



Digital Audio Processor Beidou Series

OEM/ODM

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Audio Algorithm Symbiosis Platform

Exclusive custom native UI

Diversified OEM/ODM

Open a New Chapter in China's Audio DSP

CATALOGUE

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Digital Audio Processor Beidou Series

Beidou digital audio processor is an audio processing solution tailored for daily routine meetings. It has Beidou series and Beidou PRO series. With practicality and economy as the core, it has comprehensive functions and fixed software, providing ideal audio solutions for small and medium-sized enterprise conference rooms, multi-function halls and educational training institutions. Choose Beidou to make communication boundless.



High-performance processor

Equipped with ADI SHARC 21489 chip to ensure efficient and stable audio processing.

110dB

High Dynamic Range

110dB input and output dynamic range ensures pure and delicate sound quality.

Fixed software

Simplified operation process, fast deployment, intuitive user interface, easy management without professional training. Suitable for daily use scenarios.



Highly customized service

In view of various usage scenarios, we provide a rich selection of models and personalized customization solutions to accurately meet the unique needs of users.



Beidou Series

As a classic in the family, it provides a variety of specifications from 4x4 to 16x16. With its classic design and comprehensive functions, coupled with stable fixed software, it has become an ideal partner for small and medium-sized corporate conference rooms, multi-function halls and educational training institutions. It silently guards the smooth progress of every meeting and ensures clear and smooth audio.



Specification parameters

Model	Beidou44	Beidou88	Beidou1608	Beidou1616
Analog input and output channels	4x4	8x8	16x8	16x16
Processor	ADI SHARC 21489			
Sampling rate/quantization bit number	48K/24bit			
Input gain	0/6/12/18/24/30/36/42/48dB			
Phantom power	+48V/10mA max			
Frequency response (20~20kHz)	±0.5dB			
Maximum level	+18dBu			
THD+N	0.002% @+4dBu			
Input dynamic range	110dB			
Output dynamic range	110dB			
Channel isolation @1kHz	108dB			
Input impedance (balanced connection)	5.4KΩ			
Output impedance (balanced connection)	600Ω			
System delay	<3ms			
Working power supply	AC 220V,50Hz			
Dimensions (WxDxH mm)	482x200x45mm mm			
Shipping weight	3KG		4KG	

Beidou Pro Series

Based on the excellent foundation of the Beidou series, it has been comprehensively upgraded and is available in two specifications: 8x8 and 16x16. The newly added 4-channel GPIO (general purpose input and output ports) and RS485 interface significantly improve the flexibility of third-party control.



Specification parameters

Model	Beidou Pro 88	Beidou Pro 1616
Analog input and output channels	8x8	16x16
Processor	ADI SHARC 21489	
Sampling rate/quantization bit number	48K/24bit	
Input gain	0/6/12/18/24/30/36/42/48dB	
Phantom power	+48V/10mA max	
Frequency response (20~20kHz)	±0.5dB	
Maximum level	+18dBu	
THD+N	<-92dB @17dBu	
Input dynamic range	110dB	
Output dynamic range	110dB	
Channel isolation @1kHz	108dB	
Input impedance (balanced connection)	5.4KΩ	
Output impedance (balanced connection)	600Ω	
System delay	<3ms	
Working power supply	AC 220V,50Hz	
Dimensions (WxDxH mm)	482x200x45 mm	
Shipping weight	3KG	4KG

Fixed software

Our DSP Controller 1.5 software is an operating software designed specifically for the Beidou series digital audio processors. The number of input and output processing modules is fixed. You can enter the corresponding interface by selecting the corresponding version without editing.



Functional module

DSP Controller 1.5 software provides a variety of modules, including parametric equalizer, feedback suppression, echo cancellation, noise suppression, automatic mixing, automatic gain, delay, frequency division, matrix, etc.



Feedback

The AFC module is used to eliminate the howling caused by uncontrolled frequency cycles between the microphone and the speaker. The DSP Controller provides 8 notch filters with adjustable octets, each of which can be selected to be automatic or manual. In the manual state, the frequency and gain can be adjusted at will.

PEQ

The parametric equalizer has 8 bands and provides 5 selectable filters for each input. Each filter can be set to parametric filter, low pass filter, high pass filter, low shelf filter, high shelf filter. Standard parameters include frequency, slope, boost/attenuation and Q value.

