Hypex Electronics is a specialist supplier of power amplifiers, power supplies and DSP solutions for the professional and DIY audio industry. The company designs and manufactures very high-performance class D amplifiers based on world leading NCORE® and well respected UcD® technologies.

Hypex Electronics works in cooperation with its customers to find the ultimate solution for their applications, from initial idea to final product. Product development is split between general-purpose power amplifier/supply modules and projects for selected customers.

Areas where we can offer added value to customers include design for manufacture, AD/DA conversion, active loudspeaker design and DSP solutions for loudspeaker and system control.

In this brochure we explain our technologies and show you our OEM product range starting from Amplifier modules, Switch mode power supplies and Mains powered amplifier modules all the way to DSP solutions and complete plate amplifiers.
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  - MP-DSP Digin
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  - FA251
  - FA501
  - FA122
  - FA252
  - FA502
  - FA123
  - FA253
  - FA503

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www.hypex.nl
About us

Who we are:

Hypex Electronics is a specialist supplier of power amplifiers, power supplies and DSP solutions for the professional and DIY audio industry. Founded in 1996 the company manufactures very high-performance class D amplifiers based on world leading NCORE® and well respected UcD® technologies.

What we do:

- Class D amplifier design and manufacture
- SMPS (switch mode power supply), design and manufacture
- Creating DSP solutions
- Extensive R&D regarding various high-end audio and DSP designs
- Analogue circuit design
- In house support for all costumers professional and DIY

Hypex Electronics works in cooperation with its customers to find the ultimate solution for their applications, from initial idea to final product. Product development is split between general-purpose power amplifier/supply modules and projects for selected customers. Areas where we can offer added value to customers include design for manufacture, AD/DA conversion, active loudspeaker design and DSP solutions for loudspeaker and system control.
A brief history:

Hypex was founded in 1996 by Jan-Peter van Amerongen as a supplier of plate amplifiers for live sound loudspeakers. The products drew the attention of hi-fi speaker manufacturers, resulting first in a line of active subwoofer amplifier subassemblies, shortly followed by multichannel units with active cross-over filters for the studio market.

2003 saw the start of a complete migration to class D. For this purpose, the newly invented ‘Universal Class D’ technology was selected, later followed by the class leading NCORE® technology. Hypex decided not only to use UcD® and NCORE® in end-user products, but also to offer it to the market as general-purpose amplifier modules. The UcD® and NCORE® modules have quickly established themselves as the new standard, both in terms of measured and subjective performance.

In 2005, Hypex took the decision to move from a being a technology user to be a technology source. Hypex now serves many big-name audiophile brands, incorporating the world class NCORE® technology in their end-products.

Production:

Our aim is to create high quality products and deliver world-class service to our customers. Meanwhile we manage to maintain cost effective operations due to our strictly controlled production environment.

Hypex Electronics has its own production facility based in Malaysia. Furthermore, we also keep stock in warehouses in Hong Kong and in our headquarters in the Netherlands, to ensure fast delivery of goods.

By controlling the entire process of production, we are able to deliver customized services and support to our customer. Modules which are in stock can be dispatched rapidly. Our factory can produce larger orders with short lead-times.
Hypex UcD® (Universal Class D) technology

Hypex UcD® amplifier modules are self-contained high-performance Class-D amplifiers intended for a wide range of audio applications, ranging from ‘public address’ systems to ultrahigh-fidelity replay systems for studio and home use. Chief distinguishing features are flat frequency response irrespective of load impedance, nearly frequency-independent distortion behaviour and very low radiated and conducted EMI. Control is based on a phase-shift controlled self-oscillating loop taking feedback only at the speaker output.

2003 saw the start of a migration of all products to Class-D. For this, a licence deal was closed with Philips for the “Universal Class D” circuit. Realising the market potential of the circuit, Hypex decided not only to use the technology in completed subassemblies, but also to sell bare amplifier modules to the open market. The UcD180 and UcD400 modules have quickly established themselves as the new standard, both in terms of measured and subjective performance.

Hypex NCORE® Technology

NCORE® is the first Class-D amplifier not just to nudge the best linear amplifiers, but to surpass them in every aspect relevant to sound quality. If you want the ultimate in clarity, resolution and musicality, there is no longer a reason to trade efficiency or compactness.

NCORE® technology combines the stability of UcD® with improved load-independence, lower distortion and lower output impedance.

The approach is multi-pronged:

- A mathematically exact understanding of self-oscillation. This allows optimization of large signal performance.
- Improved comparator circuitry ensures that actual behaviour matches the theoretical model as closely as possible.
- New gate drive circuitry improves open-loop distortion at moderate signal levels while significantly reducing idle losses.
- A new control loop ups loop gain by 20dB across the full audio range without sacrificing stability.
Switch Mode Power Supply (SMPS)

The SMPS is a high efficiency, switch mode power supply specifically designed to be used in combination with our amplifier modules.

Key features include high efficiency over the entire load range, extremely small form factor, low weight and very low radiated and conducted EMI.

The SMPS features an over current protection which in case of temporary overload simply reduces the output voltage, only when the overload condition remains for a longer time the supply will enter hiccup mode until the overload condition disappears. This feature combined with large electrolytic buffer capacitors leads to the capability of delivering high dynamic headroom power to the connected amplifier.

