



**Shenzhen Cretone Audio Technology Co.,Ltd.**

- 📞 National Service Hotline: +86-755-8528-0469
- 📍 Add: 3rd Floor, Building B, Tiange Technology Park, Huangfengling Industrial Avenue, Baoan District, Shenzhen
- 🌐 Web: [www.cretoneaudio.com](http://www.cretoneaudio.com)

**Digital Audio Processor NLP Series**

**OEM/ODM**

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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## The Digital Audio Processor NLP Series

NLP series processor, as a leader in the field of audio processing, with excellent performance and diversification of series, precision and high response Audio processing challenges, NLP family honor standalone, DANTE, AES 67, special and PCM five Series, each one is ingenious, aims to open an unprecedented audio auditory feast for users

Dante AES67 PCM  
16KHz 16-bit STEREO



## High dynamic range processing power

NLP series processors use ADI SHARC high performance chip, with excellent high dynamic range processing capacity, to ensure that the audio signal in a variety of complex environments, committed to restore the audio signal the most original lossless audio quality



## Highly customized services

For diversified use scenarios, we provide rich selection of specifications and personalized customization solutions to accurately meet the unique needs of users.



Specification selection



Appearance customization



Software customization

## Almighty function module

It has core functions such as noise suppression (ANS), echo cancellation (AEC), noise gain compensator (ANC), feedback suppression (AFC), automatic mixing (AMM), automatic gain control (AGC), as well as customized user interface, USB sound card, camera tracking and other practical functions to comprehensively improve the quality of audio processing



6A algorithm



User interface



Camera tracking



USB sound card



# The NLP series

Our models range from 4X4 to 16X16 and are specifically designed for both local sound reinforcement and remote video conferencing applications in conference rooms, lecture halls, and banquet halls, ensuring efficient audio processing.



## Specification parameters

Model	NLP44	NLP84	NLP88	NLP0812	NLP1208	NLP1212	NLP1608	NLP1616
Analog input and output channels	4x4	8x4	8x8	8x12	12x8	12x12	16x8	16x16
Processor	SHARC 21489							
Sampling rate /quantification number	The 48K / 24bit 40bitDSP floating-point computing engine							
AEC channel	2-bus AEC		1-bus AEC					
Input gain	0/6/12/18/24/30/36/42/48 dB		0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB					
Phantom power	+48V/10mA max							
Frequency response (20-20 kHz)	±0.3dB							
Maximum level	+18dBu							
THD+N	<-95dB @17dBu							
Input dynamic range	113dB							
Output dynamic range	113dB							
Channel isolation degree @1kHz	108dB							
Input impedance (balanced connection)	5.4KΩ							
Output impedance (balanced connection)	600Ω							
System delay	<3ms							
Working power supply	DC12V/PoE48V		AC110~240V,50Hz/60Hz					
Dimensions (wide x depth x high mm)	215x162x44 mm		482x260x45 mm					
Hauled weight	2KG		4KG					

# The NLP series-Dante

Supports the Dante digital protocol with configurations ranging from 4X4 to 64X64, enabling flexible and efficient signal transmission.



## Specification parameters

Model	NLP44D	NLP84D	NLP88D	NLP0812D	NLP1208D	NLP1212D (008Dante)	NLP1212D (032Dante)	NLP1608D	NLP1616D	NLP3232D	NLP6464D	
Analog input and output channels	4x4	8x4	8x8	8x12	12x8	12x12	12x12	16x8	16x16	-	-	
Dante channel	4x4	8x8				16x16		32x32		64x64		
Processor	ADI SHARC 21489@450 MHz SIMD				ADI SHARC 21489@450 MHz SIMDx2							
Sampling rate /quantification number	48K / 24bit 40bitDSP floating point computing engine											
AEC channel	2-bus AEC		1-bus AEC									
Input gain	0/6/12/18/24/30/36/42/48 dB		0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB									
Phantom power					+48V/10mA max							
Frequency response (20-20 kHz)	±0.5dB		±0.3dB									
Maximum level					+18dBu							
THD+N					<-95dB @17dBu							
Input dynamic range					113dB							
Output dynamic range					113dB							
Channel isolation degree @1kHz					108dB							
Input impedance (balanced connection)					5.4KΩ							
Output impedance (balanced connection)					600Ω							
System delay					<3ms				<6ms			
Working power supply	DC12V/PoE48V		AC110~240V,50Hz/60Hz									
Dimensions (wide x depth x high mm)	215x162x44 mm		482x260x45 mm									
Hauled weight	2KG		4KG							3KG		

# NLP Series AES67

Support AES 67 protocol, show strong compatibility, supports 4X4 to 32X32 optional. It is suitable for all kinds of meeting venues, especially for multi-protocol compatibility and efficient collaboration requirements.

