Captivate Design Center 1_60_00_00
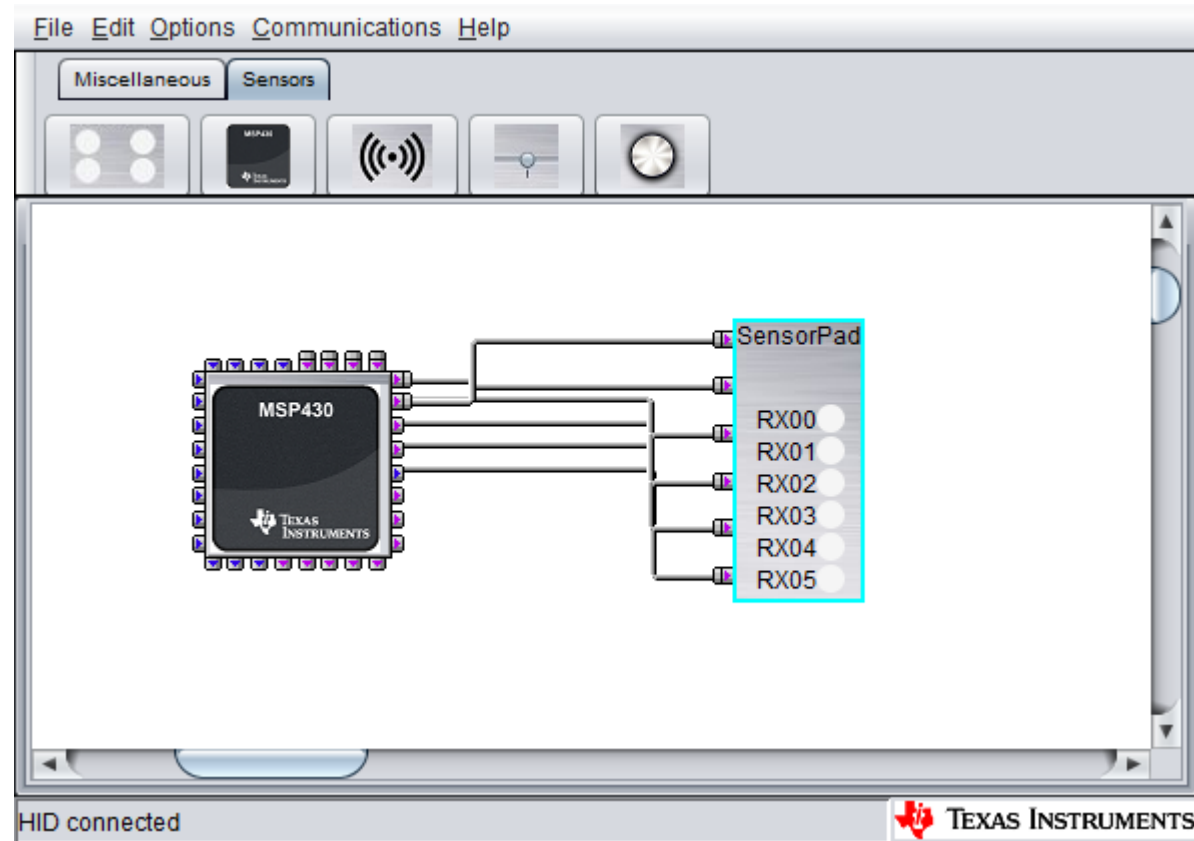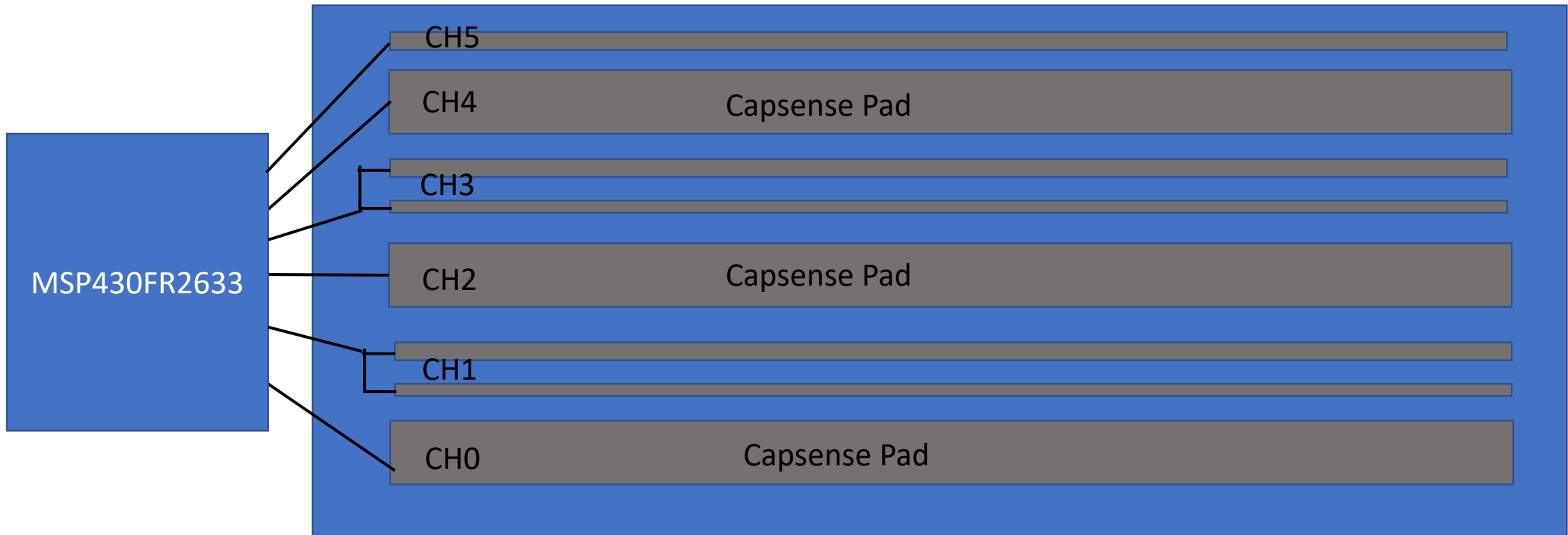
ButtonGroupSensor properties