A new feature in our new power supplies is the automatic input voltage selector which accommodates quasi universal mains capabilities. An auxiliary isolated supply to power possible user applications is also included.

The supply is triggered for normal operation or latched off in case of a critical fault via in built-in actuators. The SMPS is optimized from the first phase of design to final implementation to realize the low EMI signature required of the most demanding audio applications.

Hypex DSP Solutions

Hypex Electronics has many years of experience in DSP solutions for active speakers. We have developed our own filter design software which can be utilized to configure our range of DSP modules and plate amplifiers.

The DSP solution used in our FusionAmps is now available for OEM purchase. Using one of the latest DSP’s from Analog Devices, the ADAU1450 and separate ADC/DAC chips we have raised the bar for features and performance for OEM DSP solutions in the market.
Introduction

The UcD® amplifier modules are self-contained high-performance class D amplifiers intended for a wide range of audio applications, ranging from Public Address systems to ultrahigh-fidelity replay systems for studio and home use. Chief distinguishing features are flat frequency response irrespective of load impedance, nearly frequency-independent distortion behaviour and very low radiated and conducted EMI. Control is based on a phase-shift controlled self-oscillating loop taking feedback only at the speaker output.

Due to our modular approach with separate half bridge and full bridge amplifier modules and separate SMPS (Switch Mode Power Supplies) this is a very flexible and cost-effective system with almost endless integration options.

UcD® Amplifier modules are specially intended for multichannel applications.

Available modules:

<table>
<thead>
<tr>
<th>Module</th>
<th>Channels</th>
<th>Bridgeable?</th>
<th>Power 4 ohm</th>
<th>Power 8 ohm</th>
</tr>
</thead>
<tbody>
<tr>
<td>UcD102 OEM</td>
<td>2</td>
<td>Yes</td>
<td>2x 100W</td>
<td>2x 60W</td>
</tr>
<tr>
<td>UcD180LP OEM</td>
<td>1</td>
<td>Yes</td>
<td>180W</td>
<td>120W</td>
</tr>
<tr>
<td>UcD250LP OEM</td>
<td>1</td>
<td>Yes</td>
<td>250W</td>
<td>180W</td>
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<td>UcD400LP OEM</td>
<td>1</td>
<td>Yes</td>
<td>400W</td>
<td>250W</td>
</tr>
<tr>
<td>UcD180 OEM</td>
<td>1</td>
<td>Yes</td>
<td>180W</td>
<td>120W</td>
</tr>
<tr>
<td>UcD400 OEM</td>
<td>1</td>
<td>Yes</td>
<td>400W</td>
<td>250W</td>
</tr>
<tr>
<td>UcD700LZ OEM</td>
<td>1</td>
<td>Yes</td>
<td>700W</td>
<td>440W</td>
</tr>
<tr>
<td>UcD2k OEM</td>
<td>1</td>
<td>No</td>
<td>2500W</td>
<td>1600W</td>
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</table>

Highlights

- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise
- Fully passive loop control

Features

- Differential audio input
- Pop-free start and stop control
- Runs on unregulated +/- rails

Protections

- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection
/ UcD102 OEM
2 channel 100W amplifier module

**Highlights**
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

**Features**
- Unbuffered input
- Runs on unregulated +/- rails
- Pop-free start and stop control
- Differential audio input
- Weight: 55 g
- Dimensions: 70 x 70 x 24mm

**Protections**
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2 x 100</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2 x 60</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,02</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>17</td>
<td>25</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>DC</td>
<td>-</td>
<td>48k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>20</td>
<td>36</td>
<td>42</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended SMPS**
SMPS400A100 / SMPS1200A100

**Application example 16ch amplifier:**

![Application example image]
/ UcD180LP OEM
1 channel 180W amplifier module

**Highlights**
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

**Features**
- Unbuffered input
- Runs on unregulated +/- rails
- Pop-free start and stop control
- Differential audio input
- Weight: 55 g
- Dimensions: 55 x 38 x 26mm

**Protections**
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>180</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>120</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz, Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>17</td>
<td>25</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>DC</td>
<td>-</td>
<td>48k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>20</td>
<td>45</td>
<td>50</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS400A180 / SMPS1200A180

**Application example 8ch amplifier:**
/ UcD250LP OEM
1 channel 250W amplifier module.

**Highlights**
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

**Features**
- Unbuffered input
- Runs on unregulated +/- rails
- Pop-free start and stop control
- Differential audio input
- Weight: 55 g
- Dimensions: 55 x 38 x 26mm

**Protections**
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>250</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>180</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>0,003</td>
<td>0,02</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz, Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>20</td>
<td>25</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>DC</td>
<td>-</td>
<td>56k</td>
<td>Hz</td>
<td>+0/-3dB, All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>20</td>
<td>60</td>
<td>68</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS400A400 / SMPS1200A400 / SMPS3kA400

**Application example 8ch amplifier:**
/ UcD400LP OEM
1 channel 400W amplifier module

Highlights
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

Features
- Unbuffered input
- Runs on unregulated +/- rails
- Pop-free start and stop control
- Differential audio input
- Weight: 59 g
- Dimensions: 55 x 38 x 26mm

