MAX21000 Maxim Inertial Demo (MInD) Evaluation Kit

Evaluates: MAX21000 Gyroscope

General Description

The MAX21000 Maxim inertial demo (MInD) evaluation kit (EV kit) allows evaluating the performance of the MAX21000 ultra-accurate, low-power, 3-axis digital output gyroscope.

The MInD EV kit provides a complete ecosystem composed of hardware and software to evaluate the gyroscope using a PC.

Using the USB connection and a PC, it is possible to evaluate the main important parameters and configurations of the device.

Features

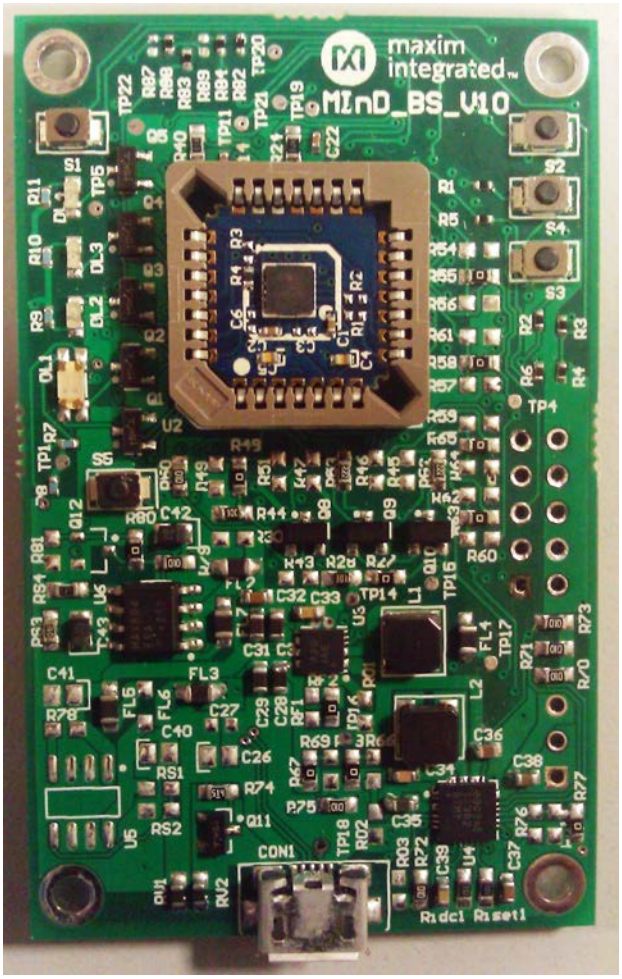
- Easy Evaluation of the MAX21000
- USB 2.0 Support
- Power Provided Through the USB
- Supply Available with Battery
- Windows®-Compatible Graphical-User Interface (GUI)
- RoHS Compliant
- Proven Schematics
- Proven PCB Layout
- Fully Assembled and Tested

MInD EV Kit Contents

- Assembled Circuit Board Including:
  - MAX21000
  - USB Pen with GUI and MAX21000 C Library
  - USB A-Micro-B Cable
  - (Optional) 3.7V Lithium-Polymer (Li-Poly) Battery

***Ordering Information* appears at end of data sheet.**

MInD EV Kit Photo



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19-6750; Rev 0; 7/13

maxim integrated™

MAX21000 MInD Setup

MInD does not require any particular setup. It is configured to work at 3.2V with a single supply for the MAX21000. See the schematics if different settings are required.

The current consumption is measured using the drop voltage on resistor R28 (20Ω). For a more accurate current estimation, measure the resistor and insert it in the corresponding box of the MInD tab of the GUI.

By inserting and removing STAMP from the PLCC28 socket, some electrical contact issues can be identified. These can be solved, improving the folding of the PLCC28 pins, as shown in Figure 1.

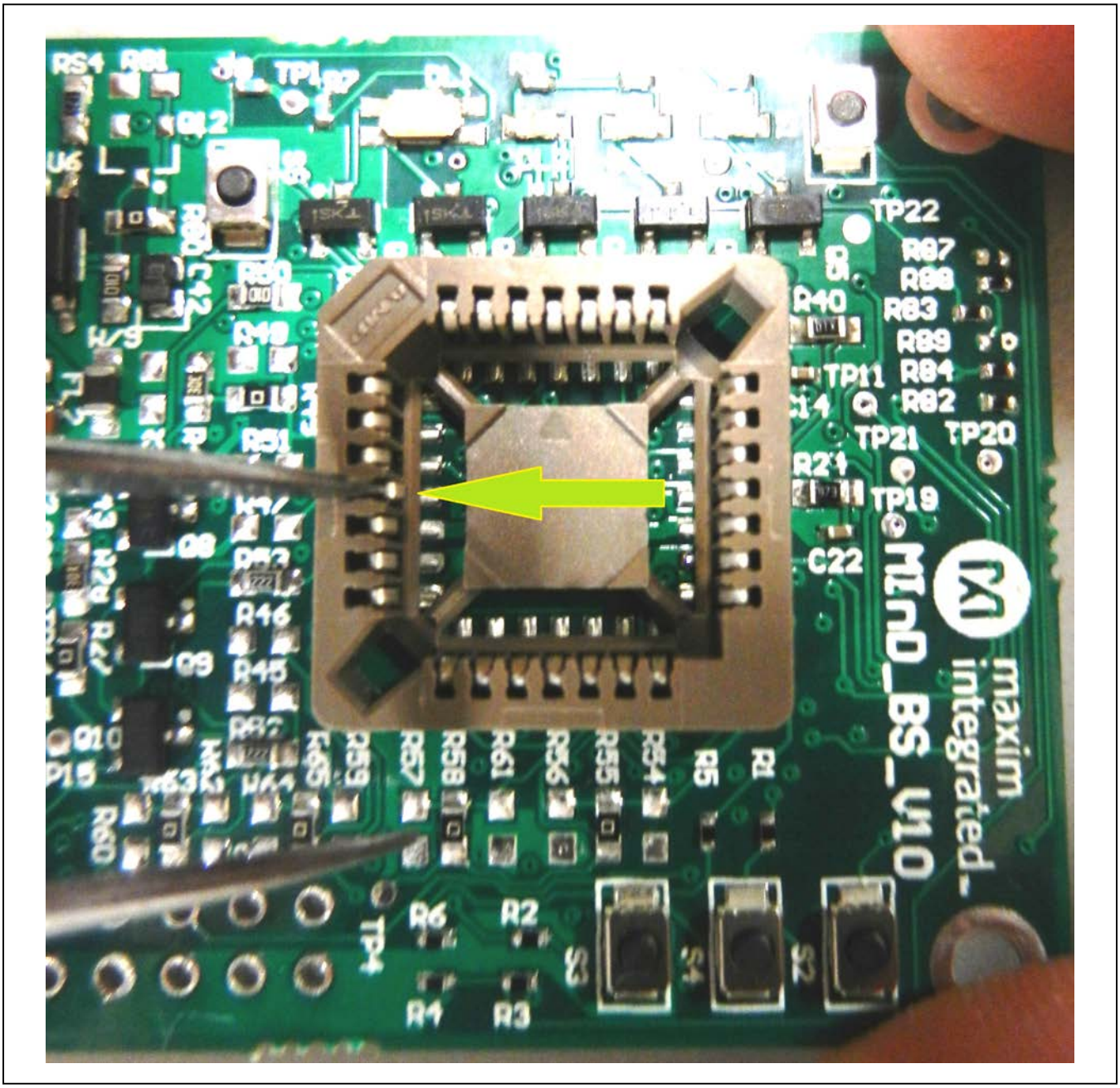

Figure 1. PLCC28 Folding for Electrical Contact Improvement

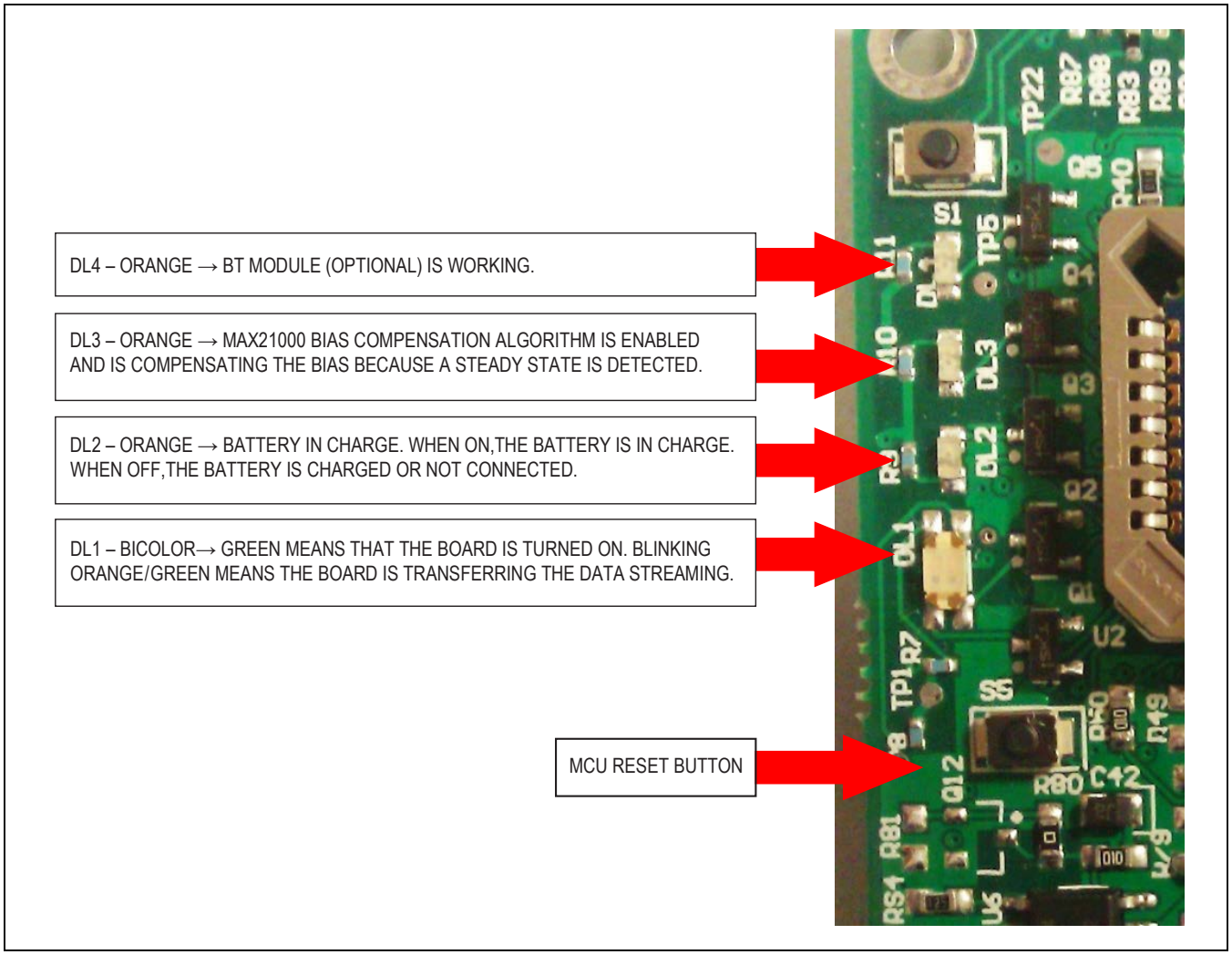

Figure 2. MInD is Provided with 4 LEDs for System Status Information and a Reset Button (the other 4 buttons are for future use)

Quick Start

Required Equipment

- MInD board (included)
- Windows XP®, Windows Vista®, or Windows® 7 operating system
- Spare USB port on PC
- Micro-USB cable (included)

Note: In the following sections, software-related items are identified by **bolding**. Text in bold refers to items directly from the install or EV kit software. Text in **bold and underlined** refers to items from the Windows operating system.

Figure 3. Software Install (Step 1)

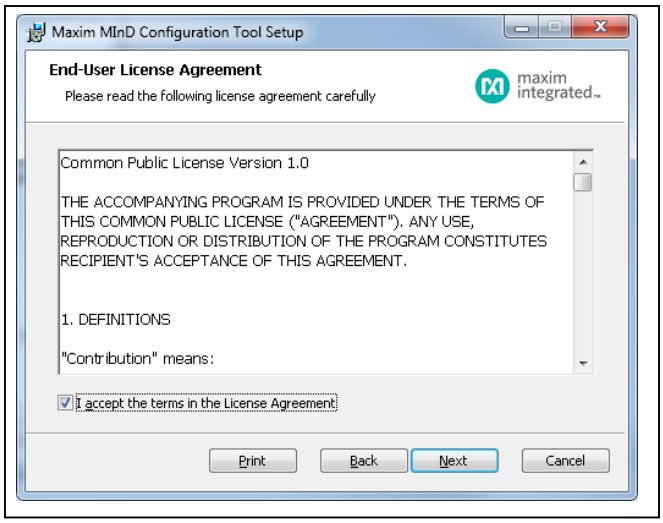

Figure 4. Software Install (Step 2)

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Installation Procedure

Software

To download the software, visit **www.maximintegrated.com/MAX21000MInDEVKit_Software**. Follow the steps below to install the MInD software:

1) From the **installer** folder, execute the **Setup.exe** file, then click **Next** to start the wizard (Figure 3).
2) Accept the terms in the License Agreement and click **Next** (Figure 4).
3) Select the **installation folder** and click **Next** (Figure 5).
4) Click **Install** to confirm the previous settings and start the installation (Figure 6).

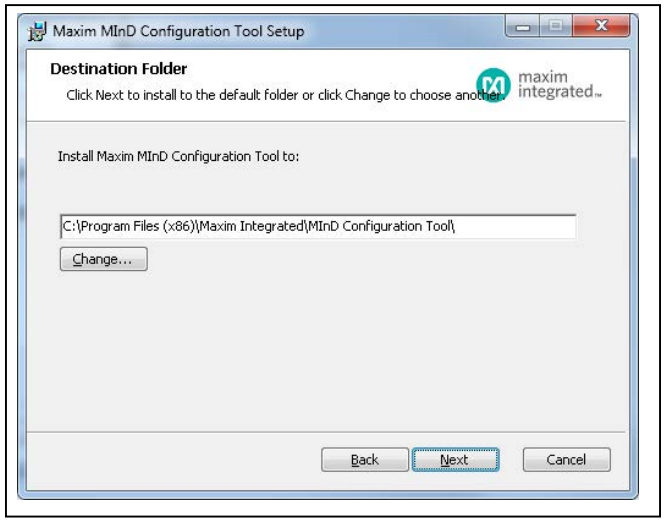


Figure 5. Software Install (Step 3)

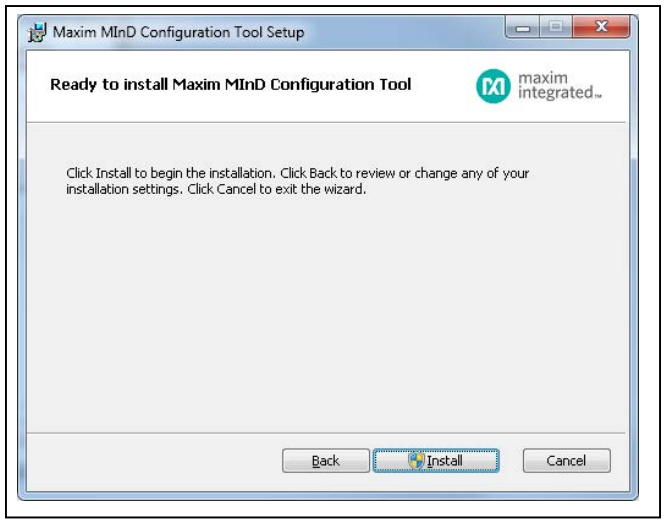


Figure 6. Software Install (Step 4)

5) During the installation procedure, the Device Driver Installation Wizard is executed. Click **Next** to start the installation of the drivers (Figure 7).
6) Wait for the completion of the installation (Figure 8).
7) If the installation is completed successfully, a green checkmark should appear next to the two drivers (Figure 9).
8) At the end of the installation, click **Finish** to terminate the procedure (Figure 10).