AMM

When multiple microphones are turned on in a conference room, gain sharing automatic mixing will automatically manage the gain distribution of multiple microphones, maintain sufficient gain for the microphone currently in use, and automatically reduce the gain of unused microphones, thereby ensuring that the conference sound reinforcement has good transmission gain.

AGC

Automatically adjust the gain of microphone or music signals to solve the problem of signal fluctuations and maintain a stable gain output.

AEC

Echo cancellation is used in situations where there is echo during telephone conferences and video conferences. Three types of nonlinear filtering processing are provided for fine-tuning to maximize the performance of AEC in acoustic environments with severe sound reflections or reverberation.

ANS

Noise suppression uses a spectral subtraction algorithm. The noise suppression module can distinguish between human voices and non-human voices, effectively removing non-human voices, and the suppression level is optional at 6/12/18/24/30dB.

Customize the User Interface

The software supports the creation of a personalized user interface, making complex audio processing simple and intuitive, even for non-professionals.



The custom user interface supports mobile software control, and one tablet can easily manage multiple venues in the same network, and can realize status monitoring and fault alarm. It also has central control functions, which can control the power supply, signal switching, environmental control and other overall control in the system, realize one-click management, support IPAD\tablet, mobile phone wireless remote control, and can also run in Windows\Android\IOS systems.

OEM/ODM Service

Customizable panels

Personalized design ensures that every product can be customized exclusively for your brand.

Customizdble software

Carefully craft the user interface to enhance the experience, achieve a perfect fusion of operation and aesthetics, and make interaction a pleasure.

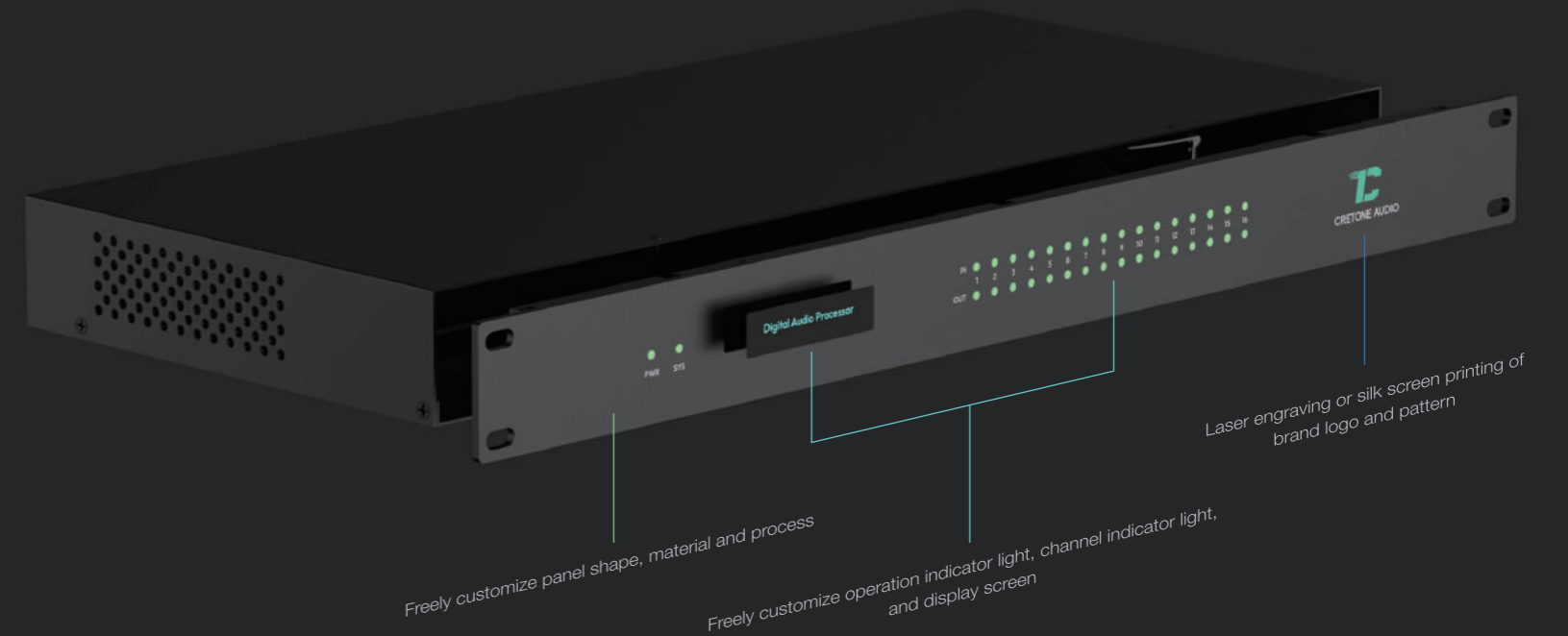
DSP resource library customization

100+ digital signal processing resources to meet your diverse audio needs.