## AES67



## Specification parameters

Model	NAP44A	NAP84A	NAP88A	NAP0812A	NAP1208A	NAP1212A (008AES67)	NAP1212A (032AES67)	NAP1608A	NAP1616A	NAP3232A	
Analog input and output channels	4x4	8x4	8x8	8x12	12x8	12x12	12x12	16x8	16x16	-	
Dante channel	4x4	8x8			16x16			32x32			
Processor	ADI SHARC 21489@450 MHz SIMD			ADI SHARC 21489@450 MHz SIMDx2							
Sampling rate /quantification number	48K / 24bit 40bitDSP floating point computing engine										
AEC channel	2-bus AEC		1-bus AEC								
Input gain	0/6/12/18/24/30/36/42/48 dB		0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB							-	
Phantom power						+48V/10mA max				-	
Frequency response (20-20 kHz)	±0.5dB		±0.3dB								
Maximum level						+18dBu				-	
THD+N						<-95dB @17dBu				-	
Input dynamic range						113dB				-	
Output dynamic range						113dB				-	
Channel isolation degree @1kHz						-108dB				-	
Input impedance (balanced connection)						5.4KΩ				-	
Output impedance (balanced connection)						600Ω				-	
System delay						<3ms			<6ms		
Working power supply	DC12V/PoE48V		AC110~240V,50Hz/60Hz								
Dimensions (wide x depth x high mm)	215x162x44 mm		482x260x45 mm								
Hauled weight	2KG		4KG					3KG			

# The NLP series 4-channel independent AEC processor

Farewell to the traditional bus processing, 4 channels operate independently, designed for multi-microphone environment, to achieve fine echo elimination, to ensure the audio purity without disturbance. Especially suitable for conference rooms, classrooms, public inspection methods and other occasions with high sound quality requirements.



## Specification parameters

Model	NLP88-AEC
Analog input and output channels	8x8
processor	ADI SHARC 21489x2
Sampling rate /quantification number	48K/24bit
Input gain	0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB
Phantom power	+48V/10mA max
Frequency response (20-20 kHz)	±0.3dB
Maximum level	+18dBu
THD+N	<-95dB @17dBu
Input dynamic range	113dB
Output dynamic range	113dB
Channel isolation degree @1kHz	-108dB
Input impedance (balanced connection)	5.4KΩ
Output impedance (balanced connection)	600Ω
System delay	<3ms
Working power supply	AC110~240V,50Hz/60Hz
Dimensions (wide x depth x high mm)	482x260x45 mm
Hauled weight	4KG

# NLP Series- PCM standalone

Built-in industry-leading 6A audio algorithm and rich functional modules, the number of analog channels ranges from 8x8, 12x12, 16x16, matching the number of PCM channels of 8, 12, and 16 respectively, meeting the high-quality audio recording and transmission needs of radio and television centers, public security, procuratorial and judicial organs, etc.

**PCM**  
16KHz 16-bit STEREO



## Specification parameters

Model	NLP88-PCM	NLP1212-PCM	NLP1616-PCM
Analog input and output channels	8x8	12x12	16x16
PCM channel	8x8	12x12	16x16
processor	ADI SHARC 21489	ADI SHARC 21489 x 2	
DSP processing power	400 MIPS, 1.6 GFLOPS		
DSP sampling rate / quantification numbers	48K/24bit		
PCM sampling rate / quantification numbers	16kHz/16Bit		
Input gain	0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB		
Phantom power	+48V/10mA max		
Frequency response (20-20 kHz)	±0.3dB		
Maximum level	+18dBu		
THD+N	<-95dB @17dBu		
Input dynamic range	113dB		
Output dynamic range	113dB		
Channel isolation degree @1kHz	108dB		
Input impedance (balanced connection)	5.4KΩ		
Output impedance (balanced connection)	600Ω		
System delay	<3ms		
Working power supply	AC110~240V,50Hz/60Hz		
Dimensions (wide x depth x high mm)	482x260x45 mm		
Hauled weight	4KG		

# NLP Series-PCM Network

Support PCM coding sampling output, new drag and drop architecture, easily handle the real-time transmission of 16 character voice signals, and can expand more PCM channels to meet the needs of high-quality audio recording and transmission such as radio and television center and public inspection method.