Protections
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

General data:

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<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>400</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>250</td>
<td>0,02</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>0,003</td>
<td>0,02</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>20</td>
<td>25</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>25</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>DC</td>
<td>-</td>
<td>56k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>25</td>
<td>60</td>
<td>68</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS400A400 / SMPS1200A400 / SMPS3kA400

Application example 8ch amplifier:
/ UcD180 OEM
1 channel 180W amplifier module

Highlights
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

Features
- Pop-free start and stop control
- Differential audio input
- DC-fault detection
- Weight: 100 g
- Dimensions: 73 x 67 x 33mm

Protections
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

General data:

<table>
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<tr>
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<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Output Power</td>
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<td>180</td>
<td>-</td>
<td>W</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>120</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,05</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
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<tr>
<td>Output noise</td>
<td>20</td>
<td>-</td>
<td>80</td>
<td>µV</td>
<td>with or without buffer</td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td></td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>25</td>
<td>45</td>
<td>50</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS400A180 / SMPS1200A180

Application example stereo amplifier:
** Highlights**
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

** Features**
- Pop-free start and stop control
- Differential audio input
- Weight: 145 g
- Dimensions: 82 x 75 x 38mm

** Protections**
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Short circuit protection

---

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Output Power</td>
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<td>400</td>
<td>-</td>
<td>W</td>
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<td>-</td>
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<td>Distortion</td>
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<tr>
<td>Output noise</td>
<td>30</td>
<td>-</td>
<td>80</td>
<td>µV</td>
<td>With or without input buffer.</td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
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<tr>
<td>Frequency Response</td>
<td>10</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
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<td>Power supply voltage</td>
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<td>64</td>
<td>73</td>
<td>V</td>
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</tbody>
</table>

**Recommended SMPS**
- SMPS400A400 / SMPS1200A400 / SMPS3kA400

**Application example stereo amplifier:**

---
/ UcD700LZ OEM
1 channel 700W amplifier module

Highlights
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

Features
- Pop-free start and stop control
- Differential audio input
- Short term 1200W in 2 ohm
- Weight: 250 g
- Dimensions: 130 x 79 x 36mm

Protections
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>1200</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1% short term</td>
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<td>Output Power</td>
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<td>700</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
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<td>Output Power</td>
<td>-</td>
<td>440</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
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<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,005</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
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<tr>
<td>Output noise</td>
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<td>30</td>
<td>35</td>
<td>µV</td>
<td>Incl. input buffer.</td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>75</td>
<td>90</td>
<td>95</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS1200A700 / SMPS3kA700

Application example 4ch touring amplifier:
/ UcD2k OEM
1 channel 2500W amplifier module

**Highlights**
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency-independent THD
- Very low noise
- Fully passive loop control

**Features**
- Runs on unregulated +/- rails
- Pop-free start and stop control
- Differential audio input
- Weight: 550 g
- Dimensions: 141 x 108 x 38mm

**Protections**
- Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2000</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1% short term</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2500</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>1600</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td></td>
<td>0,03</td>
<td>%</td>
<td>20Hz&lt;1&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td></td>
<td>35</td>
<td>µV</td>
<td>Incl. input buffer.</td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td></td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10</td>
<td></td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>50</td>
<td>90</td>
<td>98</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS: SMPS3kA700

**Application example 4ch touring amplifier:**
NCORE® Family

Introduction

NCORE® is the trade name for the first significant step in power amplifier performance in two decades. Building on the strong heritage of UcD®, NCORE® takes the things UcD® does well and does them ten times better. Literally. Following nearly two years of development Hypex announced the first module with this round-breaking technology to the world in 2011. Due to our modular approach with separate half bridge- and full bridge amplifier modules and separate SMPS (Switch Mode Power Supplies) this is a very flexible and extremely high-end system with almost endless integration options. NCORE® Amplifier modules are specially intended for High-End HiFi applications.

Available modules:

<table>
<thead>
<tr>
<th>Module</th>
<th>Channels</th>
<th>Bridgeable?</th>
<th>Power 4 ohm</th>
<th>Power 8 ohm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC500 OEM</td>
<td>1</td>
<td>Yes</td>
<td>700W</td>
<td>400W</td>
</tr>
<tr>
<td>NC1200 OEM</td>
<td>1</td>
<td>Yes</td>
<td>700W</td>
<td>400W</td>
</tr>
<tr>
<td>NC2k OEM</td>
<td>1</td>
<td>No</td>
<td>2500W</td>
<td>1600W</td>
</tr>
</tbody>
</table>

Highlights

- Extremely low distortion and noise over frequency and power range
- Extremely low output impedance
- Very high-power density
- Neutral and transparent reproduction: “Neither dirt nor fairy dust”

Features

- Differential audio input
- Pop-free start and stop control
- I2C bus connection
- Current monitor output

Protections

- Advanced Overcurrent protection
- Extensive, microprocessor-controlled error protection
- DC-fault detection
- Over temperature protection
- Short circuit protection
/ NC500 OEM
1 channel 700W amplifier module

**Highlights**
- Extremely low distortion and noise over frequency and power range
- Extremely low output impedance
- Very high-power density
- Neutral and transparent reproduction: “Neither dirt nor fairy dust”

