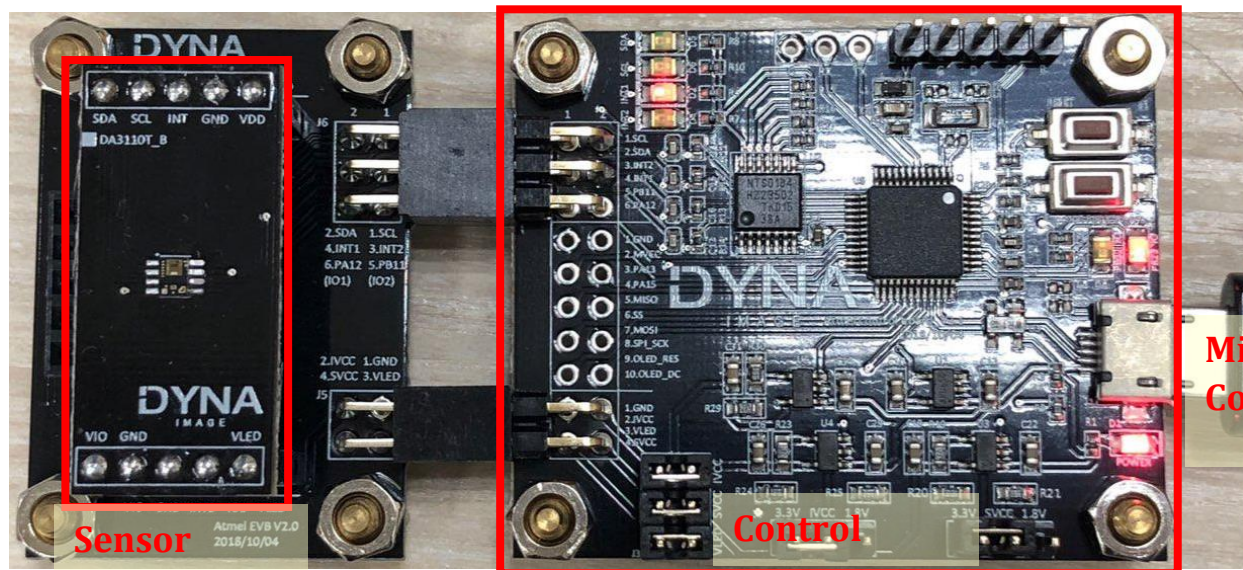


PX358J Demo Program User Guide

VERSION	DATE	CONTENT	AUTHOR
1.0	2021/7/28	Document creation	Brian Chiu

Hardware Setup

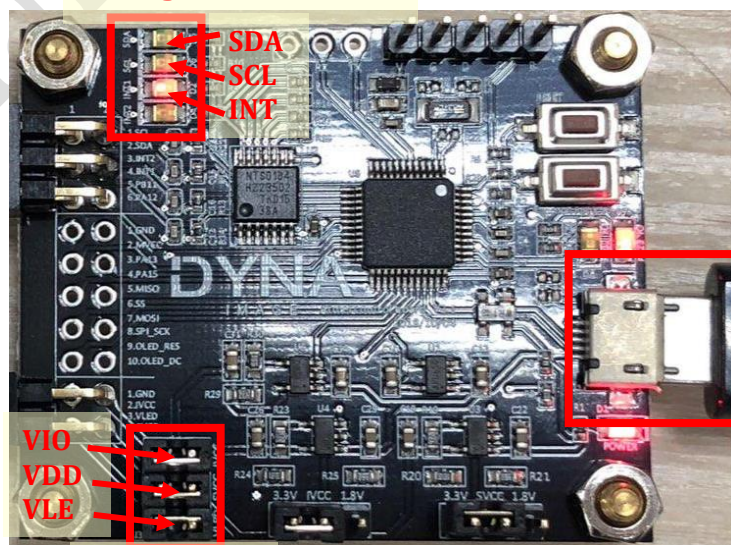


Sensor Board



Control Board

Debug LED, Active



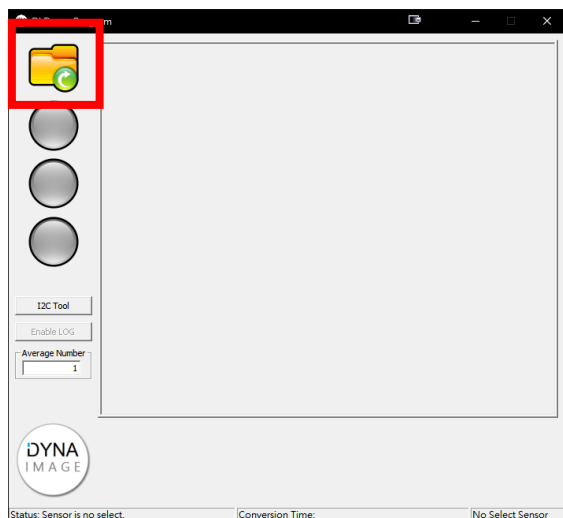
Power

Software Setup

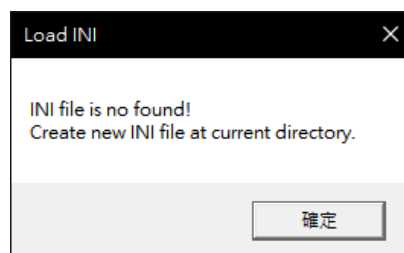
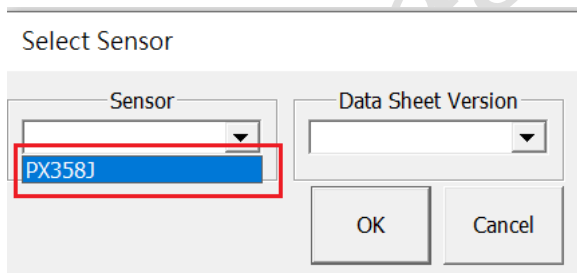
1. Open DI_Demo_Program.exe



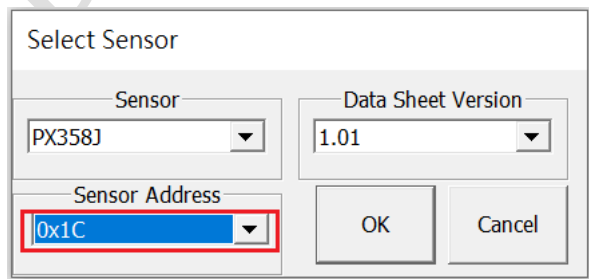
2. Open sensor selects windows



3. Select PX358J, then press OK. If it's your first use, you will get a "Load INI" message and then press OK.



4. After first use, select sensor address of 0x1C when you load PX358J_v1.01.ini file.



The user interface of Sys Config Tab is shown as follow:

The screenshot shows the 'Sys Config' tab of the 'PX358J Demo Program'. The interface includes a left sidebar with icons for selecting a sensor, saving settings, pausing, reloading defaults, using the I2C tool, logging data, and changing the average number. The main area displays configuration options for the PX358J sensor, including version information and various enable/disable checkboxes. A 'Software Reset' button is also present. The bottom status bar shows sensor status, conversion time, power consumption, and the sensor name. To the right, a 'Register Table' lists memory addresses, values, and names for various registers.

Annotations:

- Select Sensor
- Save setting to .ini file
- Pause
- Reload default value
- I2C Tool
- Log Data
- Change Average Number

Register Table

Addr	Value	Name
0x00, 0x01	0x0000	PsData
0x4F	0x00	WaitTime
0x60	0x15	PsCtrl
0x61	0x20	PsPuw
0x62	0x02	PsPuc
