STEVAL-IDI001V1

A premium developer's tool for sensor hub applications

Description

STEVAL-IDI001V1 is an evaluation board based on the STM32F4 Microcontroller and a wide range of ST sensors. With a small form factor (4 x 4 cm), it represents an integration of sensors and CPU for a "sensor hub like" application. The hardware is compatible with STM32Nucleo and X-NUCLEO expansion boards. The included adapter board is an expansion board that allows the interoperability between STEVAL-IDI001V1, STM32Nucleo and various X-NUCLEO expansions. Expansion boards can be connected either via Arduino or morpho connectors. The evaluation board comes with built-in data logging firmware. It allows streaming and storing of the selected sensor measurements via USB or via bluetooth low energy if an X-NUCLEO-IDB04A1 (or X-NUCLEO-IDB05A1) is plugged through the adapter board. The acquired data can be used to implement new advanced algorithms.

Features

- STM32F439IIH6 High Performance MCU ARM® Cortex™-M4F @ 180 MHz with 256 KB of embedded SRAM
- 8 MB external SRAM
- IMU 9 axes inertial sensor: LSM9DS1
- Environmental sensors: Pressure (LPS25HB), Humidity and Temperature (HTS221), UV index (UVIS25M).
- Proximity and ambient light sensors (2x VL6180X)
- Digital MEMS microphone array (4x MP34DT01)
- USB connector
- Micro SD card expansion
- GPIO expansion for pin control and connection to the STM32Nucleo board thanks to the adapter board included in the package

For further information contact your local STMicroelectronics sales office

1 Schematic diagrams

Figure 1: STEVAL-IDI001V1 board schematic part 1
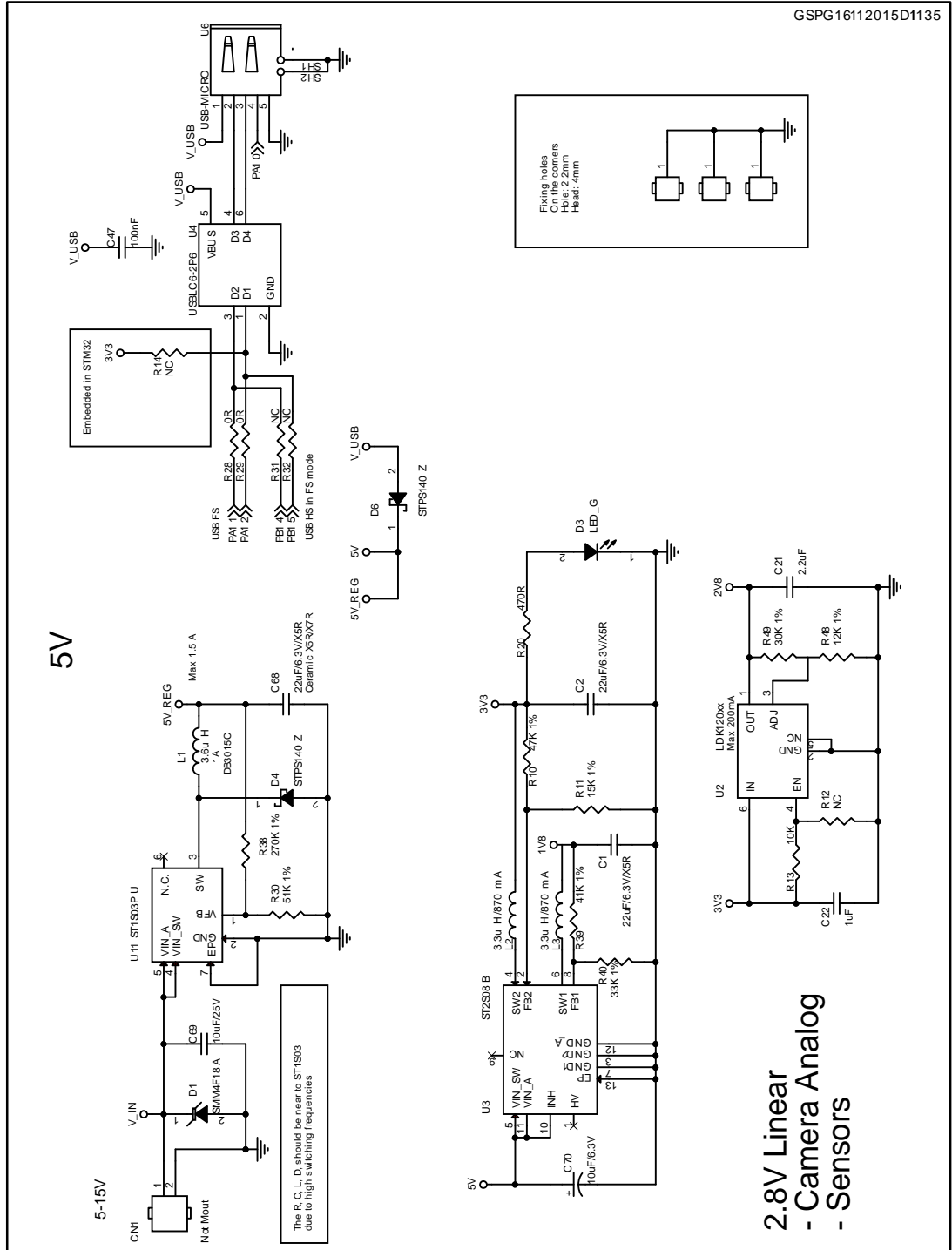
Figure 2: STEVAL-IDI001V1 board schematic part 2