Customizable panels

We provide one-stop panel customization services to meet the diverse needs of our customers. You can add your brand logo or design unique shapes and patterns on our standard panels, and you can freely choose the appropriate material, color and craftsmanship. In addition, we can also provide personalized customization services based on actual needs and market positioning.

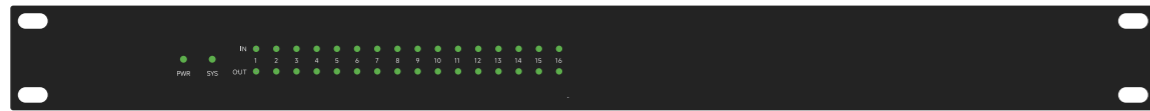


Standard panel

In order to meet the increasingly diverse needs of customers, our company provides comprehensive panel customization services. We have carefully created four standard specifications of panels to meet the application needs of different scenarios: regular version, version with light and screen, version with light but without screen, and version with screen but without light.



Standard panel



Lighted panel



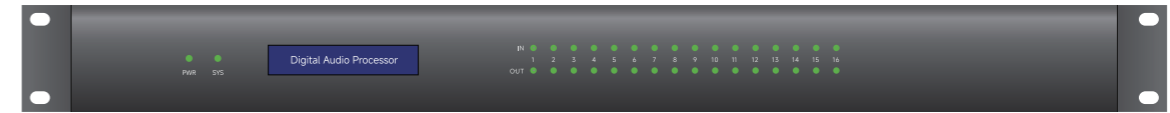
Panel with screen



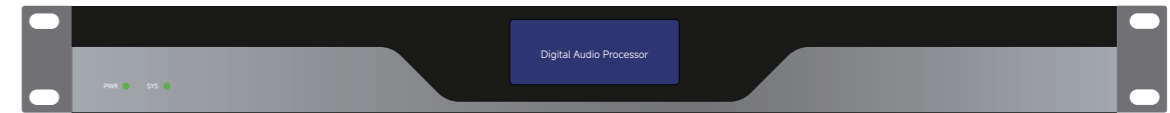
Panel with light and screen

Personalization

On the basis of standard specifications, we go a step further and provide personalized appearance customization services. You can freely choose suitable materials, colors and craftsmanship according to your brand style and design concept to create a unique product appearance.



At the same time, we can also freely design the positions of the front panel operation indicator, channel indicator, display, USB sound card and other modules according to your specific needs. No matter what layout and functional configuration you want, we can tailor it for you to achieve true personalized customization.



Software customizable

Based on our powerful operating software, we provide comprehensive UI customization services, dedicated to creating a product interface that is both beautiful and practical for you; our services cover interface style design, interaction logic optimization, icon and button design, as well as multilingual packages, etc., to fully meet your customization needs.

Interface style design

Icon and button design

Interaction logic optimization

Multi-language packs



Standard-Based Differentiated Customization

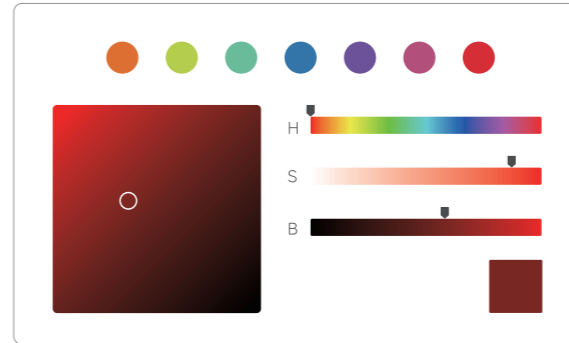
Based on neutral operating software, our differentiated customization service opens up unlimited possibilities for personalization for your brand. We not only support adding logos, personalized modification of desktop icons, exclusive customization of models, and branded editing of help documents, but also provide unique exclusive IDs. At the same time, the software skin color can be freely customized, so that your brand impression can be deeply rooted in the hearts of the people at every touch point.

