IQS231EV02 Quick start guide

Single Channel Capacitive Proximity/Touch/SAR Controller with movement detection

The IQS231ProxSense® IC is a self-capacitance controller designed for SAR applications where a reliable proximity detection function is required along with human and inanimate object distinction. The IQS231 uses quick release and movement detection to achieve this. The IQS231 operates standalone or I²C can be configured via OTP (One Time Programmable) bits.

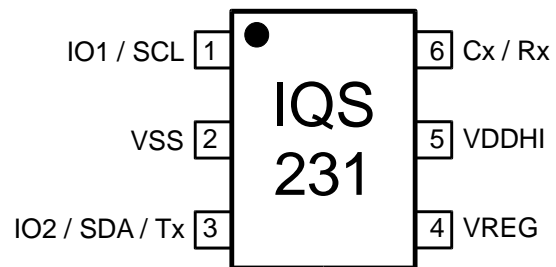# 1 Reference design and pin layout

Figure 1.1 IQS231EV02

Figure 1.2 TSOT23-6 Pin layout

Table 1.1   Multifunction pin descriptions

IQS231 in TSOT23-6			
Pin	**Name**	**Type**	**Function**
1	PRIMARY I/O	Digital Input/Output	Multifunction **IO1** / **SCL** (I²C Clock signal)
2	VSS	Signal GND	
3	SECONDARY I/O / Tx	Digital Input/Output	Multifunction **IO2 / SDA** (I²C Data output) / Tx
4	VREG	Regulator output	Requires external capacitor
5	VDDHI	Supply Input	Supply:1.75V – 3.6V
6	Cx	Sense electrode	Connect to conductive area intended for sensor

Table 1.2   Pin-out description

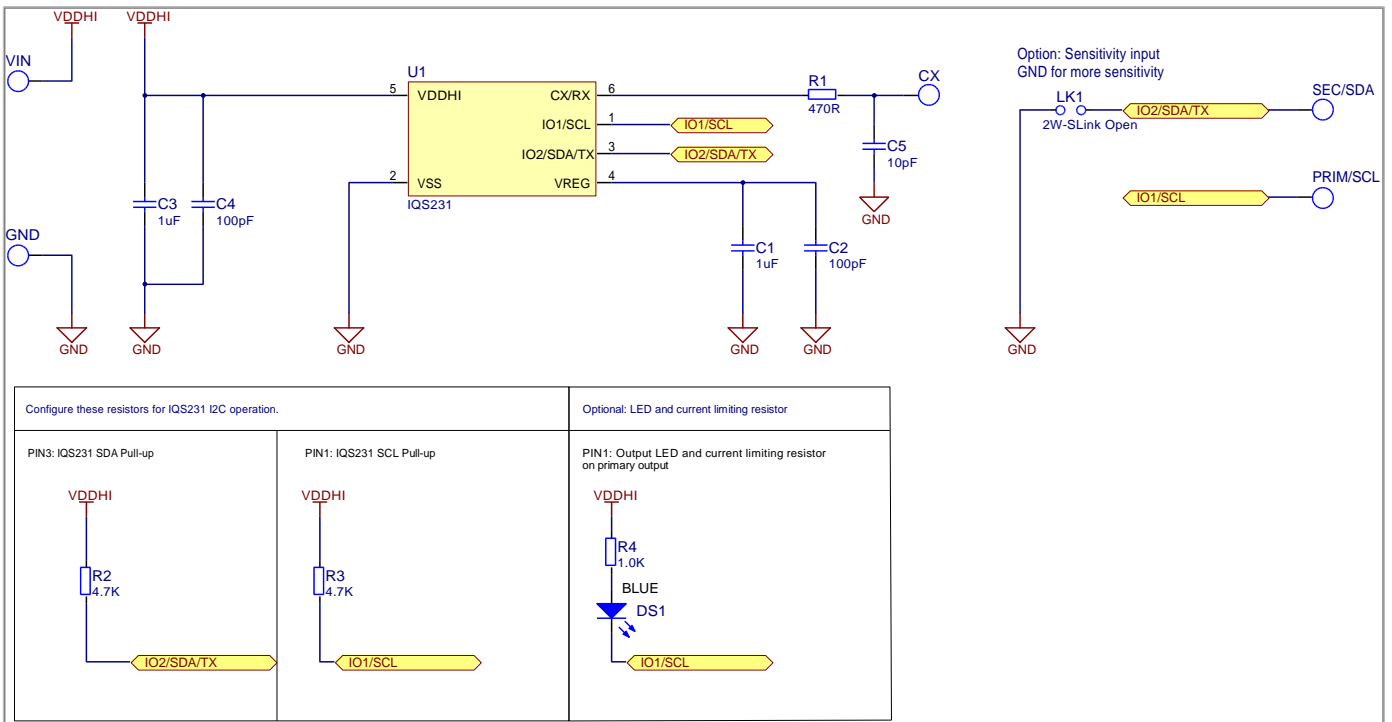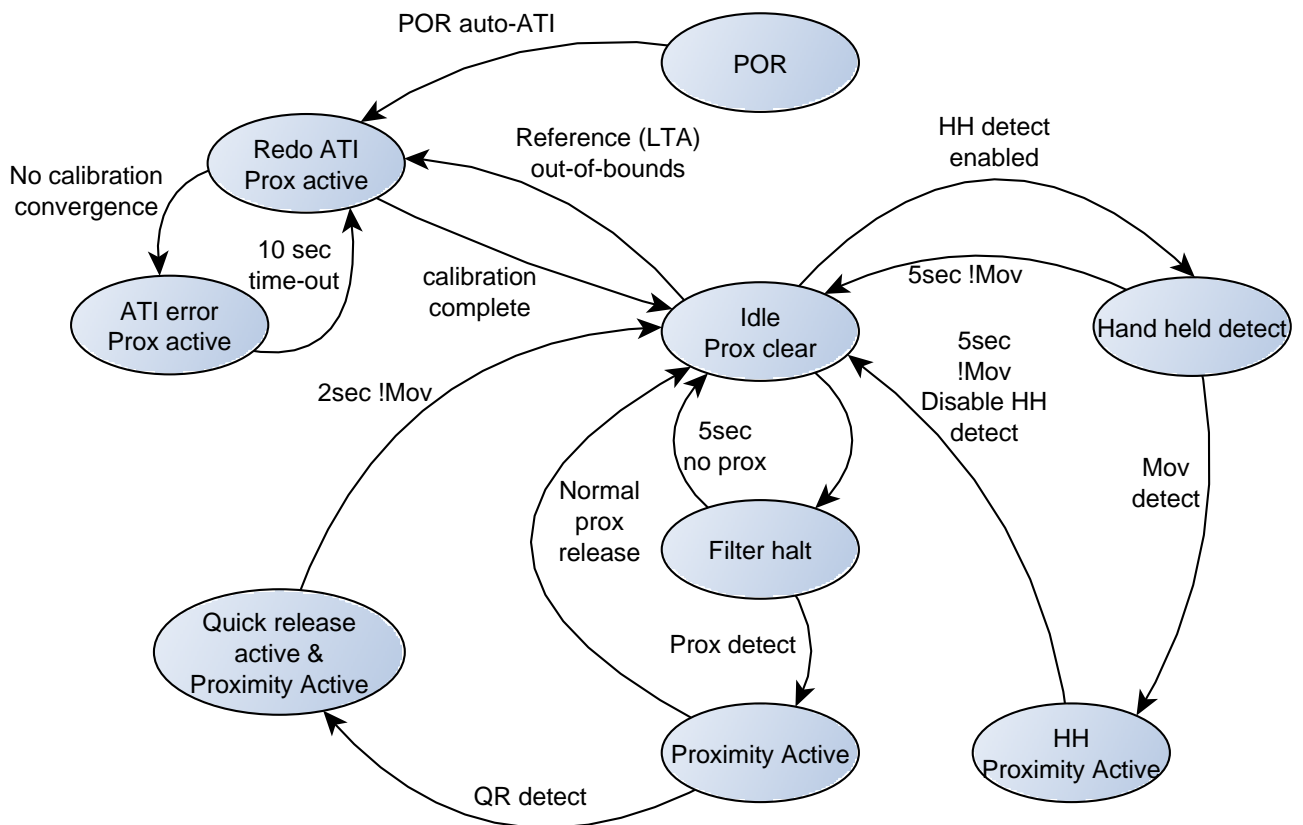| Multifunction pin name	Multifunction pin option
IO1	Proximity output / Proximity output with heartbeat
IO2	Sensitivity input / Synchronization input / Movement output / Touch output

Figure 1.3 Reference design

2 Default UI

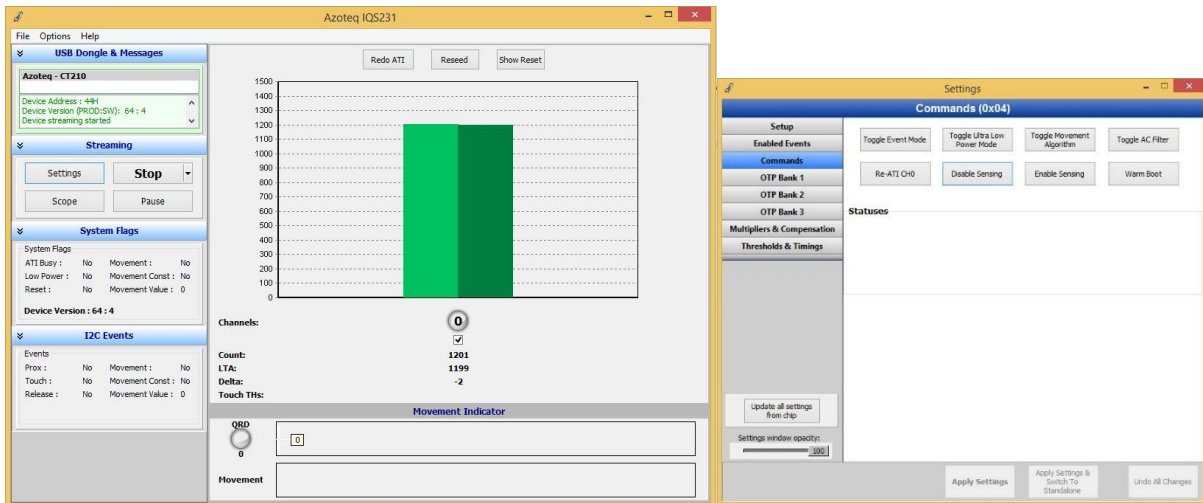**Figure 2.1   Proximity UI no movement**

Figure 2.2   IQS231 GUI

Different UI's can be selected in the IQS231 GUI and can then be selected to run in standalone mode.

The GUI is available for download from the Software & Tools section of azoteq.com and the CT210 (sold separately) is used in conjunction with the GUI to select the different UI's and settings.

Using USBProg the IQS231 can be configured in different variations. Please note when settings are programmed it is permanent.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Touch Sensor Development Tools *category:*

Click to view products by Azoteq *manufacturer:*

Other Similar products are found below :

TSC2100EVM TSC2003EVM-PDK ATMXT1066T2-DEV-PCB ATMXT336UDEVPCB LC717A00ARGEVK ATMXT641TDAT-I2C-PCB
MAX20353EVSYS# 1374 MIKROE-1906 1602 SEN0164 1982 STEVAL-PCC009V3 ATSAMD20-QTRDEMO ATQT2-XPRO ATQT6-
XPRO 2340 DM160221 DM160229 DM160222 ATQT5-XPRO DFR0129 SEN0170 SLEXP8019A SLEXP8018A 1375 SEN0186
SEN0148 DK-000013-03 ROB0103 cs-useful-01 DFR0385 SEN0184 SX8651EVKA 1362 2024 3575 4830 AS8579-TS_EK_DB
ATQT600 IQS227/228ASEV01 SKU-6515 CY3280-MBR2 CY3280-MBR3 DFR0030 DM160219 AC160219 AC320007 AC47H23A
ATEVK-MXT1066T2-A