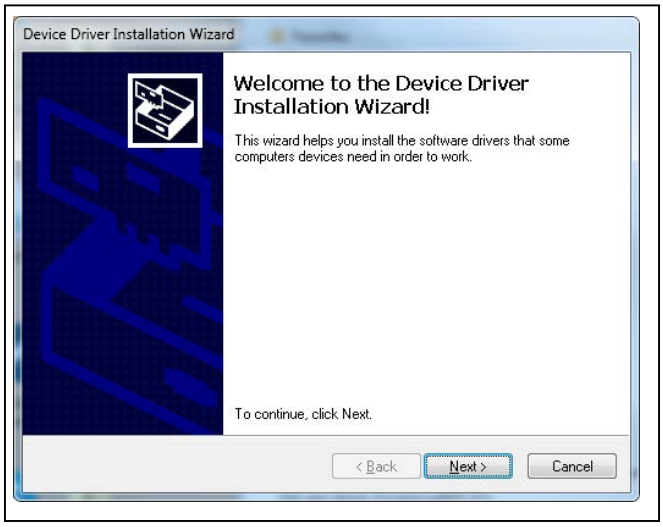


Figure 7. Driver Install (Step 1)

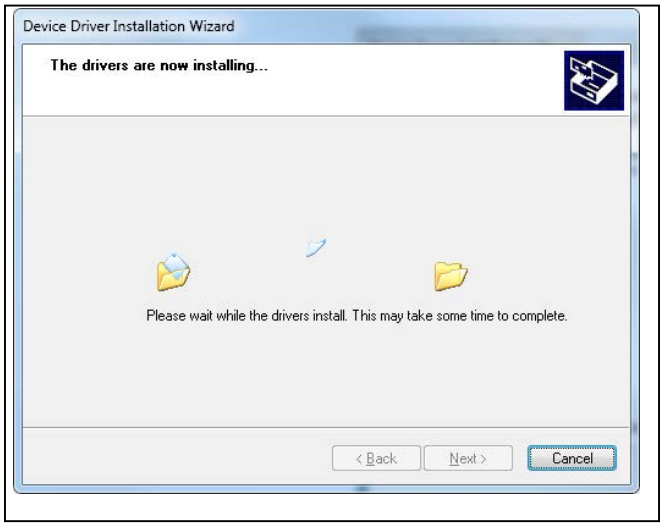


Figure 8. Driver Install (Step 2)

Figure 9. Driver Install (Step 3)

Figure 10. Software Install (Step 4)

Launch the MInD Software

After installing the software, an icon on the **desktop** and a new folder on the **Start** menu are created. To launch the MInD software, do the following:

- Double-click on the MInD.exe icon on the desktop.
- Go to **Start** >> **All Programs**. Look for the **Maxim\ MInD** folder and click on MInD.exe inside the folder.
- Go to the installation folder and double-click on MInD.exe.

After the execution of one of the previous operations, the MInD application window is opened (Figure 11).

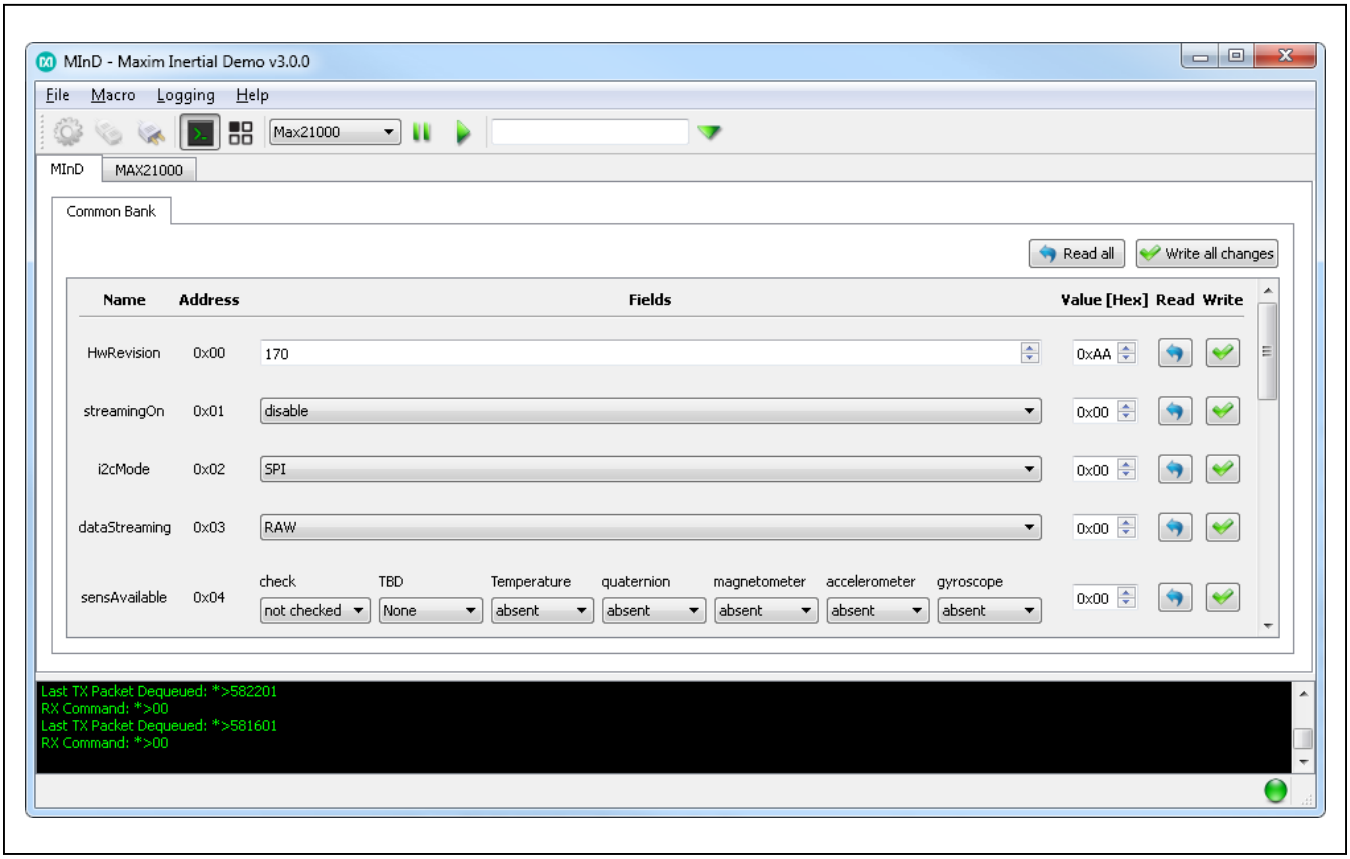


Figure 11. MInD Application Main Window

Detailed Description of the MInD Software

Device Connection

To establish a connection with the MInD board, follow the steps below:

1) Click on the **Select the MInD device** button on the application toolbar (Figure 12).
2) The **Device settings dialog** is shown. Select the appropriate COM port following the example in Figure 13 (note that the COM port name may be different), and click on the **OK** button.
3) Finally, click on the **Connect the selected MInD device** button on the application toolbar to connect to the selected device (Figure 14).

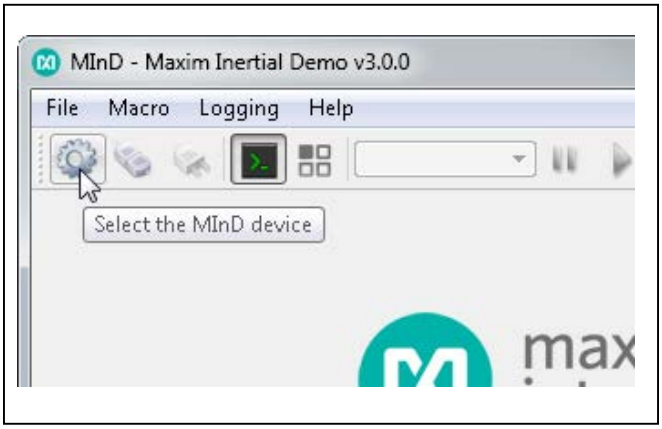


Figure 12. Select the MInD Device Button

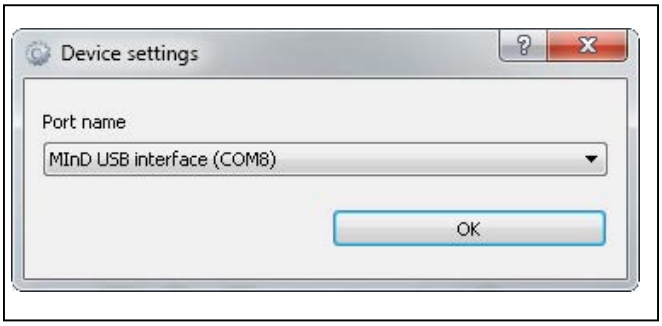


Figure 13. Device Settings Dialog

MInD Configuration

When the connection is established, you can set its registers, changing the values of the fields in the **Tabs frame** of the GUI window (Figure 15). Available parameters are described as registers with address and value. Some are read only.

The **MInD** tab contains the configuration parameters of the evaluation board, as shown in Figure 15. These registers are shown in Table 1.

Example: How to set the **FULL SCALE** (this example is for the MAX21000 device):

1) Select the **MAX21000** tab (Figure 16).
2) Select the **Bank 0x00** tab and identify the **SENSE_CFG_0** register.
3) Click on the **GYRO_FSC** field and select the desired value.
4) Finally, click on the green checkmark on the right of the field to confirm the change (Figure 17).

MAX21000 Configuration

The **device** tab represents the register map of the device. All the registers are the 1:1 mapping of the internal registers and banks of the sensor.

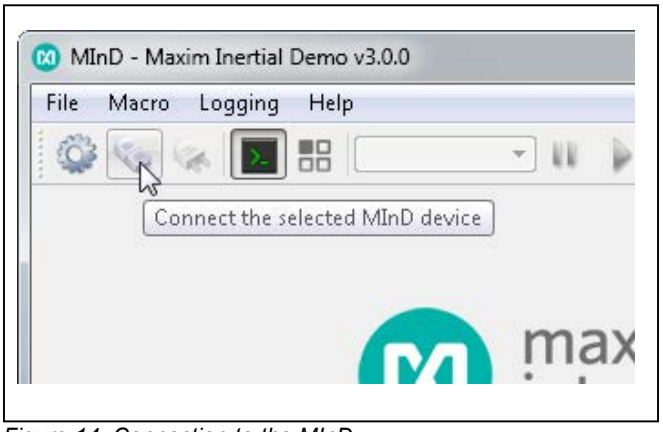


Figure 14. Connection to the MInD

Table 1. MInD Registers

REGISTER	DESCRIPTION
HwRevision	Read-only register containing the hardware version of the connected MInD board.
firmware	Read-only register containing the firmware version running on the connected MInD board. The four most significant bits identify the major version, the four less significant bits identify the minor version.
streamingOn	Read/write register to select the streaming mode: • **disable:** Disable the streaming. • **enable USB:** Enable the streaming through the USB interface. • **enable BT:** Enable the streaming through the Bluetooth interface.
i2cMode	Read/write register to select the communication protocol used by the MInD firmware to communicate with the MAX21000: • **SPI:** SPI protocol. • **I2C:** I^2C protocol.
dataStreaming	Read/write register to select the protocol of the streaming. For now, only the RAW protocol is available.
sensAvailable	Read/write register to select the data sent by the streaming. Writing 1 on the **check** flag triggers the autodetection of the available data.
pollingOrInt	Read/write register to select the synchronization mode between the MInD firmware and the MAX21000: • **polling:** The firmware waits for a change in the internal DATA_READY field of the SYSTEM_STATUS register. • **interrupt:** The firmware uses the interrupt event generated by the MAX21000 through the interrupt pin.
Advanced	Read/write register to set the following advanced functions: • **Bias Comp:** Field to enable/disable the bias compensation algorithm. • **useFIFO:** Field to select if the data are taken directly from the output of the device or from the FIFO.
useQuat	Read/write register composed by two fields: • **quatType:** Field to select the quaternion estimation algorithm. For now, only the Mag Acc Gyro Integrated Fusion (magif) is available. • **resetQuat:** *Writing run*, the current position of the MInD board is set as the front spatial position.
spiClock	Read/write register to set the clock frequency of the SPI interface. The real value is computed as *register_value x 100kHz*.
i2cClock	Read/write register to set the clock frequency of the I2C interface. The real value is computed as *register_value x 2kHz*.
Voltage and Resistor	Read/write registers containing the real values of the resistor R28 and the output voltage of the DC-DC. These values are used by an ADC to measure the current consumption. Set a more accurate value of these parameters to improve the measurement.
MAX21000	Read-only register containing the ID of the MAX21000.

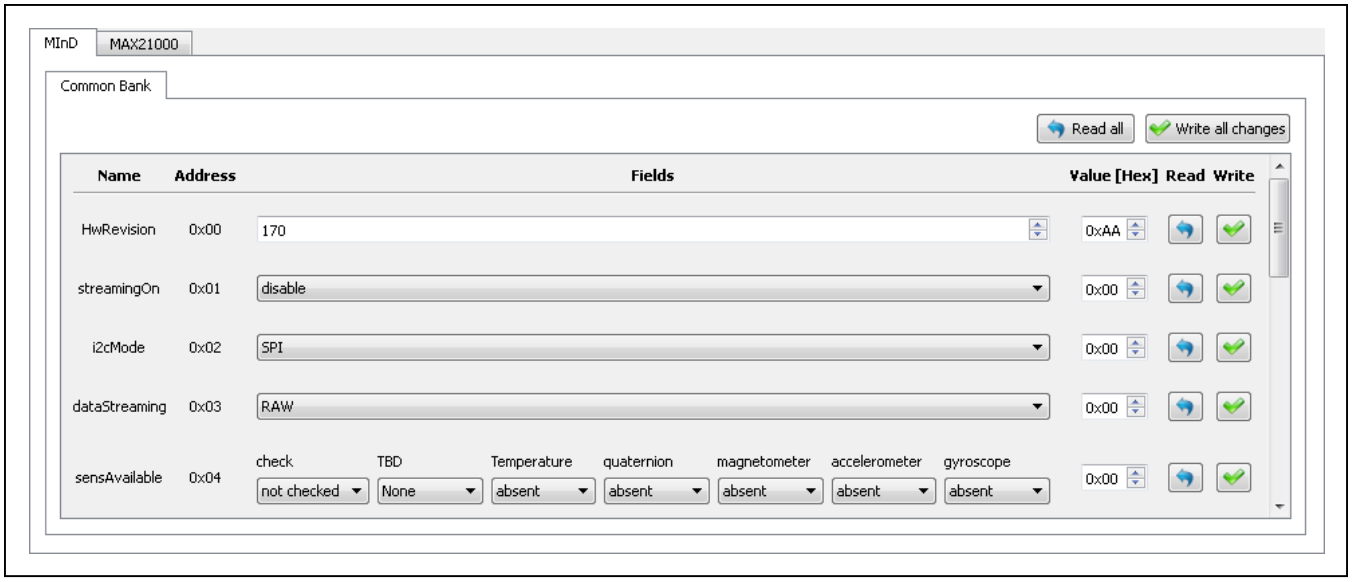


Figure 15. MInD Tab in the Main Window

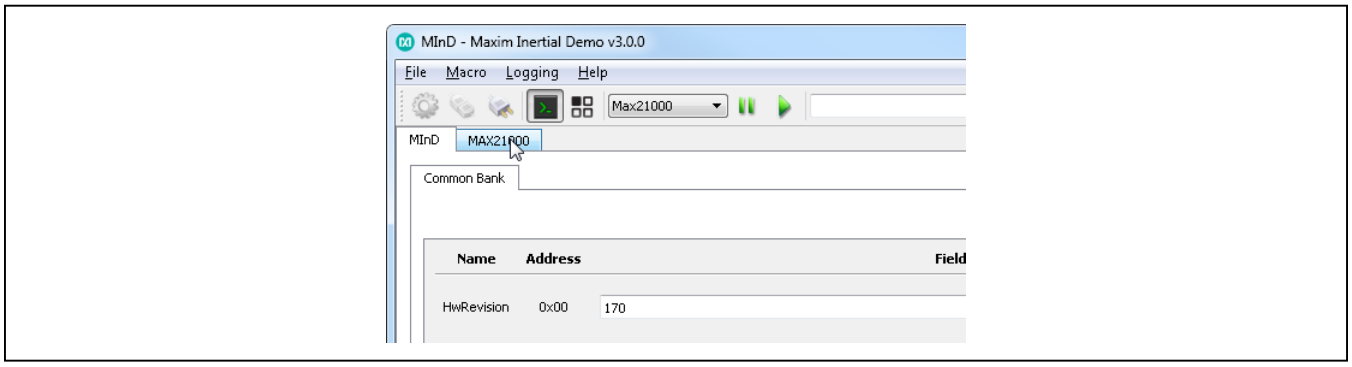


Figure 16. MAX21000 Tab Selection

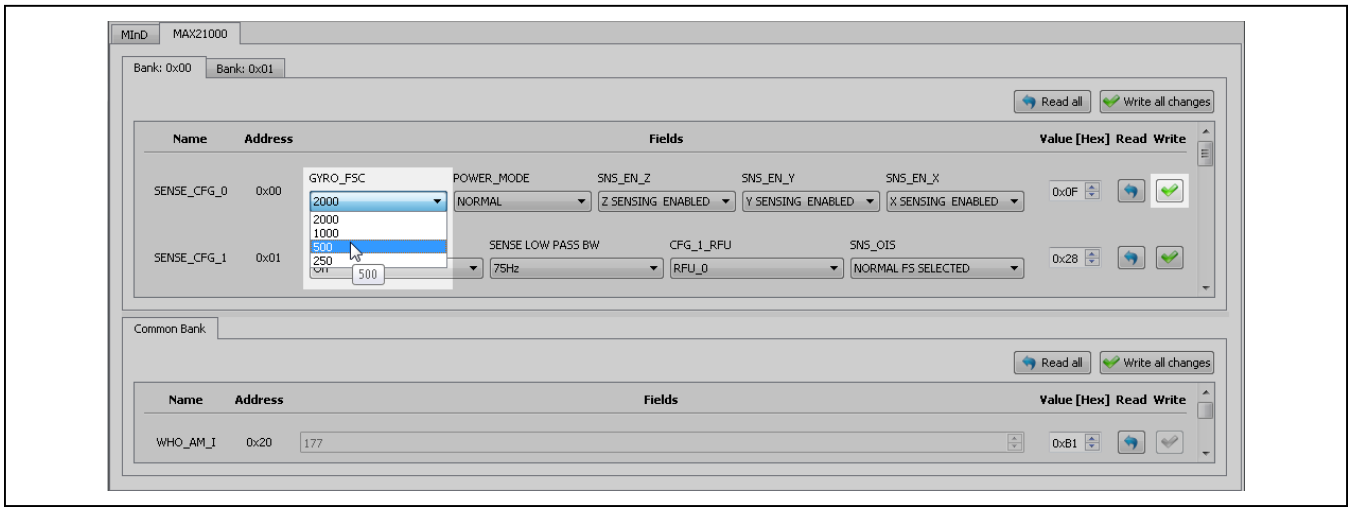


Figure 17. Sets the Gyroscope to Full Scale on the MAX21000

Toolbar

The toolbar is located on the top of the MInD GUI window (Figure 18).

