AeonKit :
Wearable Device Prototyping Toolkit

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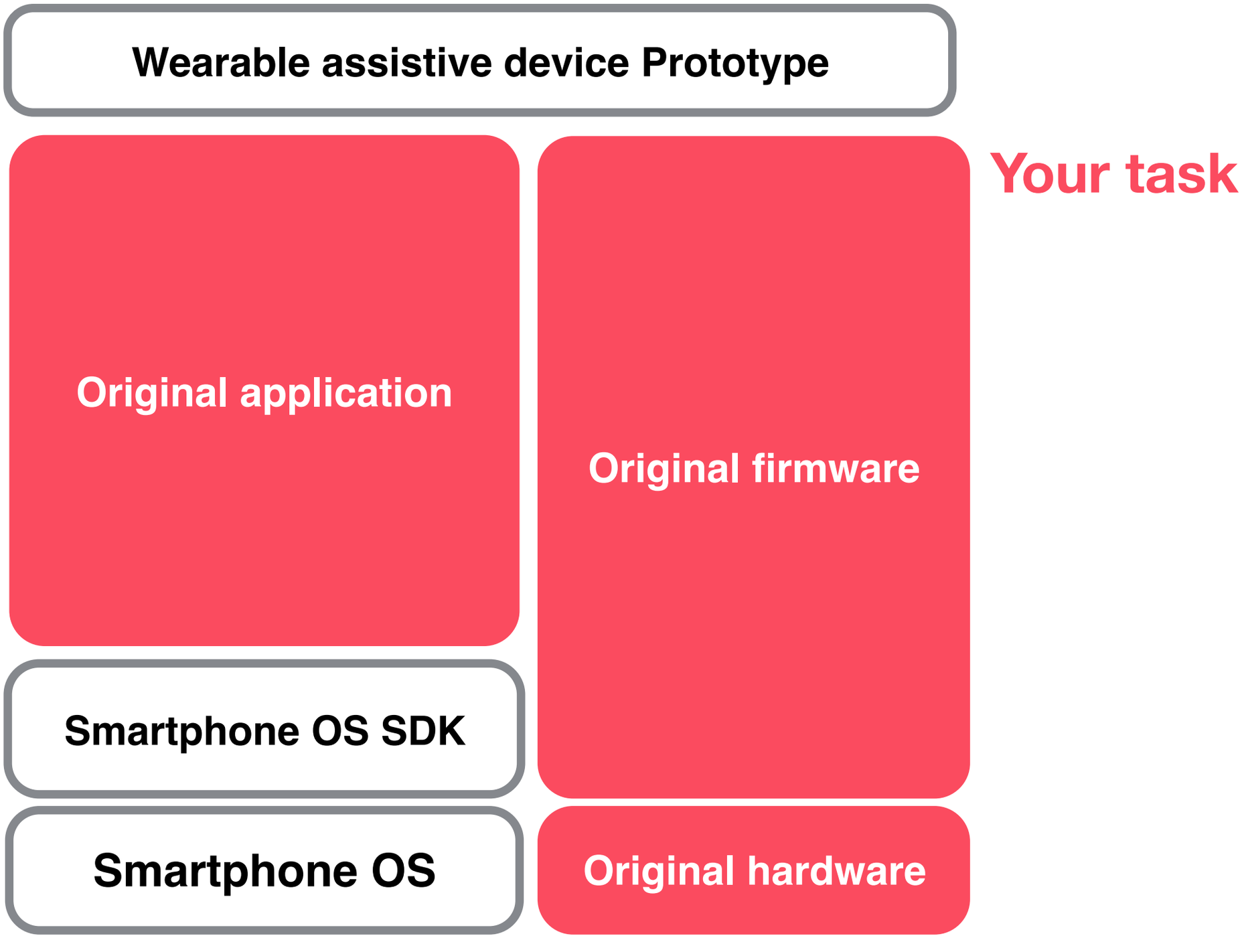
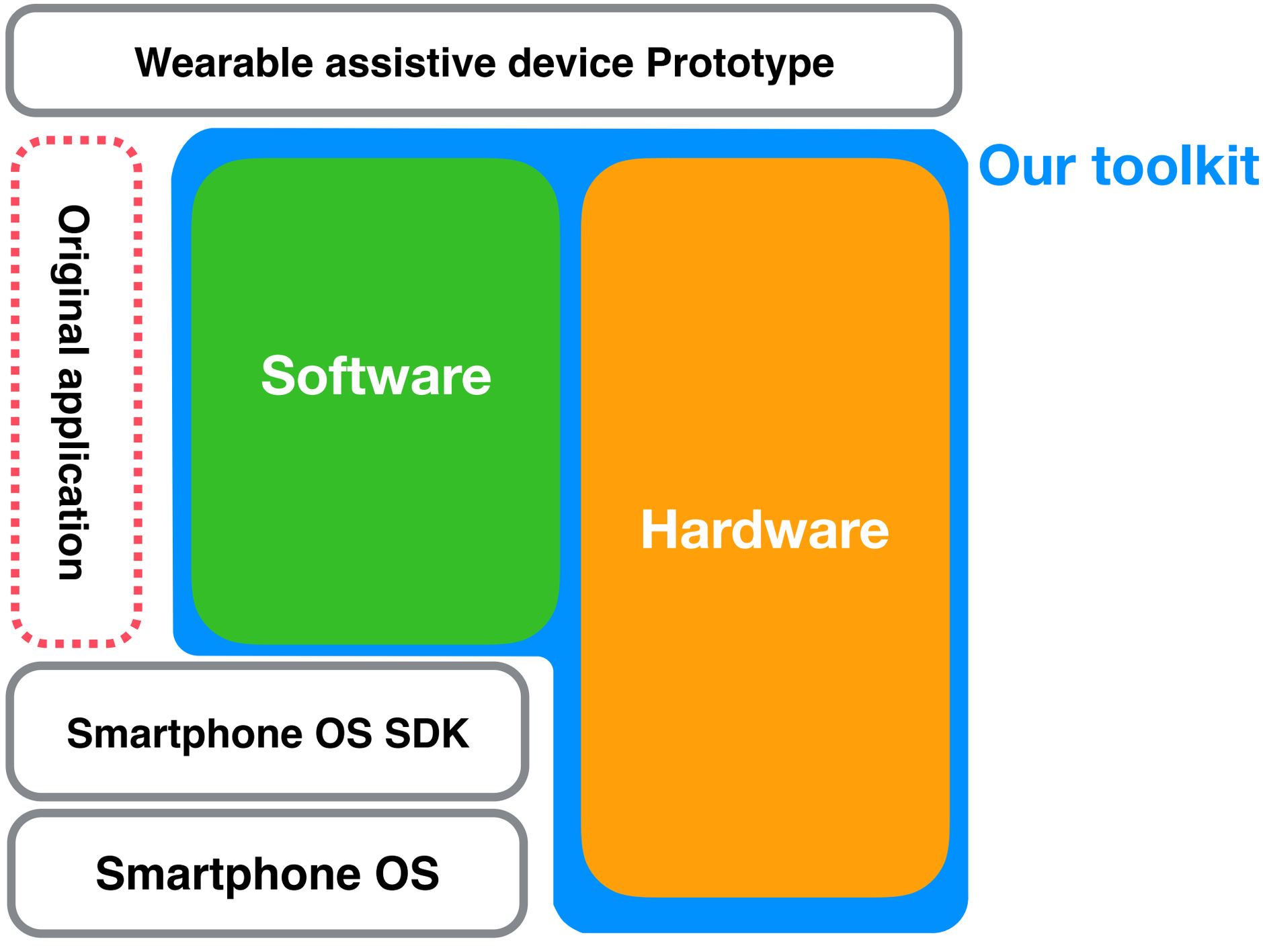
Architecture of the toolkit



Architecture of the toolkit



Overview of the toolkit

- **Composed of 3 part of things.**
  - Hardware Module
  - Toolkit Software Development Kit
  - Graphical Module Editor

Hardware Module

- **Hardware Module manages sensor or dispay.**
  - Very small, light weight and low cost.
- **It’s wirelessly connected to the smartphone.**
  - Connected by Bluetooth Low Energy（BLE）.
  - A software on the smartphone controls all modules.