**Features**
- Differential audio input
- I2C bus connection
- Current monitor output
- Weight: 135 g
- Dimensions: 82 x 63 x 32mm

**Protections**
- Advanced Overcurrent protection
- Overvoltage protection
- DC-fault detection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>550</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1% short term</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>700</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>400</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td></td>
<td>0,001</td>
<td>%</td>
<td>20Hz&lt;1&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>9</td>
<td>10</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>35</td>
<td>84</td>
<td>98</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended SMPS**
- SMPS1200A400 / SMPS1200A700 / SMPS3kA400 / SMPS3kA700

**Application example 8ch amplifier:**
/ NC1200 OEM
1 channel 1200W amplifier module

Highlights
- Extremely low distortion and noise over frequency and power range
- Extremely low output impedance
- Very high-power density
- Neutral and transparent reproduction: “Neither dirt nor fairy dust”

Features
- Differential audio input
- I2C bus connection
- Current monitor output
- Weight: 350 g
- Dimensions: 130 x 79 x 43mm

Protections
- Advanced Overcurrent protection
- Extensive, microprocessor-controlled error protection
- DC-fault detection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>1200</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1% short term</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>700</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>400</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,001</td>
<td>%</td>
<td>20Hz&lt;1&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>20</td>
<td>28</td>
<td>µV</td>
<td>Incl. input buffer.</td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>35</td>
<td>84</td>
<td>98</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

Recommended SMPS
SMPS1200A700 / SMPS3kA700

Application example high-end mono block:
NC2k OEM
1 channel 2500W amplifier module

**Highlights**
- Extremely low distortion and noise over frequency and power range
- Extremely low output impedance
- Very high-power density
- Neutral and transparent reproduction: “Neither dirt nor fairy dust”

**Features**
- Unbuffered Input
- Differential audio input
- I2C bus connection
- Current monitor output
- Weight: 560 g
- Dimensions: 133 x 107 x 49mm

**Protections**
- Advanced Overcurrent protection
- Extensive, microprocessor-controlled error protection
- DC-fault detection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2000</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1% short term</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2500</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>1600</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,001</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>18</td>
<td>20</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>-</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Power supply voltage</td>
<td>35</td>
<td>84</td>
<td>98</td>
<td>V</td>
<td></td>
</tr>
</tbody>
</table>

**Recommended SMPS**
SMPS3kA700

**Application example 4ch touring amplifier:**

![Application example](image1)

![Application example](image2)
**Introduction**

The SMPS is a high efficiency, switch mode power supply specifically designed to be used in combination with our amplifier modules.

Key features include high efficiency over the entire load range, extremely small form factor, low weight and very low radiated and conducted EMI.

The SMPS features an over current protection which in case of temporary overload simply reduces the output voltage, only when the overload condition remains for a longer time the supply will enter hiccup mode until the overload condition disappears. This feature combined with large electrolytic buffer capacitors leads to the capability of delivering high dynamic headroom power to the connected amplifier. An auxiliary isolated supply to power possible user applications is also included. The supply is triggered for normal operation or latched off in case of a critical fault via built-in actuators. The SMPS is optimised from the first phase of design to final implementation to realize the low EMI signature required of the most demanding audio applications. All SMPS’s are specially designed to be used in combination with our UcD® and NCORE® amplifier families.

**Available modules:**

<table>
<thead>
<tr>
<th>Module</th>
<th>Version</th>
<th>Output power</th>
<th>Output voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMPS400</td>
<td>A100</td>
<td>400W</td>
<td>2x 37V</td>
</tr>
<tr>
<td></td>
<td>A180</td>
<td>400W</td>
<td>2x 46V</td>
</tr>
<tr>
<td></td>
<td>A400</td>
<td>400W</td>
<td>2x 62V</td>
</tr>
<tr>
<td>SMPS1200</td>
<td>A100</td>
<td>1200W</td>
<td>2x 40V</td>
</tr>
<tr>
<td></td>
<td>A180</td>
<td>1200W</td>
<td>2x 46V</td>
</tr>
<tr>
<td></td>
<td>A400</td>
<td>1200W</td>
<td>2x 63V</td>
</tr>
<tr>
<td></td>
<td>A700</td>
<td>1200W</td>
<td>2x 85V</td>
</tr>
<tr>
<td>SMPS3k</td>
<td>A400</td>
<td>3000W</td>
<td>2x 63V</td>
</tr>
<tr>
<td></td>
<td>A700</td>
<td>3000W</td>
<td>2x 85V</td>
</tr>
</tbody>
</table>

**Highlights**
- High efficiency
- Extremely small form factor
- Low EMI
- Multiple variants available

**Features**
- Selectable input voltage range
- Remote controlled operation

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection
Switch Mode Power Supplies (SMPS)

/ SMPS400

400W switch mode power supply

**Highlights**
- High efficiency
- Extremely small form factor
- Low EMI
- 3 variants available: A100, A180 and A400

**Features**
- Selectable input voltage range
- Can be fitted in 1HE
- Remote controlled operation
- Weight: 300 g
- Dimensions: 108 x 95 x 40mm