A short description of each toolbar button follows:

- The **Connection management** buttons allow the user to select a MInD device and to open/close a connection to it.
- The **Console** button shows/hides the console window on the bottom side of the main window. The console reports the commands exchanged by the software and the device and the decoded streaming output (if active).
- The **Views** button launches the **Views panel** containing a set of graphical visualizations of the sensors data (see the *Views Panel* section).
- The **Macro management** tool permits the user to select a macro and launch its play/pause function (see the *Macro* section).
- The **Direct commands** tool permits the execution of raw commands on the MInD device.

Views Panel

This panel contains a set of graphical visualizations of the sensors data (Figure 19).

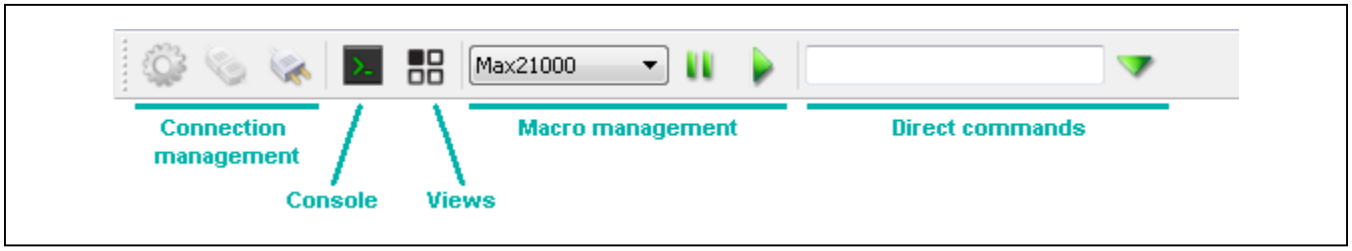


Figure 18 Toolbar

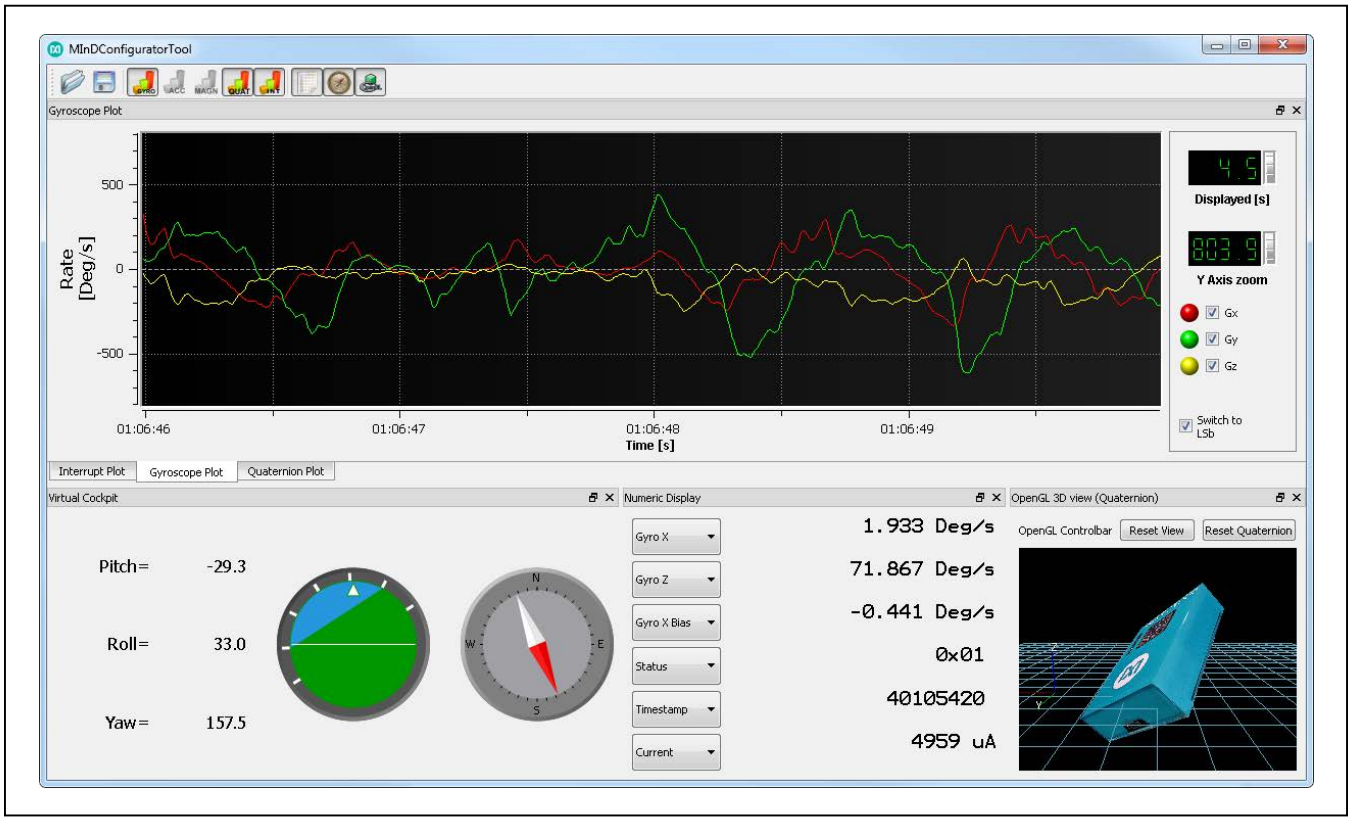


Figure 19. Views Panel

Using the **Views** panel, you can select among different dockable views by clicking on the related button of the toolbar on the top of the window. The available views are:

- **Gyroscope Plot:** This view shows a plot for the gyroscope data (Figure 20).
- **Quaternion Plot:** This view shows a plot for the quaternion components (Figure 21).
- **Interrupt Plot:** This view shows a plot for the interrupts status (Figure 22).

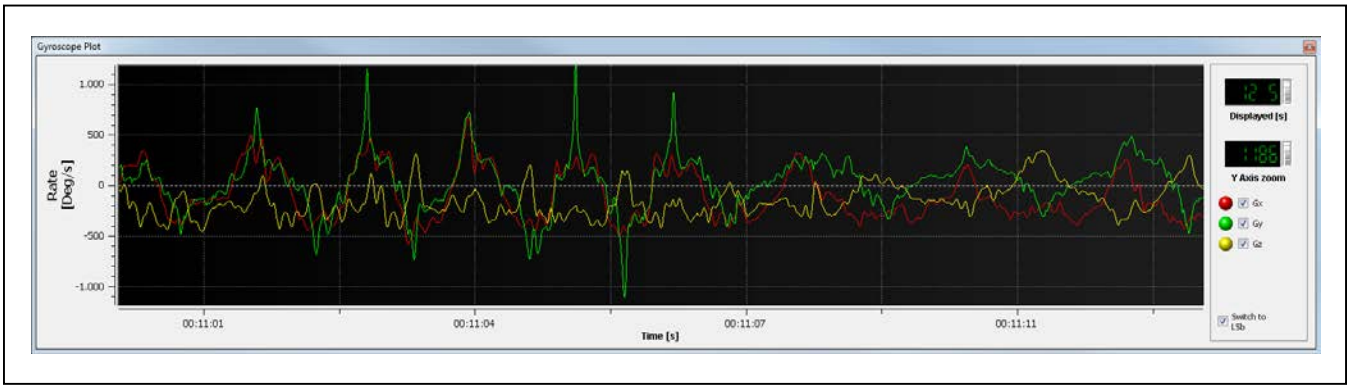


Figure 20. Gyroscope Plot

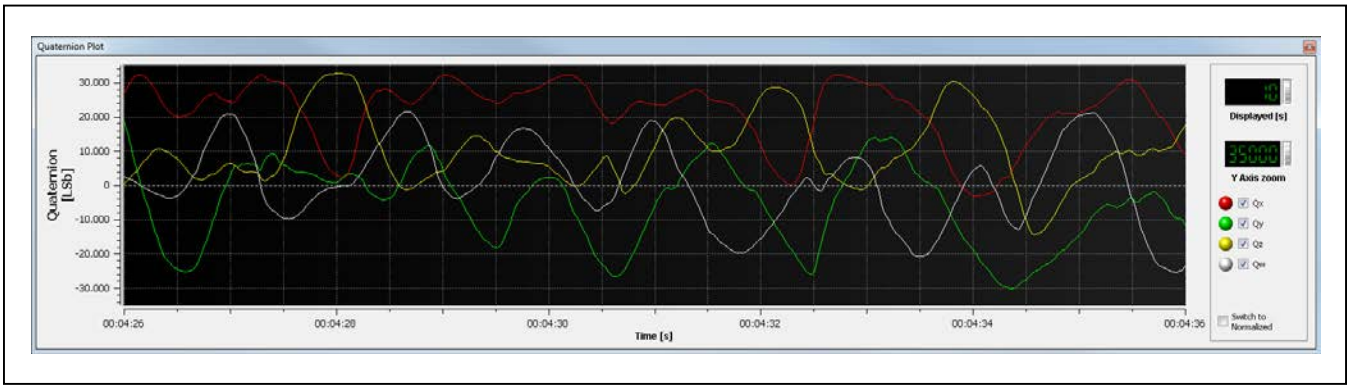


Figure 21. Quaternion Plot

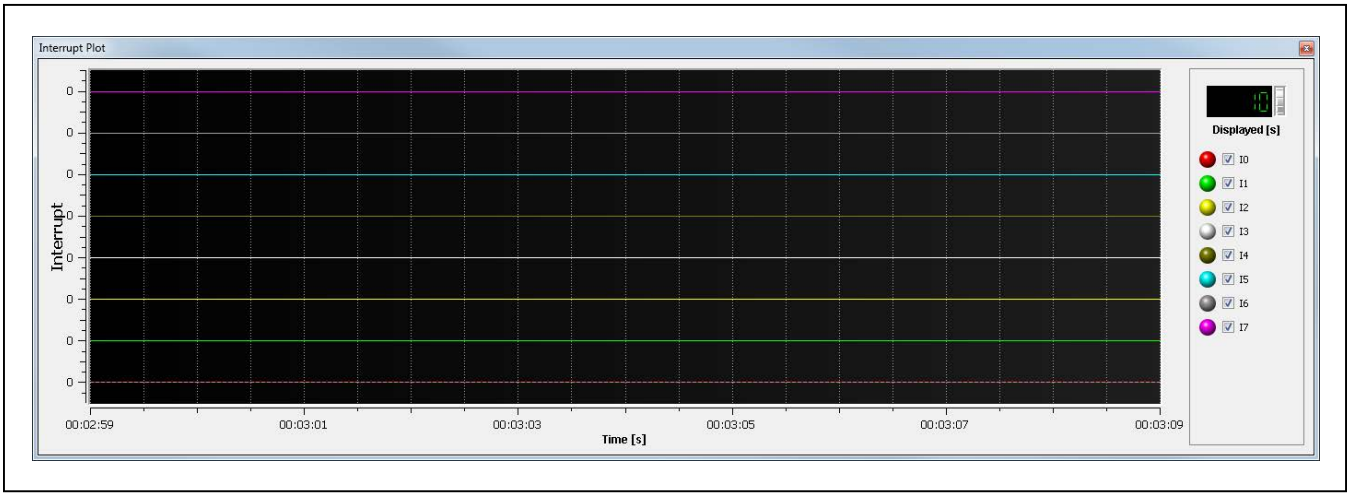


Figure 22. Interrupt Plot

- **3D View:** This view shows a 3D representation of the current position of the MInD device (Figure 23).
- **Virtual Cockpit:** This view contains the angular position information in terms of yaw, pitch, roll, and a representation of them as a virtual flight deck (Figure 24).
- **Numeric Display:** This view permits the user to visualize the current value of some information that can be chosen among a set of possibilities (Figure 25).

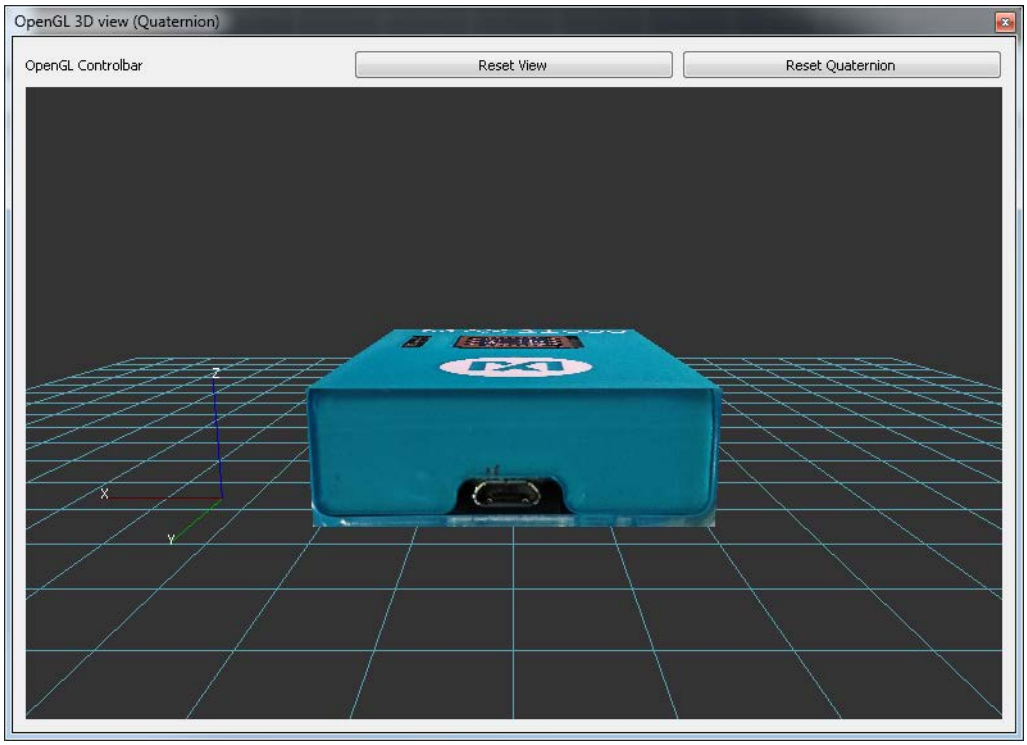


Figure 23. 3D View

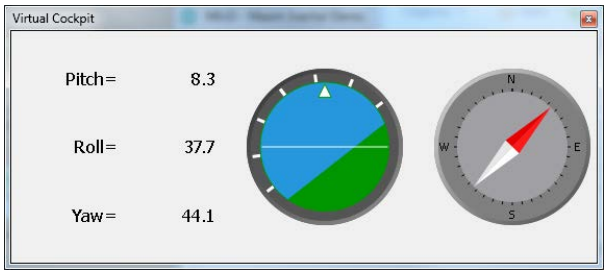


Figure 24. Virtual Cockpit

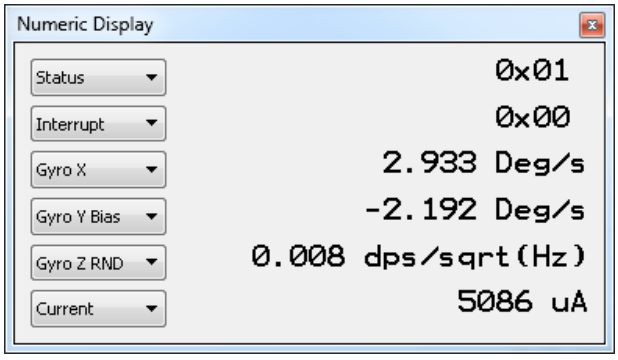


Figure 25. Numeric Display

Macro

A macro is a set of commands that can be executed through the selection of its identifier. The macro feature provided by the software permits the user to run an existing macro, record a new one, and save the current configuration as a macro.