0x63	0x00	PsPreCtrl
0x64	0x0B	PsDrvCtrl
0x65	0x11	PsDacCtrl
0x67	0x00	PsCtDac
0x69, 0x6A	0x0000	PsCal
0x6B	0x11	PsAlgoCtrl
0x6C, 0x6D	0x0000	PsThLow
0x6E, 0x6F	0x03FF	PsThHigh
0xF0	0x02	DevCtrl
0xF1	0x03	IntCtrl
0xF2	0x00	HaltCtrl
0xF4	0x00	SwRst
0xFE	0x10	IntFlag
0xFF	0x80	StatFlag

The user interface of PS+IR Tab is shown as follow:

Addr	Value	Name
0x00, 0x01	0x0000	PsCh
0x10	0x00	PsConvTime
0x11	0x00	PsNapTime
0x12	0x10	PsCtrl
0x13	0x00	PsIntPuw
0x14	0x00	PsIntPuc
0x15	0x00	PsPrePuc
0x16	0x08	PsDrvCtrl
0x18	0x01	PsPers
0x1A, 0x1B	0x0000	PsThLow
0x1C, 0x1D	0xFFFF	PsThHigh
0x1E, 0x1F	0x0000	PsCalb
0x31	0x00	Analog ICT DAC
0xF0	0x12	DevCtrl
0xF1	0x02	IntCtrl
0xF2	0x00	HaltCtrl
0xF3	0x00	SysCtrl
0xF4	0x00	SwRst
0xFE	0x80	IntFlag
0xFF	0x00	StatFlag

1. PsData Bits: Change PS resolution bit.
2. PS Mean Time: Internal average function.
3. Waiting Time: Internal waiting time for power saving.
4. PS Integration Pulse Width: Change PS sensitivity.
5. PS Integration Pulse Count: Change PS sensitivity.
6. Reduce PS crosstalk impact by analog hardware function.
 - PS CTDAC Gain: CtDac Gain, from x1 to x15 ratio.
 - PS Crosstalk DAC: CtDac Step, from 0 to 96 step.
 - Auto CtDac: Calculate the CtDac value with software algorithm.
7. Reduce PS crosstalk impact by digital hardware function.
 - PS Calibration: PS data calibration from 0 to 65535.
 - Auto Calibration: Get 20 samples average then write to PS Calibration register.
8. Based on above settings, it will automatically calculate PX318J conversion time.
9. Based on above settings, it will automatically calculate total PX318J power consumption.

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