



IQS7211EEV02A USER GUIDE

IQ Switch® - ProxFusion® Series

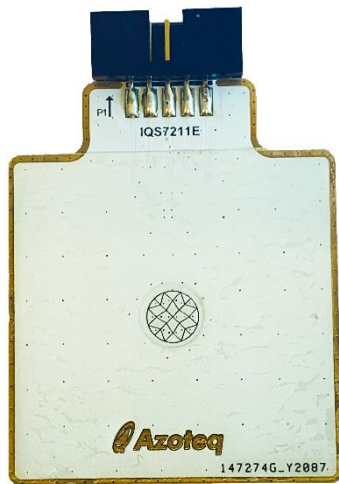
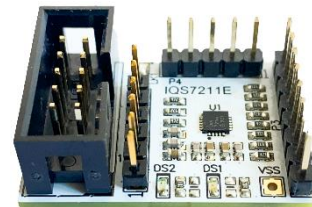
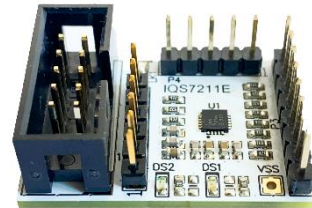
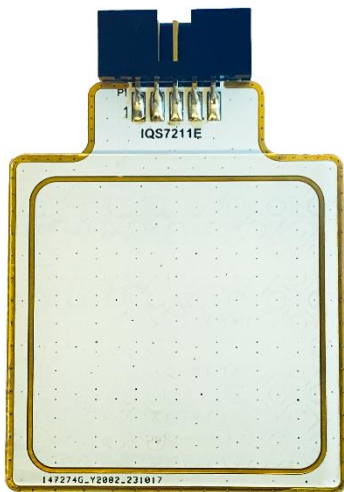




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1 Introduction

This user guide describes the operation of the IQS7211EEV02A Evaluation Kit. The EV-Kit consists of five parts:

- IQS7211E Headphone Trackpad x 1
- IQS7211E Flower Trackpad x 1
- CT210A x 1
- IQS7211E Stamp x 2

To visualise raw data from the EV-Kit, the Trackpad board can be interfaced to any personal computer with USB support, along with the CT210A and the relevant IQS7211E software Graphical User Interface (GUI) available to download from the Azoteq website. The purpose of the IQS7211EEV02A EV-Kit is to help application and development engineers in evaluating these IC's capabilities. A picture of the evaluation kit is shown below.





2 Stamps

To interface the IQS7211E Stamp to a PC we advise using the CT210A. This EV Kit can be setup with the following steps:

- Download & Install GUI from Azoteq website
- Plug the stamp board into the CT210A using the ribbon cable
- Connect the CT210A to the PC with a USB cable (use USB data cable only)
- Run the IQS7211E GUI (latest version available from the www.azoteq.com website)
- Click “Start Streaming” button
- GUI should look as follow.

Configuration Tool Manager

CT210A : 432465353235544805D8FF3

PAUSE STREAMING STOP STREAMING

Power On
I2C Address: 0x56
Device Version: 1112:1:0
Settings read from device
Started streaming
Settings read from device

VERSION INFO

IMPORT H FILE EXPORT H FILE

SETTINGS

WRITE CHANGES READ SETTINGS USER SETTINGS

No Changes To Write

- ALP ATI Compensation
- ATI Settings
- Report Rates and Timing
- System Settings
- ALP Settings
- Thresholds and Debounce Settings
- Button and ALP count and LTA betas
- Hardware Settings
- Trackpad Settings
- Settings Version Numbers
- Gesture Settings
- RxTx Mapping
- Allocation of channels into cycles 0-9
- Allocation of channels into cycles 10-19

Load settings from last session? EXPORT HEX...

778	832	781	722	788	459
427	427	427	427	427	427
760	754	764	510	767	298
427	427	427	427	427	297
639	300	470	558	298	765
427	299	427	427	298	427
773	876	775	826	784	718
427	427	427	427	427	427
774	887	777	858	788	799
427	427	427	427	427	427
775	893	778	874	791	840
427	427	427	427	427	427
774	895	778	881	791	855
427	427	427	427	427	427

Bar Chart

Legend: Counts (green), LTA (blue), Output (red)

Counts: ALP 0, LTA 0

EVENTS VIEW LOG

INFO FLAGS

Trackpad Movement Too Many Fingers

ALP Output

Amount of Fingers

0 1

2

INFO FLAGS

ATI Error Re-ATI Occurred

ALP ATI Error Reset Occurred

ALP Re-ATI Occurred

Charging Mode

Active Mode Idle-Touch Mode

Idle Mode LPT Mode

LP2 Mode

GESTURES

Single Tap Double Tap

Triple Tap Press And Hold

Palm

GESTURES

Swipe X+ Swipe X-

Swipe Y+ Swipe Y-

Swipe And Hold X+ Swipe And Hold X-

Swipe And Hold Y+ Swipe And Hold Y-



3 Setting up for the IQS7211E Headphone Trackpad

To interface the IQS7211E Headphone Trackpad to a PC we advise using the CT210A. This EV Kit can be setup with the following steps:

- Download IQS7211E GUI from Azoteq website
- Install GUI on PC
- Plug the Headphone Trackpad into the CT210A using ribbon cable
- Connect the CT210A to the PC with a USB cable (use USB data cable only)
- Run the IQS7211E GUI (latest version available from the www.azoteq.com website)
- Click “Start Streaming” button
- “USER SETTINGS”
- “EV Kit Modules” tab
- Choose picture of “Headphone Trackpad” plugin board
- Minimise “Settings” pop-up window
- GUI should look as follow.

The screenshot displays the Azoteq IQS7211E V0.0.1 GUI. The interface is divided into several sections:

- Configuration Tool Manager:** Includes buttons for 'PAUSE STREAMING' and 'STOP STREAMING', a 'VERSION INFO' section, and 'IMPORT H FILE' and 'EXPORT H FILE' buttons.
- Settings:** A sidebar on the left with 'WRITE CHANGES', 'READ SETTINGS', and 'USER SETTINGS' buttons. It lists various settings categories like 'ALP ATI Compensation', 'ATI Settings', 'Report Rates and Timing', etc.
- Data Grid:** A central table displaying numerical data points in a grid format.
- Streaming Options:** A panel on the right with radio buttons for 'None', 'Counts', 'Counts and Reference', 'Deltas', 'ATI Compensation', and 'Touch'. It also includes 'XY Line Thickness' and 'Relative X/Y' settings.
- Bar Chart:** A chart showing 'Counts' and 'LTA' for 'ALP' and 'LTA' categories. The Y-axis ranges from 0 to 500. The legend indicates 'Counts' (green) and 'LTA' (blue).
- Events:** A section on the right with 'INFO FLAGS' and 'Amount of Fingers'.

Trackpad is now active to be evaluated.



4 Setting up for the IQS7211E Flower Trackpad

To interface the IQS7211E Flower Trackpad to a PC we advise using the CT210A. This EV Kit can be setup with the following steps:

- Download IQS7211E GUI from Azoteq website
- Install GUI on PC
- Plug the Flower Trackpad into the CT210A using ribbon cable
- Connect the CT210A to the PC with a USB cable (use USB data cable only)
- Run the IQS7211E GUI (latest version available from the www.azoteq.com website)
- Click “Start Streaming” button
- “USER SETTINGS”
- “EV Kit Modules” tab
- Choose picture of “Flower Trackpad” plugin board
- Minimise “Settings” pop-up window
- GUI should look as follow.

The screenshot displays the IQS7211E GUI interface. At the top, there's a title bar with 'Azoteq IQS7211E V0.0.1' and 'About' information. Below this is a 'CONFIGURATION TOOL MANAGER' section with various control buttons like 'ACK RESET', 'TRACKPAD RESEED', etc., and a 'CT210A' dropdown menu. A 'PAUSE STREAMING' and 'STOP STREAMING' section is visible. A 'VERSION INFO' box shows settings read from the device. The 'SETTINGS' section includes 'WRITE CHANGES', 'READ SETTINGS', and 'USER SETTINGS' buttons, with a list of settings categories like 'ALP ATI Compensation', 'ATI Settings', etc. The main area features a 3x3 grid of data points, all showing values like 298 and 299. To the right, there's a 'Bar Chart' showing 'Counts' and 'LTA' values. Below the chart is an 'EVENTS' section with 'INFO FLAGS' and 'Amount of Fingers' data. The bottom right corner shows 'Finger: 1' details, including 'Line Color', 'X: 65535', 'Y: 65535', 'Touch Strength: 0', and 'Area: 0'.

Trackpad is now active to be evaluated.