Each macro is composed of two functions: play and pause. The play button on the **Macro management** section of the toolbar (see the *Toolbar* section) triggers the execution of the play function; the **Pause** button triggers the execution of the pause function. The macro to be executed can be selected using the drop-down list in the **Macro management** section.

To play a macro:

- Select the desired macro from the **Select the macro** drop-down list in the **Macro management** section of the toolbar.
- Click the **Play button** in the **Macro management** section of the toolbar to execute the play function of the macro.
- Click the **Pause button** in the **Macro management** section of the toolbar to execute the pause function of the macro.

Recording a macro means that every write operation executed using the **Tabs frame** is saved in a macro. Note that the write operation executed using the **Direct commands** tool are not recorded.

To record a macro:

- Open the **Macro menu**.
- Click on the **Record a macro** menu entry.
- Insert the name of the new macro in the dialog window and click **OK**.

  If a valid name is set, the recording starts.

  If the name is not valid, an error message appears and the name is requested again.
- Execute all the write operations you want to store.
- Open the **Macro menu**.
- Click on the **Record a macro** menu entry to stop the recording.

When the recording is terminated, all the write operations are stored in the play function of the created macro. To recall the recorded macro, select it from the **Select the macro** drop-down and click the **Play** button.

The macro feature also permits the user to save the current status of the registers in a macro.

To save the current register's status as a macro:

- Open the **Macro menu**.
- Click on the **Save as macro…** menu entry.
- Insert the name of the new macro in the dialog window and click **OK**.

  If a valid name is set, the register status is saved in a new macro.

  If the name is not valid, an error message appears and the name is requested again.

The **Macro management** tool also provides an interface to manage the macros. The **Advanced macro manager** interface permits the user to manually create a new macro, edit, modify, or delete an existing macro, and to check the syntax of a macro.

A macro in the MInD software is a set of instructions written in a Javascript-like language. Almost all the basic instructions of Javascript are provided, so refer to a Javascript reference guide for a list of available instructions. To add the software functionalities, a new object called *mind* has been integrated. This object provides the following functions:

- *ReadRegister(<device name>, <bank address>, <register address>)* : returns a register value;
- *WriteRegister(<device name>, <bank address>, <register address>, <data to write>)* : write a value on a register;
- *print(<string to print>)* : prints the specified string in the Output text area.

Some other external functions could be released together with the software; you can find their definition in the utilfunc.js file on the root installation folder. Currently, only the *sleep(time)* function is provided; it introduced a delay of time ms in the execution. For an example of code, see Figure 26.

To open the **Advanced macro manager:**

- Open the **Macro menu**.
- Click on the **Advanced macro manager** menu entry.

Figure 26 shows the **Advanced macro manager** interface.

The interface is composed by a toolbar on the top that provides all the functionalities of the **Advanced macro manager**, the list of available macros on the left, a text editor to show the macro content on the right, and a debugging output text area on the bottom.

The toolbar offers the following functionalities (from left to right):

- Create a new macro: Creates an empty macro and adds it on the list of available macros.
- Save the current macro: Saves the currently edited macro.
- Delete a macro: Deletes the currently selected macro.
- Check macro syntax: Checks if the syntax of the currently edited macro is correct.

Figure 26 shows an example of macro, which increments the value of the SENSE LOW PASS BW field of the SENS_CFG_1 register every 500ms.

Note that the behavior of the **Play button** of the **Advanced macro manager** is different from the behavior of the **Play button** of the main window, in that it executes the script as is, without calling a specific function; so, if you want to debug a function you have to call it inside the code (as shown in the example). When the debugging is complete, you should delete the call instruction.

Maxim Integrated strongly suggests that you write your code inside a play or pause function, in order to permit the execution from outside the **Advanced macro manager**.

Logging

The logging feature permits the user to save the captured data from the MInD device to a desired text file. The logging options are available by clicking on the **Logging menu** at the top of the GUI window (Figure 27).

Clicking on the **Configure** menu entry allows the user to select the destination file for the logging information and the fields to be saved on the destination file, as shown in Figure 28.

Clicking on the **Start/Stop** menu entry allows the user to enable/disable the logging on file.

Note: If you are planning to execute a long-time logging, it is suggested to keep the 3D view closed (see the *Troubleshooting* section for details).

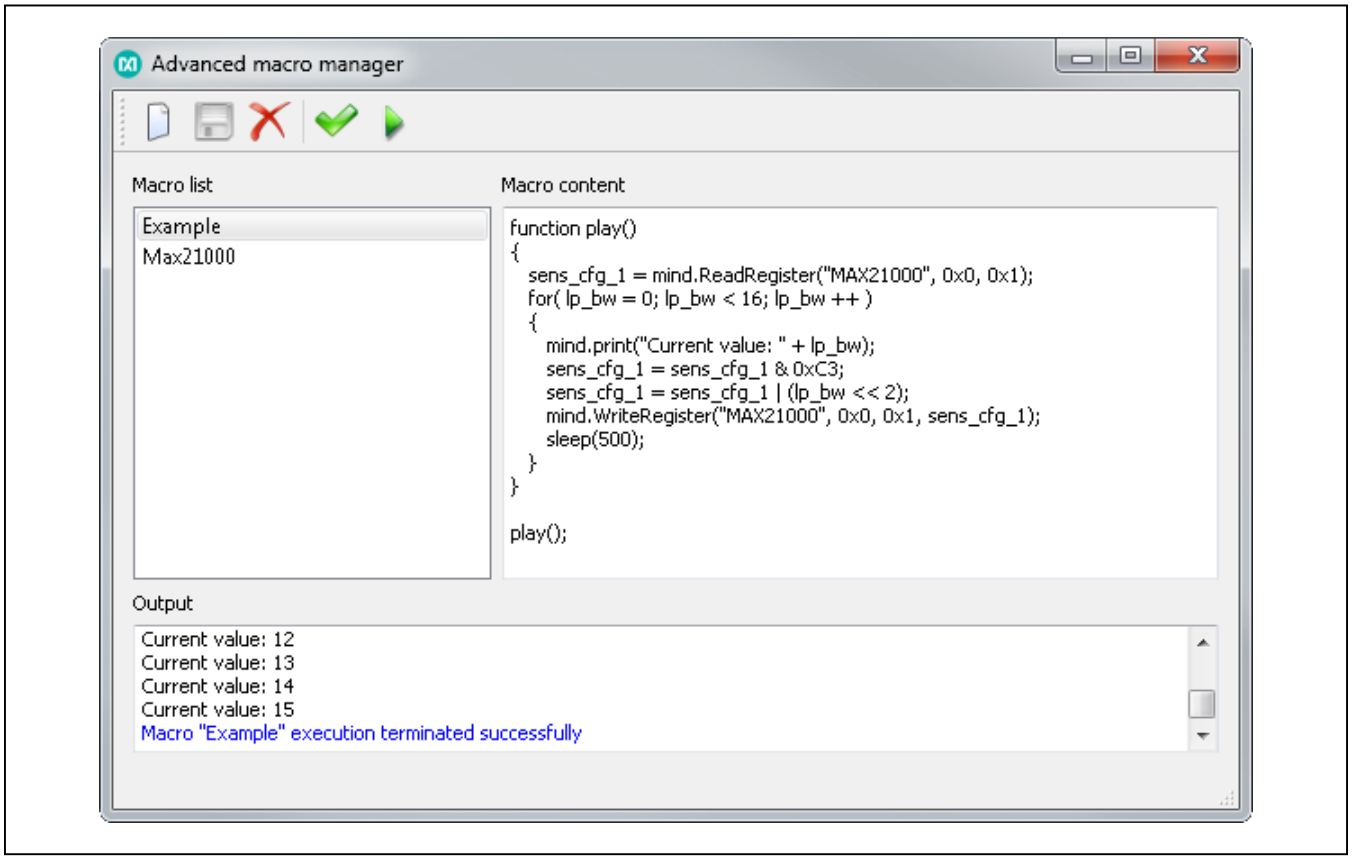


Figure 26 Advanced Macro Manager Interface

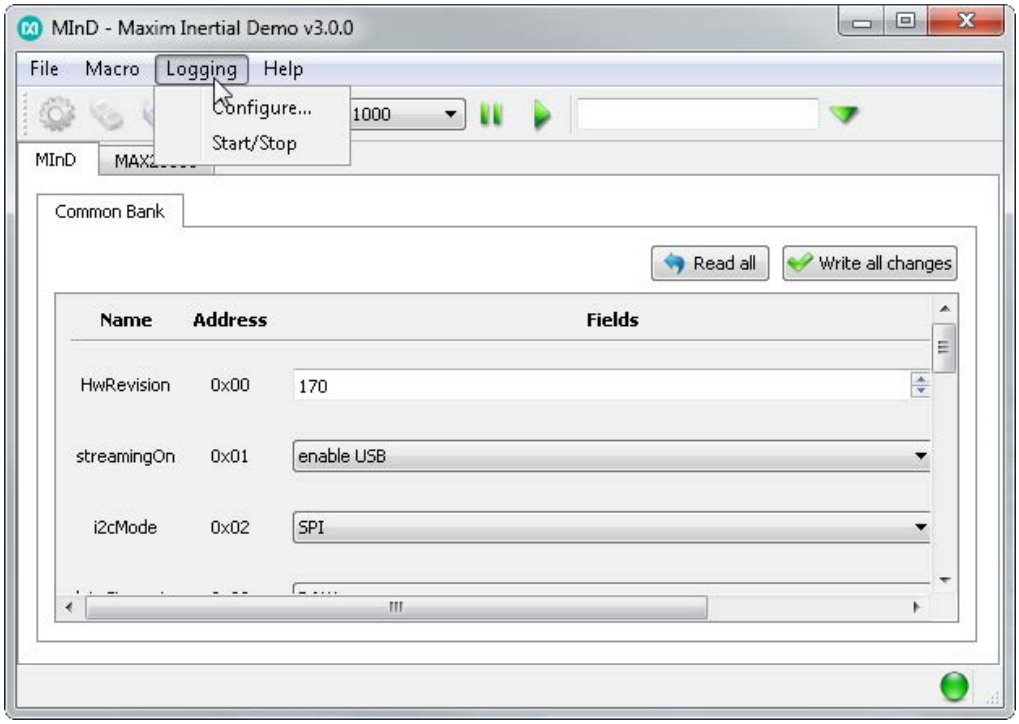


Figure 27. Logging Menu

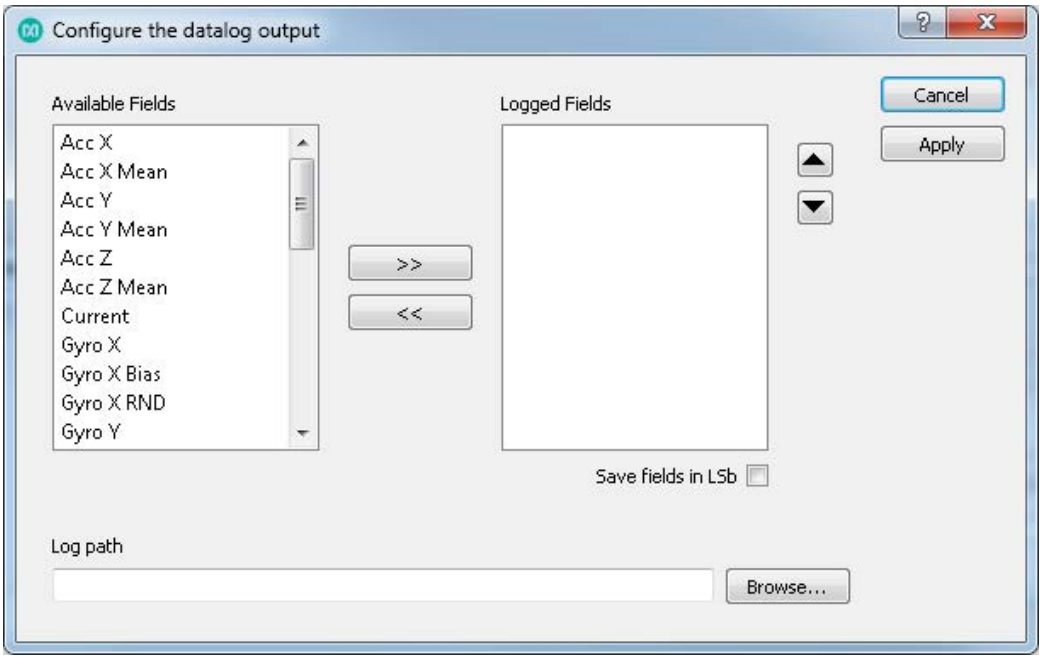


Figure 28. Log Configuration Dialog

Upgrade the Firmware

To upgrade the firmware, open the **Help** menu and click on **Upgrade the firmware…**, as shown in Figure 29.

This operation closes the MInD configuration tool, so a confirmation is requested, as shown in Figure 30.

Click **Yes** to close the MInD configuration tool and open the upgrader (Figure 31).

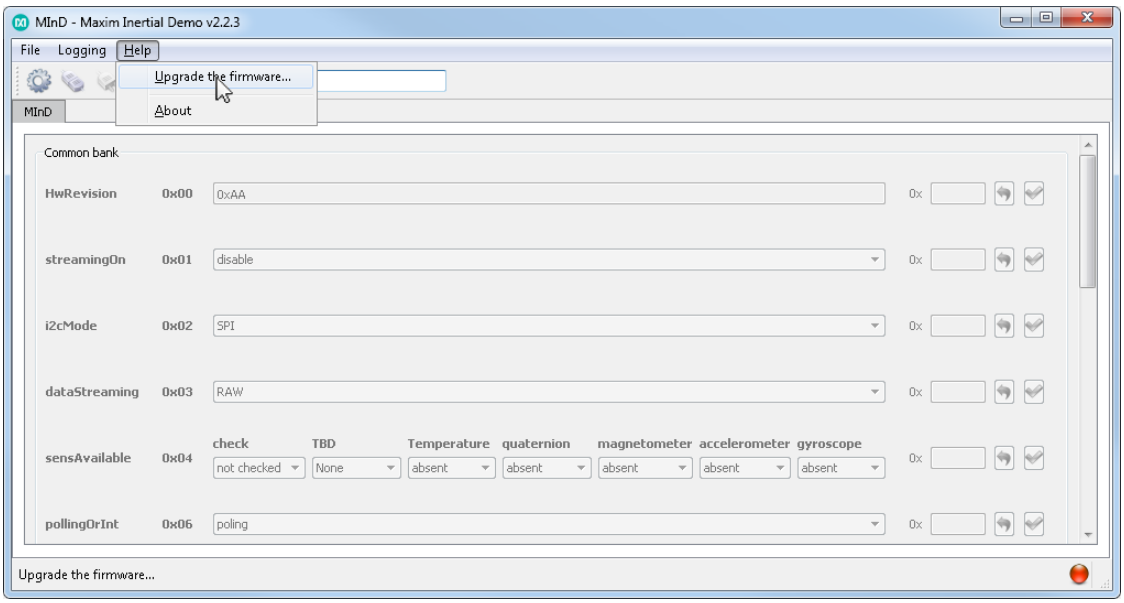


Figure 29. Open the Firmware Upgrader

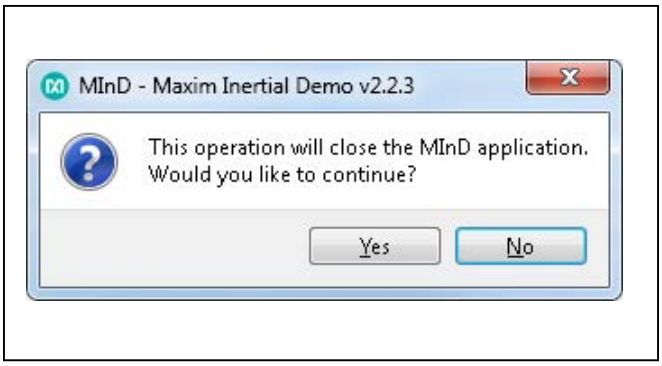


Figure 30. Confirmation Message

Figure 31. MInD Upgrader Main Window

It contains the following components:

- **List of COMs**: Shows a list of connected MInD devices.
- **Refresh button**: By clicking on this button, the user can refresh the content of the **List of COMs** component.
- **Upgrade file**: Permits the user to select the new firmware package. The extension of the firmware package file is *.mindu*.