In addition, all interactive elements of our software, such as icons, buttons, faders, levels, etc., can be personalized and adjusted according to your design needs. Ensure that every detail of the user interface is in harmony with your brand image.

We promise that through our carefully polished customization service, we will help you create an exclusive software experience that not only highlights the brand characteristics but also has complete functions.

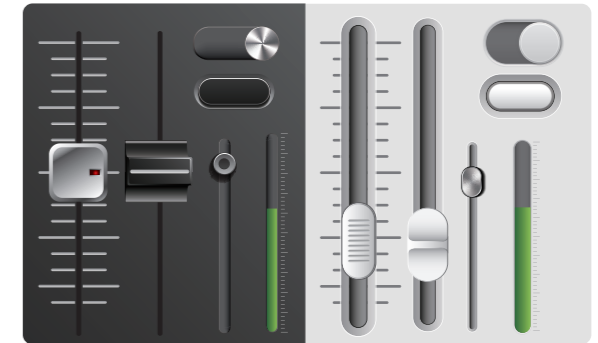
Color customization

Freely customize according to brand tone or personal preference



Component individual design

Ensure that all interactive elements of the software interface accurately match your needs



Highly customized

In the journey of innovation, we provide tailor-made services to create a unique software interface for your brand. We deeply understand your needs and comprehensively shape the layout, style, style and interaction of the software.

Customized design: From macro interface layout to micro element design, from color matching to font selection, we carefully create every interface element to ensure that they are not only beautiful, but also perfectly integrated with your brand personality.

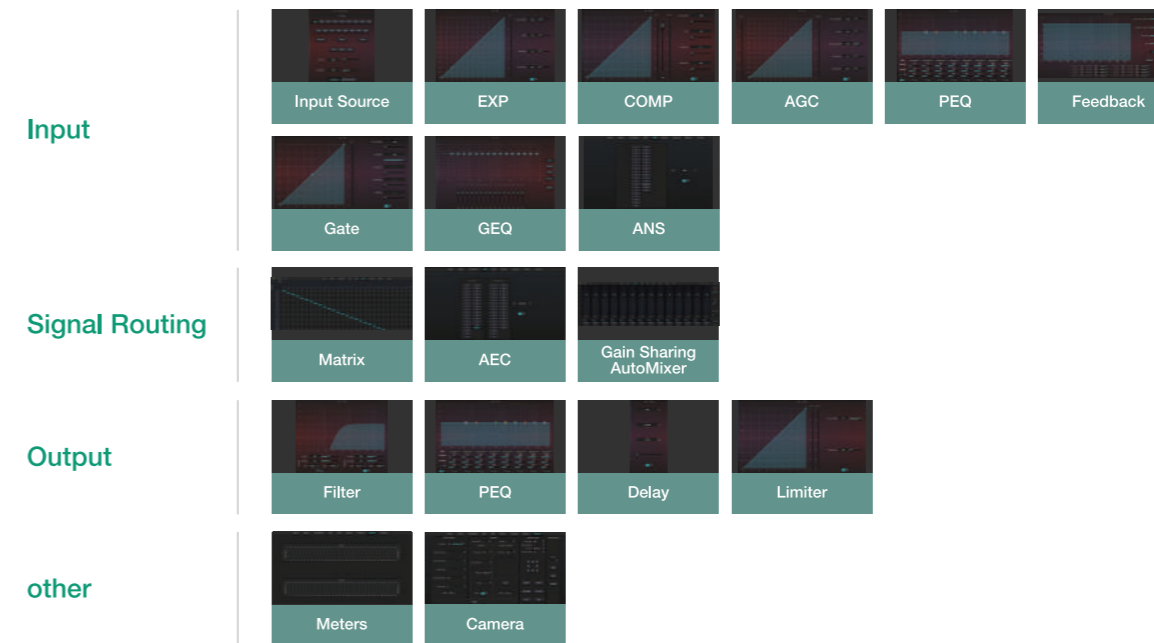
Continuous iteration: We keep up with the latest trends in the market and technology, and are committed to the continuous evolution of UI services to ensure that your product interface is always one step ahead and remains competitive.

We firmly believe that with our unremitting pursuit of personalized customization and our firm commitment to continuous iteration, we can ensure that your software interface is not only a tool, but also a narrator of brand stories.