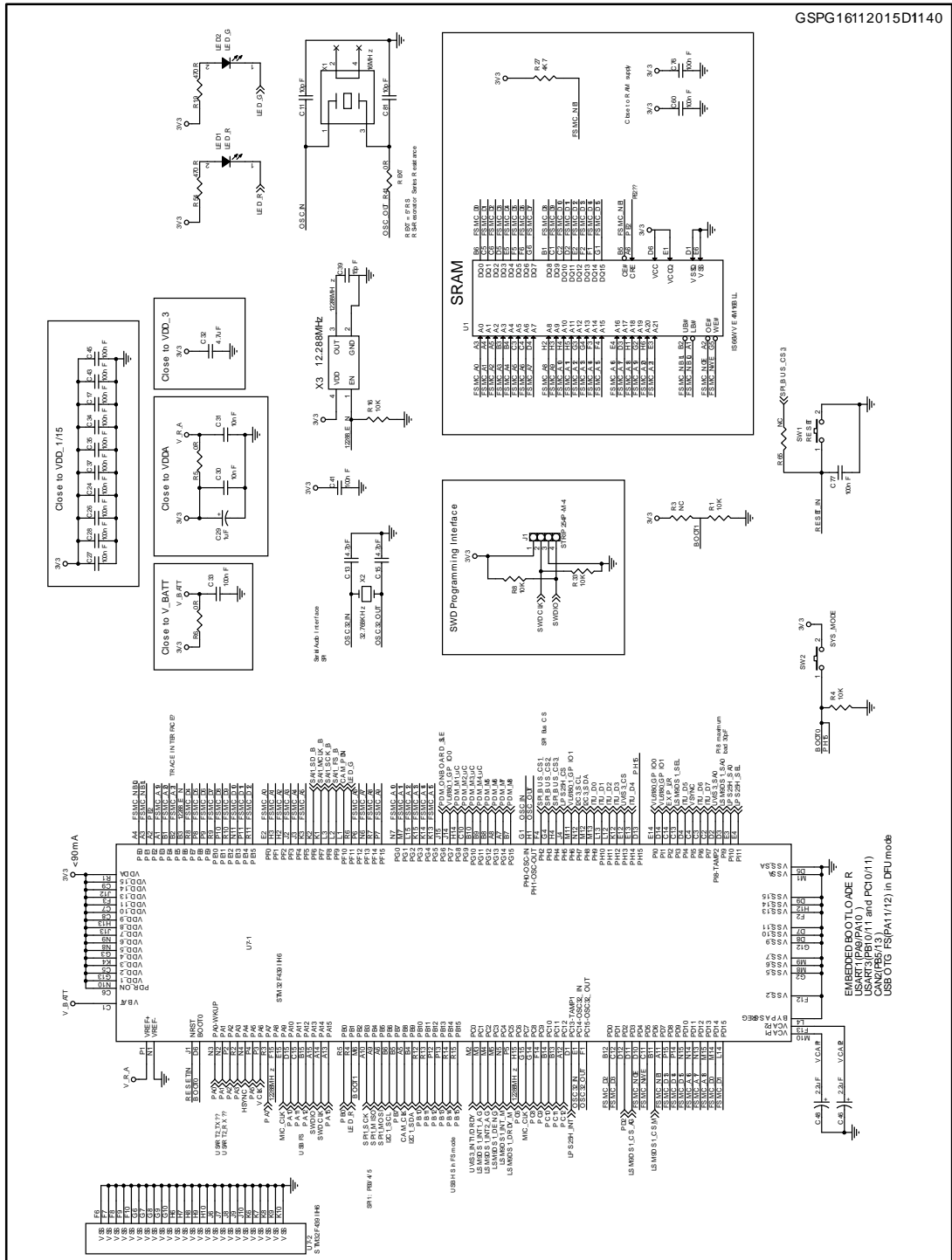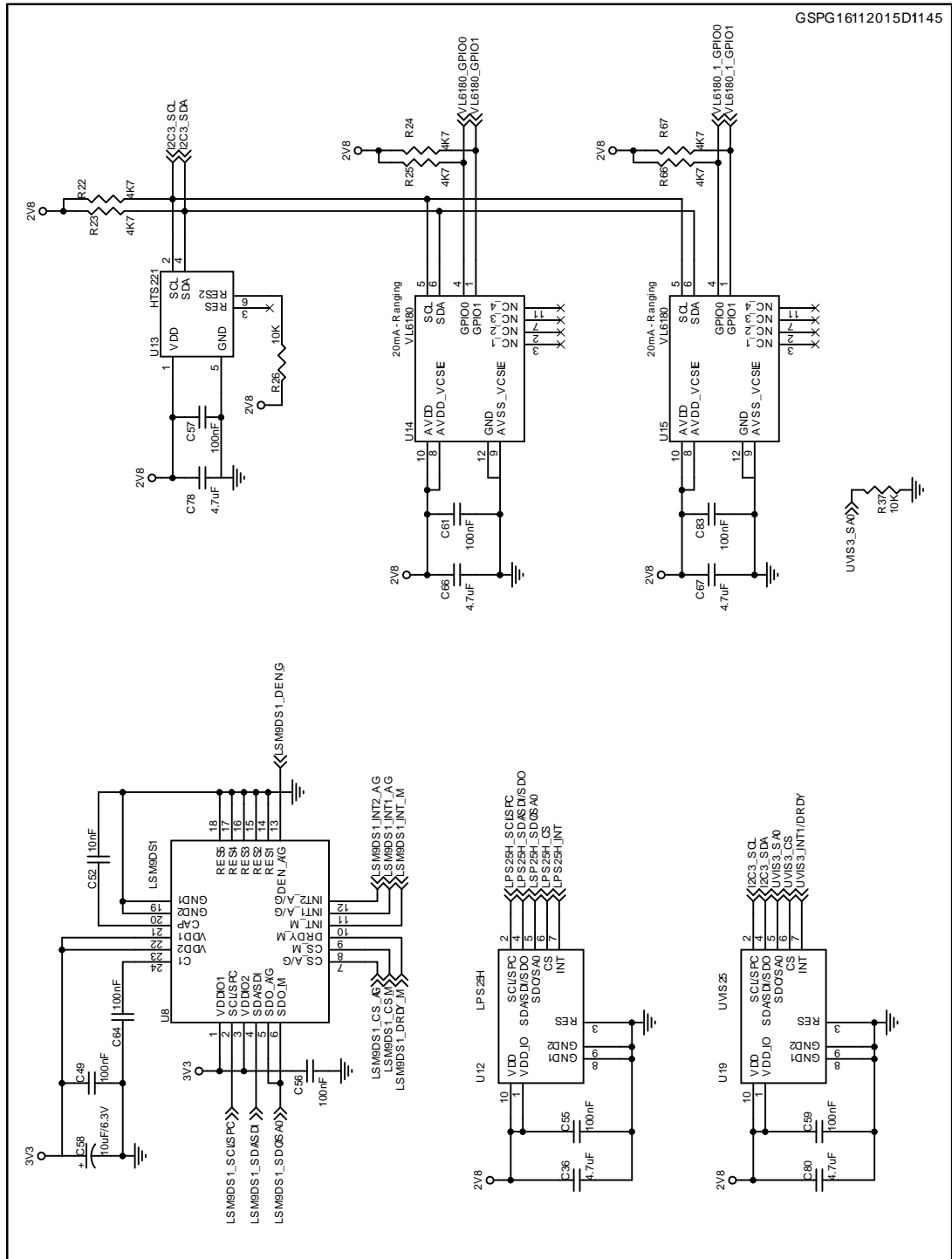**Figure 3: STEVAL-IDI001V1 board schematic part 3**

