ISD-DEMO2360 User Manual

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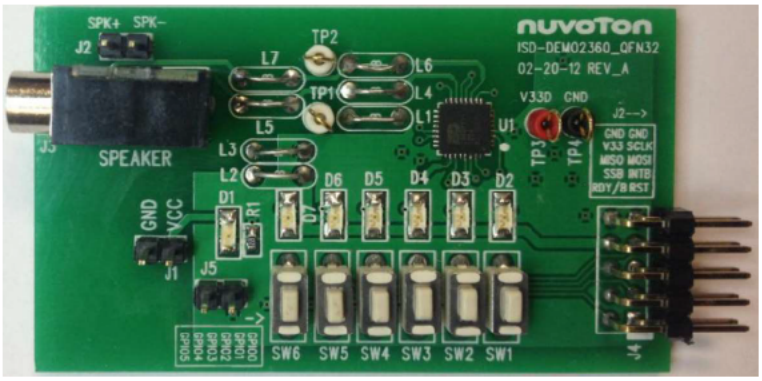
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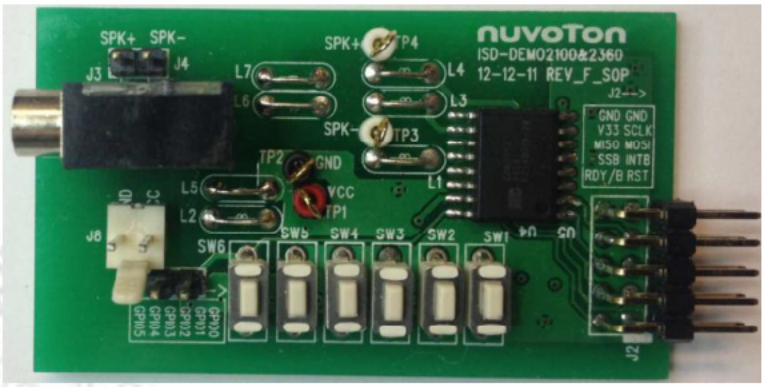
1. Overview

The ISD2360 demo board is a small board dedicated for ISD2360 device evaluation and application development. The ISD2360 comes in two packages: QFN32 and SOP16, hence there are two types of demo boards for the ISD2360.

- For QFN32 package: **ISD-DEMO2360_QFN32** – shown in **Picture 1-1** ISD-DEMO2360_QFN32
- For SOP16 package: **ISD-DEMO2360_SOP16** – shown in **Picture 1-2**



