Port Splitter for Digital Sensors

SPLIT-Nx-v2 splits a single NXT Sensor port into 3 ports and allows you to connect multiple I2C compliant devices to single NXT port.

Electrical Connections

Connect SPLIT-Nx-v2 to any sensor port of NXT using standard connector cable from NXT set (or a Flexi-cable from mindsensors.com), and connect your digital sensors to SPLIT-Nx-v2's any of remaining ports.

Sensor Configuration

The sensors attached to SPLIT-Nx-v2 must be I2C compliant devices with unique I2C addresses. Attach your sensors to any of the available ports on SPLIT-Nx-v2.
Refer to your sensor's User Guide on how to change the I2C address.

Programming Techniques

There is no special NXT-G block or API needed to use SPLIT-Nx-v2. In your program, address your sensors using I2C address of your sensor. (Each sensor must have unique I2C address).
Attach the port splitter to NXT on any port (say port 1).
In your program, use the respective sensor's Block (or API as the case may be), and for the parameters, use the port of the port splitter (port 1 in our case) and I2C address of the attached sensor from which you wish to take a reading.

⚠ **NOTE**
If you are programming in NXT-G, the respective block for the sensor should support addressing them with I2C address.

Current Consumption of your sensors

Under normal conditions, maximum current consumption capacity of NXT I2C bus is about 100 milli-amps. While attaching multiple sensors, ensure that total current drawn by your sensors is within the limits. Also to limit current consumption, use the shortest possible length of cables between the sensor and SPLIT-Nx-v2.

Supported Sensors and Devices

Review list of devices on following webpage:
http://www.mindsensors.com/ev3-and-nxt/52-port-splitter-for-nxt-digital-sensors

Using SPLIT-Nx-v2 with NXT Motors

Upto three motors can be attached to SPLIT-Nx-v2. Turning motor port ON through the NXT program will turn all the attached motors ON at once. This is useful if you need to run all motors at once, however independent control of each attached motor is not possible and encoder values of the motors can not be used. i.e. rotation control feature of motor blocks can not be used. Also note that the power supplied to the motors will be limited by the power coming from the NXT brick.

More about the encoder value: *The encoder reading on NXT will be Logical AND operation of encoder values of all attached motors. For simple programs such value is not of much use.*