



Azoteq



IQS222 Evaluation Kit

IQS222EV02 (AZP143 PCB)



Evaluation Kit: User Manual

IQ Switch® - ProxSense® Series

IQS222 EV-Kit User Manual



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1 Introduction

This user manual describes the IQS222 evaluation kit. The EV-kit is made in two parts, consisting of a mother board and keypad. It is developed to facilitate application engineers and development engineers in evaluating the IQS222 (8 channel) sensor with proximity and touch detection. Support for one wheel and 5 touch keys. I2C interface. The design of the EV-kit allows for flexibility, allowing the user to use the IQS222 in direct mode, streaming mode to a PC.

Evaluation Kit Contents:

1 x AZP143 Controller PCB:	
1 x Keypad PCB	

The keypad is easy removable from the IQS222 controller PCB. This makes the controller PCB a quick design tool when prototyping with the IQS222 8-channel capacitive sensing controller IC. The module is assembled with a SO-20 packaged device, and SO-20 samples are also included. These samples can be used for quick prototyping with any design. The IQS221 IC are also packaged in the very compact QFN20 4x4 package.



2 Motherboard

Figure 1 shows the top view of the EV-kit motherboard. Its features include:

- Modular design: Connect the supplied wheel into the main board, or wire the main board into a prototype for rapid prototyping
- 1 wheel and 5 touch buttons.
- Reference design for IQS222 with user proximity & touch detection ability
- User friendly GUI interface. (requires Azoteq Configuration Tool (CT), or Azoteq Data Streamer (DS))
- Up to 8 keys
- 8 touch sensitivity settings per channel
- Low system cost
- Reliability through reducing system complexity
- Best in class proximity sensitivity – proximity approach detection

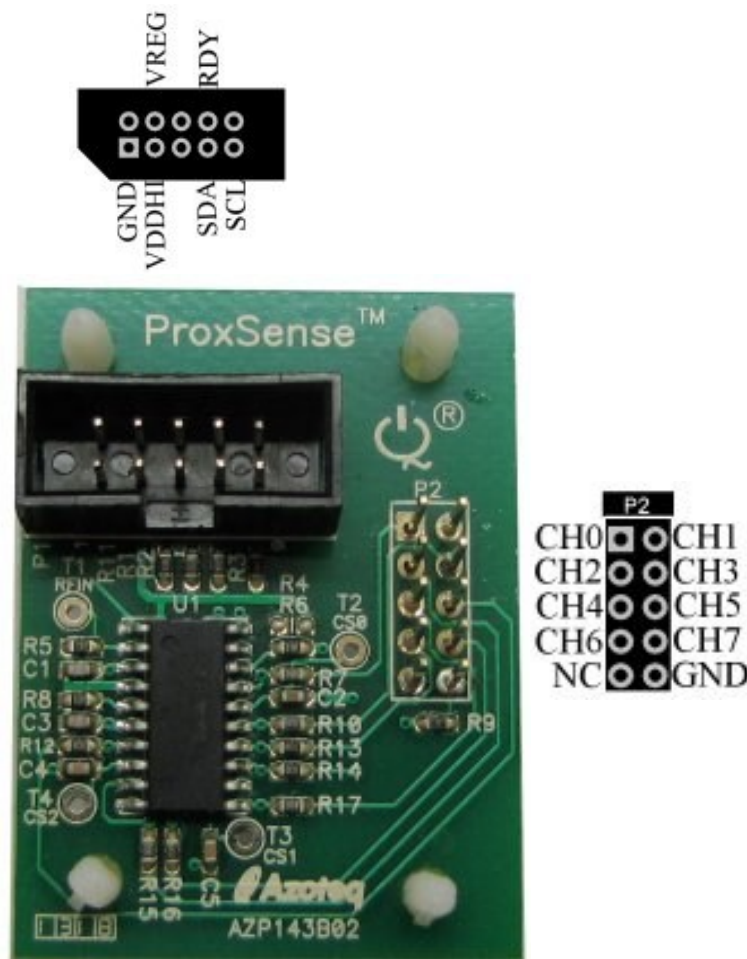


Figure 1: Motherboard



3 Operation

- Ensure Keypad is connected to EV02 controller PCB
- Connect the EV-kit to a PC through a CT200.
- Streaming can now be done through IQS222 GUI.

