SIMPLIFIED
M F G

DAC1

Dolby 5.1, DTS5.1 to Stereo

Downmixing Audio Converter

User Manual

VER 2.0

Thank you for purchasing this device

The Simplified MFG DAC1 is designed to provide years of reliable service.   At Simplified MFG, we want the experience with this device to be the best possible and are committed to helping achieve that experience.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended to protect and extend the life of your equipment. Set top boxes (STB) that are connected to the outside world can introduce surges through the HDMI.   Simplified MFG's HDSURGE is recommended for use with these STB devices (cable and satellite)

Table of Contents

1. **Introduction**

The DAC1 is an 18Gbps HDMI2.0b audio extractor that can downmix all Dolby 5.1 and DTS 5.1 formats to stereo or 5.1 formats via the optical SPDIF and/or the 3.5mm mini jack.

2. **Features**

- HDMI 2.0b (18Gbps), HDCP2.2/HDCP1.4 compliant.
- Supports video resolution up to 4K2K@50/60Hz (4:4:4)
- Extracts audio with downmixing feature in all Dolby™ and DTS™ formats including DTS-X and Atmos
- Three position switch allows for passing bitstream and breaking out stereo, using the display for the audio EDID and breaking out multi-channel and, and convert all to stereo
- HDR10+/ DolbyVision™ Pass-through
- Supports CEC pass-through

3. Package contents

1x DAC1 audio extractor/converter
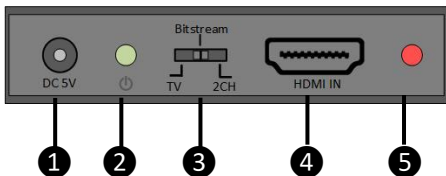
1x 5VDC 1A power supply

1x Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2 and HDCP 1.4
Video Bandwidth	18Gbps
Video Resolutions	720P50/60Hz,1080P50/60Hz, 4K2K24Hz, 4K2K30Hz, 4K2K@50/60Hz (4:4:4)
Color Depth	8, 10, or 12bit (depends on source setting)
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
HDMI Audio Formats	LPCM, Dolby Digital/Plus/EX, Dolby True HD, Atmos, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS-HD Master Audio, DSD & DTS-X
L/R Audio Formats	PCM 2.0
Optical Audio	LPCM [2.0/2.1]CH, Dolby 5.1, Dolby

Formats	True HD, Dolby DD+, DTS 5.1, DTS-ES 6, DTS-HDMA 5.1, DTS HD-HRA 5.1
ESD Protection	Human-body Model: ±8kV (Air-gap discharge), ±4kV (Contact discharge)

Connections	
Input ports	1×HDMI Type A [19-pin female]
Output ports	1×HDMI Type A [19-pin female] 2×RCA Connectors [L & R] 1×Optical out [S/PDIF]

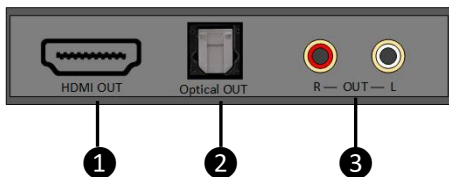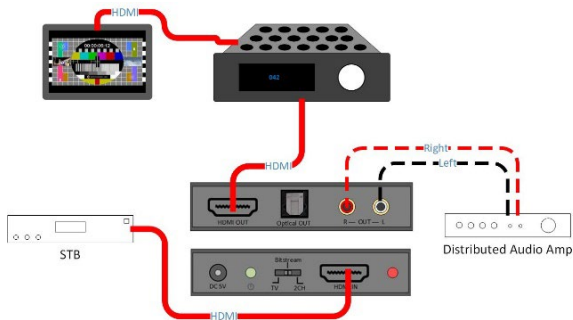| **Mechanical**	
Housing	Metal Enclosure
Color	Black
Dimensions	73.5mm (2.9") [W] × 60.7mm (2.4") [D] × 17mm (.67") [H]
Weight	130g / 4.6 oz.
Power Supply	Input: AC100~240V 50/60Hz, Output: DC5V/1A (US/EU standards, CE/FCC/UL certified)
Power Consumption	1W (max)
Operating Temperature	0°C ~ 40°C / 32°F ~ 104°F
Storage Temperature	-20°C ~ 60°C / -4°F ~ 140°F
Relative Humidity	20~90% RH (non-condensing)

5.Operation Controls and Functions

5.1 Input Side

Number	Name	Function description
1	5.5mm 5VDC In	The 5VDC 1A power supply is connected here
2	LED Power Indicator	This green LED will illuminate when the 5VDC 1A power supply is powering the the DAC1
3	Three position function switch	**TV:** Audio EDID is copied from HDMI connection (usually 5.1) **Bitstream:** Audio EDID is on AVR copy mode (use with Atmos/DTS-X) **2CH:** All Audio is set to stereo
4	HDMI Input	The HDMI source you wish to extract audio from connects here
5	Link LED	The Link Indicator shows that there is a HDMI signal connected

Number	Name	Function description
1	HDMI OUTPUT	Connect to HDMI display device such as TV or monitor
2	OPTICAL OUT	Optical audio output
3	L/R OUT	RCA analog audio output

6. Application Example

7. Function Explanation

When the audio selection switch is in the "TV" position the audio EDID copies how the display is set (5.1 or stereo, usually).   The RCA's will output stereo and the optical will output multichannel and stereo (within its capabilities listed in the specs).   When it is set to "Bitstream" the audio EDID is set to the abilities of the AVR and the optical output will be limited to only formats supported by the optical output.   The HDMI of course will support all HD audio formats.   When the switch is set to "2CH" all outputs are now in stereo mode.   The RCA outputs are live with stereo in all settings as the DAC1 will convert the other formats to stereo.

8. Warranty

Should you feel that this product does not function adequately due to defects in materials or workmanship, we (referred to as "the warrantor") will, for the length of the period indicated below (starting from the original date of the purchase) either a) repair the product with new or refurbished parts. Or b) Replace the product with new or refurbished product.   All Simplified MFG products are covered by a 3-year PARTS and LABOR warranty.   During this period there will be no charge for unit repair, replacement of unit components or replacement of the product if deemed necessary. The decision to repair or replace is made by the warrantor.   The purchaser must mail in the product during the warranty period. This limited warranty only covers the product purchased as new and is extended to the original purchaser only.   It is non-transferrable to subsequent owners, even during the warranty period.   A purchase receipt or other proof of purchase date is required for the limited warranty service.

9. Contact

Sales and Tech Support

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