X-NUCLEO-CCA01M1

Sound terminal expansion board based on STA350BW for STM32 Nucleo

Data brief

Features

- 2 channels of ternary PWM 2 x 50W @ 25V 6 Ω
- FFX ™ 100 dB SNR and dynamic range
- I²C control with selectable device address
- Digital gain +48 dB -80 dB with 0.125 dB/step
- Two independent DRCs configurable as a dual-band anti-clipper (B2DRC) or independent
- limiters/compressors
- I²S input interface
- 3 coefficients banks for EQ preset storing with fast recall via I²C interface
- Up to 8 user-programmable biquads per channel
- Free comprehensive development firmware library and example compatible with STM32Cube firmware
- Compatible with STM32 Nucleo boards
- Equipped with ST morpho connector (upward and downward)
- Equipped with Arduino UNO R3 connector (upward) to allow multiple board connections
- RoHS compliant

Description

The X-NUCLEO-CCA01M1 is an expansion board based on the STA350BW Sound Terminal® 2.1-channel high-efficiency digital audio output system.

It can be plugged on top of an STM32 Nucleo board and is compatible with the ST morpho connector layout. It enables the output of digital audio streams to a speakers pairs connected directly to the board and allows the evaluation of the STMicroelectronics STA350BW digital audio output component. Up to two X-NUCLEO-CCA01M1 expansion boards can be plugged on top of the same STM32 Nucleo host in order to build a four-channel digital audio output system.

The communication between the STM32 MCU and the STA350BW device is performed through the I²C bus interface for setup and control purposes and the I²S bus for digital audio transmission. A dedicated connector is available on the board in order to supply the power source for the output stage.

For further information contact your local STMicroelectronics sales office

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Schematic diagram

Figure 1: Schematic diagram (1 of 3)

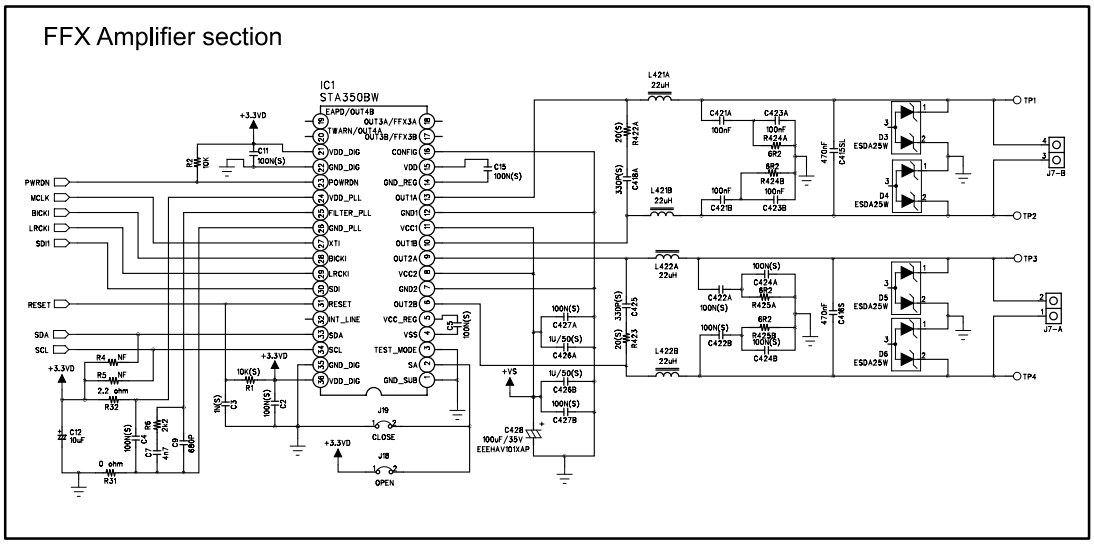


Figure 2: Schematic diagram (2 of 3)

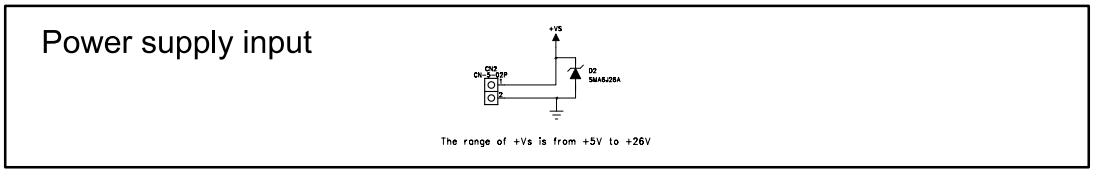
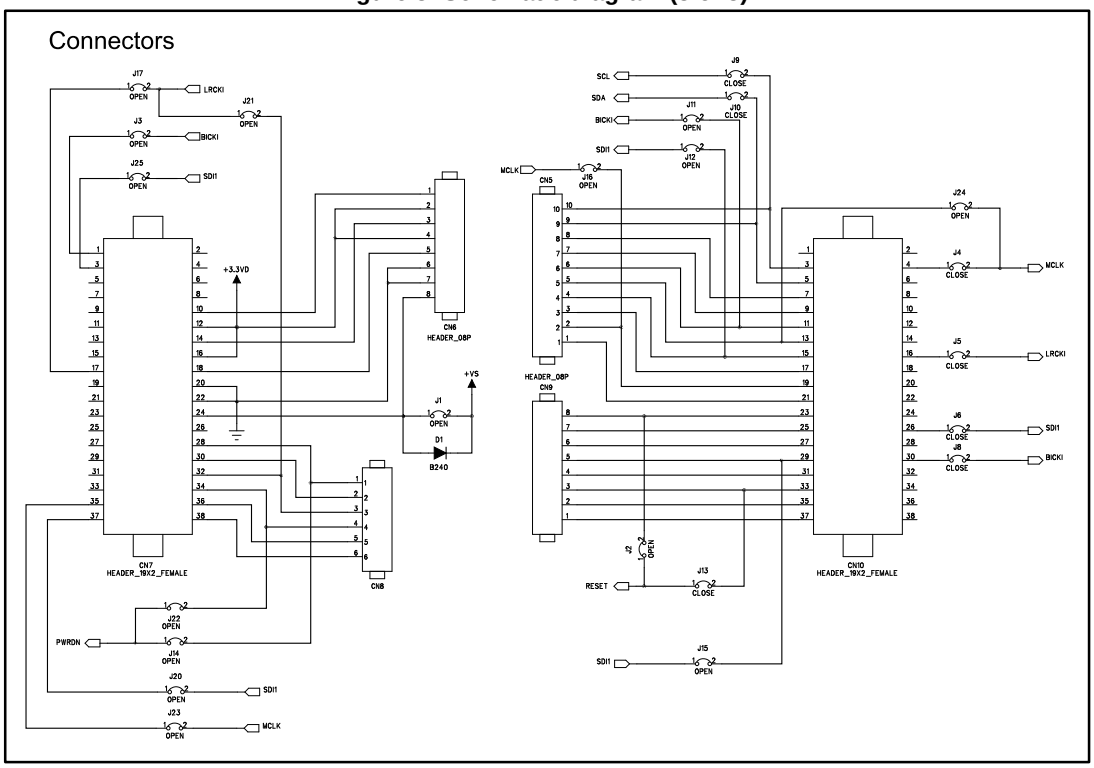


Figure 3: Schematic diagram (3 of 3)



Revision history

Table 1: Document revision history

Date	Version	Changes
17-Nov-2015	1	Initial release.
16-Dec-2015	2	Updated cover page *"Features"*

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