**PCM**  
16KHz 16-bit STEREO



## Specification parameters

Model	TKY88D-PCM	TKY1616D-PCM	TKY88A-PCM	TKY1616A-PCM	TKY88DD-PCM	TKY88AA-PCM
Analog input and output channels	-	-	-	-	8x8	8x8
Dante channel	8x8	16x16	-	-	8x8	-
AES67 channel	-	-	8x8	16x16	-	8x8
PCM channel	8x8	16x16	8x8	16x16	16x16	
Processor	ADI SHARC 21569 @1GHz SIMD					
DSP sampling rate / number of quantification numbers	48K/24bit					
PCM sampling rate / number of quantification numbers	16kHz/16Bit					
Input gain	-				0/3/6/9/12/15/18/21/24/27/30/33/36/39/42/45/48 dB	
Phantom power	-				+48V/10mA max	
Frequency response (20-20 kHz)	±0.3 dB					
Maximum level	+18dBu					
THD+N	<0.003%@4dB					
Input dynamic range	-				115dB	
Output dynamic range	-				115dB	
Channel isolation degree @1kHz	-				108dB	
Input impedance (balanced connection)	-				5.4KΩ	
Output impedance (balanced connection)	-				600Ω	
System delay	<3ms					
Working power supply	AC110~240V,50Hz/60Hz					
Dimensions (wide x depth x high mm)	482x260x45 mm					
Hauled weight	5KG					

## DSP Configurable software

Our DSP Controller software is a configurable software designed specifically for the NLP series digital audio processors. It integrates powerful functional modules, including but not limited to automatic mixing, echo cancellation, noise suppression, etc., aiming to provide users with a comprehensive and flexible audio processing solution. Whether you are an audio engineer, system integrator or end user, DSP Controller can meet your high standards for sound quality and operation.



## Functional module

DSP Controller Provide more than 100 + DSP modules, including parametric equalizer, graphic equalizer, feedback suppression, etc. The modules can be freely configured to ensure the diversity and professionalism of audio processing.

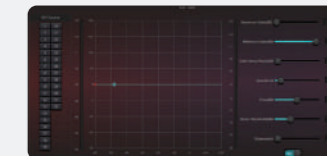
### PEQ

Provide 5 / 8 / 12 section selection, each input is equipped with 5 filters (parameters, low pass, high pass, low shelf, high shelf), support frequency, slope, gain, Q value adjustment.



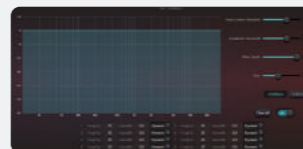
### ANC

The system automatically adjusts the output gain according to the ambient noise to keep the sound clarity.



### Feedback

Notch filter with 8/12/16 adjustable band supports automatic / manual mode for eliminating feedback.



### AutoMixer

In a multi-microphone environment, the gain of the unused microphone is automatically adjusted to optimize the potetial acoustical gain.



Gain Sharing AutoMixer Gating AutoMixer

### AGC

Automatically adjust the input signal gain to maintain a stable output level.



### Ducker

The input channel has a ducker function to automatically reduce the background music to ensure specific notifications.



### AEC

Suitable for telephone and video conferencing, using nonlinear filtering processing to eliminate acoustic echo.



### ANS

A spectral subtraction algorithm was used to distinguish between human and nonhuman voices and provide multilevel suppression options.



### Edit the configuration



#### 01 Device List

The main interface to automatically find all the DSP on the network. Users will connect to the specified DSP according to the need, and the connection indicator will flash after going online. One DSP supports up to 8 users to connect and control online at the same time.

#### 02 Custom processing module

Click the edit button to right-select the input or output channel processing module, and the edit dialog box. It can replace the current processing module, delete, copy and other operations. After editing, click to upload to the host.

