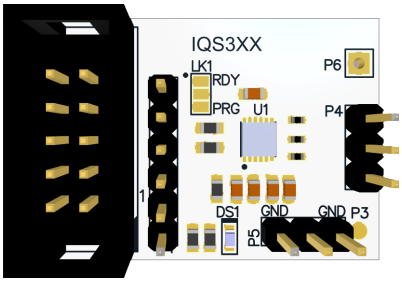
IOS320 Module User Guide

User Guide for the IQS320 Module



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1 Introduction

The IQS3xx module is used to evaluate any IQS3xx series hardware. To visualise the raw data from the IQS3xx module (AZP1208A4), the module can be interfaced with any Windows PC that supports USB. This is done with the CT210A and the relevant software Graphical User Interface (GUI). The purpose of the IQS3xx module is to help application development engineers in evaluating the IC's capabilities.

2 Connections

It is important to take note of the connections highlighted on the IQS3xx module below:

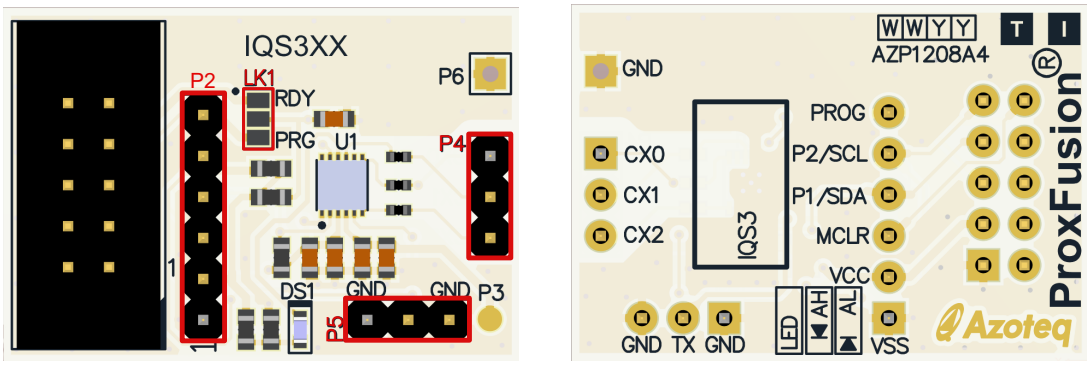

Figure 2.1: IQS3xx Module Connections

Connector Name	Connector Description	Recommended Usage
P4	CX Pins	Sensing electrodes CX0 and CX1 (CX2 is not used for the IQS320).
P5	TX & GND	TX is used as InputA for the IQS320. It is recommended to use a jumper between TX (InputA) and GND for device address 0x47, as there is no pull-up readily available.
LK1	RDY/PROG Link	Solder link that routes the RDY/MCLR of the IC to the correct pin for either programming a blank IC or the RDY used for communication. (Keep on RDY pin as boards that have been marked in the box on the bottom layer are programmed and should not be programmed again).
P2	Debugging Pins	Used for debugging when interfacing with the GUI or MCU.

The debugging pins are as follows:

	Pin Name	Pin Function
1	VSS	Analog/Digital Ground
2	VCC	Power supply input voltage
3	RDY/MCLR	Ready Interrupt
4	SDA	I^2C Data / Digital Output
5	SCL	I^2C Clock / Digital Output
6	PROG	VPP input for OTP

3 Setting up the IQS320

Connect the CT210A to the box header on the IQS3xx module, then connect the CT210A to a PC with a micro USB data cable:

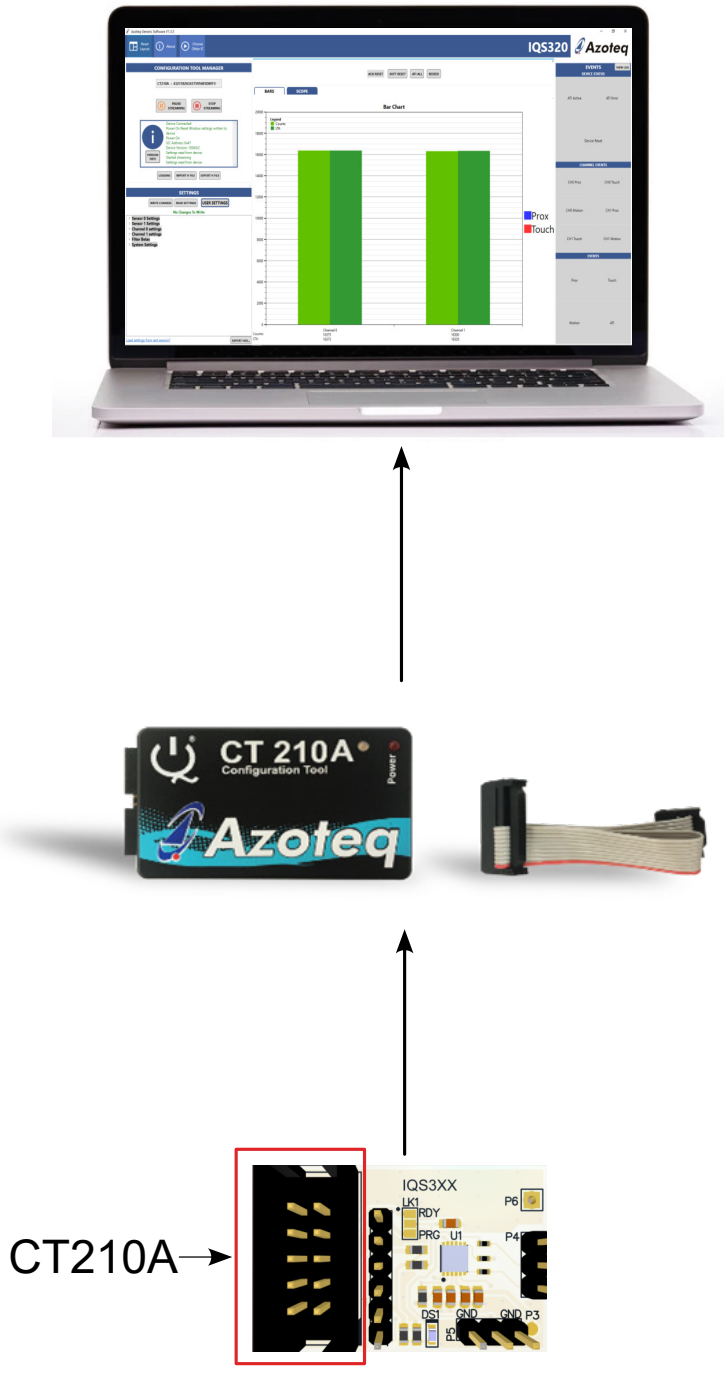

Figure 3.1: IQS320 Module Setup

4 Streaming

The IQS320 has two 7-bit device addresses, 0x47 and 0x48, that can be toggled with InputA (TX on the IQS3xx module). The device will check if InputA is set to VSS or VCC[1] at startup. If InputA is set to VSS, the device address will be set to 0x47 and if set to VCC the device address will be set to 0x48.

Once the device is setup and the device address selected, the "START STREAMING" button can be clicked as shown below.

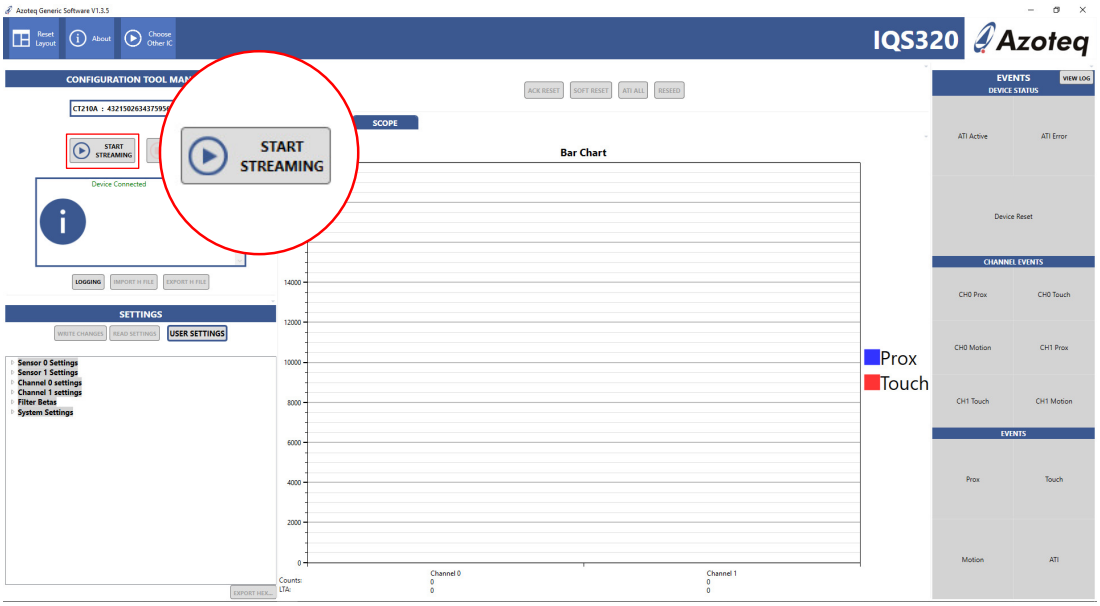

Figure 4.1: IQS320 GUI (Start Stream)

Once the device has successfully strated streaming, click the "ACK RESET" button and then the "ATI ALL" button. The GUI should now look like the following:

Figure 4.2: IQS320 GUI (Streaming)

[1] Do not leave InputA in a floating state.