**Protocols**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>400</td>
<td>-</td>
<td>W</td>
<td>20Hz into amplifier load</td>
</tr>
<tr>
<td>Output Voltage Main A100</td>
<td>2x29</td>
<td>2x37</td>
<td>2x43</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A180</td>
<td>2x35</td>
<td>2x46</td>
<td>2x43</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A400</td>
<td>2x48</td>
<td>2x62</td>
<td>2x72</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A100, A180</td>
<td>2x16</td>
<td>2x21</td>
<td>2x24</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux A400</td>
<td>2x15</td>
<td>2x20</td>
<td>2x23</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>500</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

SMPS400A100 suitable for: UcD102 OEM
SMPS400A180 suitable for: UcD180LP OEM, UcD180 OEM
SMPS400A400 suitable for: UcD250LP OEM, UcD400LP OEM, UcD400 OEM
SMPS1200
1200W switch mode power supply

**Highlights**
- High efficiency
- Extremely small form factor
- Low EMI
- 4 variants available: A100, A180, A400 and A700

**Features**
- Selectable input voltage range
- Remote controlled operation
- Weight: 850 g
- Dimensions: 165 x 105 x 52mm

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>1200</td>
<td>-</td>
<td>W</td>
<td>20Hz into amplifier load</td>
</tr>
<tr>
<td>Output Voltage Main A100</td>
<td>2x31</td>
<td>2x40</td>
<td>2x46</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A180</td>
<td>2x36</td>
<td>2x46</td>
<td>2x53</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A400</td>
<td>2x49</td>
<td>2x63</td>
<td>2x72</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A700</td>
<td>2x66</td>
<td>2x85</td>
<td>2x98</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A100</td>
<td>2x15</td>
<td>2x20</td>
<td>2x22</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A180, A400</td>
<td>2x17</td>
<td>2x22</td>
<td>2x25</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A700</td>
<td>2x16</td>
<td>2x21</td>
<td>2x24</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>500</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

SMPS1200A100 suitable for: UcD102 OEM
SMPS1200A180 suitable for: UcD180LP OEM, UcD180 OEM
SMPS1200A400 suitable for: UcD250LP OEM, UcD400LP OEM, UcD400 OEM, NC500 OEM
SMPS1200A700 suitable for: UcD700LZ OEM, NC500 OEM, NC1200
SMPS3k
3000W switch mode power supply

Highlights
- High efficiency
- Extremely small form factor
- Low EMI
- 2 variants available: A400 and A700

Features
- Selectable input voltage range
- Remote controlled operation
- Weight: 1475 g
- Dimensions: 200 x 145 x 55mm

Features
- Selectable input voltage range
- Remote controlled operation
- Weight: 1475 g
- Dimensions: 200 x 145 x 55mm

Protocols
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>3000</td>
<td>-</td>
<td>W</td>
<td>20Hz into amplifier load</td>
</tr>
<tr>
<td>Output Voltage Main A400</td>
<td>2x49</td>
<td>2x63</td>
<td>2x72</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Main A700</td>
<td>2x66</td>
<td>2x85</td>
<td>2x97</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A400</td>
<td>2x15</td>
<td>2x20</td>
<td>2x23</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Voltage Vaux A700</td>
<td>2x18</td>
<td>2x23</td>
<td>2x26</td>
<td>Vdc</td>
<td>Proportional to AC Mains</td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>500</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

SMPS3kA400 suitable for: UcD250LP OEM, UcD400LP OEM, UcD400 OEM, NC500 OEM (1)
SMPS3kA700 suitable for: UcD700LZ OEM, UcD2k OEM, NC500 OEM, NC1200, NC2k (1)

1: For half bridge amplifier modules please beware of power supply pumping phenomenon.
This can happen with high power, low frequencies. For these applications contact support@hypex.nl
Introduction

The NCxxxMP amplifier module incorporates a low power standby power supply (meets 2013 ERP Lot 6 0.5W requirements), a highly efficient switch mode power supply and a high-performance Class D amplifier in one compact and easily applicable power brick. All modules are CB approved and ETL certified according to UL62368:2014 Ed.2 and CSA C22.2#62368:2014 Ed.2.

To achieve universal mains input compatibility this SMPS features an automatic input voltage doubler (except for the NC52MP which has universal mains without the need for a voltage doubler).

Available modules:

<table>
<thead>
<tr>
<th>Module</th>
<th>Channels</th>
<th>Bridgeable?</th>
<th>Power 4 ohm</th>
<th>Power 8 ohm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC52MP</td>
<td>2</td>
<td>Yes</td>
<td>2x 50W</td>
<td>2x 25W</td>
</tr>
<tr>
<td>NC250MP</td>
<td>1</td>
<td>No</td>
<td>250W</td>
<td>130W</td>
</tr>
<tr>
<td>NC122MP</td>
<td>2</td>
<td>Yes</td>
<td>2x 125W</td>
<td>2x 75W</td>
</tr>
<tr>
<td>NC500MP</td>
<td>1</td>
<td>No</td>
<td>500W</td>
<td>270W</td>
</tr>
<tr>
<td>NC252MP</td>
<td>2</td>
<td>Yes</td>
<td>2x 250W</td>
<td>2x 200W</td>
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<tr>
<td>NC502MP</td>
<td>2</td>
<td>Yes</td>
<td>2x 500W</td>
<td>2x 350W</td>
</tr>
<tr>
<td>NC100HF</td>
<td>1</td>
<td>No</td>
<td>100W (1)</td>
<td>100W (1)</td>
</tr>
</tbody>
</table>

1: Power of NC100HF depends on combination with NCxxxMP.