5 Reference Designs

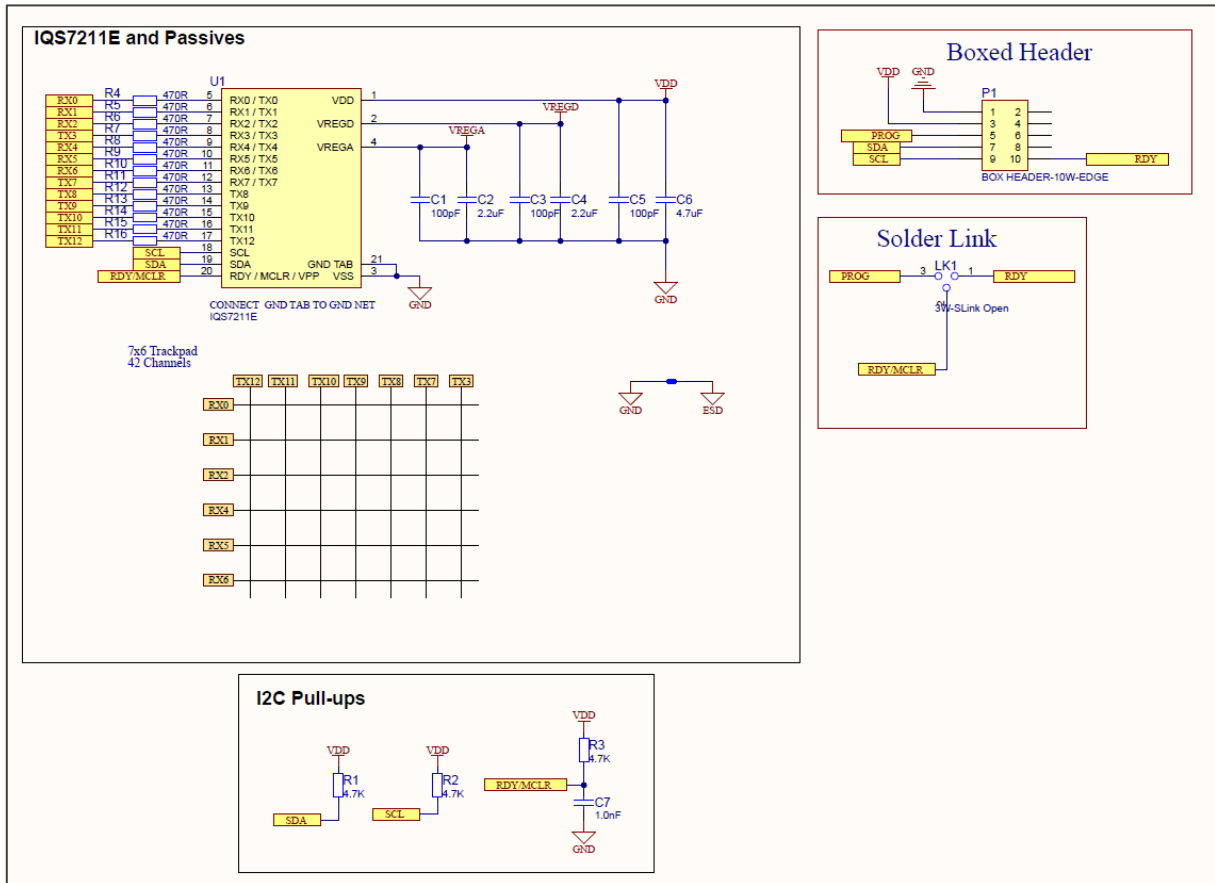


Figure 5-1 IQS7211E Headphone Trackpad Layout

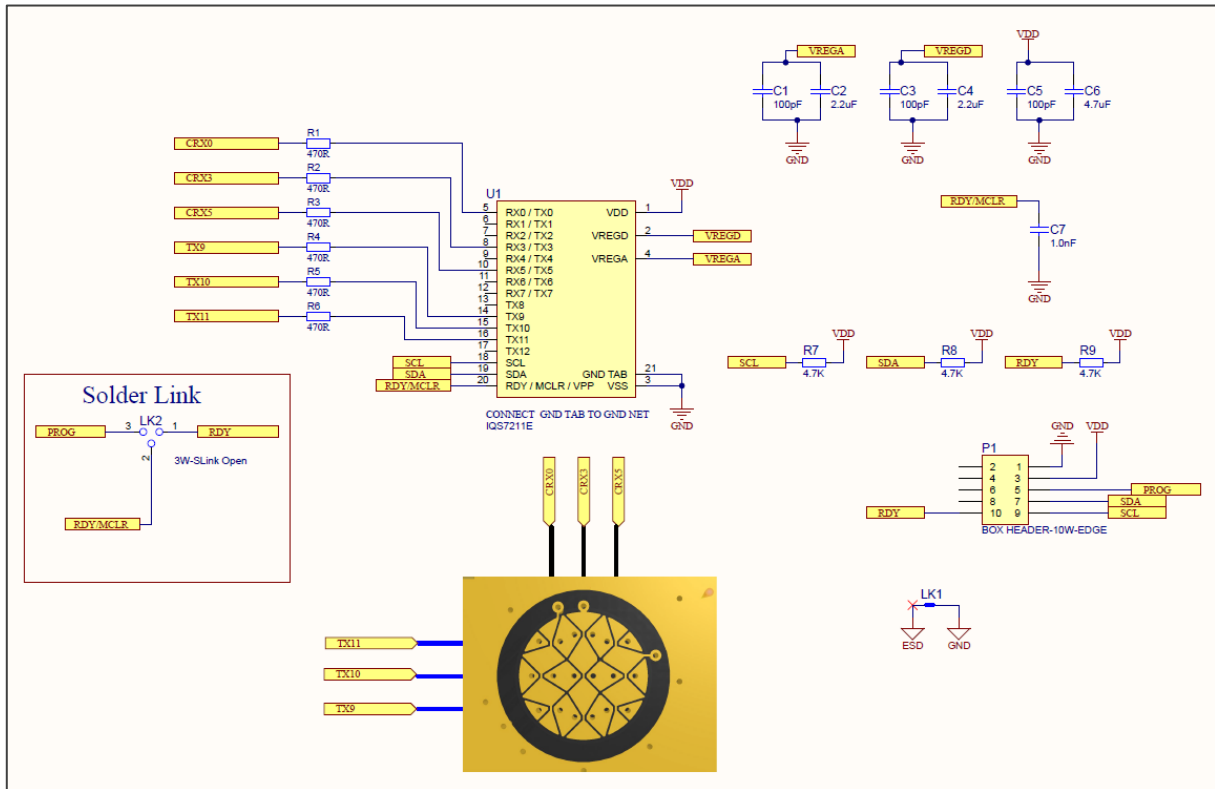


