

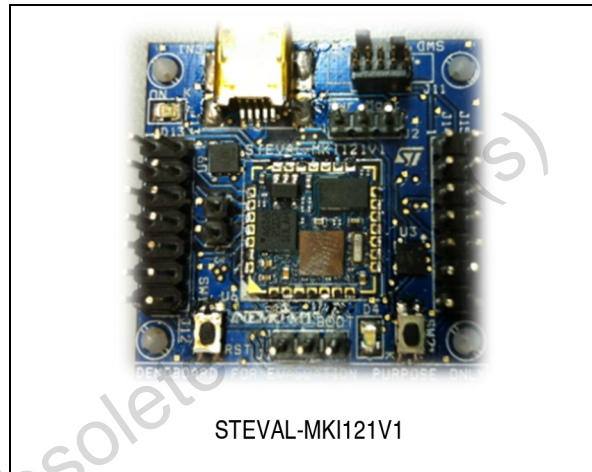


## Discovery-M1 board based on the INEMO-M1 system-on-board

Data brief

### Features

- Two power supply options: through the USB bus or from one of two external supply voltages, VEXT (from 3.6 to 6 V) or D\_VDD (from 2.4 V to 3.3 V)
- INEMO-M1: 9-axis SoB, 13x13x2 mm size factor
- LPS331AP: MEMS pressure sensor 260-1260 mbar absolute digital output barometer
- INEMO-M1 pinout available on two double connectors
- SWD connector for programming and debugging.
- Two pushbuttons (reset and user)
- Two LEDs: user LED, power-on LED
- RoHS compliant



library to quickly support the use of the demonstration board features.

### Description

The Discovery-M1 helps to discover the INEMO-M1 performance features and to facilitate its evaluation. The INEMO-M1 is the smallest 9-axis system-on-board (SoB) of the iNEMO module family; it integrates multiple ST sensors with a powerful computational core: a 6-axis geomagnetic module, a 3-axis gyroscope and an ARM Cortex™ M3 32-bit MCU.

The Discovery-M1 based on the INEMO-M1, and including a pressure sensor LPS331AP, represents a complete 10-DoF open platform able to provide fast inertial application development using MEMS sensors and the STM32. The pinout of the two connectors gives a complete set of communication interfaces in a very small size, making the Discovery-M1 a flexible solution for effortless orientation estimation embedded applications.

To aid in user development and analysis, the Discovery-M1 demonstration kit includes a PC GUI for sensor output display and a firmware

