

AUDIOCENTER

Dynamic Audio Solutions

BrainCore™
Technology Inside

Technology for music & arts
Designed & Engineered in Europe



Theme Parks, Resorts, Education, Hotels, Commercial Centers, Business Meetings ...

Butterfly

Multipurpose Micro-Line Array Loudspeaker





Joan La Roda
Audiocenter R&D Director

Joan La Roda is an European electro-acoustic engineer, graduated from the Polytechnic University of Valencia (Spain), began his career in the audio industry since 1990 and has held various positions since then. During these 33 years, he first worked as a touring sound engineer, gaining experience in real-life situations. Then successfully designed sound systems for the largest Spanish audio manufacturer, including a top-selling stage monitor which is with linear phase response using FIR filters. After this period, he continued his career as a loudspeaker designer for several companies.

He has published educational articles in Spanish and English on phase alignment and tuning of cardioid subwoofers and has given educational seminars in Southeast Asia, Europe, Oceania and Latin America. Recently he published a book in Spanish to help people make the right choice when buying a sound system. He now uses BEM (Boundary Element Method) techniques to design horns and line array waveguides for Audiocenter.

Design Concept

- ⦿ With global state-of-art patented technology, developed to meet the most demanding features on the market
- ⦿ Ultra-small size but high performance
- ⦿ Stylish outlook design and exquisite finishing
- ⦿ Modular design
- ⦿ Versatile use for different applications
- ⦿ Flexible applications
- ⦿ Durable use for all-weather and scenes



BrainCore™

BrainCore™ is an innovative core application technology researched and developed by Audiocenter, devoted to Audiocenter active DSP-controlled loudspeakers with supreme performance and high reliability.

With its advanced technology and scientific methodology, BrainCore™ analyses and processes the input signal, DSP module, Class-D amplifier and loudspeaker optimally, achieving excellent frequency response and audio reproduction even at high levels of SPL.

Key Features



Innovative BrainCore™ technology improves the system audio performance

The innovative BrainCore™ technology and built-in powerful DSP processor improve the features of the transducers. With Cort™ correction technology and Limita™ dynamic processing technology, the system works with safety and reliability and achieves superb performance.



Unique Driver Protection Circuit

When the high frequency section is overloaded for a long time, our exclusive protection circuit on crossover board will limit the current or cut-off the signal to the driver to protect it from damage.



Customized ProDriver

Latest driver technology and customized drivers ensure a clean sound and impressive dynamics.



T-EYE™ Treble Design

Our T-Eye™ HF design coupled with Butterfly custom-made horn, result in a wider horizontal coverage, larger near-field distance and more delicate sound.



Smart Crossover Design

30 years' experience Smart crossover technology to ensure zero consumption even in high dynamic output. Our Smart X-over technology allows best coupling between cabinets, both horizontal and vertical planes.



Extremely Simple Installation

Very easy-to-install. The front fixing points have an extremely simple slider installation method. It can be easily installed by one single person in just two steps, saving time and effort and bringing users a better experience.



Durable ABS cabinet structure

The cabinet is ABS made, with good strength, heat resistance and chemical corrosion resistance. It can meet the needs of different scenarios.



Flexible and Multiple Applications

Can be used as many applications, such as main PA, monitor, surround element, side-fill, front-fill, under-balcony or delay array. Butterfly can meet all the event needs.