Figure 5-2 IQS7211E Flower Trackpad Layout

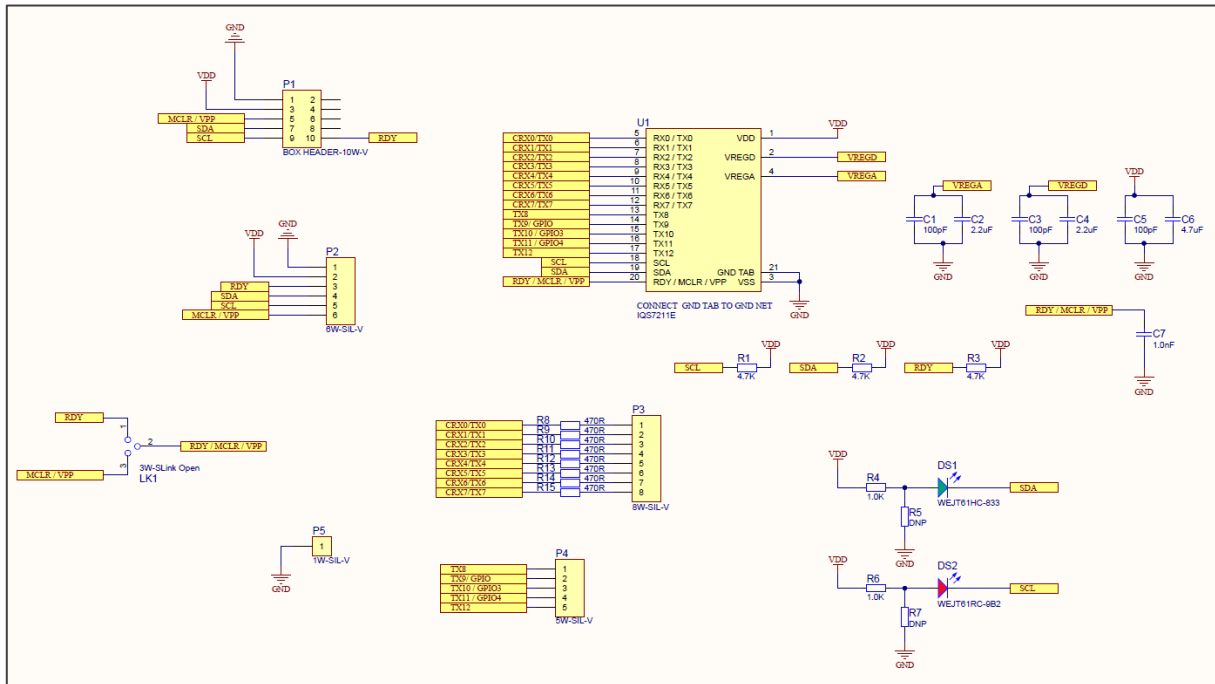


Figure 5-3 IQS7211E QFN20 Stamp Layout




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