DSP resource library customization

Our DSP digital audio processor features an extensive resource library of over 100 functional modules, covering the three key stages—input, signal routing, and output—to provide flexible customization options that meet diverse customer needs.



*Customers can choose and define the required functions and settings in these three stages according to their actual needs, and easily create their own personalized audio processing solutions. At the same time, we promise to continuously upgrade the resource library, work closely with customers, and jointly incubate ideas to ensure that your audio processing solutions always stay ahead and meet the ever-changing market needs.

DSP Resource Library Customization Requirement Table

You can fill in your customized modules according to your needs in the resource library to quickly form a demand list


Input									Signal Routing	Output						
IN1	EXP	COMP	AGC	PEQ	Feedback	Ducker	Gate	ANS		OUT1	Filter	PEQ	Delay	Limiter	GEQ	Output Settings
IN2	A	B	C	D	E	F	G	H		OUT2	A	B	C	D	E	F
IN3	A	B	C	D	E	F	G	H		OUT3	A	B	C	D	E	F
IN4	A	B	C	D	E	F	G	H		OUT4	A	B	C	D	E	F
IN5	A	B	C	D	E	F	G	H		OUT5	A	B	C	D	E	F
IN6	A	B	C	D	E	F	G	H		OUT6	A	B	C	D	E	F
IN7	A	B	C	D	E	F	G	H		OUT7	A	B	C	D	E	F
IN8	A	B	C	D	E	F	G	H		OUT8	A	B	C	D	E	F
IN9	A	B	C	D	E	F	G	H		OUT9	A	B	C	D	E	F
IN10	A	B	C	D	E	F	G	H		OUT10	A	B	C	D	E	F
IN11	A	B	C	D	E	F	G	H		OUT11	A	B	C	D	E	F
IN12	A	B	C	D	E	F	G	H		OUT12	A	B	C	D	E	F
IN13	A	B	C	D	E	F	G	H		OUT13	A	B	C	D	E	F
IN14	A	B	C	D	E	F	G	H		OUT14	A	B	C	D	E	F
IN15	A	B	C	D	E	F	G	H		OUT15	A	B	C	D	E	F
IN16	A	B	C	D	E	F	G	H		OUT16	A	B	C	D	E	F

Control Panel

Control panel series, tailor-made for your processor!

We know that every detail matters to the user experience. Therefore, we have specially equipped the Beidou series with a variety of advanced and easy-to-use control panels to meet your diverse operating needs. This series covers the Remote control panel with 8-button NCP-1, the Remote control panel with knob and display NCP-3, the 4" Android touchscreen NCP-4, the 8" Android touchscreen NCP-8, providing you with a comprehensive choice.

These control panels are not only a perfect match for the Beidou series, but can also be customized according to your specific needs. Choose our control panel series to make your processor better and more convenient to operate.



NCP-1
Remote control panel with 8-button

Type	Wall-mounted
Programmable buttons	8
Knob	1
Control protocol	UDP
Function	User-defined
Network interface	1, 100Mbps RJ45, communication distance 100 meters
Power supply method	PoE
Appearance size (HxW)	156X96mm
Bottom box size (WxDxH)	152X84X50mm
Material color	Silver matte



NCP-3

Remote control panel with knob and display

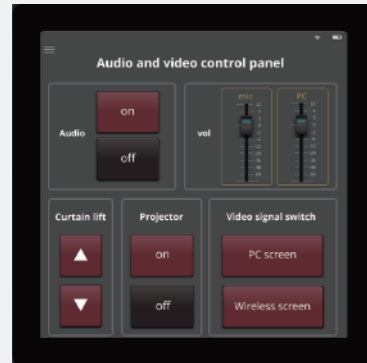
Type	Wall-mounted
Display	1.13" OLED display
Knob	1 knob, supports up to 32 menu functions
Control protocol	UDP
Function	Supports user customization
Network interface	1, 100Mbps RJ45, communication distance 100 meters
Power supply method	PoE
Appearance size (HxW)	86X86mm
Bottom box size (WxDxH)	82X82X31mm
Material color	Silver matte



NCP-8

8" Android touchscreen

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	212.2x147.6x31



NCP-4

4" Android touchscreen

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	<100mW
Product size (WXDXH)	86.2 x40.5x 86.2mm
Opening size (WXDXH)	87.2x40.5x87.2mm