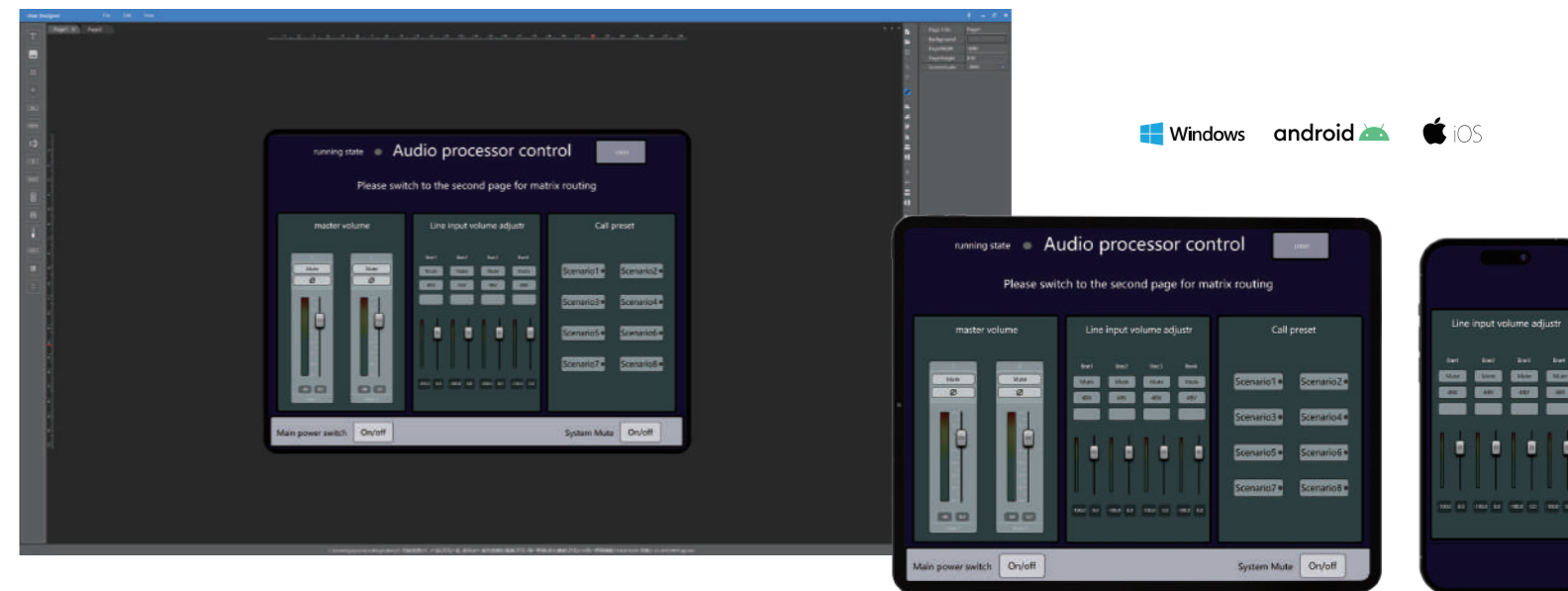
Note: When the CPU turns red after 100, the resource exceeds cannot be uploaded to the host, and it needs to be edited again.

#### 03 Input and output channels

Each channel of input and output can reconfigure the processing module. If the configuration is the same, it will be copied to all channels.

### 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.

## Customizable 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.



Freely customize panel shape, material and process. Save translation

Freely customize operation indicator light, channel indicator light, display screen, USB sound card