Picture 1-1 ISD-DEMO2360_QFN32

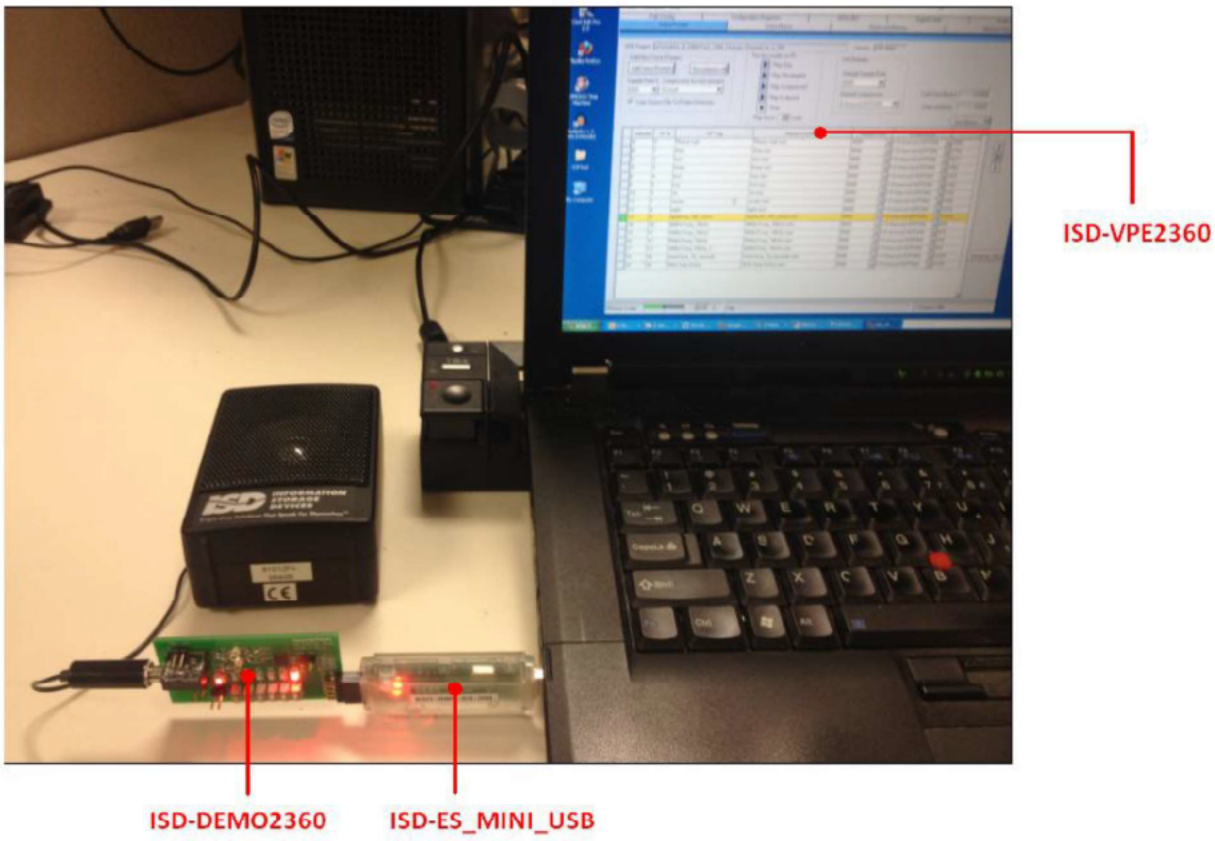


Picture 1-2 ISD-DEMO2360_SOP

The ISD2360 evaluation kit consists of three parts:

- ISD-DEMO2360 (QFN or SOP)
- ISD-ES_MINI_USB: a small interface board providing USB connection to PC
- ISD-VPE2360: free downloadable GUI evaluation software for ISD2360.

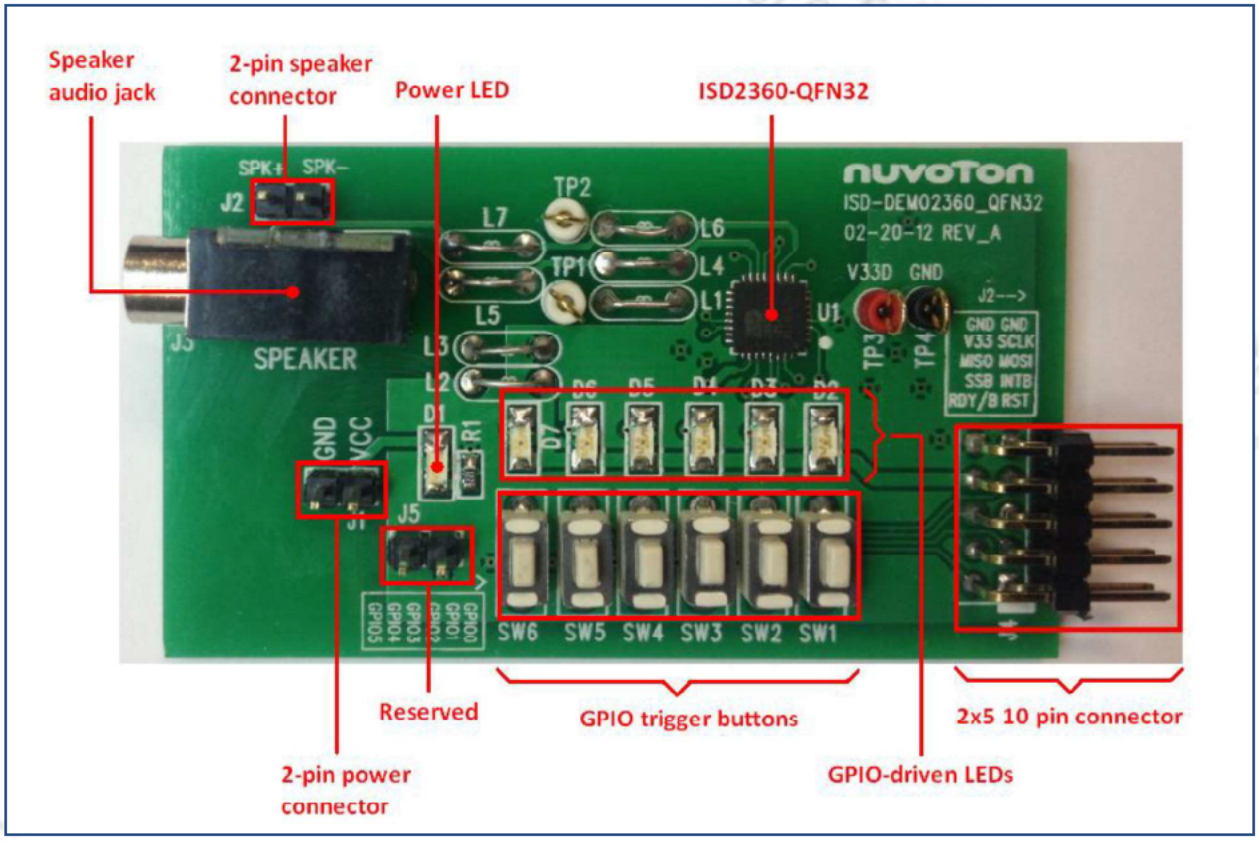
The ISD2360 *demo board* connecting to the *ISD-ES_MINI_USB* board, along with the ISD-*VPE2360*, makes up a small but complete evaluation system for ISD2360, as shown in **Picture 1-3** A complete ISD2360 evaluation system.



