The BeoCreate
4-Channel Amplifier
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The Beocreate 4-Channel Amplifier is a very flexible DSP/DAC/amplifier combination board designed for high-quality music playback in combination with passive loudspeakers.

FACTS

• Up to 180W output power (2x30W, 2x60W)
• Capable of driving up to four of 4-8 Ohm speakers (the two 60W channels can drive 2 Ohm speakers)
• Fully controllable from the Raspberry Pi
• Sample rates up to 192kHz
• 4-Channel digital-analog conversion included
• Connects directly to the Raspberry Pi A+/B+/2B/3B/Zero, no additional cables needed
• Only one 12-24V external power supply needed to power both the Beocreate board and a Raspberry Pi, no need for an external USB power supply
• No soldering required, the Raspberry Pi can be plugged easily onto the Beocreate board. Speakers can be connected via screw terminals
• Can work standalone (without the Raspberry Pi) as a digital amplifier. However, to program the DSP, a Raspberry Pi is required

DIMENSIONS WITHOUT PACKAGE
12.5 x 9.5 x 2.5 cm

DIMENSIONS INCLUDING PACKAGE
-

WEIGHT
0.09 kg

GTIN 4260439550521

USAGE RECOMMENDATIONS

• DIY active speakers
• up-cycling of vintage speakers
• room acoustics corrections
• up-/down-/resampling applications
FEATURES

• 294MHz DSP with 16kB data RAM and 8kB program RAM
• 16 asynchronous sample rate converters allow to handle different sample rates on different inputs and outputs
• DSP can be fully programmed by the end user using Analog's SigmaStudio (requires a PC with Microsoft Windows)
• nboard EEPROM allows to use the board standalone without a Raspberry Pi
• TOSLink input and output (up to 96kHz sample rate)
• 4 channel DAC supports sample rates of from 44.1kHz to 192kHz
• 2x60W and 2x30W Class-D output stages
• expansion connector allows to connect additional hardware (access to Raspberry Pi and DSP GPIOs)
• can be used as a 2-channel sound card from the Raspberry Pi
• multiple devices can be chain-linked using SPDIF (e.g. to implement an active 4-way stereo system)

CONNECTORS

• TOSLink input and output connectors
• 5.5mm barell jack and screw terminal for external 12-24V power supply
• 4x screw terminal to connect loudspeakers
• 34 pin expansion connector
• programming header (compatible with Analog Devices USBi interface)
## ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>TEST CONDITIONS</th>
<th>TYPICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Output power per channel</strong></td>
<td>Vsupply=12V, f=1kHz, Rspk = 4Ohm, THD+N &lt; 0.1%</td>
<td>15W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=18V, f=1kHz, Rspk = 4Ohm, THD+N &lt; 0.1%</td>
<td>30W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=24V, f=1kHz, Rspk = 4Ohm, THD+N &lt; 0.1%</td>
<td>40W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=12V, f=1kHz, Rspk = 8Ohm, THD+N &lt; 0.1%</td>
<td>8W</td>
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<td></td>
<td>Vsupply=18V, f=1kHz, Rspk = 8Ohm, THD+N &lt; 0.1%</td>
<td>16W</td>
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<tr>
<td></td>
<td>Vsupply=24V, f=1kHz, Rspk = 8Ohm, THD+N &lt; 0.1%</td>
<td>30W</td>
</tr>
<tr>
<td><strong>Maximum output power per channel</strong></td>
<td>Vsupply=12V, Rspk = 4Ohm, THD+N &lt; 10%</td>
<td>19W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=18V, Rspk = 4Ohm, THD+N &lt; 10%</td>
<td>40W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=24V, Rspk = 4Ohm, THD+N &lt; 10%</td>
<td>70W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=12V, Rspk = 8Ohm, THD+N &lt; 10%</td>
<td>10W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=18V, Rspk = 8Ohm, THD+N &lt; 10%</td>
<td>23W</td>
</tr>
<tr>
<td></td>
<td>Vsupply=24V, Rspk = 8Ohm, THD+N &lt; 10%</td>
<td>40W</td>
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