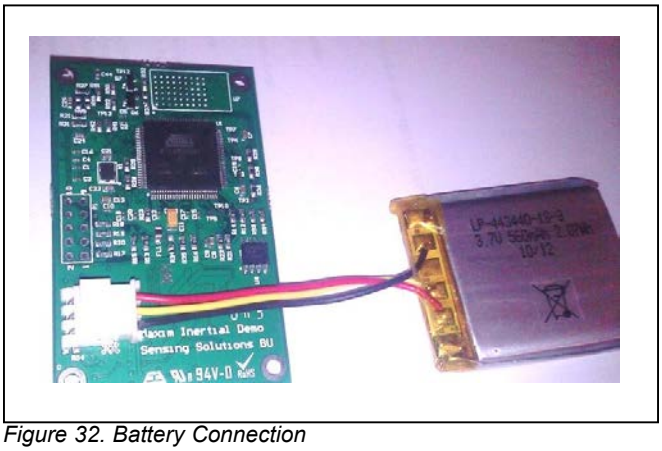


Figure 32. Battery Connection

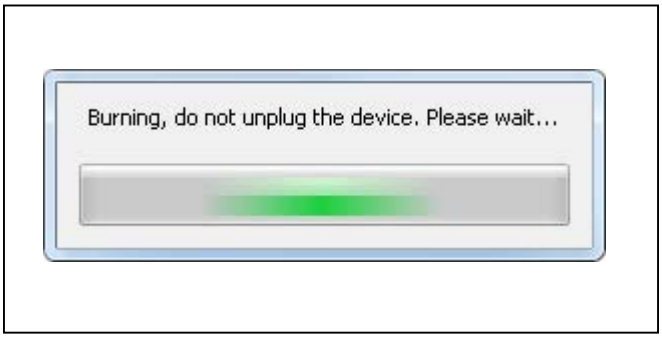


Figure 33. Waiting Bar

- **Upgrade button**: This button is enabled once all the required information is provided (COM port and upgrade file); clicking on it starts the upload of the new firmware.

The steps needed to upgrade the firmware are:

1) Plug the battery to the board, as shown in Figure 32, and then connect the MInD device to the PC using a micro-USB cable.
2) Select the COM port of the MInD device you want to upgrade. Use the refresh button to update the list, if necessary.
3) Click the **Browse…** button in the *upgrade file* area to select a <MInDFW_x_y.mindu> firmware package file.
4) Click the **Upgrade** button to start the uploading. During the upgrading, a “waiting” bar is shown (Figure 33). Wait until this bar disappears.
5) When the uploading is terminated successfully, the message shown in Figure 34 appears. If a failure message appears, see the *Troubleshooting* section.
6) Click **OK** to terminate the upgrading process.

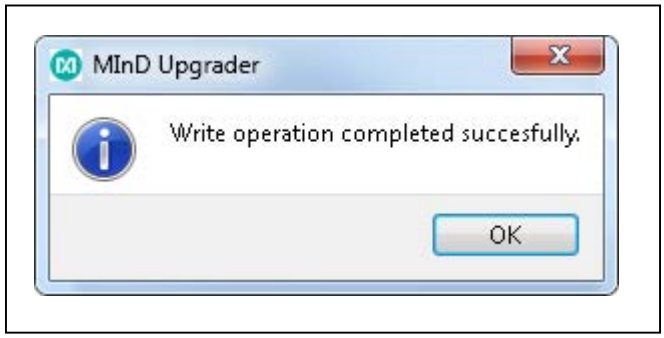


Figure 34. Completion Message

Troubleshooting

The EV kit should work on the first try directly out of the box. In the rare occasion that a problem is suspected, see Table 2 to help troubleshoot the issue.

Table 2. Troubleshooting

ISSUE NO.	SYMPTON	CAUSE	SOLUTION
1	When I execute the 3D view, everything goes very slow.	The 3D view uses some graphical libraries that might not be compatible with old graphic cards or with obsolete drivers.	Try to improve the performance or update the drivers of your graphic card.
2	If I keep the 3D view running, the physical memory consumption increases continuously.	The 3D libraries cause memory leakage with some graphical cards.	This problem has not been solved yet. In case of long running (e.g., if you use the device to log data for hours), it is suggested to keep the 3D view closed.
3	The LEDs are all red and the firmware upgraders do not show the device in the List of COMs components.	The MInD device is stuck in programming mode.	1) Connect the battery. 2) Select the **Recovery** tab (Figure 35). 3) Select the COM port of the connected device (Figure 36). 4) Click the **Recovery Board** button. The message shown in Figure 37 should appear. 5) Click **OK** to terminate the procedure. The original firmware has been restored.
4	The firmware upgrader failed to upgrade the firmware and showed the message “Error Loading Firmware.”	The battery is not connected.	Connect the battery and apply the solution for Issue 3 above and try to upgrade the new firmware again.
5	The firmware upgrader failed to upgrade the firmware and showed other error messages.	The procedure failed for internal reasons.	Apply the solution for Issue 3 above and then uninstall and reinstall the software.

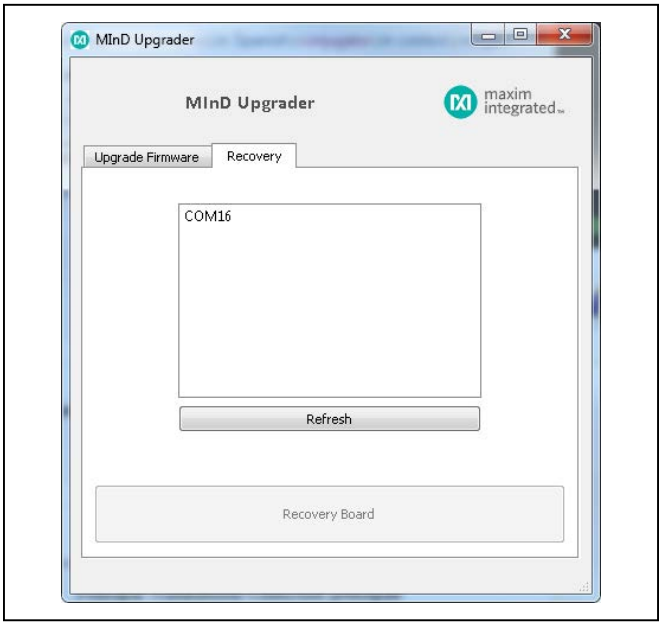


Figure 35. Recovery Tab on the MInD Upgrader

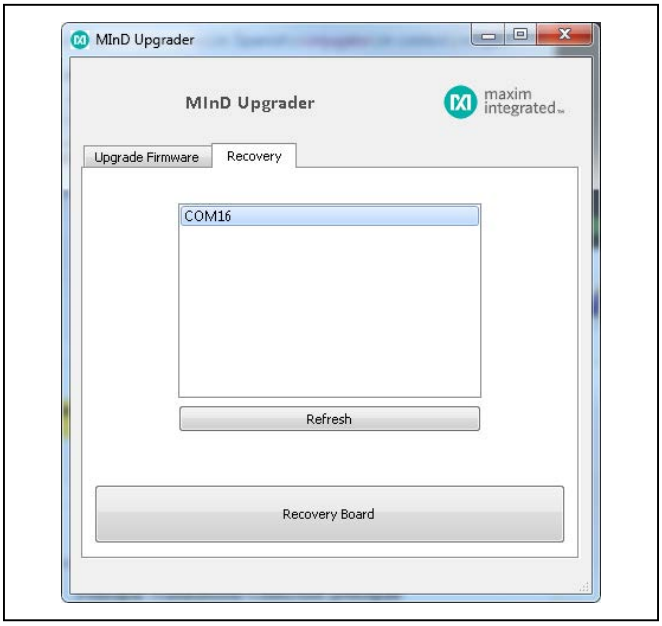


Figure 36. Select the COM Port

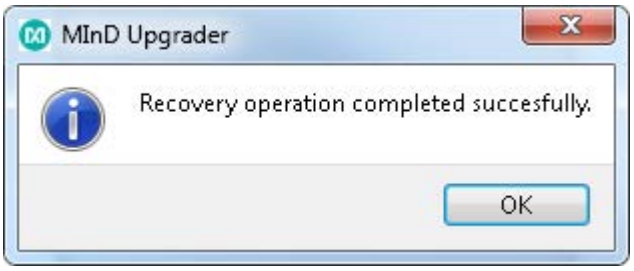


Figure 37. Completion Message

Component List

DESIGNATION	QTY	DESCRIPTION
C1–C5, C9, C10, C12, C14–C17, C19, C20, C22	15	100nF ceramic capacitors (0402)
C6, C7, C13, C35	4	4.7µF ceramic capacitors (0603)
C8	1	2.2µF ceramic capacitor (0603)
C11	1	10µF polarized capacitor (1206)
C18	0	Not installed, ceramic capacitor (0402)
C21, C23	2	20pF ceramic capacitors (0603)
C24	1	10pF ceramic capacitor (0603)
C25, C34	2	100nF ceramic capacitors (0603)
C26, C40, C41	0	Not installed, polarized capacitors (0805) AVX TAJR106K006RNJ
C27	0	Not installed, ceramic capacitor (0603)
C28–C31		22µF ceramic capacitors (0603) Digi-Key 445-8028-1-ND
C32, C37	2	1µF ceramic capacitors (0603)
C33	1	0.1µF ceramic capacitor (0603)
C36, C38, C44	3	10µF ceramic capacitors (0603)
C39	1	150nF ceramic capacitor (0603)
C42, C43	2	10µF polarized capacitors (0805) AVX TAJR106K006RNJ
CON1	1	ZX62-B-5PA USB micro-B to micro AB connector Hirose ZX62-B-5PA-11
DL1	1	Red/green GaAs LED (1206) Farnell OLS-136HR-HYG-XD-T

DESIGNATION	QTY	DESCRIPTION
DL2–DL4	3	Orange LEDs (0603) Vishay TLMO1000-GS08
FL1	1	10µH, 10Ω SMD EMI suppression ferrite bead (SMD 0805) Taiyo Yuden LB2012T100KR
FL2–FL5, FL7	5	10Ω SMD EMI suppression ferrite beads (SMF 0805) Würth 742792011
FL6	0	Not installed, SMD EMI suppression ferrite bead (SMF 0805) Würth 742792011
L1	1	3.3µH Vishay IFSC1515AHER3R3M01
L2	1	2.2µH Vishay IFSC1515AHER2R2M01
P1	1	10-pin (2 x 5) connector
P2	1	3-pin right-angle connector Molex 687-8095
Q1–Q5, Q7, Q11	7	BSS138K n-channel power MOSFETs (SOT23) Digi-Key BSS138KTR-ND/2410031
Q6, Q8–C10	4	BSR315P p-channel power MOSFETs (SC59) Digi-Key BSR315P
Q12	0	n-channel power MOSFET (SOT23) Digi-Key BSS138KTR-ND/2410031
R1–R3, R5, R82–R84, R88	8	0Ω resistors (0402)

Component List (continued)

DESIGNATION	QTY	DESCRIPTION
R4, R6	2	100kΩ resistors (0402)
R7–R11	5	100Ω resistors (0402)
R12–R14, R16, R22, R23, R25–R27, R35, R48, R55, R58, R63, R65, R67, R68, R77, R80, RF2	20	0Ω resistors (0603)
R15	1	1Ω resistor (0603)
R17–R21, R32, R50, R70–R73, R75, R79, R90, R91	15	100kΩ resistors (0603)
R24, R29, R37	3	47kΩ resistors (0603)
R28	1	20Ω resistor (0603)
R30, R33, R34, R43, R45–R47, R49, R51, R54, R56, R57, R59–R62, R64, R66, R69, R76, R78, R81, R85, R86, RF1, RO4, RS1, RS2	0	Not installed, resistors (0603)
R31	1	68kΩ resistor (0603)
R36, R38–R40	4	10Ω resistors (0603)
R41, R42	2	27Ω resistors (0603)
R44	1	20kΩ resistor (0603)
R52, R53	2	2kΩ resistors (0603)
R74	1	510kΩ resistor (0603)
R87, R89	0	Not installed, resistors (0402)
R92	1	10kΩ resistor (0603)
R93, R94	2	47kΩ resistors (0603)
RIDC1	1	3.3kΩ resistor (0603)
RISET1	1	1.2kΩ resistor (0603)
RO1–RO3	0	Not installed, 0Ω resistors (0603)
RO5	0	Not installed, NTC resistor (0603)
RS3	1	1MΩ resistor (0603)
RS4	1	1.2MΩ resistor (0603)
RV1, RV2	2	V5.5MLA voltage-sensitive resistor (0603) Littelfuse 1757273
S1–S5	5	Tactile SMD switches (SMD2) Omron 1333652
U1	1	ARM® Cortex-M3 32-bit microcontroller (100 LQFP) Atmel ATSAM3SD8CA-AU
U2	1	Socket for STAMP board (STAMP_AII_V10) Farnell 3-822516-2
U3	1	High-efficiency, seamless-transition, step-up/down DC-DC converter (14 TDFN-EP*) Maxim MAX8625AETD+
U4	1	2A, 1-cell Li+ DC-DC charger for USB and adapter power (28 TQFN-EP*) Maxim MAX8903A
U5	0	Not installed, 5V/3.3V or adjustable, LDO, low-IQ, 500mA linear regulator (8 SO)
U6	1	5V/3.3V or adjustable, LDO, low-IQ, 500mA linear regulator (8 SO) Maxim MAX603/MAX604
U7	1	Panasonic Bluetooth® module (PAN1321) Panasonic ENW-89811K4CF
U8	1	8Kbit (1024 x 8), 2.5V 2-wire bus automotive serial EEPROM with write protect (8 SO) Atmel AT24C16C
Y1	1	12MHz crystal oscillator
—	1	PCB: MInD_BS_V10

**EP = Exposed pad.*

ARM is a registered trademark and registered service mark of ARM Limited.

Bluetooth is a registered trademark of Bluetooth SIG, Inc.