Module：

Attatch modules on your body.

Wireless Connection

OLED Display

Haptic Display

Connect to moduels

Motion Sensor

Smartphone

Module：

Attatch modules
on your body.

Wireless
Connection

OLED Display

Haptic Display

Connect
to moduels

Tilt Sensor

Smartphone

Sensor Data

Module：

Attatch modules
on your body.

Wireless
Connection

OLED Display

Haptic Display

Connect
to moduels

Process data

Motion Sensor

Smartphone

Module：

Attatch modules on your body.

Wireless Connection

Present an information

OLED Display

Haptic Display

Haptic feedback

Connect to moduels

Motion Sensor

Smartphone

Behave as One device.

Wireless Connection

Attatch modules on your body.

OLED Display

Haptic Display

Connect to moduels

Motion Sensor

Smartphone

Toolkit Software Development Kit （SDK）

- **Including some useful classes.**
  - Module Class
  - Software Module Class

Module Class

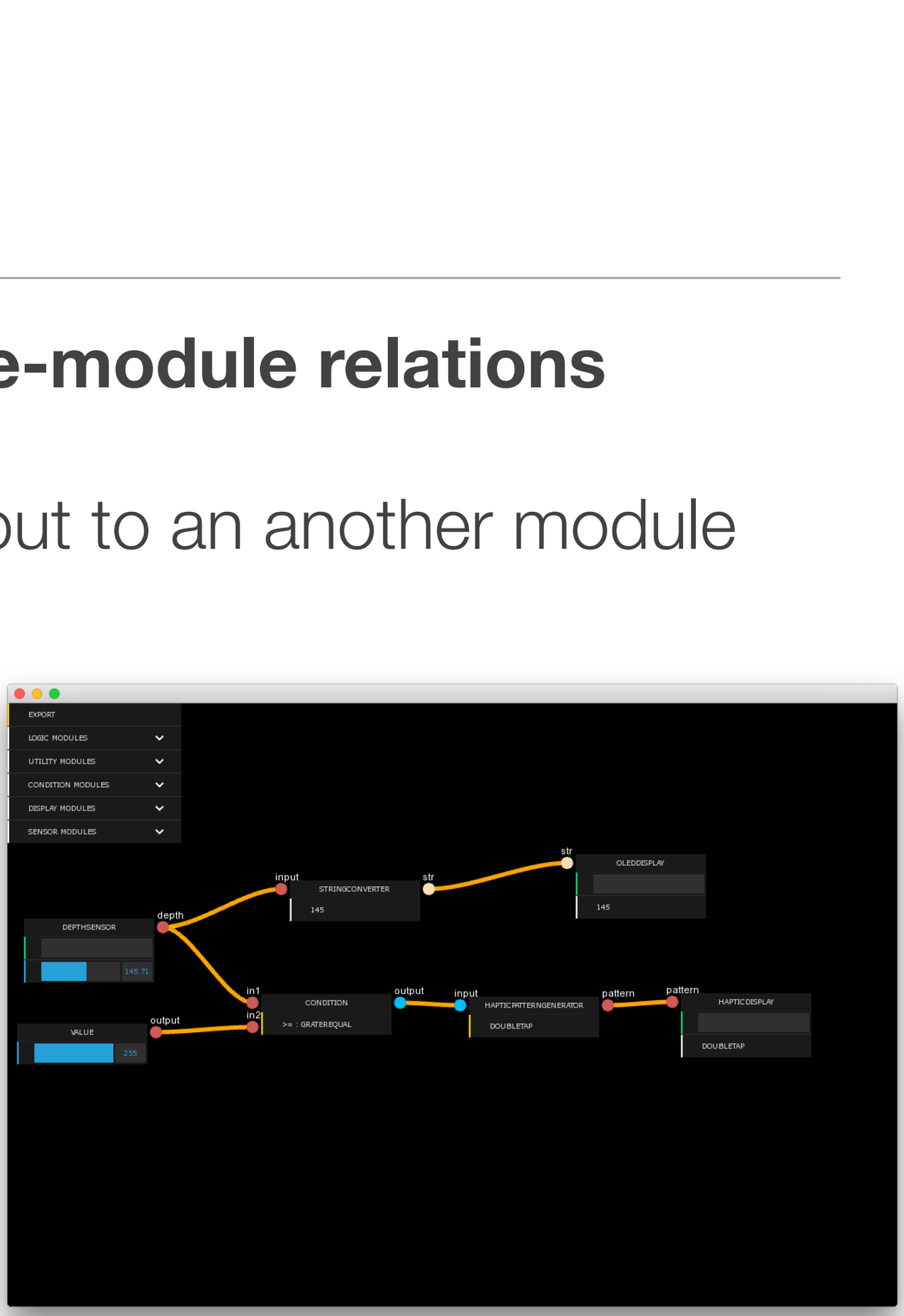
- **1 module class to 1 hardware module.**
  - Easy comprehension of usage.
  - To control a hardware module, call method of module class instance.