Highlights
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

Features
- Universal mains operation
- 5W standby SMPS
- External controlled operation

Protections
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection
/ NC52MP (New)
2 channel 50W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Universal mains (100-240Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 176 g
- Dimensions: 125 x 80 x 38mm

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Universal mains (100-240Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 176 g
- Dimensions: 125 x 80 x 38mm

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 60</td>
<td>-</td>
<td>W</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 50</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 25</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,002</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz, Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>35</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
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<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
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</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x17</td>
<td>2x18</td>
<td>2x19</td>
<td>Vdc</td>
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<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>0,1</td>
<td>A</td>
<td>Per rail</td>
</tr>
</tbody>
</table>
NC250MP
1 channel 250W amplifier module + power supply

Highlights
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

Features
- One channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 360 g
- Dimensions: 140 x 85 x 40mm

Protections
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>180</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>250</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>130</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0015%</td>
<td>%</td>
<td>20Hz&lt;1&lt;20kHz, Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>30 µV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1 Vdc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21 Vdc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>1 A</td>
<td>Per rail</td>
<td></td>
</tr>
</tbody>
</table>

Application example mono block:
/ NC122MP
2 channel 125W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 415 g
- Dimensions: 170 x 85 x 40mm

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 115</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 125</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 75</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0015</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21</td>
<td>Vdc</td>
<td>Per rail</td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

**Application example stereo amplifier:**

![Stereo Amplifier Diagram](image-url)
/ NC500MP
1 channel 500W amplifier module + power supply

Highlights
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

Features
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 500 g
- Dimensions: 146 x 105 x 42mm

Protections
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<td>400</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>500</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>270</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
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<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0023</td>
<td>%</td>
<td>20Hz&lt;1&lt;20kHz. Pout=1W</td>
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<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td></td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td>Per rail</td>
</tr>
</tbody>
</table>

Application example bass guitar amplifier:
/ NC252MP

2 channel 250W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 575 g
- Dimensions: 170 x 105 x 42mm

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
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<td>Output Power</td>
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<td>2x 180</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
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<td>2x 250</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 200</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0015</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz, Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td>Per rail</td>
</tr>
</tbody>
</table>

**Application example 3 way active speaker:**

![Application example diagram](image)
/ NC502MP
2 channel 500W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 1.055 g
- Dimensions: 230 x 155 x 47mm

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<td>Output Power</td>
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<td>2x 450</td>
<td>-</td>
<td>W</td>
<td>2Ω, THD=1%</td>
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<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 500</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>2x 350</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
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<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0024</td>
<td>%</td>
<td>20Hz&lt;1&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>40</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>0</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
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</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21</td>
<td>Vdc</td>
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<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>0,5</td>
<td>A</td>
<td>Per rail</td>
</tr>
</tbody>
</table>

**Application example high power subwoofer:**
NC100HF
1 channel 100W extension amplifier module

Highlights
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

Features
- NCxxxMP Add-on*
- Specifically designed as channel extension for our Mains Powered Ncore modules*
- External controlled operation
- Weight: 75 g
- Dimensions: 85 x 39 x 27mm

Protections
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>100</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>-</td>
<td>0,0018</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>500-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>500</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
</tbody>
</table>

*Except for the NC52MP

Application example 3 way active speaker:
Introduction

The NCAS amplifier family incorporates a low power standby power supply (meets 2013 ERP Lot 6 0.5W requirements), a highly efficient switch mode power supply and high-performance Class D amplifiers in one compact and easily applicable power brick for active speakers. All modules are CB approved and ETL certified according to UL62368:2014 Ed.2 and CSA C22.2 #62368:2014 Ed.2.

To achieve universal mains input compatibility this SMPS features an automatic input voltage doubler. All NCAS modules are specifically designed for 2 way active speakers. With two channels in full bridge mode for optimised power performance for low frequencies and one single ended channel for the high frequencies these modules are extremely powerful for their size and very cost effective for Pro-audio and HiFi applications.

Available modules:

<table>
<thead>
<tr>
<th>Module</th>
<th>Channels</th>
<th>Bridgeable?</th>
<th>Power 4 ohm</th>
<th>Power 8 ohm</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCAS250MP</td>
<td>2</td>
<td>No</td>
<td>Tbd</td>
<td>200 + 50W</td>
</tr>
<tr>
<td>NCAS500MP</td>
<td>2</td>
<td>No</td>
<td>440 + 120W</td>
<td>400 + 100W</td>
</tr>
<tr>
<td>NCAS1000MP</td>
<td>2</td>
<td>No</td>
<td>Tbd</td>
<td>800 + 200W</td>
</tr>
</tbody>
</table>


Highlights
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

Features
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation

Protections
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

NCAS
/ NCAS500MP (New) 
2 channel 400+100W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation
- Weight: 415 g
- Dimensions: 195 x 85 x 40mm