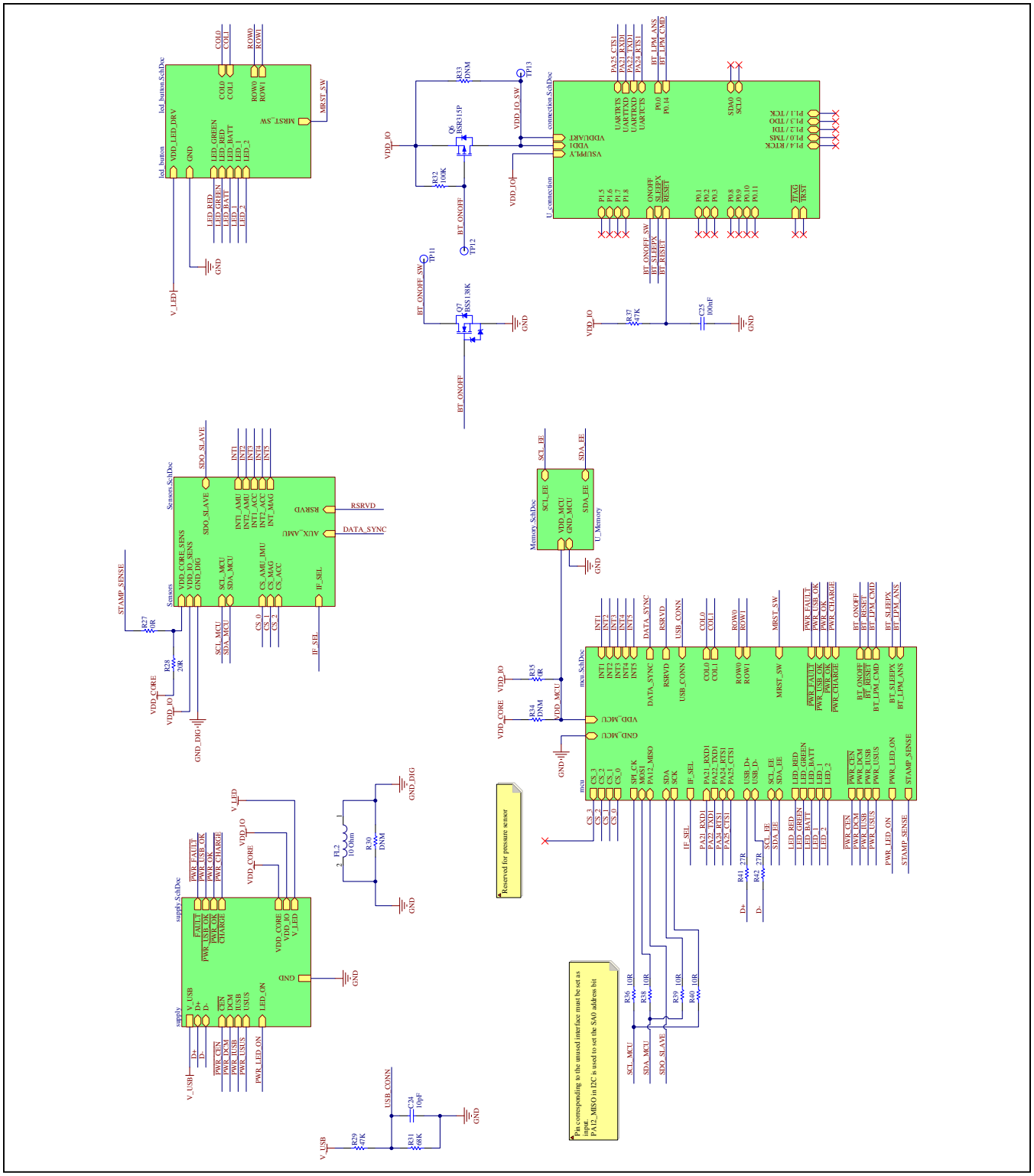


Figure 38a. MAX21000 MInD EV Kit Schematic (Sheet 1 of 7)

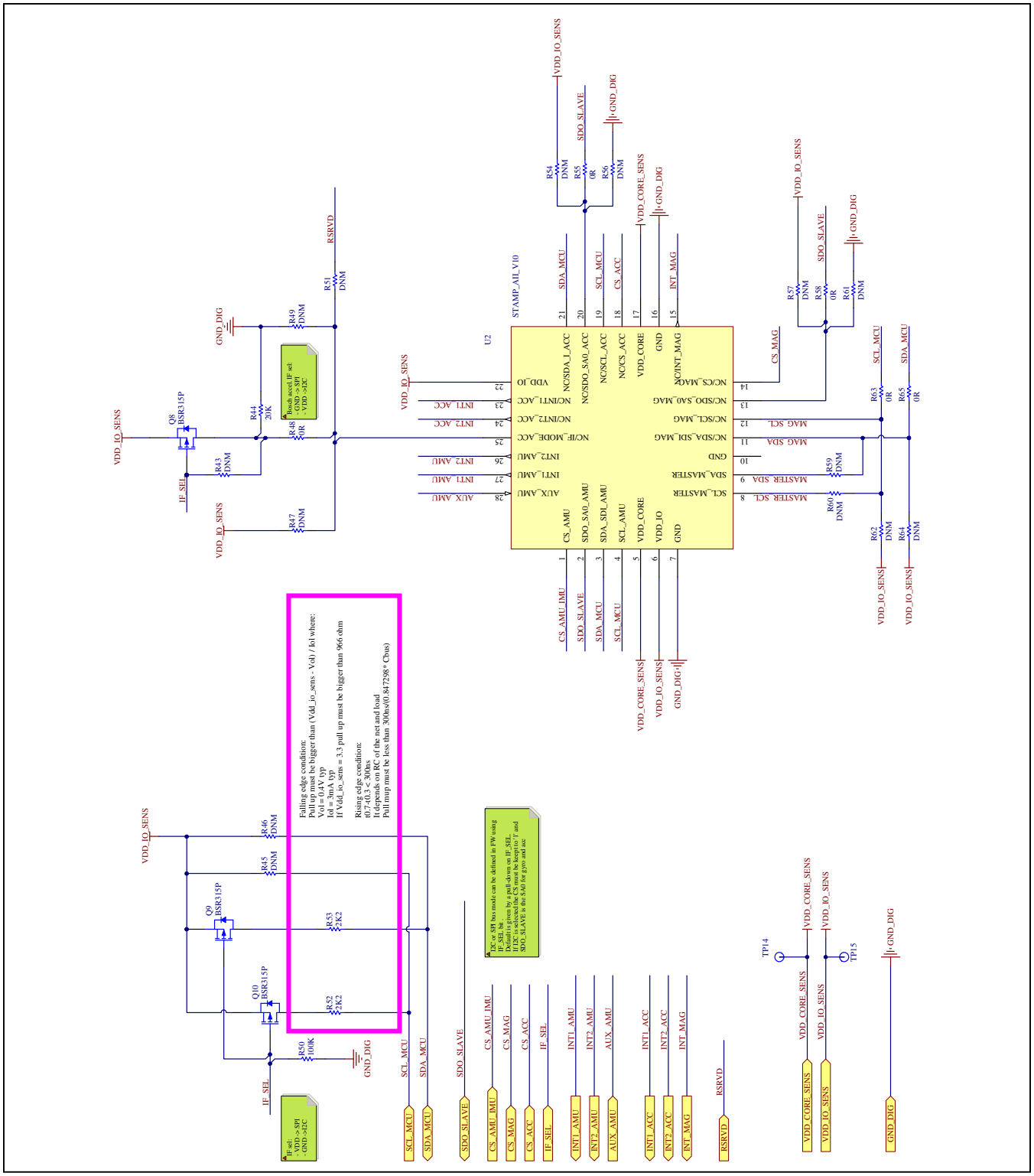


Figure 38b. MAX21000 MInD EV Kit Schematic (Sheet 2 of 7)

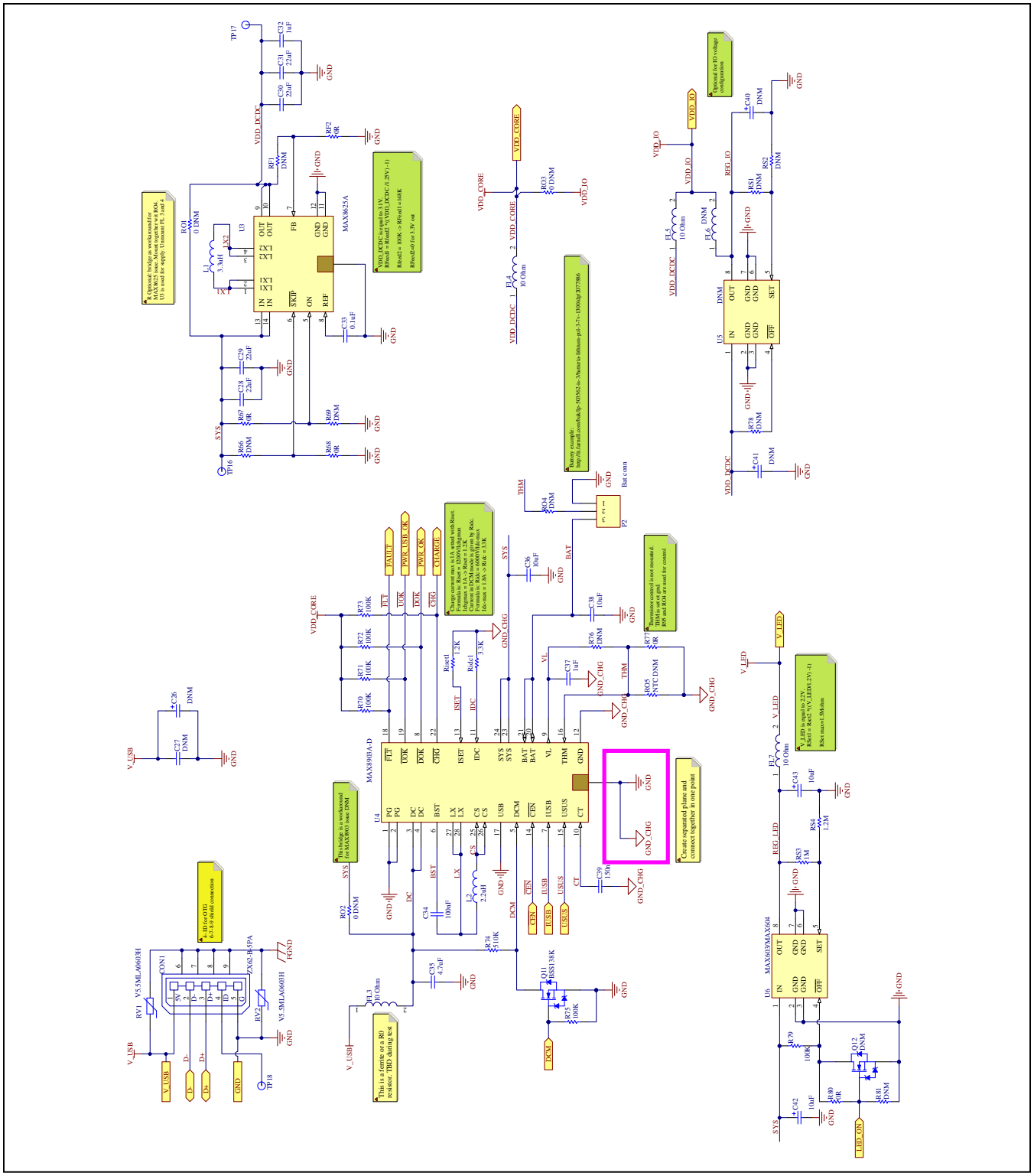


Figure 38c. MAX21000 MInD EV Kit Schematic (Sheet 3 of 7)

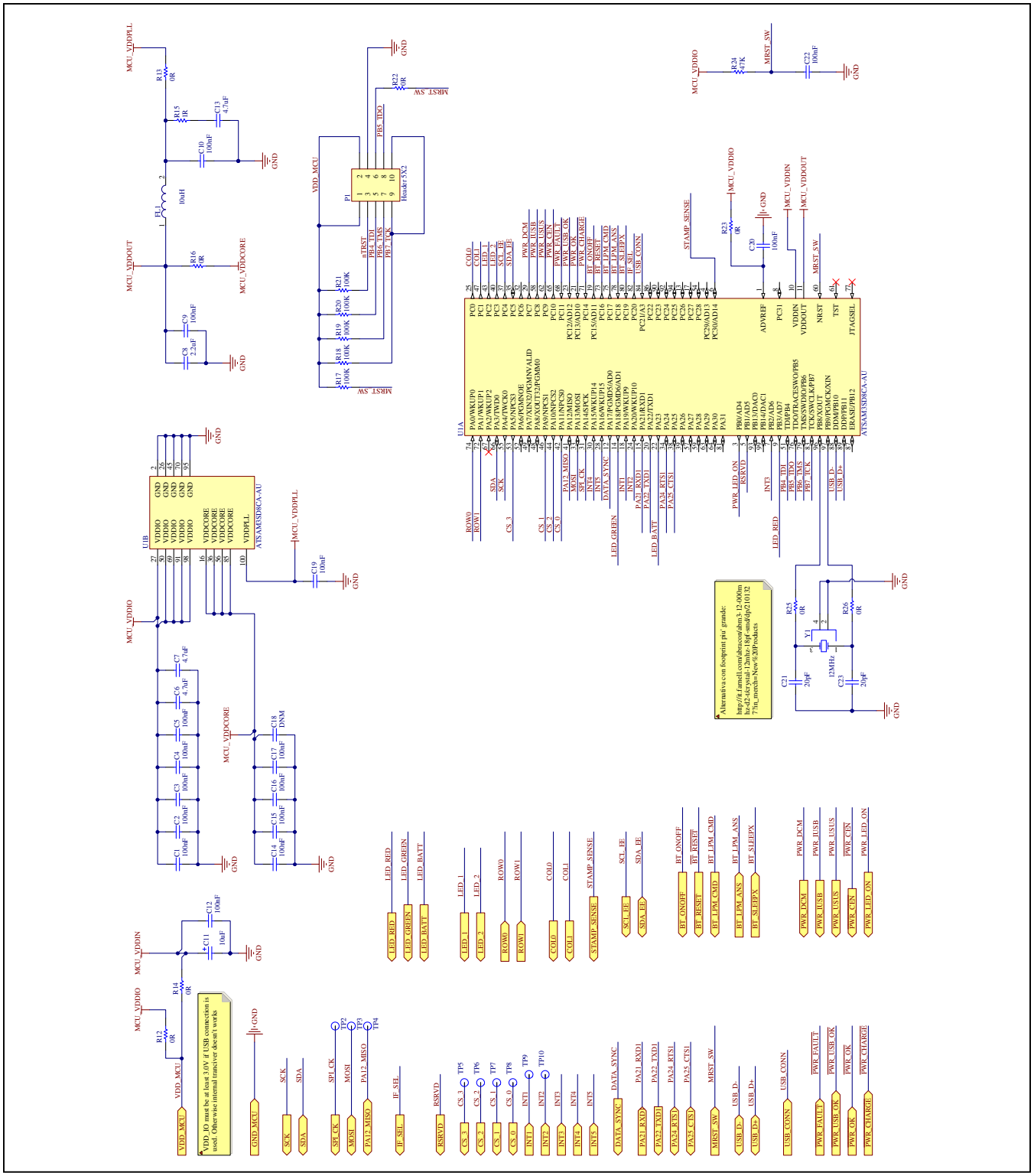


Figure 38d. MAX21000 MInD EV Kit Schematic (Sheet 4 of 7)

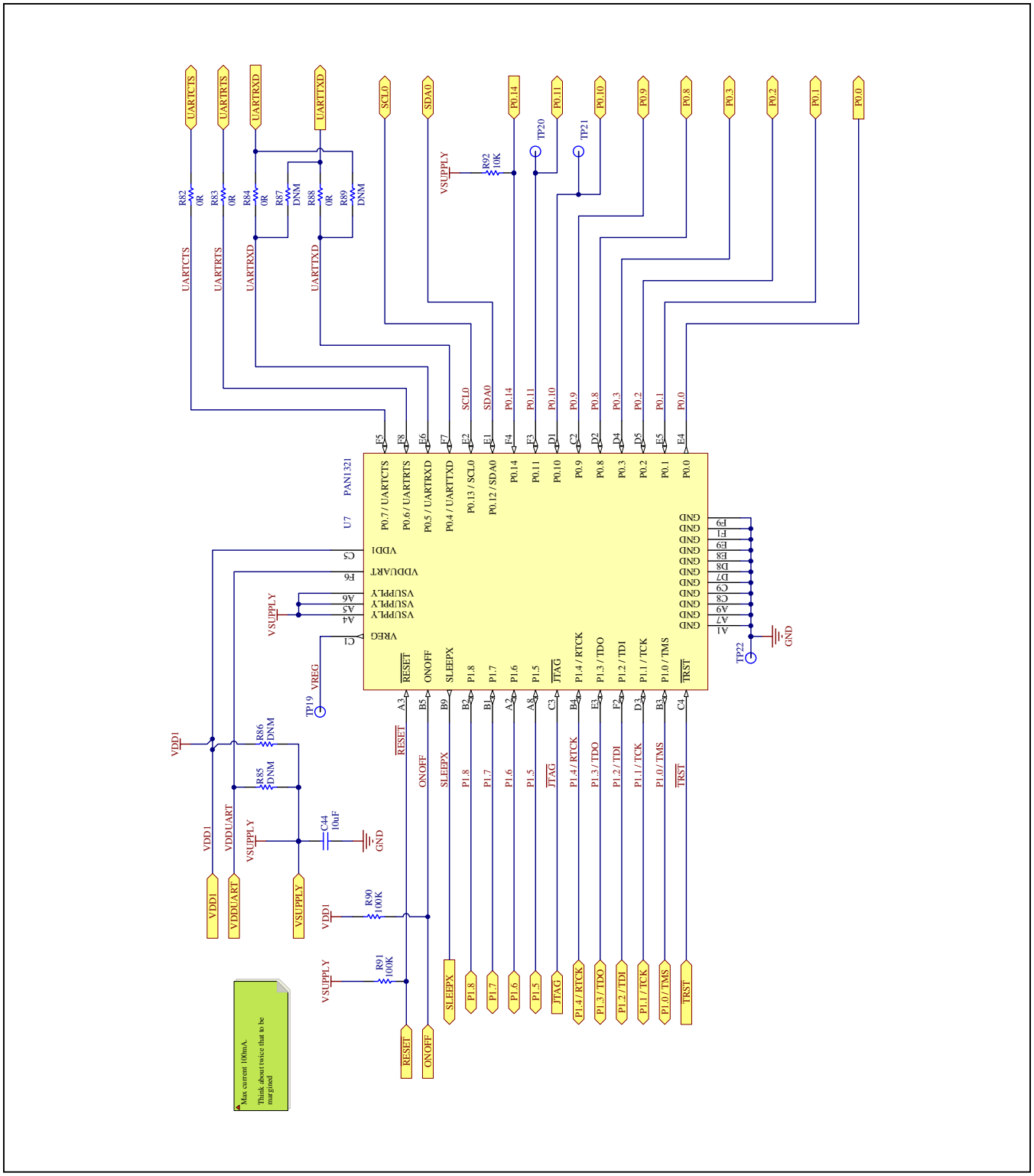


Figure 38e. MAX21000 MInD EV Kit Schematic (Sheet 5 of 7)