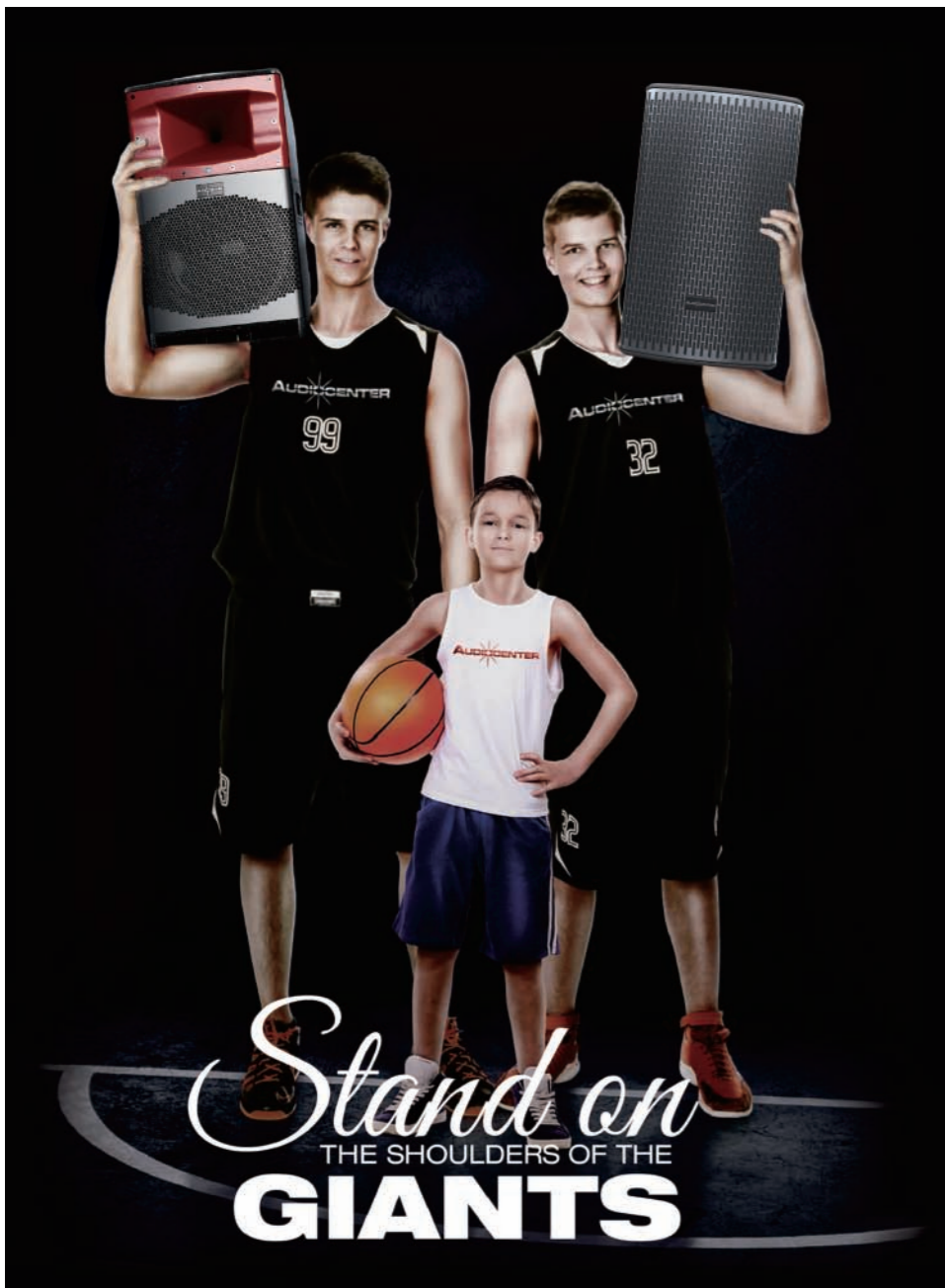
High Z and Low Z

High impedance (70V/100V) and low impedance (16Ω) available

European R&D design, German standard engineering



German Office
Gildestr.2,D-49477 Ibbenbüren



Customized ProDriver
Latest driver technology and customized drivers ensure a clean sound and impressive dynamics.



Smart Crossover Design
30 years' experience Smart crossover technology to ensure zero consumption even in high dynamic output. Our Smart X-over technology allows best coupling between cabinets, both horizontal and vertical planes.

Meet all kinds of applications

Butterfly integrates the R & D and application experience of Audiocenter, organically integrates art, vanguard technology, and electroacoustic design to create products with aesthetic and acoustic consistency for different levels of applications.

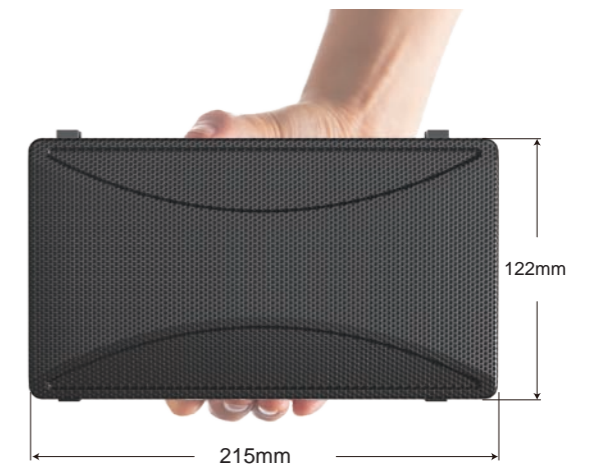
Butterfly can cover a wide variety of applications, from fixed installations to rental applications such as AV integration, educational seminars, conference, speeches, house of worship, etc.



High SPL for an Ultra Compact Cabinet

⦿ Ultra compact cabinet design, small and lightweight

Dimensions (WxHxD) : 215x122x165mm
Net Weight: 2.3kg(Butterfly 4pro)
2.5kg(Butterfly 4ca)



⦿ Maximum SPL 117dB

Customized ProDriver, up to 117dB



An Exciting Esthetic Audio Product

- ◎ Superb sound performance
- ◎ Stylish design



◎ Strong and resistant ABS cabinet

The Butterfly ABS made cabinet is strong and resistant to heat and chemical corrosion.

◎ Customized Grill

The grill is available with optional on demand colors as metal gray, black, off-white, red, yellow and green. (If you need other customized colors, please consult Audiocenter sales team.)



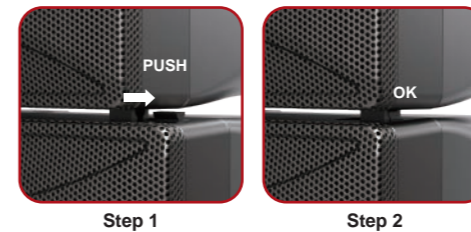
Flexible and Multiple Applications

- ◎ Based on modular design, Butterfly has excellent scalability. It can be used in flexible and multiple applications. Butterfly can work as main PA, monitor speaker, surrounding speaker, side fill, delay and many more. It can meet the needs of the entire event.



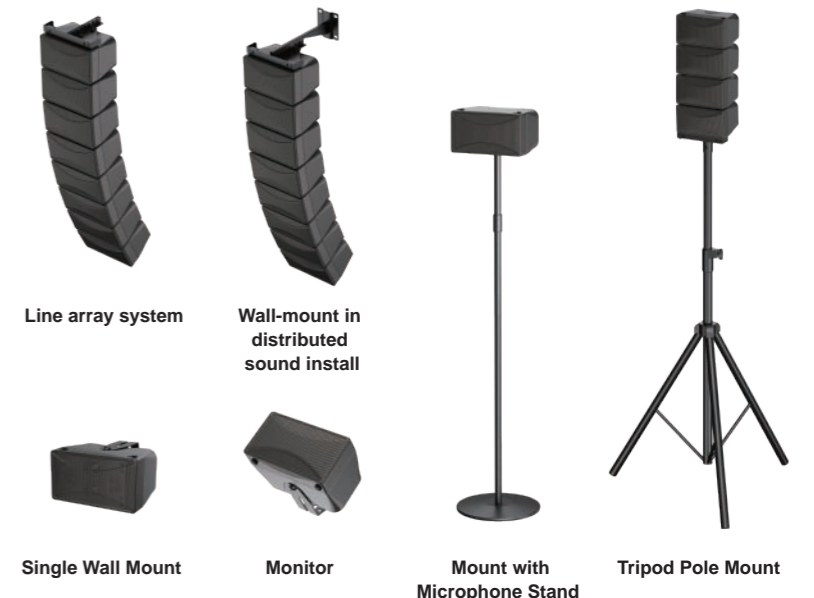
◎ Extremely Simple Installation

Extremely Simple Installation. The front fixing points have an extremely simple slider installation method, which can be easily installed by one person in just two steps, saving time and effort and bringing users a better experience.



◎ Flexible and Multiple Usages

Line array system, wall-mount in distributed sound install, monitor, pole mount



Design of Horn and Phase-Plug

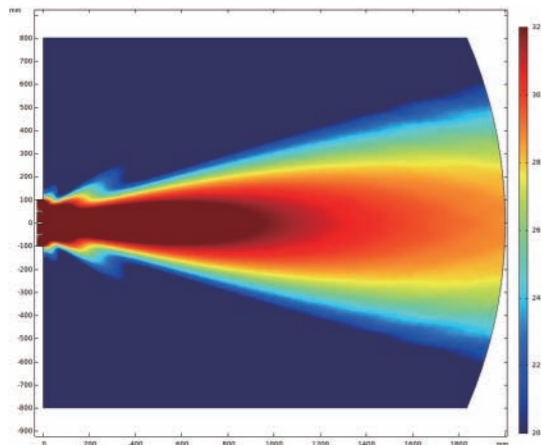
Dedicated T-EYE™ HF design, 2 soft dome tweeters are centrally located in front of the speaker, coupled to our Butterfly custom-made horn, resulting in a transparent frequency response, wide horizontal broadband coverage, large near-field distance and more delicate sound.

The horn and phase-plug are integrated in one design, achieving a smooth interaction between LF and HF and consistent mid-range frequencies.

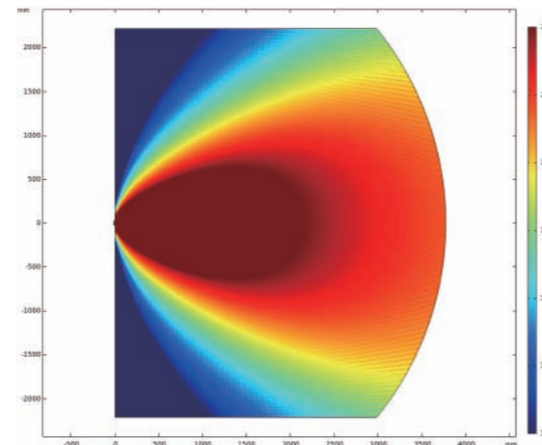
Creative hollow butterfly shape on the phase-plug plate perfectly integrates industrial design with aesthetics.



Vertical Coverage Plot for interaction between the 2 HF units

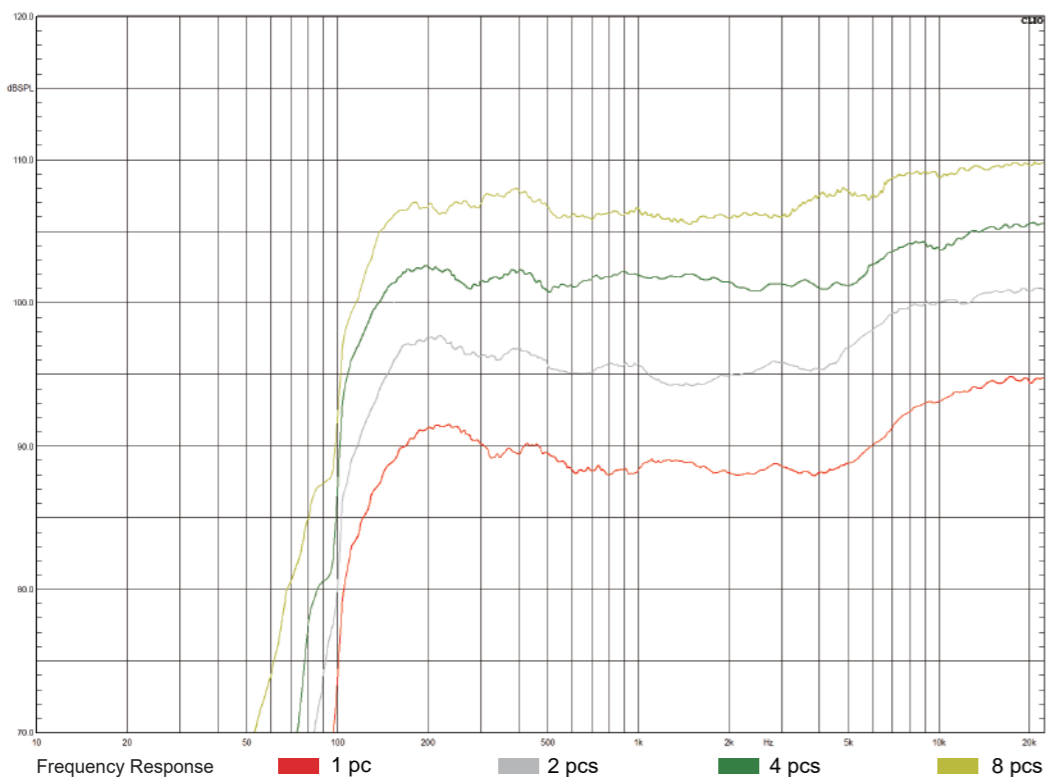


Horizontal Coverage



Coverage Consistency

Butterfly is used together with Artist T2.4V/T4.4V amplifiers and BrainCore CU processor up to 8 cabinets, the frequency response of HF is uniformly overlapped. The number of cabinets increases, the HF response will not be interfered with, and the coverage consistency is not affected.