Software Module Class

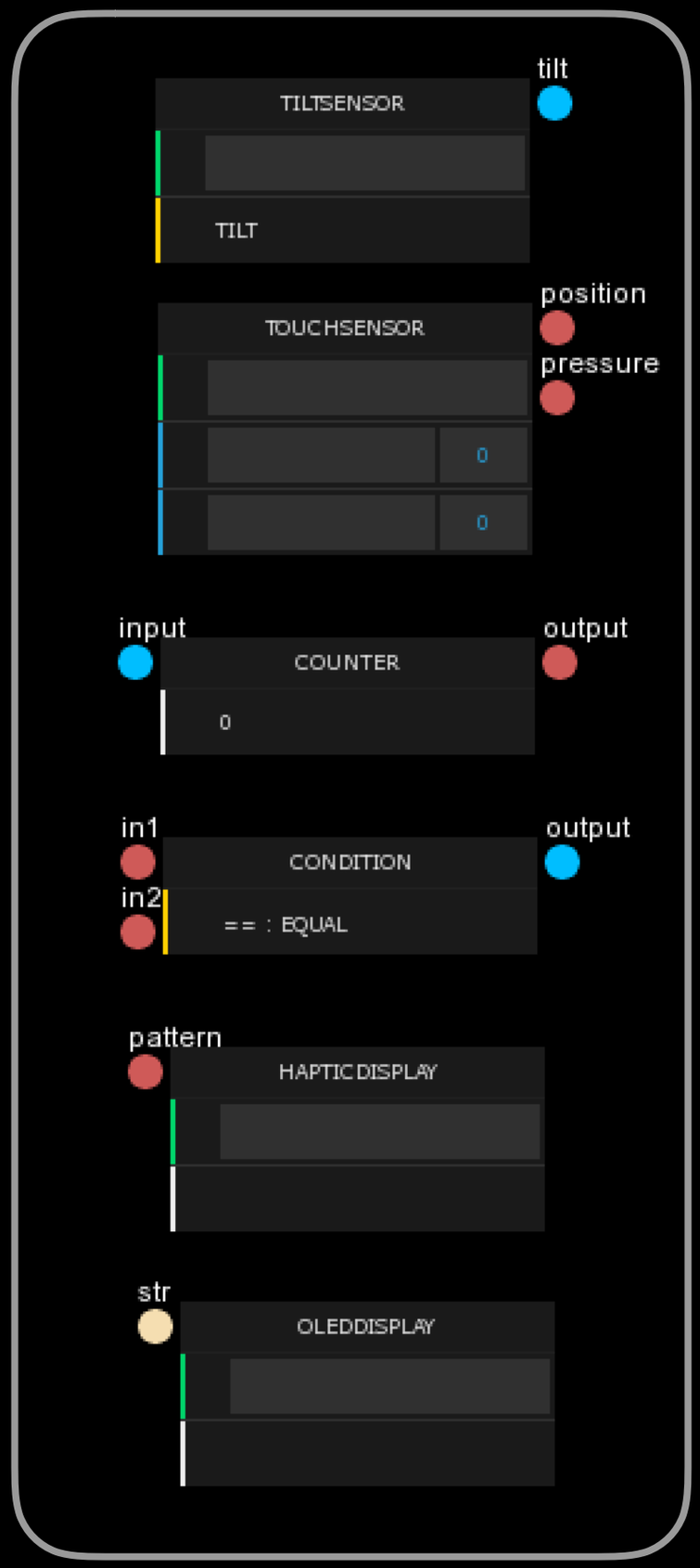
- **Software module is a virtual module.**
    - All in software features in it.
        - Count the number of something
        - Compare values
        - Logic circuit.
        - etc.