Name: SensorPad

Configuration

Capacitive Mode: SELF

Element Count: 6

Electrode config: Cycles: 2, Controller Ports: 6, TX: 0, RX: 6
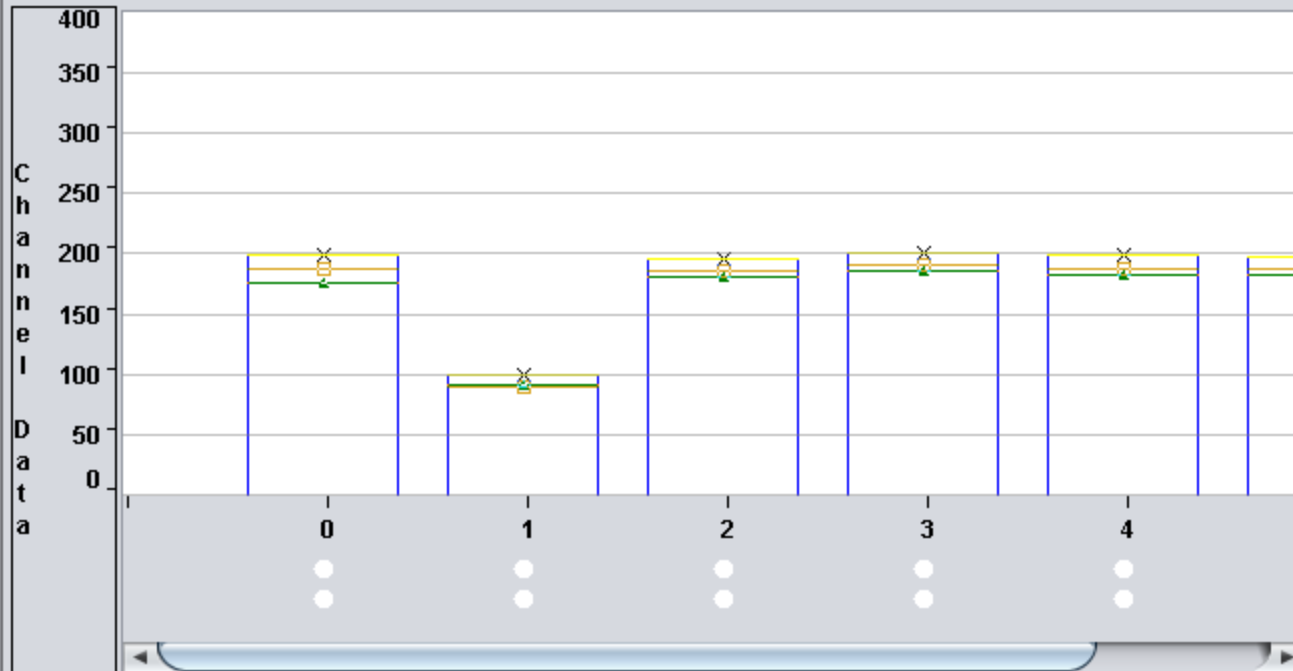
[Configure Tx/Rx Groups]