Picture 1-3 A complete ISD2360 evaluation system

2. Board Description

2.1. ISD-DEMO2360_QFN32 for QFN32 package



2.1.1. ISD-DEMO2360_QFN32 Jumper Description

J1 – 2-pin power connector, to connect battery pack or external power supply

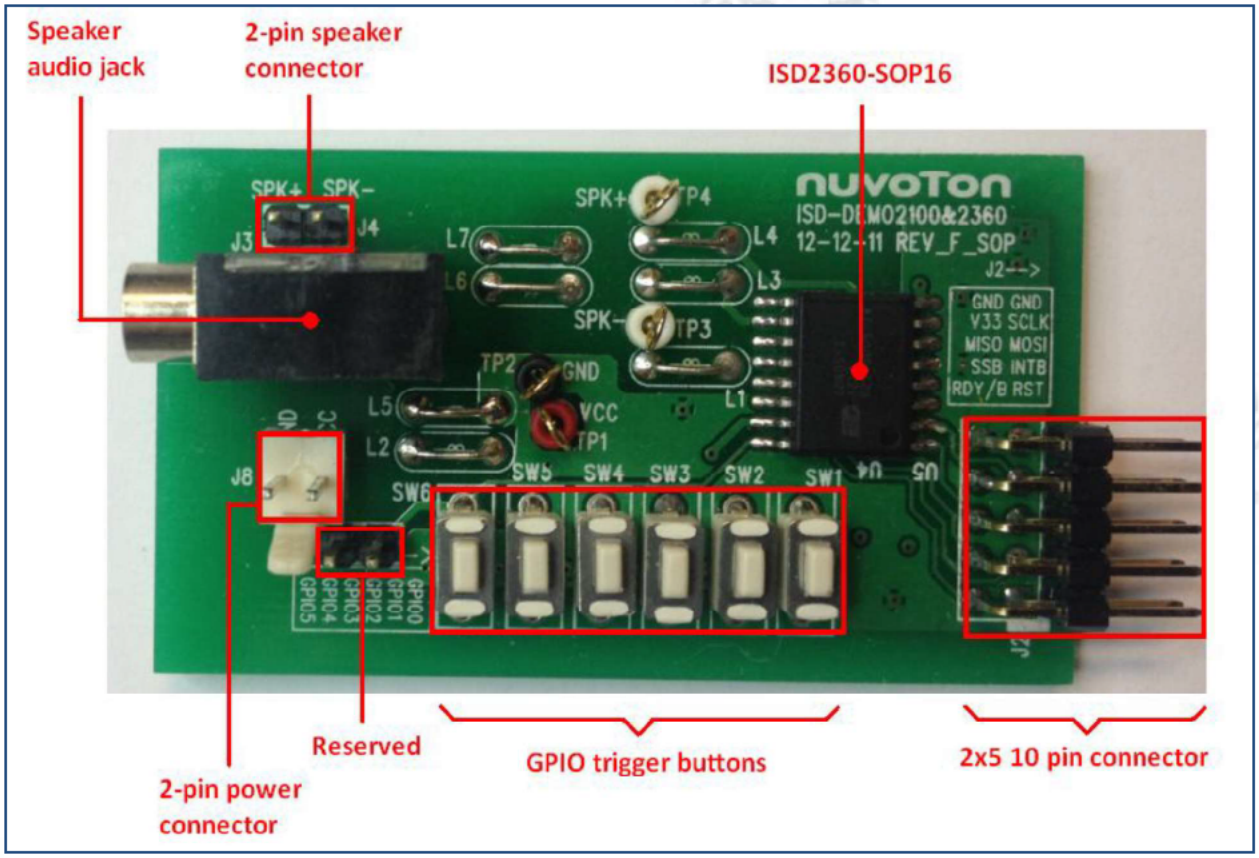
J2 – 2-pin speaker connector directly connecting to ISD2360 PWM output

