IQ Switch[®] ProxFusion[®] Series



IQS7211A EV-kit User Guide

User guide for IQS7211A Evaluation kit







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1 Introduction

This user guide describes the operation of the IQS7211A Evaluation Kit. The EV-Kit consists of 5 parts:

- 1. Stamp board
- 2. Connector board
- 3. Base board
- 4. Rectangle trackpad
- 5. Circle trackpad
- 6. Flower trackpad

To visualize raw data from the EV-Kit, the stamp board can be interfaced to any personal computer with USB support, and IQS7211A software Graphical User Interface (GUI). The purpose of the IQS7211A EV-Kit is to help application and development engineers in evaluating the IQS7211A's capabilities.

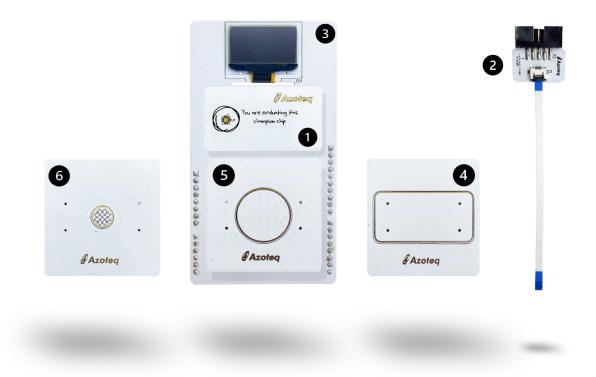


Figure 1.1: EV-kit Representation





2 Setting up the IQS7211A EV-kit

To interface the IQS7211A Evaluation Kit to a PC we advise using the CT210A (CT210A is sold with EV04 kit, but sold separately from EV02 kit).

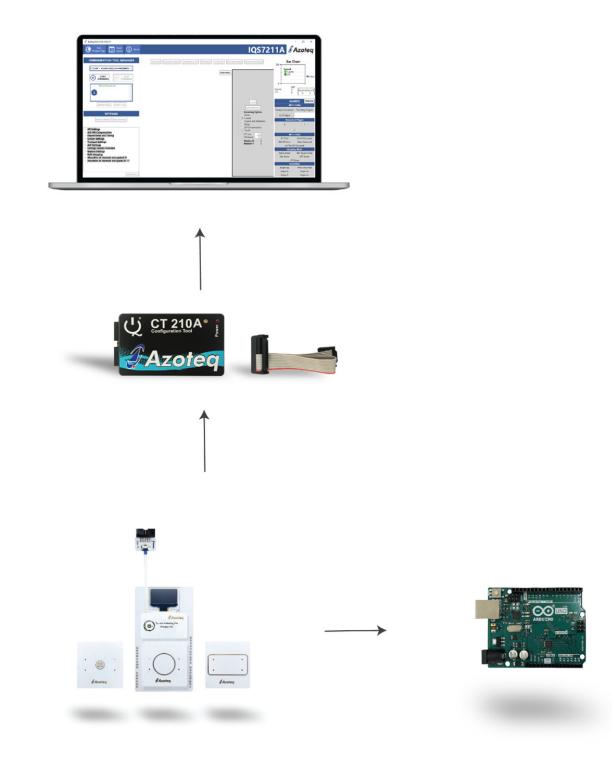


Figure 2.1: How to connect your EV-Kit to the computer





3 Stamp Board and IQS7211A IC



The IQS7211A IC is located on the stamp board. Run the IQS7211A GUI.

Figure 3.1: How to connect your EVKit to computer

To demonstrate the capabilities of the IQS7211A, we suggest evaluating with the supplied boards.

After this evaluation, the user may want to develop their own trackpad boards.





4 Plug-in Boards

4.1 Rectangle Trackpad Board

Plug this board into the base board at the PLUGIN marked area.

Azoteq

Figure 4.1: Rectangle Trackpad

Now perform the following actions in the GUI.

- > Click the "Start Streaming" button.
- > Click on the "ACK RESET" button.
- > Browse to "IQS7211A_init_AZP1149A1_8x4_TP.h" and select "Open".
- > Click on the "TRACKPAD RE-ATI" button.