The IQS222 Demo GUI is used for demonstration and development purposes. This allows designers to get a feel for the operation of the IQS222 and to experiment with the various settings that are available. The IQS222 Demo GUI is available on the Azoteq website, www.azoteq.com. Refer to the following application note: “AZD020 – IQS222 GUI Overview.pdf” for more information.



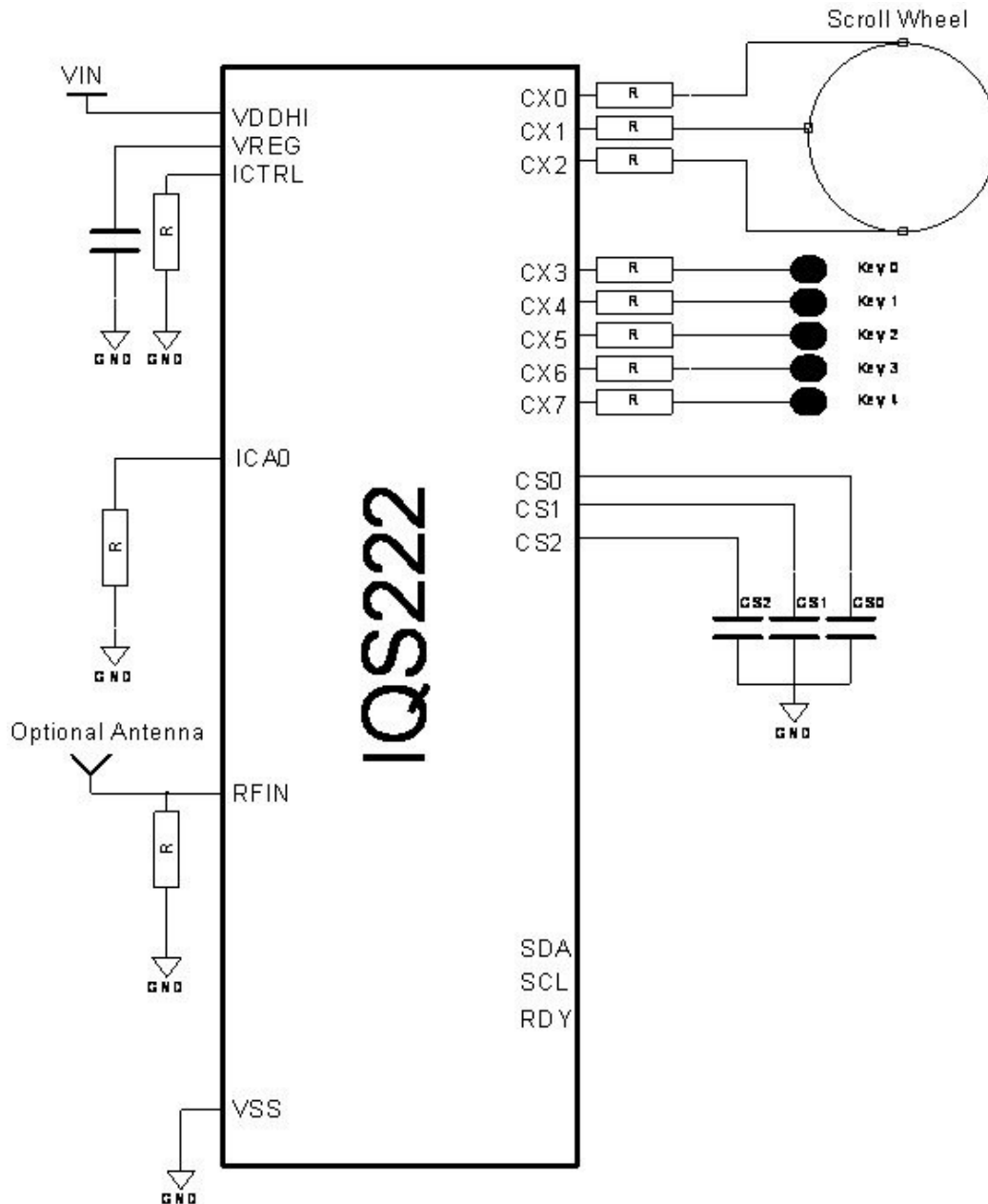
IQS222 Demo GUI



Connect CT200 to PC (use 10 pin ribbon cable to EV-Kit)