J3 – Audio jack directly connecting to ISD2360 PWM output

J4 – 2x5 10-pin connector connecting to ISD-ES_MINI_USB dongle

J5 – Reserved, not to be used.

2.2. ISD-DEMO2360_SOP16 for SOP16 package



2.2.1. ISD-DEMO2360_SOP16 Jumper Description

J2 – 2x5 10-pin connector connecting to ISD-ES_MINI_USB dongle

J3 – Audio jack directly connecting to ISD2360 PWM output

J4 – 2-pin speaker connector directly connecting to ISD2360 PWM output

J7 – Reserved, not to be used.

J8 – 2-pin power connector, to connect battery pack or external power supply

2.3. 2x5 connector pin assignment

The ISD2360 demo board can be connected to ISD USB dongle via a 2x5 10-pin connector. Table 2-1 shows the pin assignment.

Pin No	Pin Name
01	NC
02	RDY_BSYB/GPIO4
03	INTB/GPIO3
04	SSB
05	MOSI/GPIO0
06	MISO/GPIO2
07	SCLK/GPIO1
08	V33
09	GND
10	GND

Table 2.3-1 Pin Assignment for 2x5 connector

3. Operation Description

3.1. Software Installation

- **Software Download**

The ISD2360 user can use ***ISD-VPE2360*** (VPE stands for Voice Prompt Editor) GUI software to control the demo board, and fully evaluate the ISD2360 device.

The ISD-VPE2360 software is freely downloaded from Nuvoton website, or from the link below:
https://www.filesanywhere.com/FS/v.aspx?v=8a6e688761676eb6a4ad.

During the software installation, user will be prompted for username and password. The user should email Nuvoton ChipCorder team at ChipCorder@nuvoton.com, to request

the username and password. In the email user should provide the detailed company name and company address, city, including country name if outside of US. This information is required by Nuvoton to generate the username and password and to contact the user for future software updates.

- **System Requirements**

The ISD-VPE2360 is PC windows application software; it currently supports Windows XP, Windows 7- 32bit, and Windows 7- 64bit.

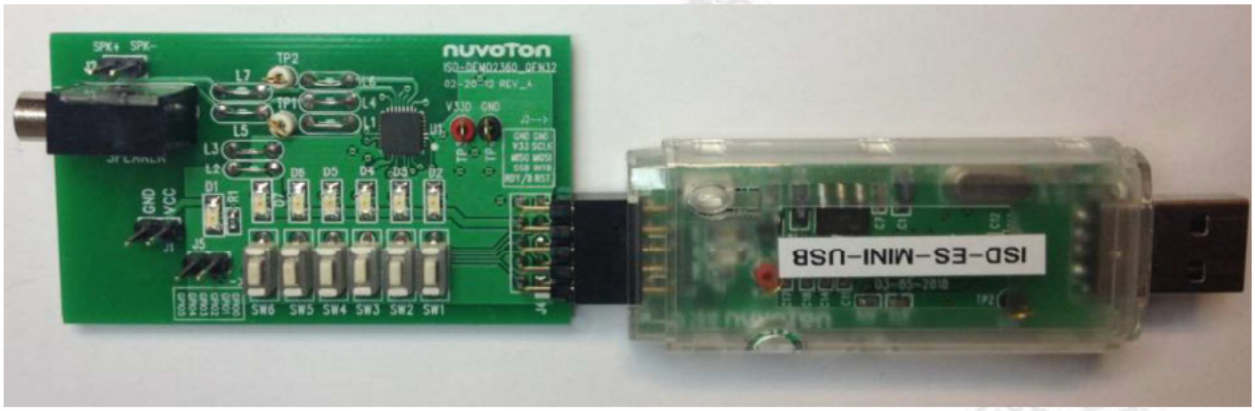
3.2. Operation under VPE

The user can follow the sequence below to launch the ISD2360 VPE and start evaluating the ISD2360 chip functionality with the ISD-DEMO2360 board.