**Figure 1. Reset, pushbutton, boot, user LED and USB**



Figure 2. INEMO-M1 SoB

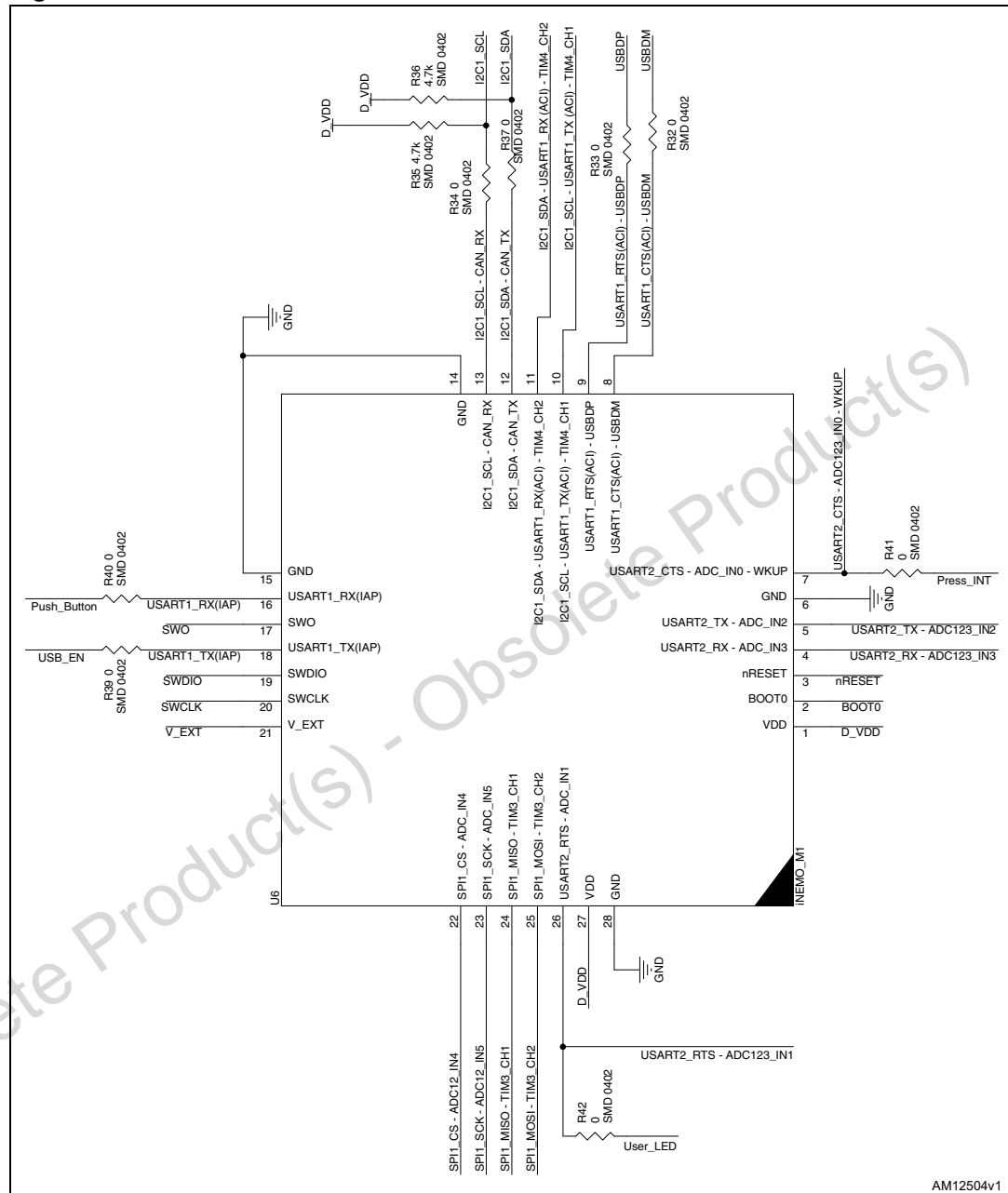


Figure 3. Pressure sensor and power management stage

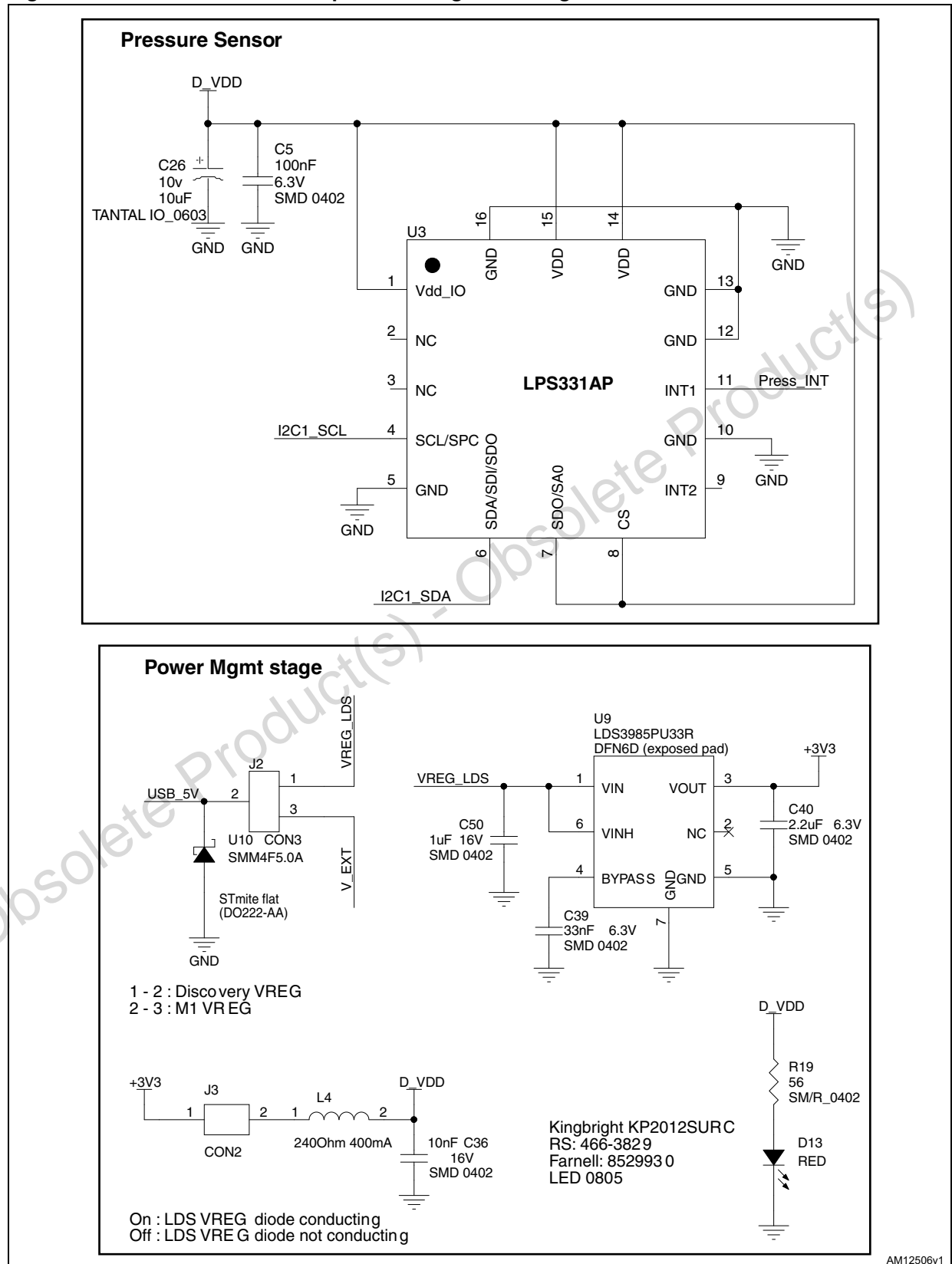