Target Communications

Connected ☑

RX00
RX01
RX02
RX03
RX04
RX05

Channel Bar Chart | Channel Oscilloscope Plot | Channel Table | SNR | Conversion_Control | Tuning

Channel Data

[Plot Display Options]

[Select All]

[Deselect All]

☑ **Count**
☑ **Delta**
☑ **Lta**
☑ **Prox Threshold**
☑ **Touch Threshold**

Delta always Zero, and cannot see RED bar when touch

ButtonGroupSensor properties

Name: SensorPad

Configuration

Capacitive Mode	SELF
Element Count	6
Electrode config	Cycles: 2, Controller Ports: 6, TX: 0, RX: 6

Configure Tx/Rx Groups

Target Communications

Connected ☑

RX00
RX01
RX02
RX03
RX04
RX05

Channel Bar Chart | Channel Oscilloscope Plot | Channel Table | SNR | Conversion_Control | Tuning

Channel	Sensor	Element	TX	RX	Time C...	Port	Parallel...	LTA	Count	Delta	Prox Th...	Touch ...	Prox St...	Touch ...
0	SensorP...	E02		RX02	SensorP...	CAP3.0	B0	232	232	0	222	205		
1	SensorP...	E03		RX03	SensorP...	CAP3.1	B1	107	107	0	97	99		
2	SensorP...	E00		RX00	SensorP...	CAP2.2	B2	200	200	0	190	185		
3	SensorP...	E04		RX04	SensorP...	CAP3.2	B2	176	176	0	166	163		
4	SensorP...	E01		RX01	SensorP...	CAP2.3	B3	200	200	0	190	185		
5	SensorP...	E05		RX05	SensorP...	CAP3.3	B3	200	200	0	190	185		

ButtonGroupSensor properties

Name: SensorPad [Help]

Configuration

Capacitive Mode: SELF

Element Count: 6

Electrode config: Cycles: 2, Controller Ports: 6, TX: 0, RX: 6

[Configure Tx/Rx Groups]

Target Communications

Connected ☑

RX00 ○
RX01 ○
RX02 ○
RX03 ○
RX04 ○
RX05 ○

[Channel Bar Chart] [Channel Oscilloscope Plot] [Channel Table] [SNR] [Conversion_Control] [Tuning]

Options

Filtering Enabled ☐   Export to CSV ☐
Sample Size 1,000   Overwrite CSV ☐

Element	Touch Str...	Touch Noi...	Untouche...	SNR
E02	174.00	1.76	0.90	39.90
E03	19.00	0.83	0.98	27.22
E00				
E04	147.00	1.61	1.25	39.20
E01				
E05	173.00	2.96	0.87	35.33

Sampling Progress

[Measure SNR]

Instructions

Signal to Noise Ratio (SNR) Measurement TAB

$$SNR(dB) = 20 \log\left(\frac{Touch\ Strength}{Touch\ Noise}\right)$$

$$Touch\ Noise = \sqrt{\frac{\sum_{n=0}^{Sample\ Size}(touched[n] - Touched\ Average)^2}{Sample\ Size}}$$

$$Untouched\ Noise = \sqrt{\frac{\sum_{n=0}^{Sample\ Size}(untouched[n] - Untouched\ Average)^2}{Sample\ Size}}$$

$$Touch\ Strength = |UnTouched\ Average - Touched\ Average|$$

$$UnTouched\ Average = \frac{\sum_{n=0}^{Sample\ Size} untouched[n]}{Sample\ Size}$$

$$Touched\ Average = \frac{\sum_{n=0}^{Sample\ Size} touched[n]}{Sample\ Size}$$

When connected to the target, the Measure SNR button will initiate a series of measurements on the highlighted element and perform the calculations described above and update the table accordingly. Additional options are available to adjust the sample size, apply filtering, and log the entire dataset.

Options

[OK]