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

**General data:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>-</td>
<td>440+120</td>
<td>-</td>
<td>W</td>
<td>4Ω, THD=1%</td>
</tr>
<tr>
<td>Output Power</td>
<td>-</td>
<td>400+100</td>
<td>-</td>
<td>W</td>
<td>8Ω, THD=1%</td>
</tr>
<tr>
<td>Distortion</td>
<td>-</td>
<td>0,005</td>
<td>-</td>
<td>%</td>
<td>20Hz&lt;f&lt;20kHz. Pout=1W</td>
</tr>
<tr>
<td>Output noise</td>
<td>-</td>
<td>-</td>
<td>60</td>
<td>µV</td>
<td></td>
</tr>
<tr>
<td>Power Bandwidth</td>
<td>-</td>
<td>20-35k</td>
<td>-</td>
<td>Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency Response</td>
<td>10</td>
<td>-</td>
<td>50k</td>
<td>Hz</td>
<td>+0/-3dB. All loads.</td>
</tr>
<tr>
<td>Standby Output Voltage</td>
<td>4,9</td>
<td>5</td>
<td>5,1</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Standby Output Current</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Output Voltage Vaux</td>
<td>2x19</td>
<td>2x20</td>
<td>2x21</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Output Current Vaux</td>
<td>-</td>
<td>-</td>
<td>0,5</td>
<td>A</td>
<td>Per rail</td>
</tr>
</tbody>
</table>

**Application example 2 way active speaker:**
/ **NCAS250MP** (Upcoming)
2 channel 200+50W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (100-240Vac)
- 5W standby SMPS
- External controlled operation

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection

/ **NCAS1000MP** (Upcoming)
2 channel 800+200W amplifier module + power supply

**Highlights**
- High efficiency
- Flat, fully load-independent frequency response
- Low output impedance
- Very low, frequency independent THD
- Very low noise

**Features**
- Two channel amplifier
- Universal mains (115/230Vac)
- 5W standby SMPS
- External controlled operation

**Protections**
- Advanced Overcurrent protection
- DC error protection
- Over temperature protection
- Short circuit protection
Active speaker DSP controller (MP DSP)

The MP-DSP is a high grade, three channel DSP board to be used specifically with the Hypex NCxxxMP & NCAS families. It can be expanded with an optional digital input board or high-level input board for subwoofers. Multiple DSP boards can be used in master-slave configuration to create a stereo or 2.1 system. Three pre-sets are available to store different filter settings, inputs and volume offsets. If a 2-channel amplifier is connected the outputs can easily be configured for BTL operation. An optional infrared received board is available for remote control.

Features
- Up to three channel active filtering
- Compatible with NCxxxMP & NCAS families
- 3 programmable presets
- Configurable Soft clip limiter
- Automatic source selection
- Automatic signal detection
- Optional IR remote control
- Master-slave operation

Software:

Our Windows control software called HFD (Hypex Filter Design) allows you to configure our MP DSP and FusionAmp products with the device settings screen. You can completely control the filtering of each channel in an easy to use Filter design screen.

General functions are:
- Volume control
- Mute (global and per channel)
- Channel assignment
- Load measurements for speakers
- Take measurements
- Load/apply microphone correction data
- Step response/Impulse response / Magnitude
- View sum of filters
- Invert filter functions
- Delay
- Graph smoothing
- Wide range of biquad filter setups
MP-DSP Main
1 channel in, 3 channels out Active speaker DSP

General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input level XLR</td>
<td>-</td>
<td>18 (6,15)</td>
<td>-</td>
<td>dBu (Vrms)</td>
<td>Default gain setting</td>
</tr>
<tr>
<td>Input level RCA</td>
<td>-</td>
<td>9 (2,18)</td>
<td>-</td>
<td>dBu (Vrms)</td>
<td>Default gain setting</td>
</tr>
<tr>
<td>Signal/Noise ratio</td>
<td>-</td>
<td>-109</td>
<td>-</td>
<td>dB</td>
<td>Analogue in</td>
</tr>
<tr>
<td>Total harmonic distortion</td>
<td>-</td>
<td>-100</td>
<td>-</td>
<td>dB</td>
<td>Analogue in, -1dBFS</td>
</tr>
<tr>
<td>Analogue latency</td>
<td>-</td>
<td>350</td>
<td>-</td>
<td>µs</td>
<td></td>
</tr>
<tr>
<td>DSP &amp; ADC sampling rate</td>
<td>-</td>
<td>93,75</td>
<td>-</td>
<td>kHz</td>
<td></td>
</tr>
<tr>
<td>Delay per channel</td>
<td>0</td>
<td>-</td>
<td>19,2</td>
<td>ms</td>
<td>Set in software</td>
</tr>
</tbody>
</table>

Application example 3 way active speaker:
### MP-DSP Digin
MP-DSP Main optional board with digital inputs

#### General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal/Noise ratio</td>
<td>-</td>
<td>-111</td>
<td></td>
<td>dB</td>
<td>Digital in</td>
</tr>
<tr>
<td>Supported sample rates</td>
<td>32, 44.1, 48, 88.2, 96, 192</td>
<td></td>
<td></td>
<td>kHz</td>
<td></td>
</tr>
<tr>
<td>Digital latency</td>
<td>-</td>
<td>1.8</td>
<td></td>
<td>ms</td>
<td>96kHz input sample rate</td>
</tr>
<tr>
<td>Total harmonic distortion</td>
<td>-</td>
<td>-100</td>
<td></td>
<td>dB</td>
<td>Digital in, -1dBFS</td>
</tr>
</tbody>
</table>