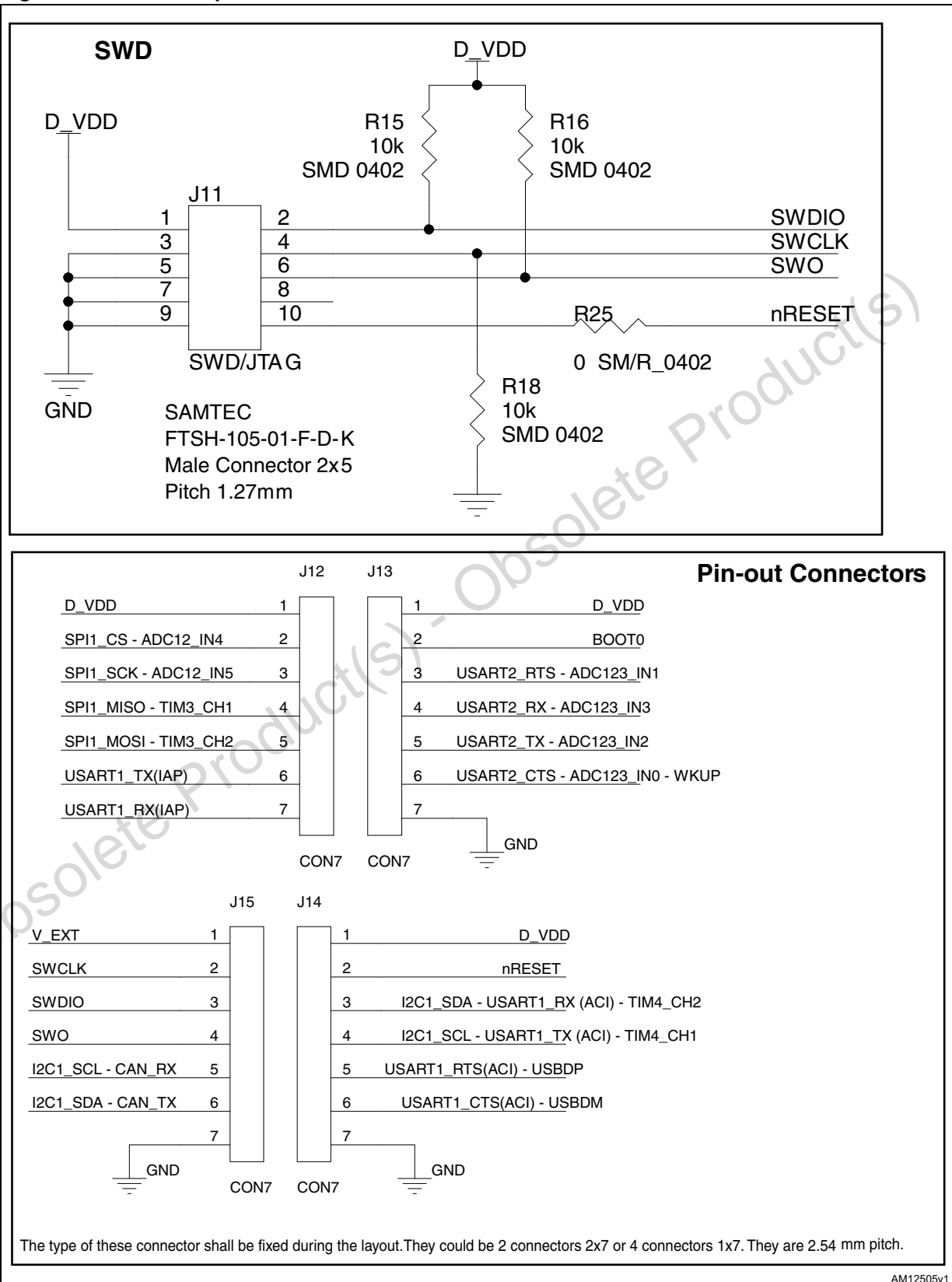


Figure 4. SWD and pinout connectors



AM12505v1

## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
13-Sep-2012	1	Initial release.

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