- Connect a demo board to USB dongle
- Plug in USB dongle into a PC USB port
- Launch VPE

To connect demo board with the USB dongle, both board need to face up for the connection. Please refer to **Picture 3.2-1** Demo board connects to USB dongle board with both boards facing upbelow.

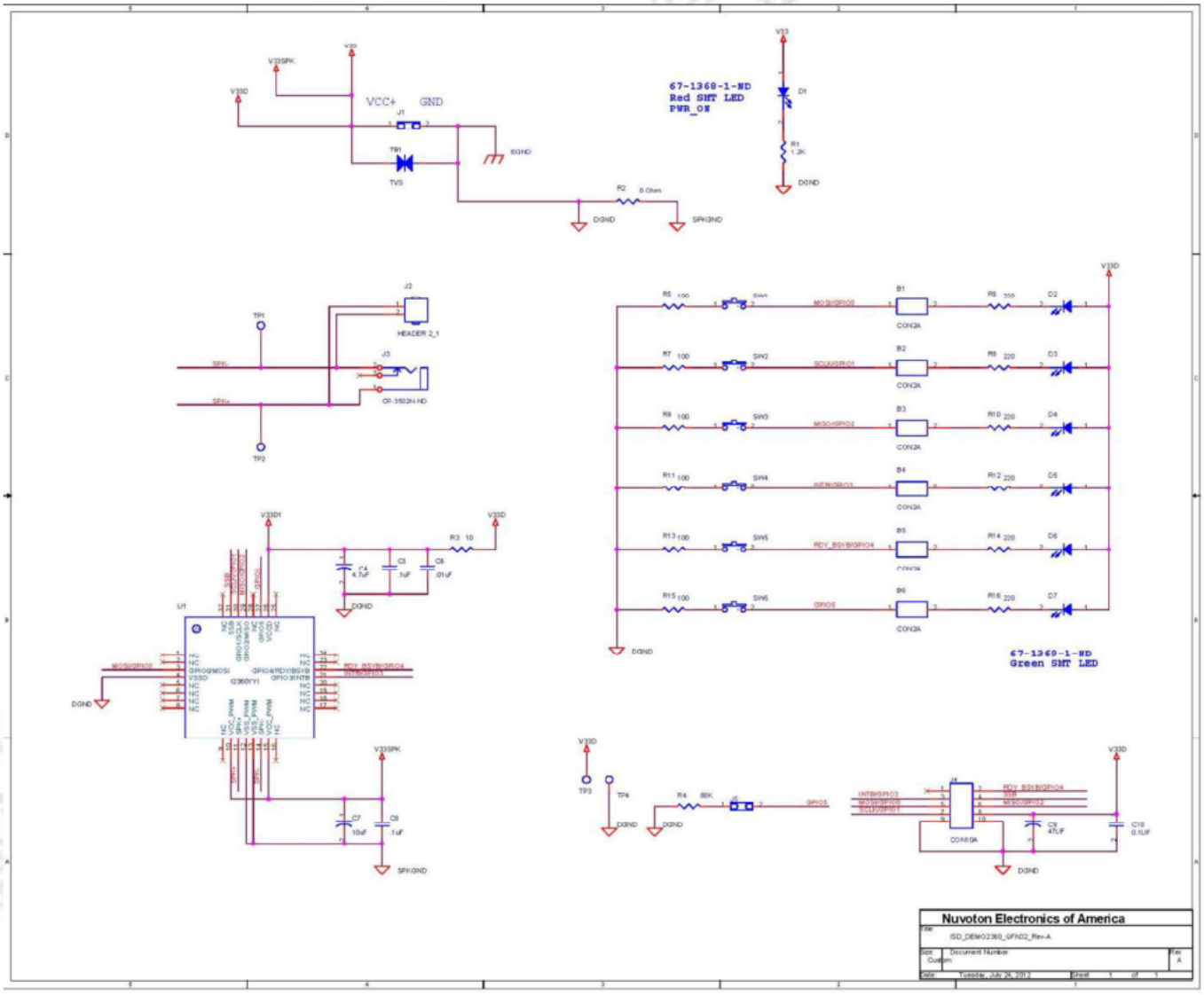
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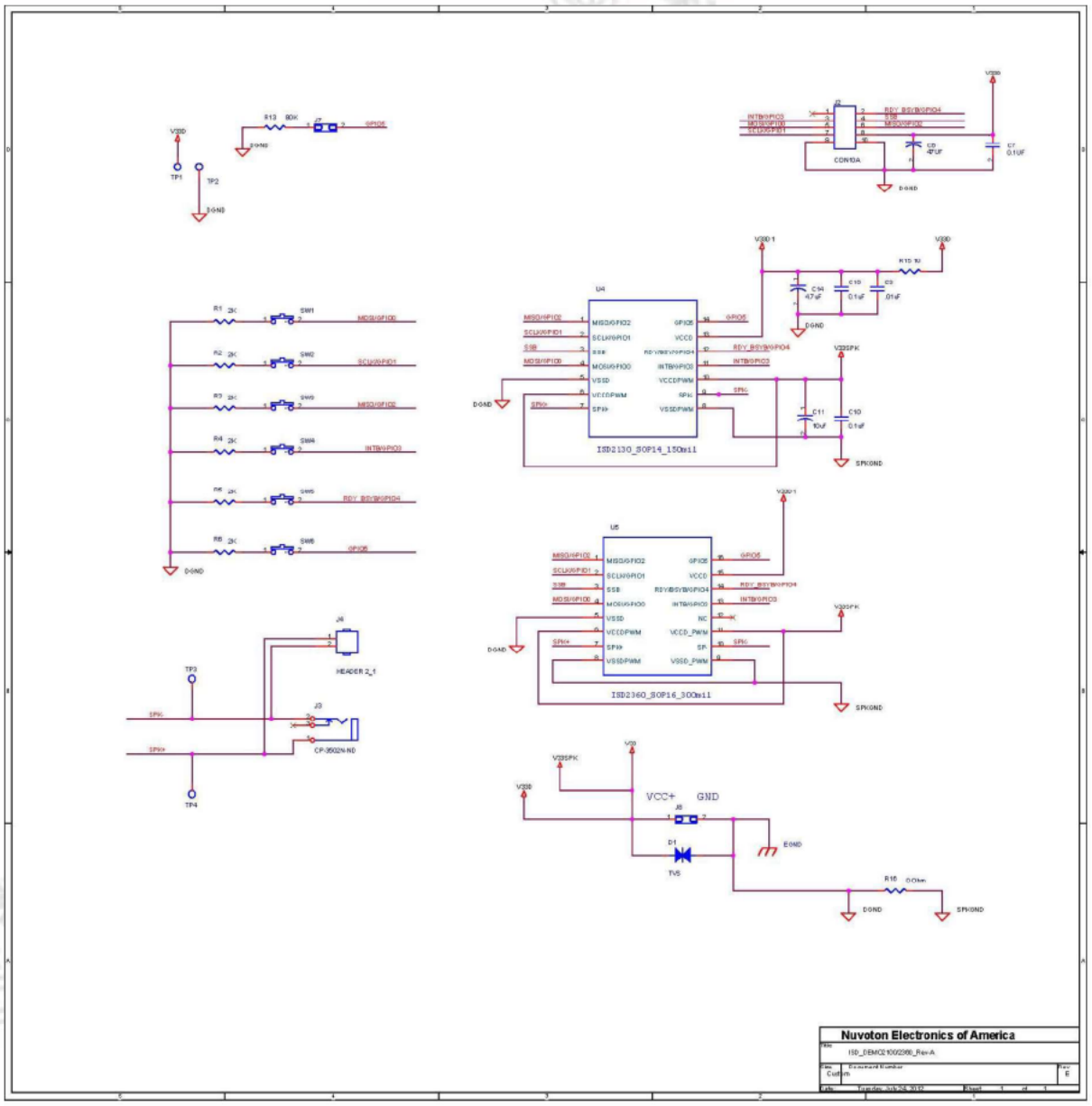
Picture 3.2-1 Demo board connects to USB dongle board with both boards facing up

4. ISD-DEMO2360 board schematic

4.1. ISD-DEMO2360_QFN32 schematic



4.2. ISD-DEMO2360_SOP16 schematic



5. Appendix: ISD-VPE Video Tutorial

There are ISD-VPE video tutorials available online which can help users who are new to the ISD-VPE GUI software. Users can access these video tutorials using the web links below:

- A Simple VPE project: https://www.youtube.com/watch?v=BXTa7Kaux0o
- A GPIO Trigger project: https://www.youtube.com/watch?v=XVDcPGpHtkI
- Record and playback project: https://www.youtube.com/watch?v=o-L-6L3TXvc

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6. Revision History

Version	Date	Description
1.0	Jan 15, 2013	First Release

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