supply	110-240V AC，50Hz/60Hz
Sampling Rate	48 kHz	Shipping Wight (N.W./G.W.)	3.15KG/4.15KG
AD\DA Quantization Bit Depth	24Bit	Dimensions (WxDxH)	482x260x44mm
THD+N	≤0.002%（1kHz，+4dBu A-weighted）		

RNN1608D

Drag-and-drop DSP Matrix Series

The RNN1608D is a member of the RNN family, provides 32X32 channels of Dante audio. It has the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

Multi-scenario Drag-and-drop Architecture

Multi-scene open platform. You can select the corresponding scenario, and then the necessary modules for the scenario will appear automatically. Based on this, you can put the DSP modules into the signal path according to your needs.

Automatic Attach Wiring

When entering programming after selecting a mode, you can complete the programming by dragging the module to the corresponding node, without the need to remove wires and reconnect them.

DSP Module Color Indication

The system uses two colors to distinguish between the "ON" and "OFF" states of module signals, making it easier to identify issues.

Advanced Audio Processing Technology

Built-in multi-channel AEC, adaptive filter, FIR and other algorithms to meet different needs, to ensure the quality and stability.

Various Control Methods

Support RS-232, RS-485, UDP control. The DSP also provides overall control ability of audio, signal switching, power, and environment in the system.

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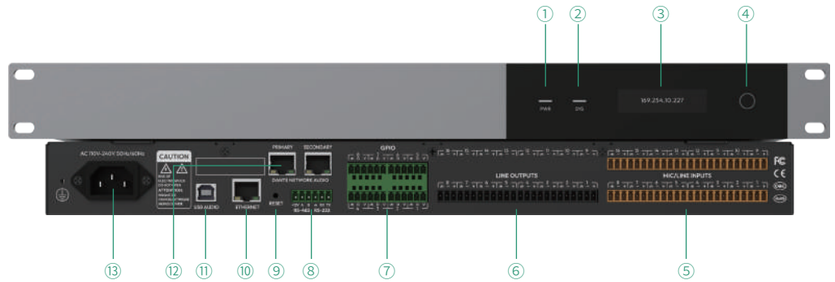

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⑬ Power Supply: accept detachable IEC cable power supply (AC 110-240V, 50/60Hz, 60W maximum)

Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	16x8	Input Dynamic Range	≥113dB
Dante\AES67 input/output channels	32x32	Output Dynamic Range	≥113dB
Preamp Adjustment	0/3/6/9/12/15/18/21/24/27/30 33/36/39/42/45/48 dB	Common-mode Rejection Ratio	＞67dB@1kHz，0dBu
		Output Channel Crosstalk	-120dB@1kHz
Phantom Power	48Vmax	Input Impedance (Balanced Connection)	5.4KΩ
Frequency Respond	20Hz~20kHz（+0.05/-0.5 dB）	Output Impedance (Balanced Connection)	100Ω
Maximum Level	+18dBu	Operating Power Supply	110-240V AC，50Hz/60Hz
Sampling Rate	48 kHz	Shipping Wight (N.W./G.W.)	2.5KG/3.41KG
AD\DA Quantization Bit Depth	24Bit	Dimensions (WxDxH)	482x260x44mm
THD+N	≤0.002%（1kHz，+4dBu A-weighted）		

RNN1616D

Drag-and-drop DSP Matrix Series

The RNN1616D is a member of the RNN family, provides 32X32 channels of Dante audio. It has the DSP functionality needed for PA systems that require professional FIR for loudspeaker management, auto mixing, paging, routing, microphone signal processing, automatic gain control, and BGM functions for a variety of application scenarios.

Features

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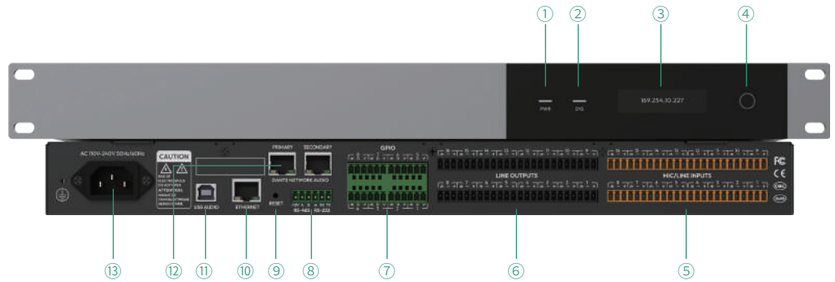

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Specifications

Processor	ADI SHARC 21569@1GHz SIMDx2	Noise	≤-95dBu (A-weighted)
Analog Input/Output Channels	16x16	Input Dynamic Range	≥113dB
Dante\AES67 input/output channels	32x32	Output Dynamic Range	≥113dB
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Maximum Level	+18dBu	Operating Power Supply	110-240V AC，50Hz/60Hz
Sampling Rate	48 kHz	Shipping Wight (N.W./G.W.)	3.18KG/4.2KG
AD\DA Quantization Bit Depth	24Bit	Dimensions (WxDxH)	482x260x44mm
THD+N	≤0.002%（1kHz，+4dBu A-weighted）		

Control Panel

NCP-3II

Remote Control Pannel with Knob and Display

Specifications

Type	Wall-mounted
Display	2″ OLED display
Knob	1 knob, supports up to 32 menu functions
Custom button	3
Control protocol	UDP
Function	Supports user customization
Network interface	1, 100Mbps RJ45, communication distance 100 meters
Power supply method	PoE
Appearance size (HxW)	86X86mm
Bottom box size (WxDxH)	82X25X82mm
Material color	Silver matte
Supported processor series	NLP/RNN

NCP-8

8" Android Touchscreen

Specifications

Resolution	1280x800
Operating system	Android 8.1 Memory: 2GB Storage: 16GB
Screen type	IPS
Size	8 inches
Control protocol	UDP
Function	Supports customizable user interface
Main chip	Quad-core cortex-A17, RockChip RK3288
Contrast	800:1
Power input	DC 12V 1.5A &PoE IEEE802.3AT
Product size	212.2x147.6x31mm

NCP-4

4" Android Touchscreen

Specifications

Resolution	480x480
Operating system	Android 10
Processor	Quad-core ARMCortexA53CPU1.6GHz, 64-bit
Control protocol	UDP
Function	Supports user-defined operation interface
Network interface	1, 100Mbps RJ45, communication distance 100 meters
Power supply method	PoE & +12VDC
Power consumption	<8W
Product size (WxH)	87.2X87.2mm
Opening size (WXDXH)	86.2 x40.5x 86.2mm