See figure 4.2 below for an example





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CONFIGURATION TOOL MANAGER	ACK	ALSAT	RACKIPAD RES	HED	CKPAD RE-A	ALP RE	SIED	HIDE PANE	FTWARE RESET ENTER EVENT MODE	500 Bar Chart
PAUSE STOP Streaming STREAMING Settings read from device in All settings defined in H-file found. Settings read from device	250	245	248	249	248	248	248	248	CLEAR RETE MARPING Streaming Options None Counts Counts Counts	Counts: 420 LTA: 398 Counts: 201 2
Settings read from device Lossing IMPORT H FILL EXPORT H FILL SETTINGS WRITE CHANGES READ SETTINGS	249	249	249	248	250	250	249	248	C Deltas ATI Compensation ✓ Touch XV Line 5 ▼ Relative X: 0 Relative Y: 0	EVENTS VIEW INFO FLAGS Trackpad Movement Too Many Fin ALP Output Amount of Fingers
No Changes To Write ATI Settings ALP ATI Compensation Report Rates and Timing System Settings Trackpad Settings ALP Settings	249	249	249	244	247	250	248	249	Finger: 1 Line Color: X: 65535	0 1 2 INFO FLAGS ATI Error Re-ATI Occur ALP ATI Error Reset Occur ALP Re-ATI Occurred
Settings Version Numbers Gesture Settings RATx Mapping Allocation of channels into cycles 0-9 Allocation of channels into cycles 10-17	247	245	246	250	250	248	248	249	Y: 65535 Touch 0 Strength: Area: 0	Charging Mode Active Mode Idle-Touch M Idle Mode Idle-Touch UP1 Mode GESTURES Single Tap Press And H Single X: Single X:

Figure 4.2: IQS7211A GUI Example: Rectangle Trackpad

The IQS7211A and Trackpad can now be evaluated by drawing lines on the trackpad and observing what happens in the GUI.

To the right side of the GUI we see the "EVENTS" section, the GESTURES are located here. Try and perform all 6 possible gestures as shown in this section.

To clear the lines drawn in the GUI, click on one of the channels displayed in the middle of the GUI.

After evaluation click on the "Stop Streaming" button.



4.2 Circle Trackpad Board

Plug this board into the base board at the PLUGIN marked area.



Figure 4.3: Circle Trackpad

Now perform the following actions in the GUI.

- > Click the "Start Streaming" button.
- > Click on the "ACK RESET" button.
- > Browse to "IQS7211A_init_AZP1148A1_6x5_TP.h" and select "Open".
- > Click on the "TRACKPAD RE-ATI" button.

See figure 4.4 below for an example





Visit Product Page Reset (i) About							IQS72	11A Azote
CONFIGURATION TOOL MANAGER	ACKRES	ET TRACKPAC	RESERD	COPAD RE-ATI	ALP RESEED	ALP RE-ATT	OPTWARE RESET	500 Bar Chart
PAUSE STOP STREAMING STREAMING Semigored IF Jie All settings defined in H-file All settings defined in H-file Induct set S	0	295	298	300	298	0	CLLAR RETX MAPPING Streaming Options None • Counts	Counts: 0 UTA: 0 Counts: 0 UTA: 0 Count A Count
Settings read from device V LOSGENE INFORT H FILE SETTINGS	298	298	298	297	293	297	Counts and Reference Deltas ATI Compensation V Touch XY Line Thickness: 5 V	EVENTS VIEWE INFO FLAGS Trackpad Movement Too Many Finge
WITE CHANGES READ SETTINGS No Changes To Write ATJ Settings ALP ATJ Compensation	299	294	297	299	294	297	Relative X: 0 Relative Y: 0	ALP Output Amount of Fingers 0 1 2
Report Rates and Timing System Settings Trackpad Settings ALP Settings Settings Version Numbers Gesture Settings	299	299	298	298	295	297	Color: X: 65535 Y: 65535	INFO FLAGS ATI Error Re-ATI Occum ALP ATI Error Reset Occume ALP Re-ATI Occumed Charging Mode Active Mode Ide-Touch Mo
RxTx Mapping Allocation of channels into cycles 0-9 Allocation of channels into cycles 10-17	0	295	297	299	296	0	Touch Strength: Area: 0	Idle Mode LP1 Mode LP2 Mode GESTURES Single Tap Press And Ho Swice X - Single X+

Figure 4.4: IQS7211A GUI Example: Circle Trackpad

The IQS7211A and Trackpad can now be evaluated by drawing lines on the trackpad and observing what happens in the GUI.

To the right side of the GUI we see the "EVENTS" section, the GESTURES are located here. Try and perform all 6 possible gestures as shown in this section.