The "USER SETTINGS" button can be clicked to access a popup settings window. The settings can be changed by the user to meet their needs. The popup can be seen below:

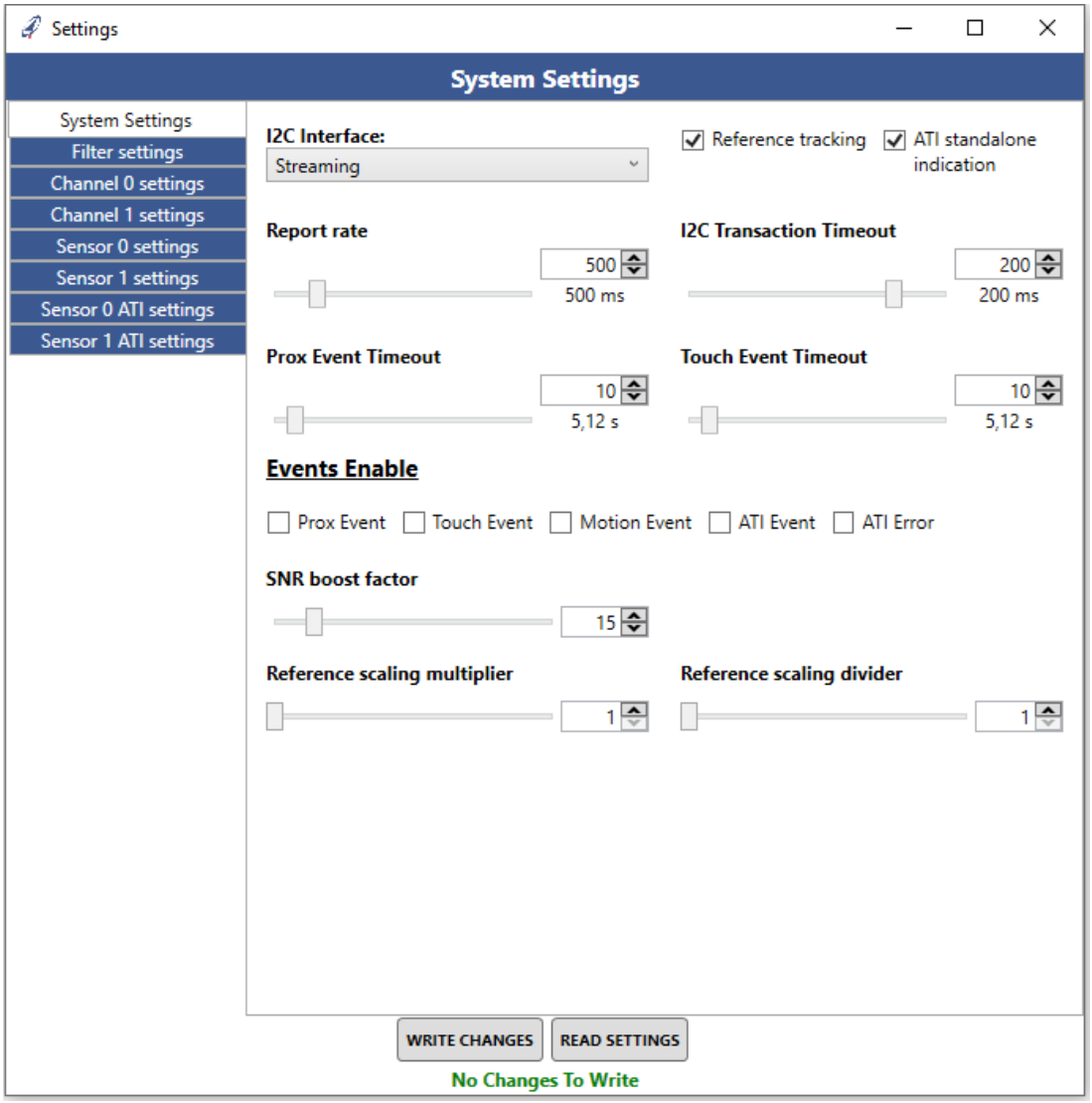

Figure 4.3: IQS320 User Settings Popup

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