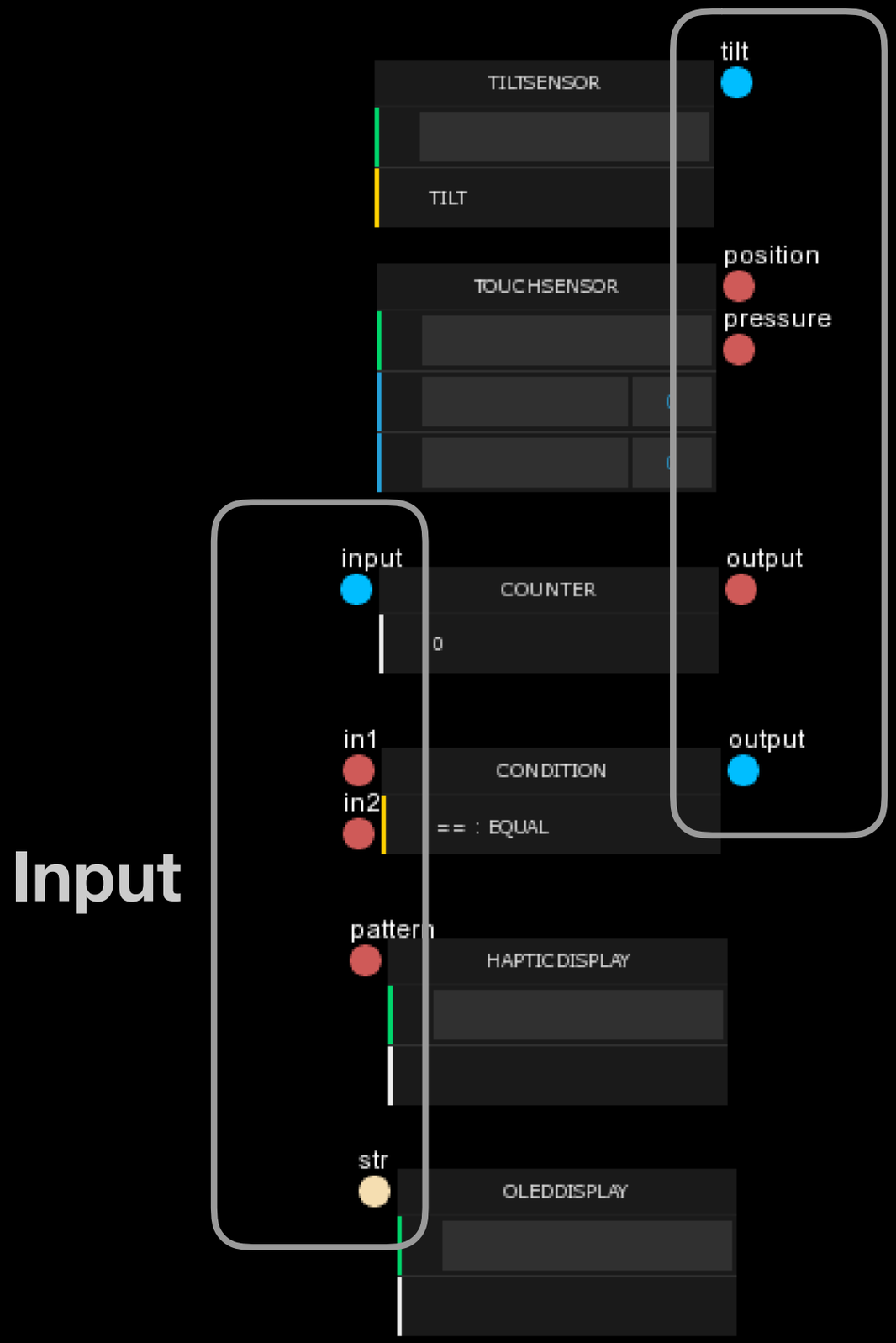
Graphical Module Editor

- **Assist to define module-module relations**
  - Connect a module output to an another module input.
- Only drag-and-drop.

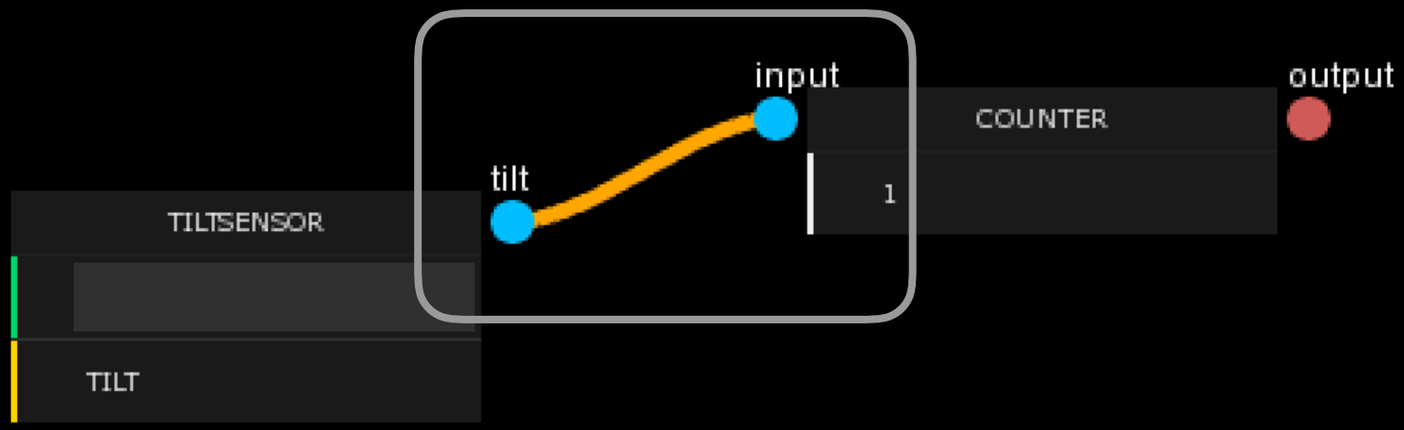


Hardware / Software module



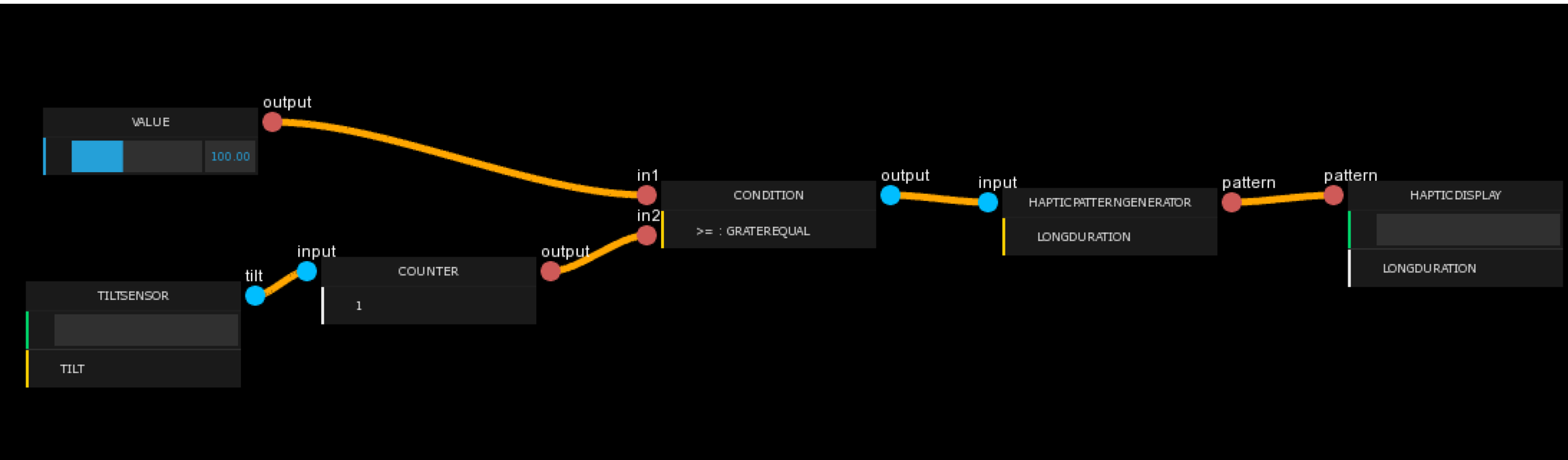

tilt
TILTSENSOR
TILT
position
TOUCHSENSOR
pressure
Output
input
COUNTER
output
0
in1
CONDITION
output
in2
== : EQUAL
Input
pattern
HAPTICDISPLAY
str
OLEDDISPLAY

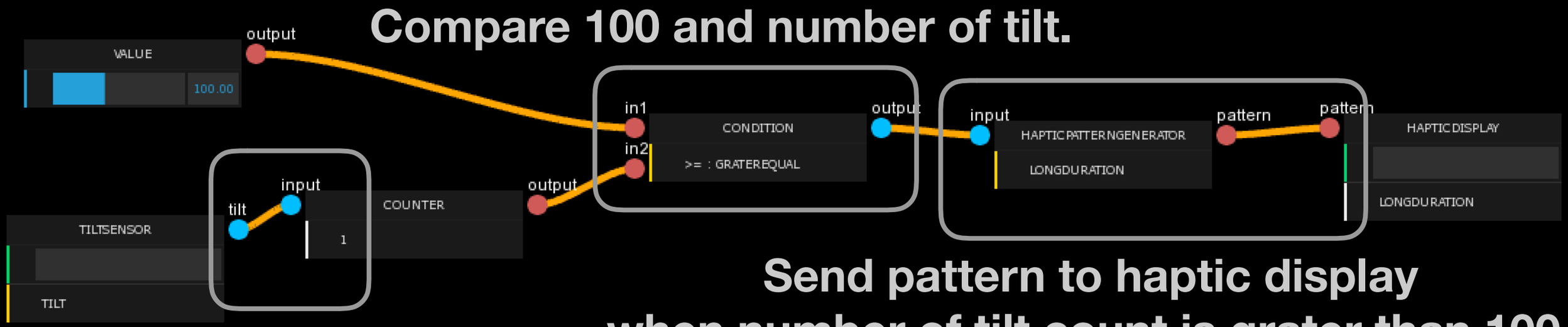
Connect an output to an input. (Drag-and-drop)



To define module-module relations

- **Define module-module relations to control a device**
    - Present haptic feedback when the user walks 100 steps.





Compare 100 and number of tilt.

Count number of tilt.

Send pattern to haptic display
when number of tilt count is grater than 100.