Laser engraving or silk screen printing of brand logo and pattern

## 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



Acrylic + Light



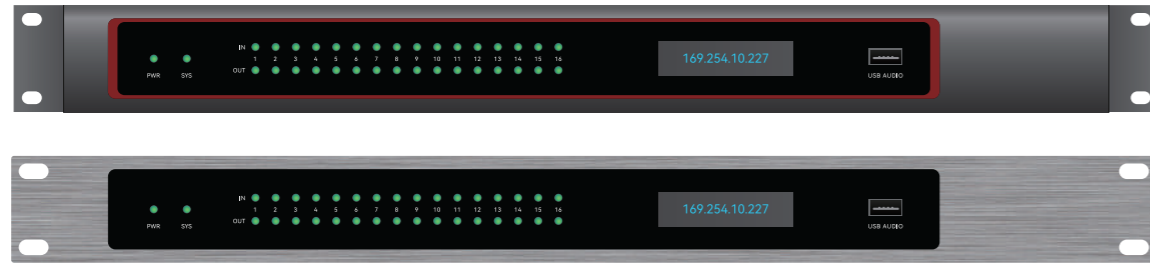
Acrylic+Screen



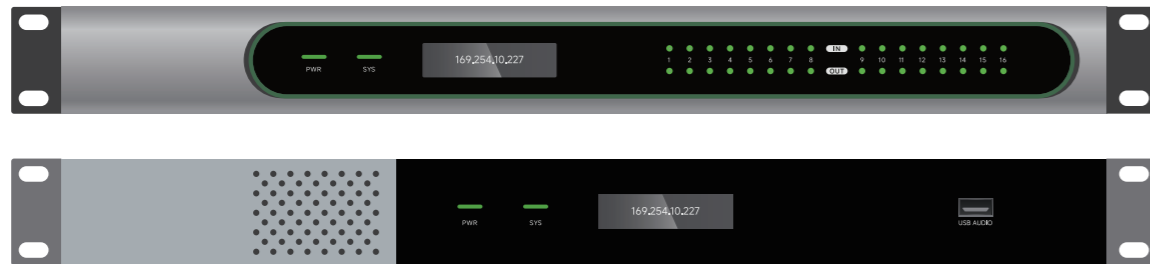
Acrylic+light+screen

### 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.



## Customizable software

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 differentiation customization

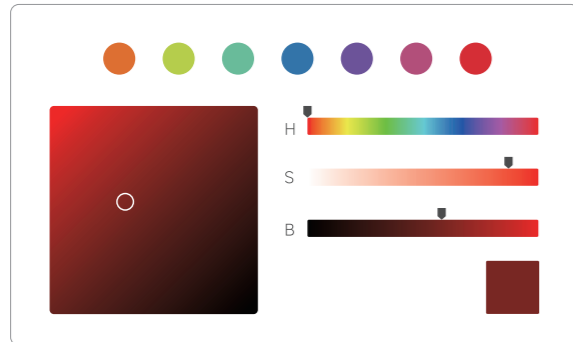
Based on neutral operating software, our differentiated customization service opens up unlimited possibilities for personalization for your brand. We not only support adding logos, personalized modification of desktop icons, exclusive customization of models, and branded editing of help documents, but 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.

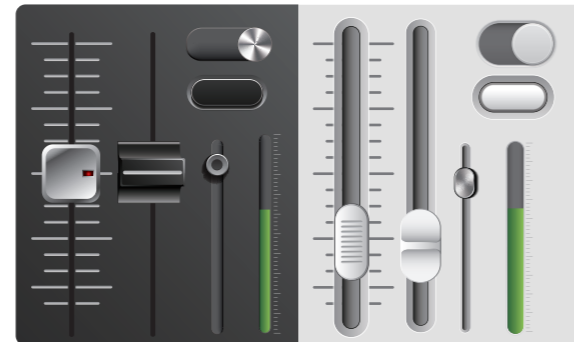
#### Colorful customization

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 is equipped with a variety resource library with more than 100 functional modules, which fully cover the three key stages of input, signal routing and output to meet the diverse customization needs of customers.



\*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, customized for your processor!

We know that every detail matters to the user experience. Therefore, we have specially equipped the NLP 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, and the 4" Serial port Android touchscreen CCP-4 with serial communication function, providing you with a comprehensive choice.

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



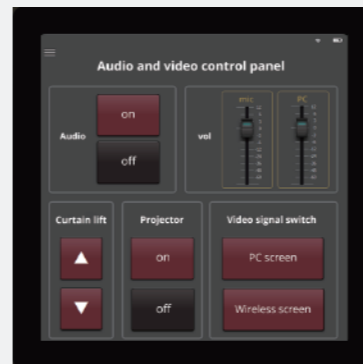
### NCP-1 Remote control panel with 8-button

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-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



### 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



### CCP-4 4" Serial port Android touchscreen

Resolution	480x480
Control protocol	RS-485
Function	Built-in operation interface
Signal line length	100 meters
Connection port	4pin Phoenix terminal
Power supply method	+12VDC
Power consumption	< 100mW
Product size (WxH)	88X88mm
Opening size (WXDXH)	82X18.1X78mm
Color	Gray