Butterfly 4pro



Dimensions(W×H×D):215×122×165mm

Specifications

Power	60W
Frequency Response(-10dB)	100Hz-20kHz
Horizontal Coverage	100°
Vertical Coverage	20°
Maximum Calculated SPL/1M(Continuous/Peak)	111dB/117dB
HF	2x1" driver
LF	4" driver,1" voice coil
Impedance	16Ω
Crossover Mode	Passive Crossover
Input Connectors	Speakon 4pin
Cabinet Material	ABS plastic material
Angle adjustment	0°,4°
Cabinet Color	Metal gray
Grille	Aluminium mesh
Mesh Color	Metal gray is standard and default color, Contact Audiocenter for customization
Pole Mount	M10
Speaker Dimensions(W×H×D)	215x122x165mm
Carton Dimensions(W×H×D)	253x160x247mm
Net Weight	2.3kg
Shipping Weight	2.7kg
Technical Support and After-sales Service	Global application support team, EASE GLL Files

Product Overview

Butterfly 4pro consists of 1 pc 4-inch LF driver and 2 pcs soft dome tweeters. The HF have an exclusive T-EYE™ design, and the array layout is assembled in the center front of the speaker. The speaker has a wider frequency response and large near-field coverage, and the sound is especially defined and delicate.

Butterfly 4pro also have a modular design concept, which can be used individually or in combination with multiple speakers. It has good scalability and can flexibly adapt to various environments and applications.

System Configuration

- Artist T2.4V/T4.4V Amplifier
- BrainCore CU

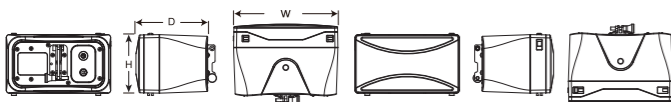
Back Panel



Butterfly 4ca



With low impedance output and 70/100V outputs



Dimensions(W×H×D):215×122×165mm

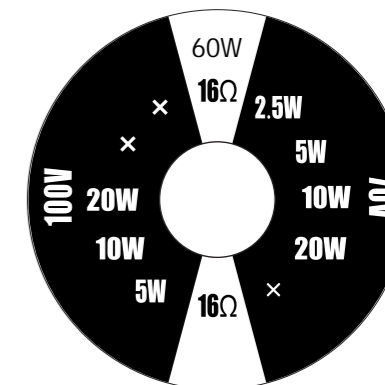
Specifications

Low Z Power	60W
High Z Power	70V:2.5W/5W/10W/20W 100V:5W/10W/20W/x
Frequency Response(-10dB)	100Hz-20kHz
Horizontal Coverage	100°
Vertical Coverage	20°
Maximum Calculated SPL/1M(Continuous/Peak)	111dB/117dB
HF	2x1" driver
LF	4" driver, 1" voice coil
Impedance	16Ω
Crossover Mode	Passive Crossover
Input Connectors	All-weather protective connector
Cabinet Material	ABS plastic material
Angle adjustment	0°, 4°
Cabinet Color	Metal gray
Grille	Aluminium mesh
Mesh Color	Metal gray is standard and default color, Contact Audiocenter for customization
Pole Mount	M10
Speaker Dimensions(W×H×D)	215x122x165mm
Carton Dimensions(W×H×D)	253×160×247mm
Net Weight	2.5kg
Shipping Weight	2.9kg
Technical Support and After-sales Service	Global application support team, EASE GLL Files

High Z and Low Z

High impedance (70V/100V) and low impedance (16 Ohm) available

70V :2.5W/5W/10W/20W
100V:5W/10W/20W/x



Product Overview

Butterfly 4ca consists of 1 pc 4-inch LF driver and 2 pcs soft dome tweeters. The HF have an exclusive T-EYE™ design, and the array layout is assembled in the center front of the speaker. The speaker has a wider frequency response and large near-field coverage, and the sound is especially defined and delicate.

