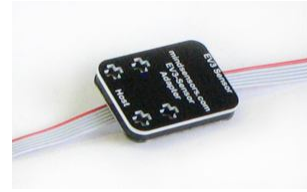## What is EV3SensorAdapter

EV3SensorAdapter is an in-line adapter to connect EV3 sensors to NXT brick or Arduino using NXShield or Raspberry Pi using BrickPi.

Connections

Connect the Host end to your NXT (or NXShield or BrickPi). Connect your sensors EV3 sensor to other end.

Programming Techniques for SensorMUX

EV3:

To use capabilities of the sensor, please download NXT blocks available at following URL:

http://www.mindsensors.com/index.php?module=documents&JAS_DocumentManager_op=viewDocument&JAS_Document_id=235

Installation instructions for EV3 block are available at:
http://www.mindsensors.com/pages/198

Download EV3 sample program from following URL and modify it to suit your needs.

http://www.mindsensors.com/index.php?module=documents&JAS_DocumentManager_op=viewDocument&JAS_Document_id=259

NXT-G:

Not supported. It is recommended to use the new EV3 software for your NXT programming.

NXC:

Download the sample programs and library file available at following location, and include the library file it in your program by #include directive. Or Modify the Sample program to suit your needs.

http://www.mindsensors.com/index.php?module=documents&JAS_DocumentManager_op=viewDocument&JAS_Document_id=256

RobotC:

To be implemented.

I2C Registers:

When Channel 0 is selected SensorMUX appears as a set of registers as follows:

Register	Read	Write
0x41	-	Command Register
0x42	Description/Name of attached sensor	-
0x52	Read the mode of the attached sensor	Set/change the mode of attached sensor.
0x54-0x55	Read the sensor value (integer) (if the sensor supports channels, value from channel 0)	-
0x56-0x57	Sensor value for channel 1 (if sensor does not support channels, this value is undefined)	-
0x58-0x59	Sensor value for channel 2 (if sensor does not support channels, this value is undefined)	-
0x5A-0x5B	Sensor value for channel 3 (if sensor does not support channels, this value is undefined)	-

I2C Bus address

Factory Default Address: 0x32.

Current Consumption

Average measured current profile is as follows:

Current Consumption	Duration
3mA	Continuous

Advanced Information

Supported sensors as follows:

Sensor Name	Supported Modes
EV3 Color	MODE_Color_ReflectedLight MODE_Color_AmbientLight

	MODE_Color_MeasureColor
EV3 Gyro	MODE_Gyro_Angle
	MODE_Gyro_Rate
EV3 Infrared	MODE_InfraRed_Proximity
	MODE_InfraRed_Beacon
	MODE_InfraRed_Remote
EV3 Ultrasonic	MODE_Sonar_CM
	MODE_Sonar_Inches
	MODE_Sonar_Presence

For details about data returned by each sensor or modes, please refer to EV3 IDE help pages.