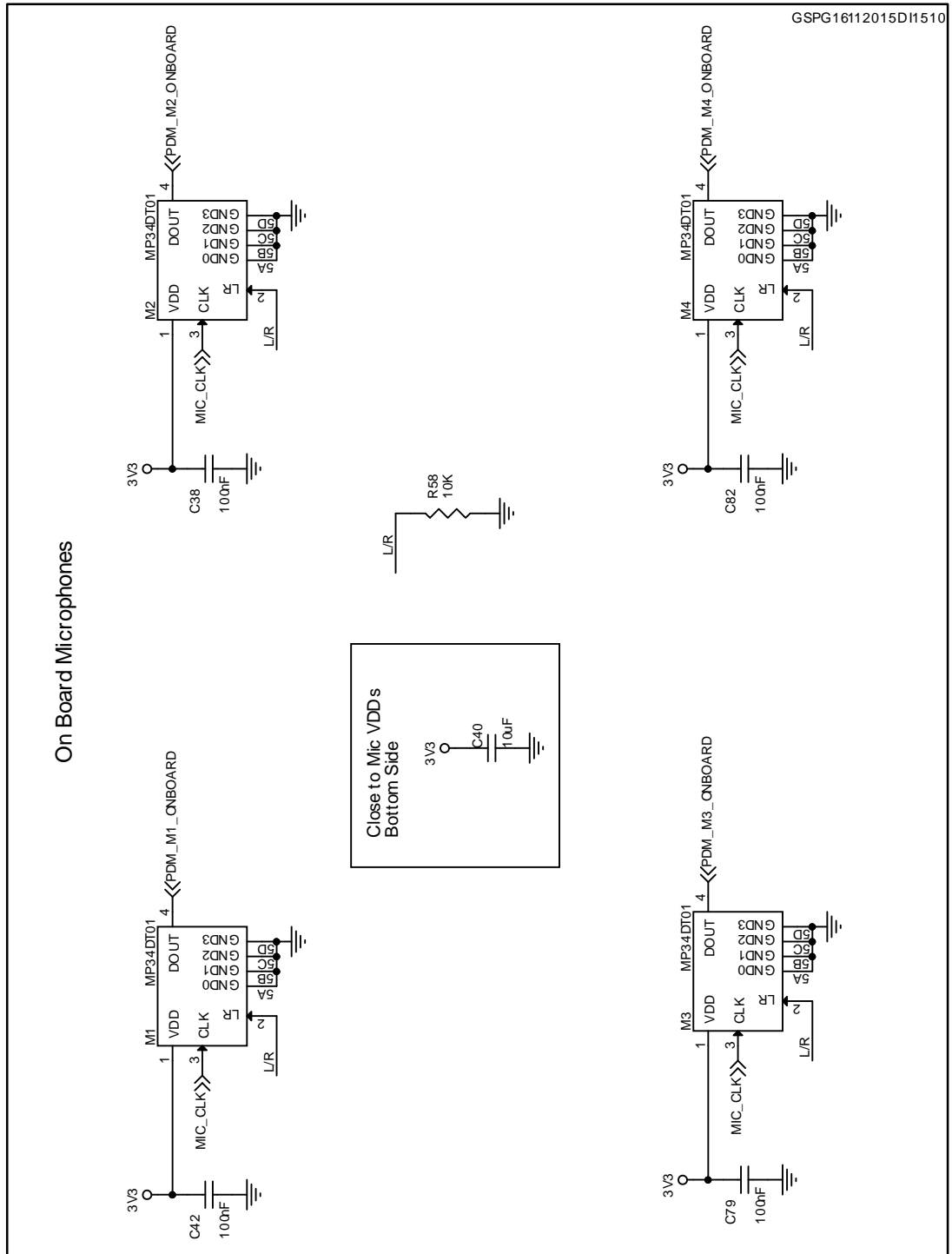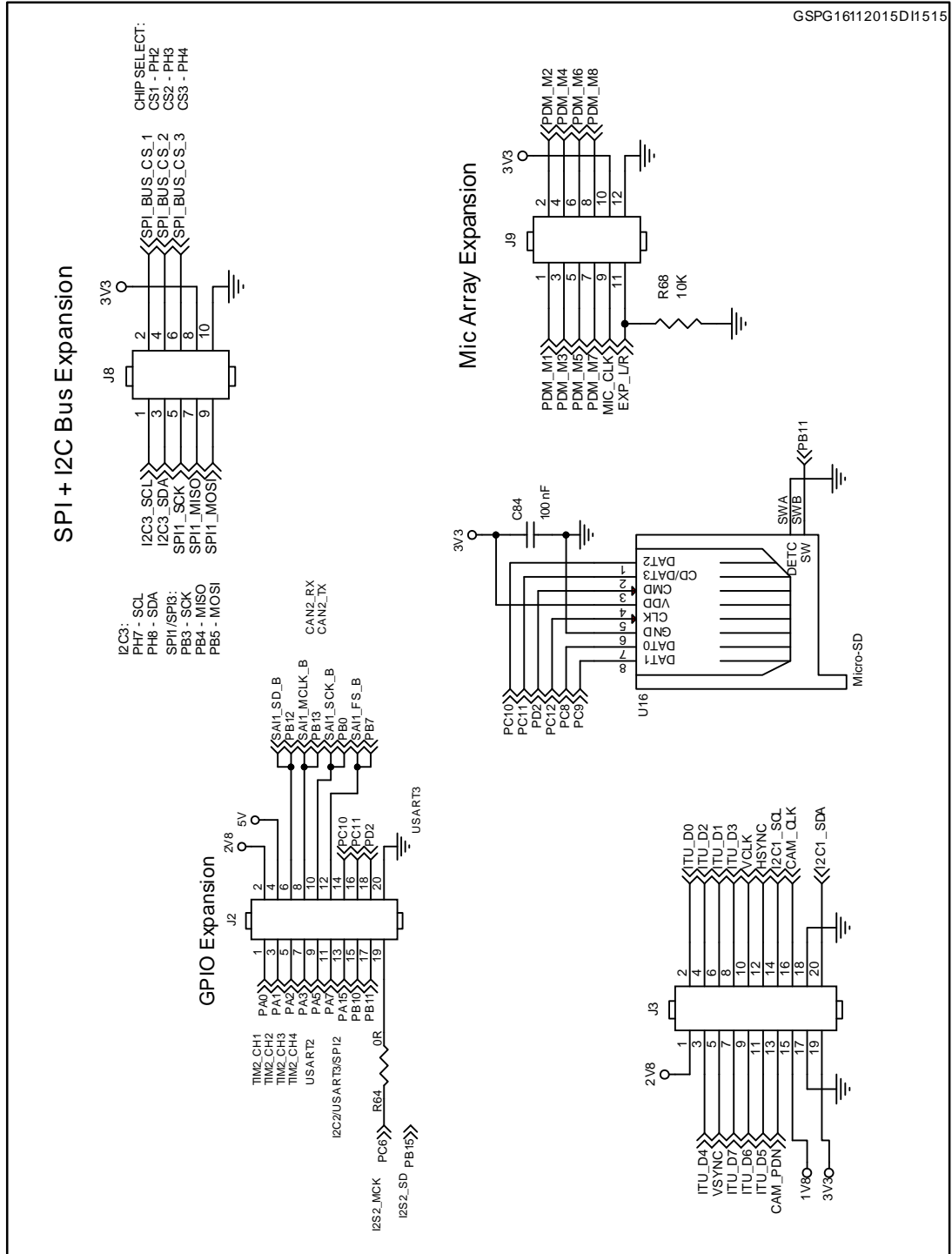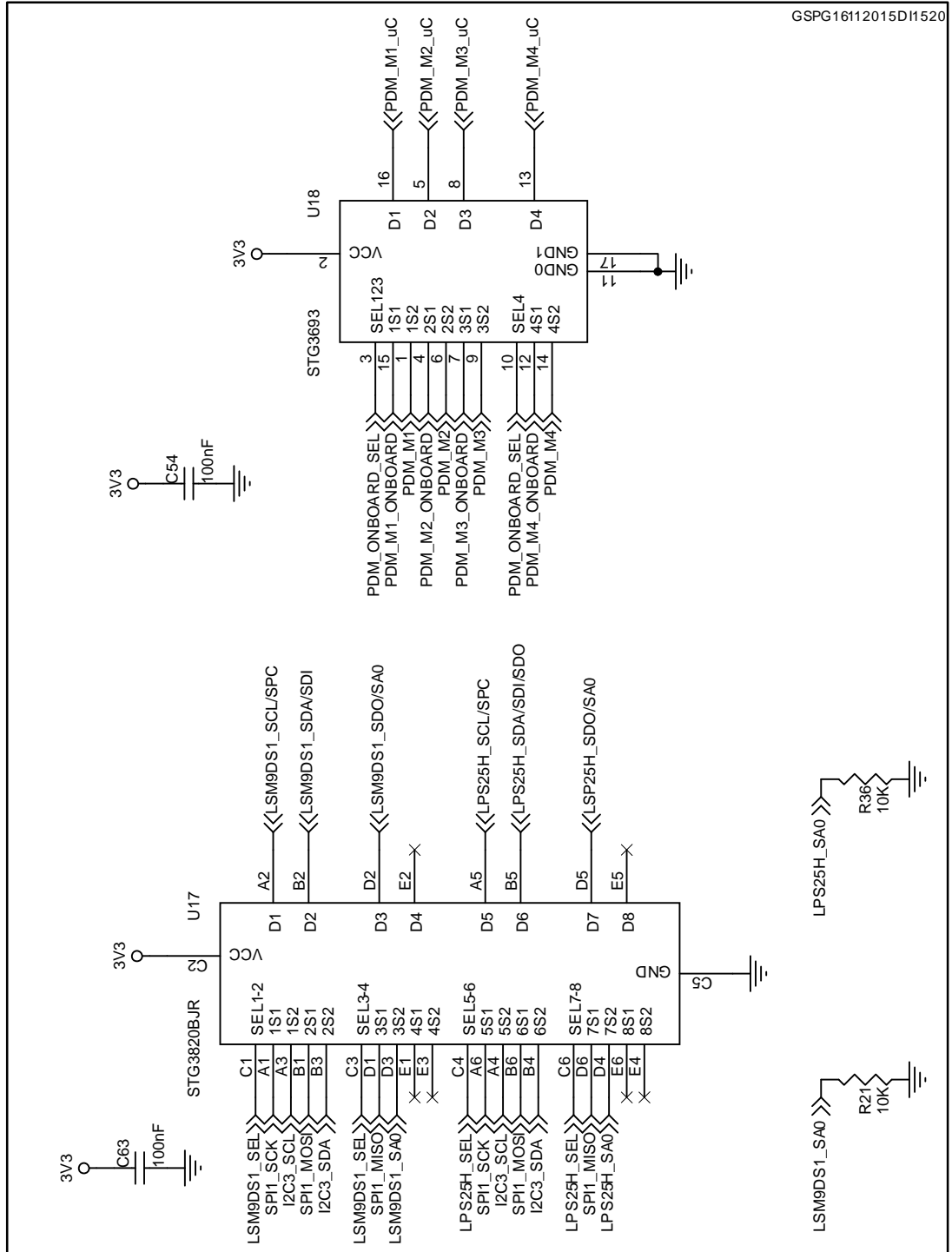**Figure 4: STEVAL-IDI001V1 board schematic part 4**

Figure 5: STEVAL-IDI001V1 board schematic part 5

Figure 6: STEVAL-IDI001V1 board schematic part 6

2 Revision history

Table 1: Document revision history

Date	Version	Changes
17-Nov-2015	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY