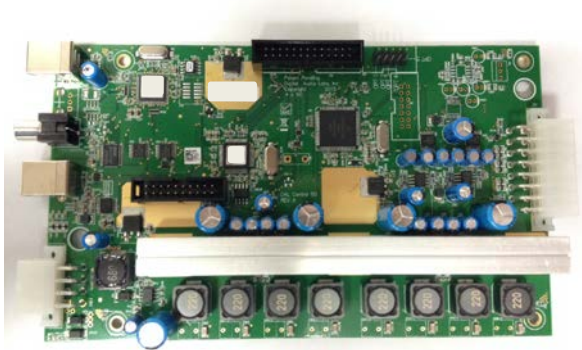


Specification Sheet – Misco PN 38016



Key Features:

- 4 x 50W Class D Amplifier with DSP
- USB 2.0, Digital S/PDIF and Analog Audio Inputs
- Expansion Support for up to 16 Inputs and 14 Outputs
- Extensive Digital Signal Processing (DSP) Capabilities
- USB control of volumes, EQ's, crossovers and presets allow multi-platform compatibility and automation

Interfacing and Connections

Audio Inputs	
USB 2.0 Streaming	<ul style="list-style-type: none">• Supports up to 16 channels of audio input via USB 2.0.• 44.1kHz/48kHz sample rate, 24-bit.
S/PDIF Digital Coaxial	<ul style="list-style-type: none">• Supports 2 channel stereo and 8 channel surround audio input.• 44.1kHz/48kHz sample rate, 24-bit.
Analog	<ul style="list-style-type: none">• Stereo Analog Line Input (-10dBV level)
Connections	
USB Type B – Audio	<ul style="list-style-type: none">• USB 2.0 connection for audio streaming.
USB Type B – Control	<ul style="list-style-type: none">• USB 1.1 connection for control of settings.
RCA Coax	<ul style="list-style-type: none">• S/PDIF Digital Input
8 Pin Mini-Fit Jr	<ul style="list-style-type: none">• 24VDC Power Input, GPIO pin and Stereo Analog Input
16 Pin Mini-Fit Jr	<ul style="list-style-type: none">• Speaker Output Connections and GPIO Pins
26 Pin Box Header (.1")	<ul style="list-style-type: none">• Digital Audio Connection to Expansion Audio Boards
10 Pin Header	<ul style="list-style-type: none">• Jumper Configuration Block for additional GPIO



For The Sound You Want

2637 32nd Avenue South, Minneapolis, MN, USA

(612) 825-1010 VOICE; (612) 825-7010 FAX

www.miscospeakers.com

Amplification

Amplifiers Onboard PCBA			
Channel	Output Power	Impedance	THD+N
Channels 1-4	50W	4 Ω	0.15%
	25W	8 Ω	0.10%
Amplifier Expansion Support			
6CH Expansion	<ul style="list-style-type: none">• Expansion interface for up to 6 channels of audio.• All 6 channels of audio expansion have processing and mixing control capabilities.• Ideal for adding a secondary sound system like a speaker array or sound chair.		
4CH Expansion	<ul style="list-style-type: none">• A secondary expansion interface allowing an additional 4 channels of audio beyond the “6 channel expansion” listed above. If desired, a subset of these channels can be sent out.• All 4 channels of audio expansion have processing and mixing control capabilities.• Ideal for adding an expansion speaker array or a community participation secondary sound system.		

General Features

- Ability to change amplifier firmware to add/subtract EQ's, crossovers, compression and channel configurations as needed to support new audio systems.
- Automatic configuration of EQ's, crossovers, volume offsets and channel mapping based on custom presets. Configuration via USB or jumper/default settings also available.
- Load a fixed configuration on start-up if desired.
- Amplifier firmware is field updatable over USB; allows easy implementation of new functionality and provides new product support without hardware changes.
- Dedicated active crossovers, EQ, compression, volume offsets and clean sounding amplifiers for each speaker. Additional filters can be added as required.



For The Sound You Want

2637 32nd Avenue South, Minneapolis, MN, USA

(612) 825-1010 VOICE; (612) 825-7010 FAX

www.miscospeakers.com

Digital Signal Processing (DSP)

Current Audio DSP Configuration	
General Overview	<ul style="list-style-type: none">• An integrated suite of processors and optional plugins pair with the onboard amplifiers to create a configurable audio platform.
Matrix Mixer	<ul style="list-style-type: none">• Up to 16 digital inputs and 2 analog inputs.• Any input can be mixed to any combination of outputs.• Expansion available, USB interface allows up to 16 channels of digital input if more input channels are required.
EQ's	<ul style="list-style-type: none">• Extensive active EQ is available on the outputs. In some cases these EQ's can work in groups (ex: stereo pairs) to simplify configuration.• 5-Band or 10-Band EQ's available on all output channels.• All EQ's are custom to each saved configuration/preset, ensuring optimized performance for all desired use cases.
Crossovers	<ul style="list-style-type: none">• Low Pass, High Pass and All Pass filters.• Filter types include: Butterworth, Linkwitz-Riley and Bessel.• Two-way and three-way crossovers can be built to create 2-way and 3-way sounds systems.
Volume Offsets	<ul style="list-style-type: none">• Each output speaker or speaker stereo pair has a configurable level offset and phase control.• Volume offsets provide another tool that allows the audio system to be fine tuned.• Different volume offsets can be configured and saved as presets for compatibility with different speaker systems.
Optional Plugin Effects	<ul style="list-style-type: none">• Additional plugin effects are available upon request if more extensive processing is desired (multi-band compression, spatical effects, delay...).

Power

Input Voltage	11-26VDC (24VDC Nominal)
Nominal Current (with audio present)	5A
Peak Current	10A

MISCO.

For The Sound You Want

2637 32nd Avenue South, Minneapolis, MN, USA

(612) 825-1010 VOICE; (612) 825-7010 FAX

www.miscospeakers.com

Dimensions and Mecahnical Overview