Butterfly 4ca also have a modular design concept, which can be used individually or in combination with multiple speakers. It has good scalability and can flexibly adapt to various environments and applications.

Butterfly 4ca is available both in High Impedance (70V/100V) and Low Impedance (16Ω).

70V: 2.5W/5W/10W/20W

100V:5W/10W/20W/x

System Configuration

- Artist T2.4V/T4.4V Amplifier
- BrainCore CU

Back Panel

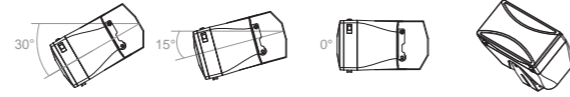


Accessories



Wall Mount / Monitor Bracket
(Standard accessory packed with the speaker)

Dimension (WxHxD):
117x55x141mm



Single Wall Mount

Monitor



Hanging Frame

Dimension (WxHxD):
205x30.5x164.5mm



Line array system



Wall Mount Bracket

Dimension (WxHxD):
205x100x339mm

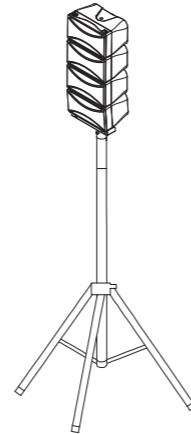


Wall-mount in distributed sound install

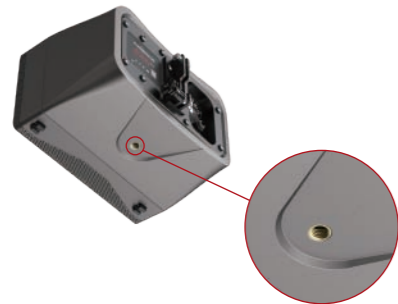


Pole Mount Bracket

Dimension (WxHxD):
205x92.5x164.5mm



Tripod Pole Mount



Cabinet built-in M10 hole



Mount with Microphone Stand

Butterfly Specifications

Specifications		Butterfly 4pro	Butterfly 4ca
Power	Low Z Power	Rated	60W
		Program	120W
		Peak	240W
	High Z Power	70V	/
100V		/	5W/10W/20W/x
Frequency Response(-10dB)		100Hz-20kHz	
Horizontal Coverage		100°	
Vertical Coverage		20°	
Maximum Calculated SPL/1M	Rated	111dB	
	Program	114dB	
	Peak	117dB	
Drivers	HF	2x1" driver	
	LF	4" driver,1" voice coil	
Impedance		16Ω	
Crossover Mode		Passive Crossover	
Input Connectors		Speakon 4pin	All-weather protective connector

CABINET

Cabinet Material	ABS plastic material	
Cabinet Color	Metal gray	
Grille	Aluminium mesh	
Mesh Color	Metal gray is standard and default color,Contact Audiocenter for customization	
Angle adjustment	0°, 4°	
Pole Mount	M10	
Optional Accessories	Hanging Bracket, Wall Mount Bracket, Support Bracket	
Speaker Dimensions(W×H×D)	215×122×165mm	215×122×165mm
Carton Dimensions(W×H×D)	253×160×247mm	253×160×247mm
Net Weight	2.3kg	2.5kg
Shipping Weight	2.7kg	2.9kg
Technical Support and After-sales Service	Global application support team,EASE GLL Files	

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BrainCore CU
Digital Audio Processor



BrainCore CU is an audio black-box for flexible applications and easy to configure. Through the BrainCore™ technology, the innovative technology independently developed by Audiocenter and based on the characteristics of different systems and application scenarios, scene presets have been created that can meet a large variety of application needs.

Users only need to call the corresponding presets according to the combination of system and application, and can quickly create an audio system without professional debugging and get satisfactory sound results.

Key Features

- With more than 20 years experiences of product development and system application, and repeated testing and debugging, these presets can meet a variety of application needs
- Users only need to import the system preset package through "CU Preset" to use
- Directly call the system preset package, you can get satisfactory sound effects without professional debugging
- 0 ~ 9 preset positions
- BrainCore CU have an ultra compact 1U design and half 19" rack space enclosure. With customized rack adapter, it allows for single installation or side-by-side (two devices) in a 19" equipment rack.