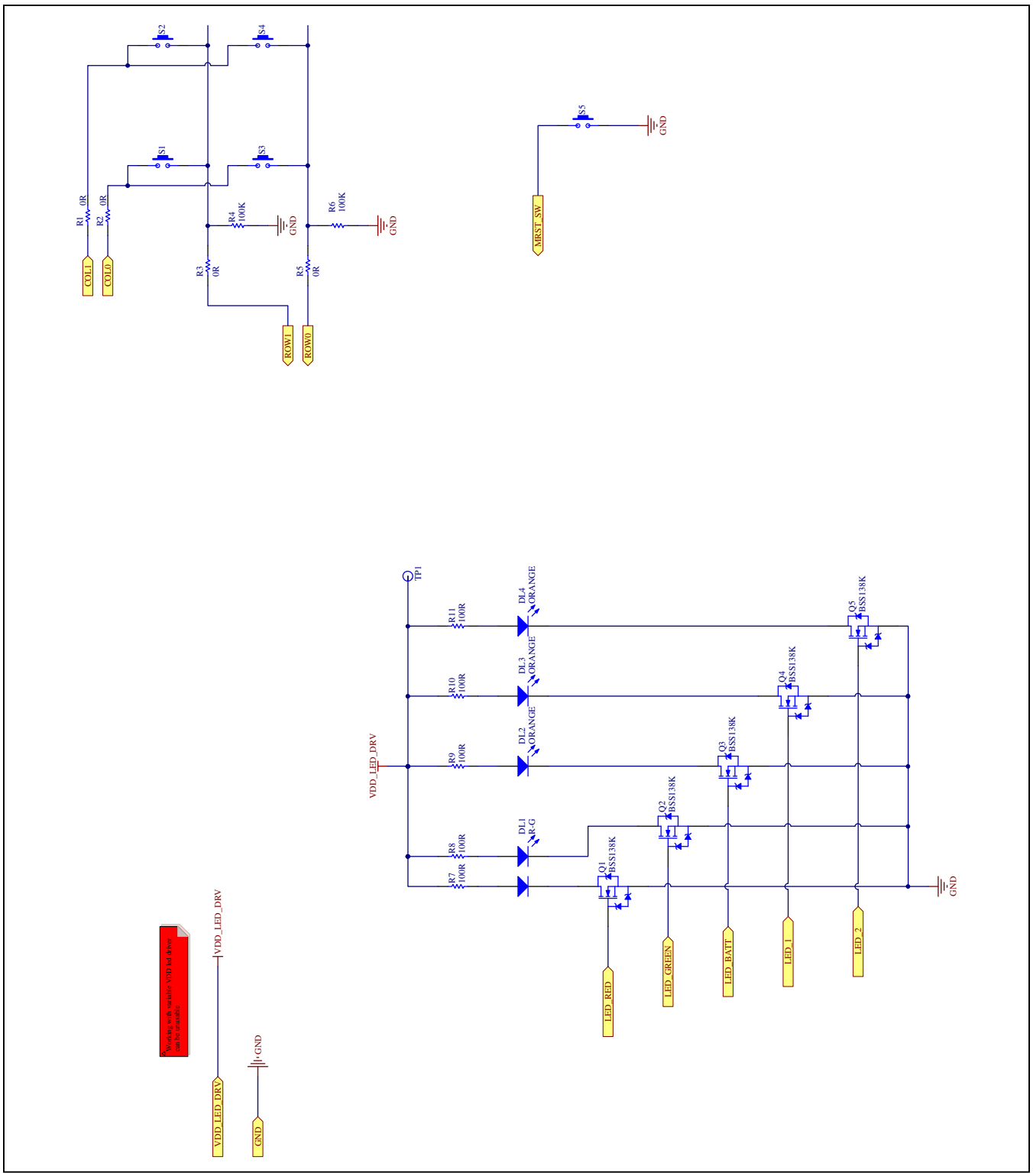


Figure 38f. MAX21000 MInD EV Kit Schematic (Sheet 6 of 7)

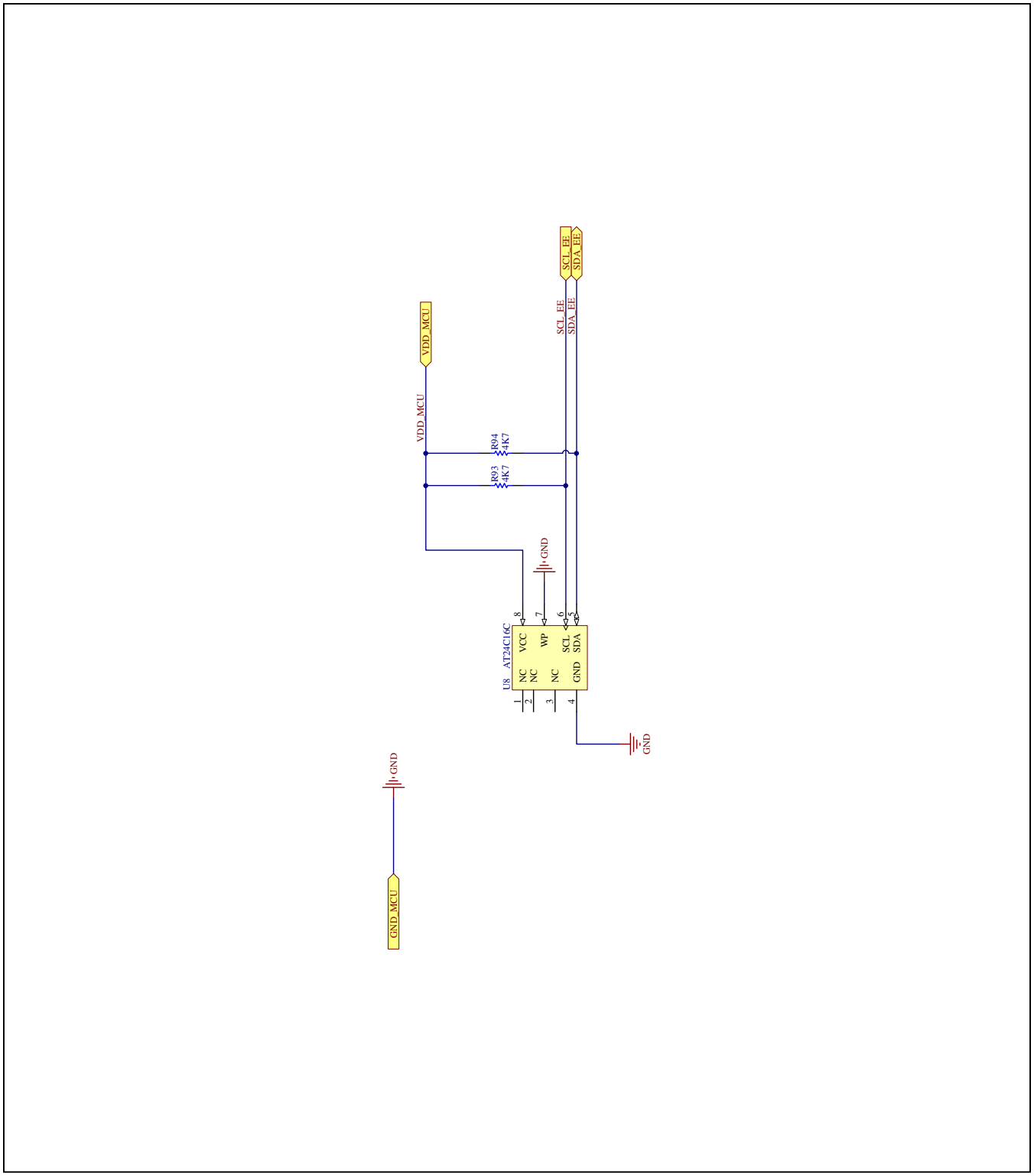


Figure 38g. MAX21000 MInD EV Kit Schematic (Sheet 7 of 7)