To clear the lines drawn in the GUI, click on one of the channels displayed in the middle of the GUI.

After evaluation click on the "Stop Streaming" button.



4.3 Flower Trackpad Board

Plug this board into the base board at the PLUGIN marked area.



Figure 4.5: Flower Trackpad

Now perform the following actions in the GUI.

- > Click the "Start Streaming" button.
- > Click on the "ACK RESET" button.
- > Browse to "IQS7211A_init_AZP1147A2_3x3_TP.h" and select "Open".
- > Click on the "TRACKPAD RE-ATI" button.

See figure 4.6 below for an example





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CONFIGURATION TOOL MANAGER	ACK RESET TRACKPA	RESED TRACKPAD RE-ATI	ALP RESEED ALP RE-ATT S	OPTWARE RESET ENTER EVENT MODE	500 Bar Chart
PAUSE STREAMING STREAMING STREAMING STREAMING Streaming All settings defined in IK-file All settings read from device Settings Settings Settings Settings Settings	444	455	458	CLEAR RTTX MAPPING Streaming Options None Counts Counts and Reference Deltas ATI Compensation V Touch	Counts: 391 LTA: 391 EVENTS WKW INFO FLAGS
SETTINGS WRITE CHANGES No Changes To Write ATT Settings ALP ATT Compensation Report Rates and Timing System Settings	453	456	456	XY Une Thickness: 3 ♥ Relative X: 0 Finger: 1 Line Color: ♥	Trackpad Movement Too Many Fing ALP Output Amount of Fingers 0 1 2 INFO FLAGS ATI Error Re-ATI Occum
system settings Trackpad Settings ALP Settings Settings Version Numbers Gesture Settings RxTx Mapping Allocation of channels into cycles 0-9 Allocation of channels into cycles 10-17	444	447	447	X: 65535 Y: 65535 Touch Strength: Area: 0	ALP ATI Error Reset Occurre ALP Re-ATI Occurred Charging Mode Active Mode Idle-Touch Mo Idle Mode Idle-Touch Mo Idle Mode UP1 Mode GISTURIS
DPORT HDX.					Single Tap Press And Ho Swipe X- Swipe X+ Swipe Y+ Swipe Y-

Figure 4.6: IQS7211A GUI Example: Circle Trackpad

The IQS7211A and Trackpad can now be evaluated by drawing lines on the trackpad and observing what happens in the GUI.

To the right side of the GUI we see the "EVENTS" section, the GESTURES are located here. Try and perform all 6 possible gestures as shown in this section.

To clear the lines drawn in the GUI, click on one of the channels displayed in the middle of the GUI.

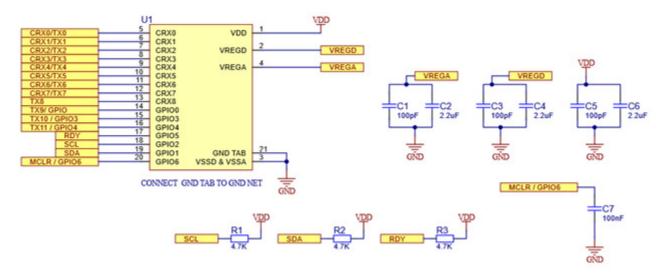
After evaluation click on the "Stop Streaming" button.



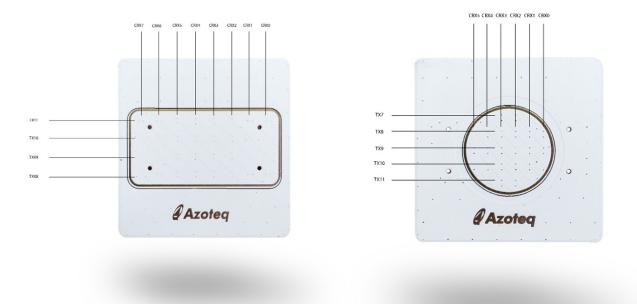
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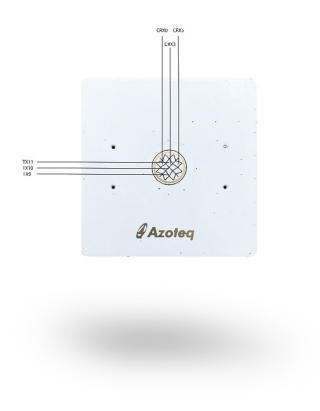
5 Reference Designs













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