Installation



Specifications	BrainCore CU
Audio System Delay	0.25ms (INPUT to OUTPUT)
AD/DA Converter	24Bit
Sampling Rate	96kHz
Input Channels	Two-way balanced
Input Interface	Female XLR
Output Channels	Three-way balanced
Output Interface	Male XLR
Input Impedance	>10kΩ
Output Impedance	<100Ω
Maximum Input Level	≥+15dBu
Requency Response	±0.3dB, 20Hz-20kHz
Dynamic	≥106dB
THD+N	≤0.05% @1kHz, 0dBu
Connection type	USB, drive free
AC Power Operating Range	100-240V/(±10%, 50-60Hz)
Power consumption	< 10W
Rack space	1U design and half 19" rack space enclosure
Dimensions(WxHxD)	218x44x153mm
Net weight	1.0kg

Artist T2.4V
2 Channel Compact Class-D Amplifier

With low impedance output and 70/100V outputs



Artist T4.4V
4 Channel Compact Class-D Amplifier

With low impedance output and 70/100V outputs



Artist T2.4V/T4.4V is 2 and 4 channel Class-D amplifier for commercial audio installation.

Artist T2.4V/T4.4V offers the renowned high reliability and outstanding sound performance delivered by AUDIOCENTER. Both two models are with low impedance output and 70/100V outputs. T2.4V/T4.4V is with ultra compact 1U design and half 19" rack space enclosure.

With customized rack adapter, it allows for single installation or side-by-side (two devices) in a 19" equipment rack.

Key Features

- Class-D amplifier technology with SMPS, high efficiency.
- Built-in IC chip to control the input/output channels routing and the output power accurately.
- With both low impedance output and 70/100V outputs.
- Excellent reproduction transparency and outstanding high-definition sound.
- Optimal cooling system and premium protection system makes extremely high reliability.
- Ultra compact 1U design and half 19" rack space enclosure. Support AUDIOCENTER BrainCore CU processor.
- When input signal is lower than the set value for 45 mins, T2.4V/T4.4V will go into energy-saving standby mode. When input signal is bigger than the set value, it will wake up automatically.

Installation



Specifications		Artist T2.4V	Artist T4.4V
Output Power (1kHz 20ms Burst THD+N=1%)	8Ω Stereo	2x130W	4x130W
	4Ω Stereo	2x260W	4x260W
	8Ω Bridge	1x520W	2x520W
	Hi-Z(70V)	1x520W	2x520W
	Hi-Z(100V)	1x520W	2x520W
Protection System	DC protection / Short circuit protection / Smart overheat management / Overheat protection / Input overload protection /Output overload protection / Soft startup protection / Limiter protection		
Working mode	Mono,Parallel,Bridge,70V/100V		
Connectors	Input	1x6-pin Euroblock (3.81mm)	2x6-pin Euroblock (3.81mm)
	Output	1x4-pin Euroblock (5.08mm)	2x4-pin Euroblock (5.08mm)
Input Impedance	≥20kΩ (Balanced) , ≥10kΩ (Unbalanced)		
Maximum input voltage	≥15dBu		
Gain	Stereo:26dB; Bridge:32dB; 70V:34dB; 100V:37dB		
Frequency response(1W 8Ω Stereo)	20Hz-20kHz (±0.5dB)		
Crosstalk(1kHz, Rated power 8Ω, A weighted)	≥70dB		
S/N Ratio(Rated power 8Ω, A weighted)	≥100dB		
Damping Factor (1kHz&8Ω)	≥200		
Intermodulation Distortion(60Hz:7kHz=4:1, half power)	≤0.05%		
Total Harmonic Distortion(1kHz, half power 8Ω, A weighted)	≤0.05%		
Amplifier Type (Output Circuitry)	Class-D		
AC Power	100-240V/(±10%, 50-60Hz)		
Power consumption	1/8 output power	80W	160W
Rack space	1U design and half 19" rack space enclosure		
Cooling	Back to front venting,mandatory cooling		
Dimensions(W×H×D)	218×44×314mm		
Net weight		2.5kg	3.2kg