### MP-DSP Subin
MP-DSP Main optional board with High-level input

#### General data:

<table>
<thead>
<tr>
<th>Item</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input level High level</td>
<td>-</td>
<td>52.5 (50)</td>
<td>-</td>
<td>dBu (Vrms)</td>
<td>Default gain setting</td>
</tr>
<tr>
<td>Knob Gain adjust</td>
<td>12</td>
<td>-</td>
<td>+12</td>
<td>dB</td>
<td>Relative to master volume</td>
</tr>
</tbody>
</table>
Introduction

The Hypex Electronics FA (Fusion Amp) plate-amplifier range consists of 8 different models. Ranging from low power 1ch to high power 3ch solutions, it can be used for a wide range of applications. Please find an overview and highlights below. All equipped with NCORE® amplifiers and High-End DSP processor for excellent audio performance. Our Windows control software called HFD (Hypex Filter Design) allows you to configure and control our FusionAmps. For more details see page 38 - 39.

Features

- 15 biquads per amplifier
- Three selectable presets for filters
- Source selection
- Signal detection
- Auto shutdown
- Clip & Thermal protect
- Password protection
- Master-slave configuration with multiple FusionAmps

This FusionAmp can be the basis of a powerful active subwoofer, a two-way or a three-way speaker. The FusionAmp family consists of the following models:

<table>
<thead>
<tr>
<th>Model</th>
<th>Ch.</th>
<th>Power</th>
<th>Dimensions &amp; weight</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA251</td>
<td>1</td>
<td>250W</td>
<td>280x120x55mm 725 g</td>
<td>Ana: XLR, RCA, high-level</td>
</tr>
<tr>
<td>FA501</td>
<td>1</td>
<td>500W</td>
<td>280x135x55mm 925 g</td>
<td>Ana: XLR, RCA, high-level</td>
</tr>
<tr>
<td>FA122</td>
<td>2</td>
<td>2x 125W</td>
<td>315x120x55mm 815 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
<tr>
<td>FA252</td>
<td>2</td>
<td>2x 250W</td>
<td>315x135x55mm 1.000 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
<tr>
<td>FA502</td>
<td>2</td>
<td>2x 500W</td>
<td>380x150x90mm 2.150 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
<tr>
<td>FA123</td>
<td>3</td>
<td>2x 125W + 100W</td>
<td>360x120x55mm 955 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
<tr>
<td>FA253</td>
<td>3</td>
<td>2x 250W + 100W</td>
<td>360x135x55mm 1.145 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
<tr>
<td>FA503</td>
<td>3</td>
<td>2x 500W + 100W</td>
<td>420x150x90mm 2.275 g</td>
<td>Ana: XLR, RCA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dig: AES/EBU, SPDIF, optical</td>
</tr>
</tbody>
</table>
The one channel FusionAmps can be the basis of a powerful active subwoofer or a full range one channel speaker. We have two one channel models:

**FA 251**

**Highlights**
- 1 channel 250W / 4 ohm
- Analogue inputs (XLR, RCA and High level)
- Remote control option
- Master/slave functionality
- Weight: 725 g
- Dimensions: 280 x 120 x 55mm

**FA 501**

**Highlights**
- 1 channel 500W / 4 ohm
- Analogue inputs (XLR, RCA and High level)
- Remote control option
- Master/slave functionality
- Weight: 925 g
- Dimensions: 280 x 135 x 55mm
The two channel FusionAmps can be the basis of a powerful active subwoofer when using in BTL mode or drive two drivers separately or a full range two channel speaker. We have three two channel models:

**FA 1 2 2**

**Highlights**
- 2 channel 2x 125W / 4 ohm
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 815 g
- Dimensions: 315 x 120 x 55mm

**FA 2 5 2**

**Highlights**
- 2 channel 2x 250W / 4 ohm
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 1.000 g
- Dimensions: 315 x 135 x 55mm
/ Two channel FusionAmps

**FA 5 0 2**

**Highlights**
- 2 channel 2x 500W / 4 ohm
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 2.150 g
- Dimensions: 380 x 150 x 90mm

/ Three channel FusionAmps

The three channel FusionAmps can be the basis of a powerful full range two or three channel speaker. We have three three channel models:

**FA 1 2 3**

**Highlights**
- 3 channel 2x 125W / 4 ohm + 100W Tweeter
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 955 g
- Dimensions: 360 x 120 x 55mm
Three channel FusionAmps

**FA 253**

**Highlights**
- 3 channel 2x 250W / 4 ohm + 100W Tweeter
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 1.145 g
- Dimensions: 360 x 135 x 55mm

**FA 503**

**Highlights**
- 3 channel 2x 500W / 4 ohm + 100W Tweeter
- Analogue inputs (XLR and RCA)
- Digital inputs (AES, S/PDIF and Optical)
- Remote control option
- Master/slave functionality
- BTL mode
- Weight: 2.275 g
- Dimensions: 420 x 150 x 90mm