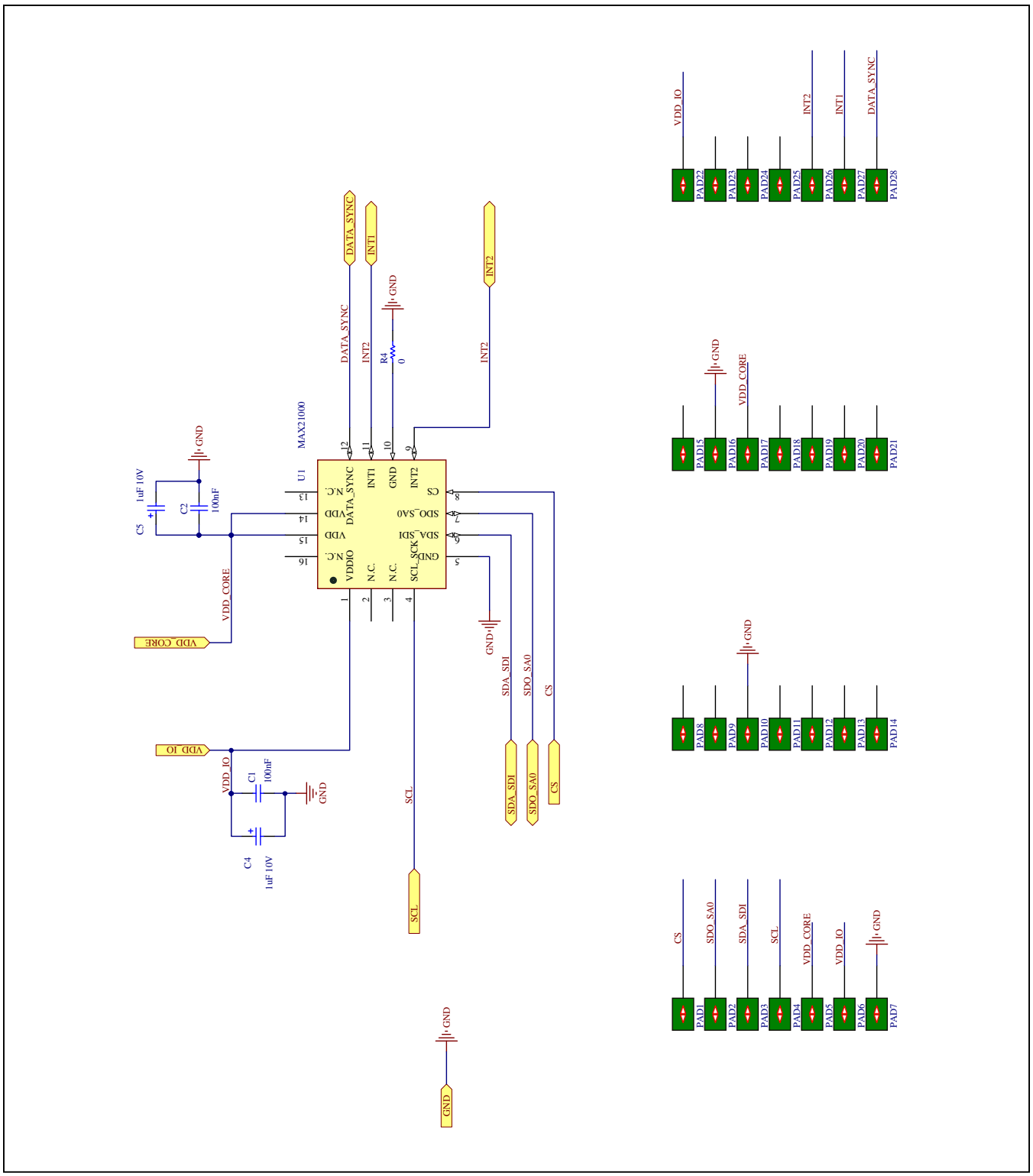


Figure 39. MAX21000 MInD EV Kit STAMP Board Support Schematic

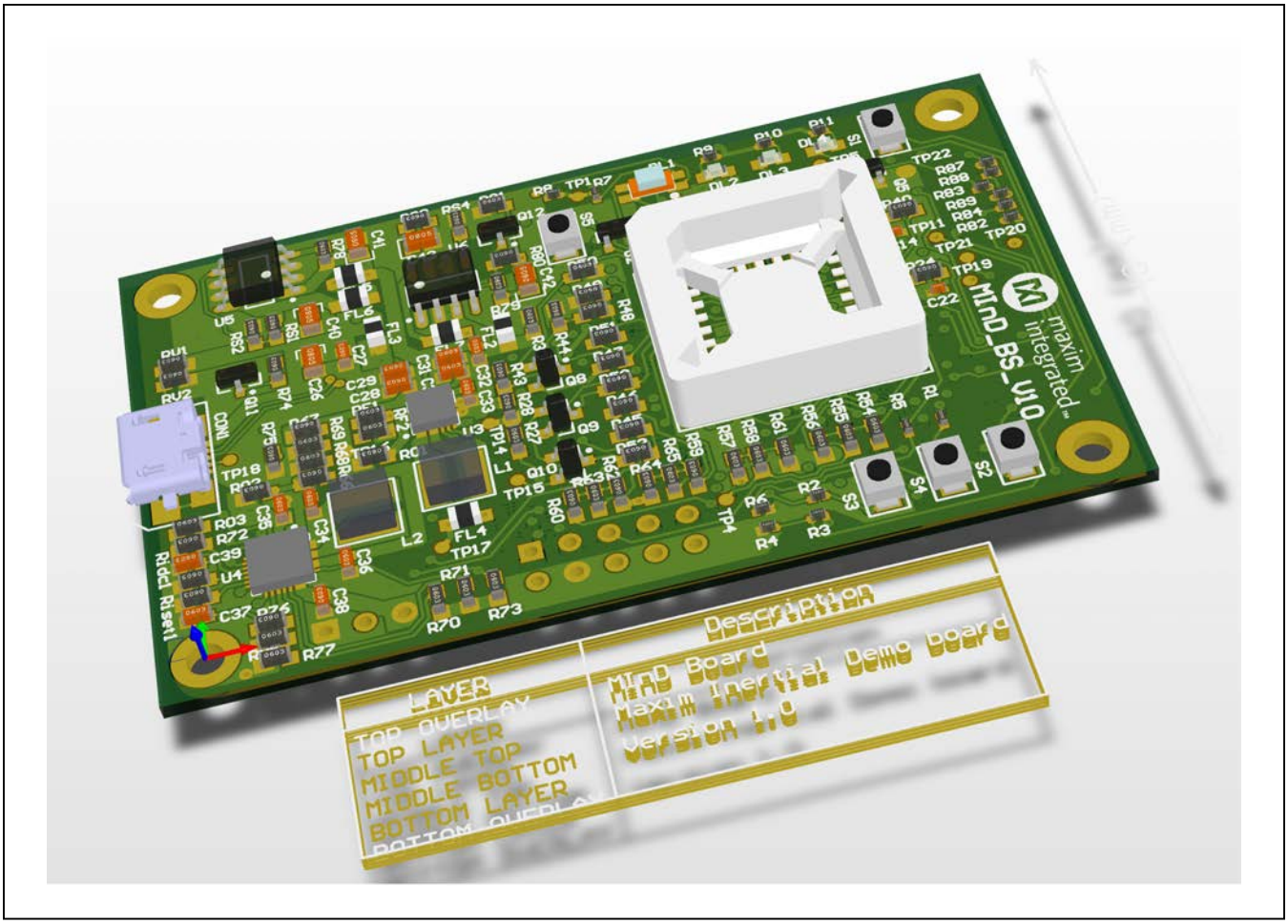


Figure 40. MAX21000 MInD EV Kit 3D View

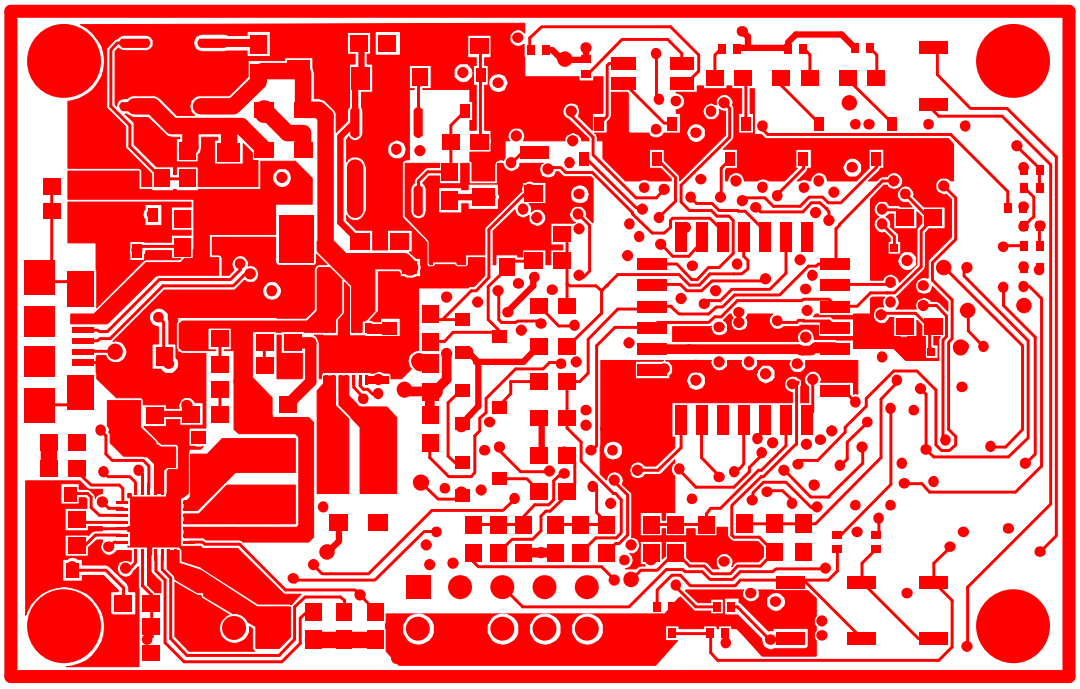


Figure 41. MAX21000 MInD EV Kit PCB Layout—Top Layer

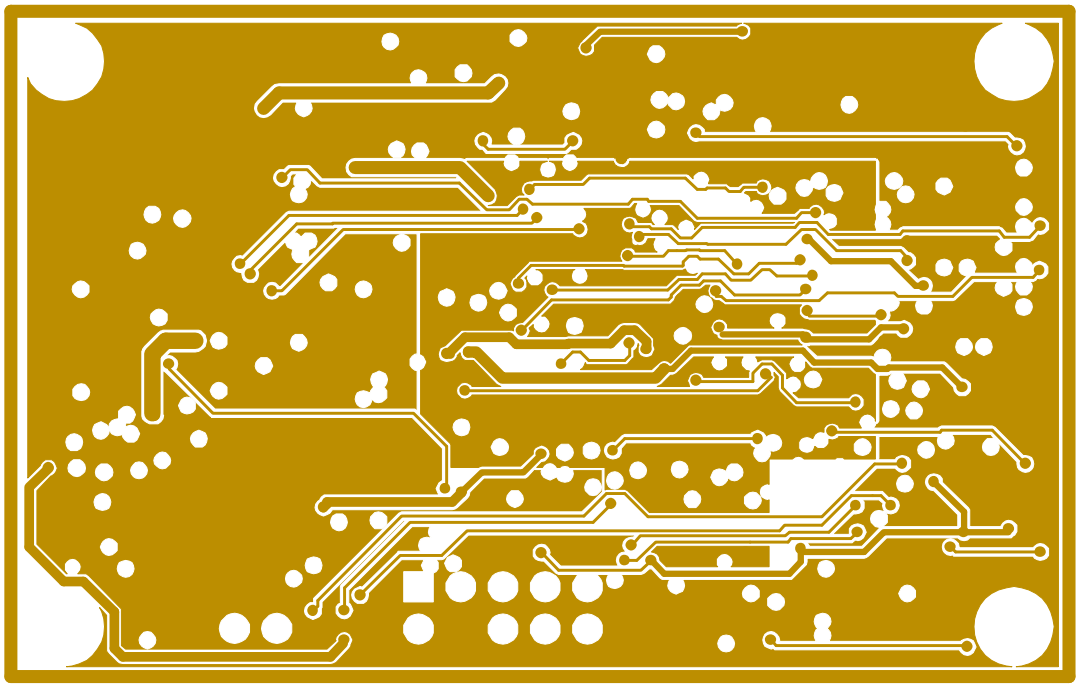


Figure 42. MAX21000 MInD EV Kit PCB Layout—Middle Top Layer

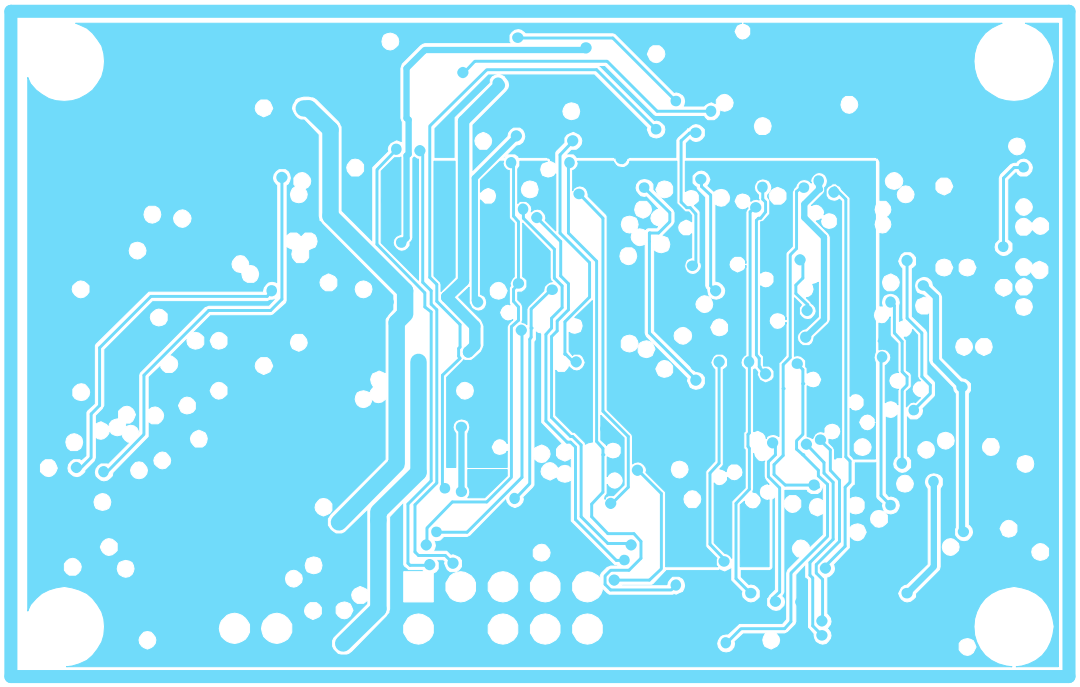
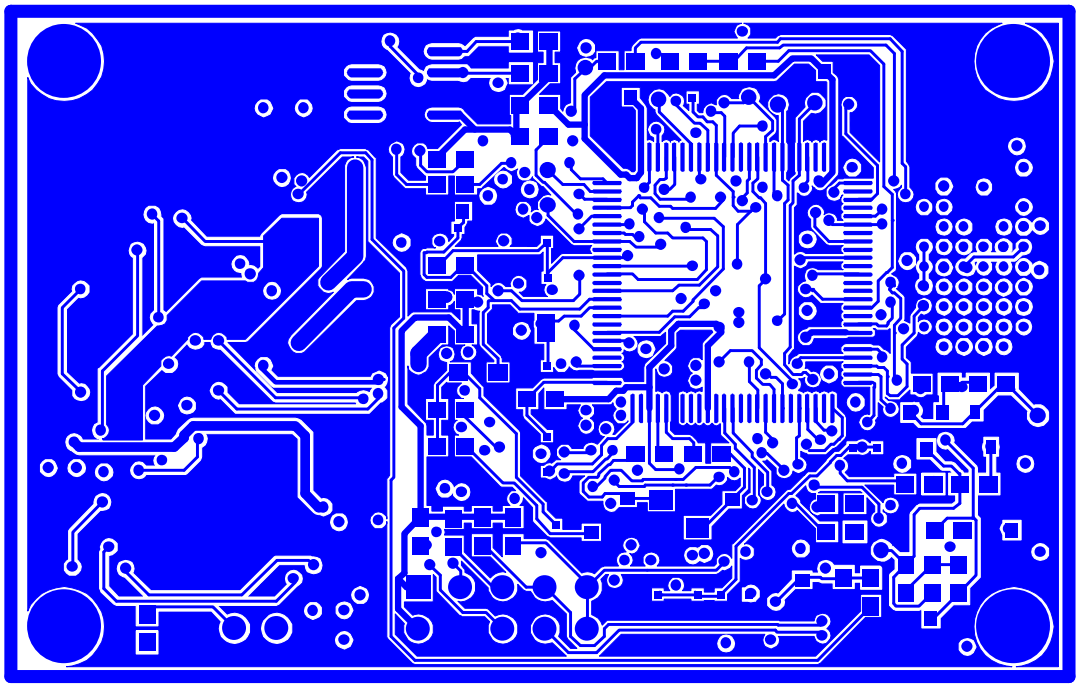


Figure 43. MAX21000 MInD EV Kit PCB Layout—Middle Bottom Layer



LAYER	Description
BOTTOM LAYER	MInD Board Maxim Inertial Demo board Version 1.0

Figure 44. MAX21000 MInD EV Kit PCB Layout—Bottom Layer

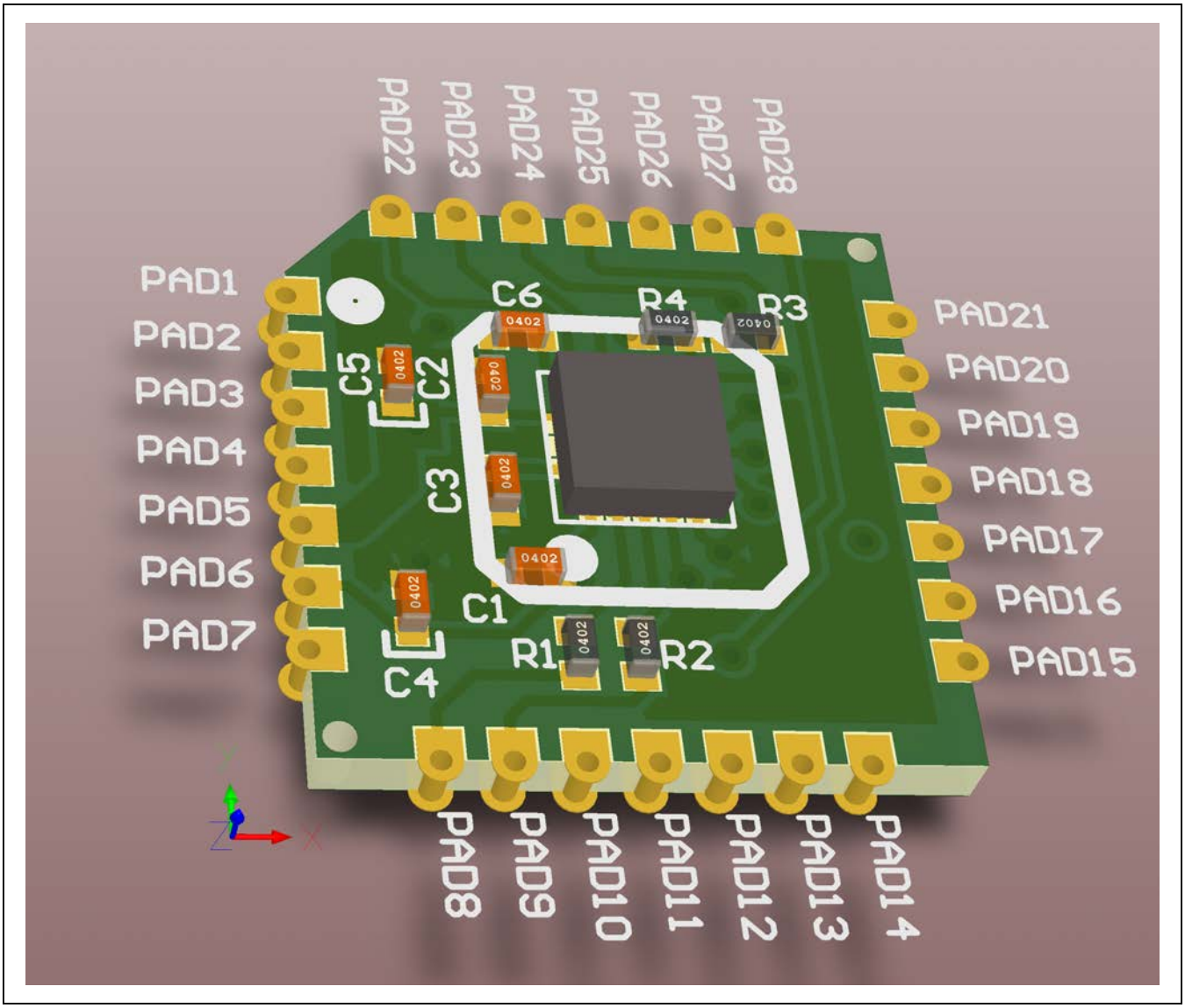


Figure 45. MAX21000 MInD EV Kit STAMP Board Support—3D View

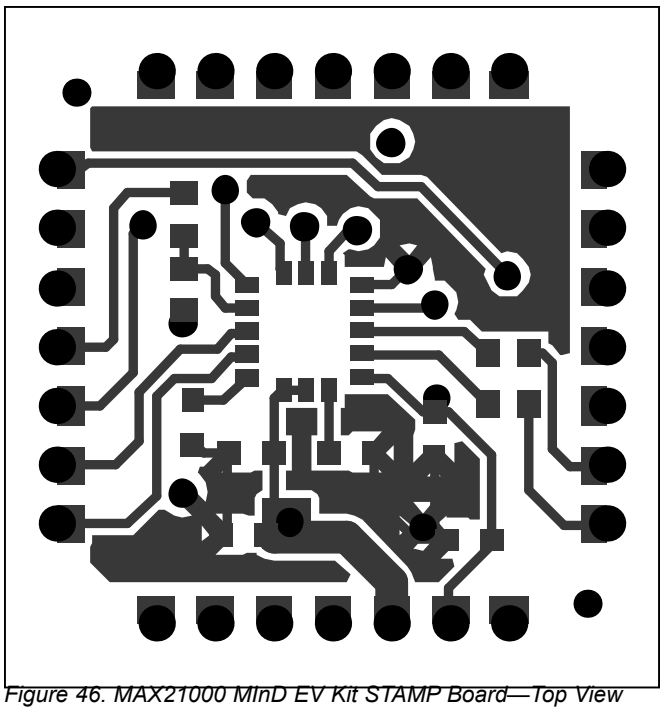


Figure 46. MAX21000 MInD EV Kit STAMP Board—Top View

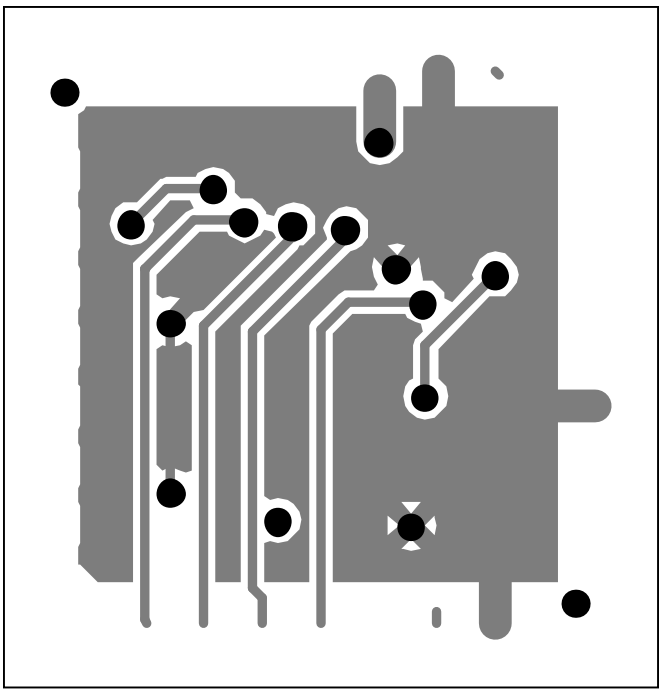


Figure 47. MAX21000 MInD EV Kit STAMP Board—Bottom View

Ordering Information

PART	TYPE
MAX21000EVKIT#	EV Kit

#Denotes RoHS compliant.

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	7/13	Initial release	—