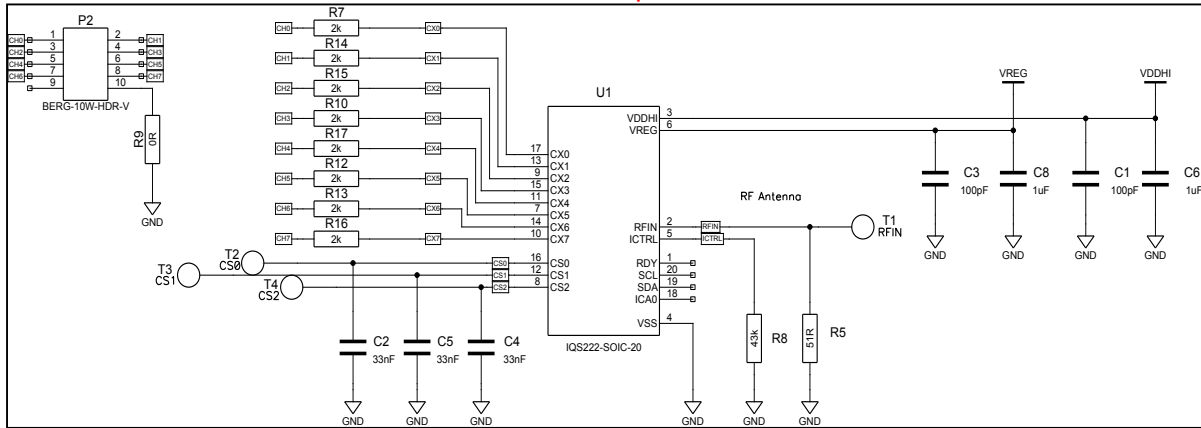


4 Circuit Overview

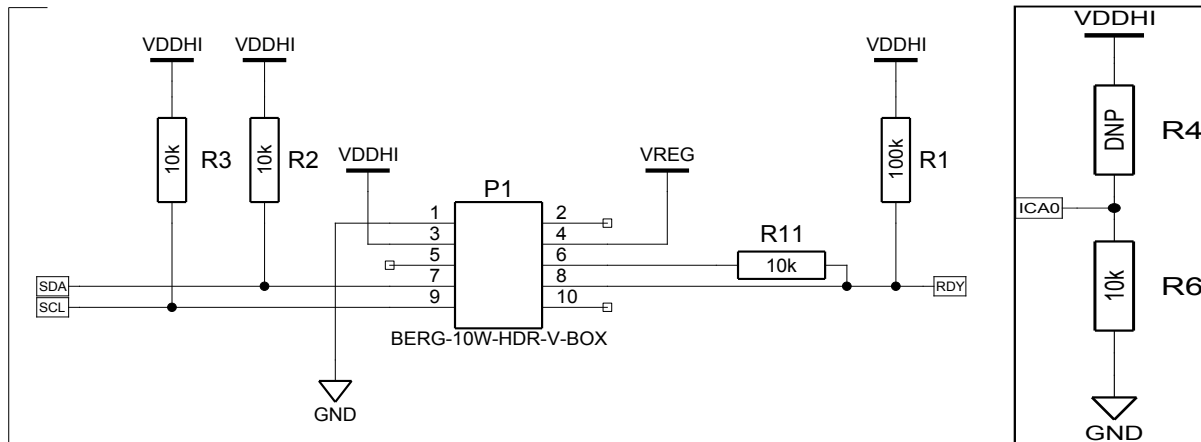




DNP = Do Not Populate



IQS222 Reference Design



I2C - for data streaming and Device Address Selection

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