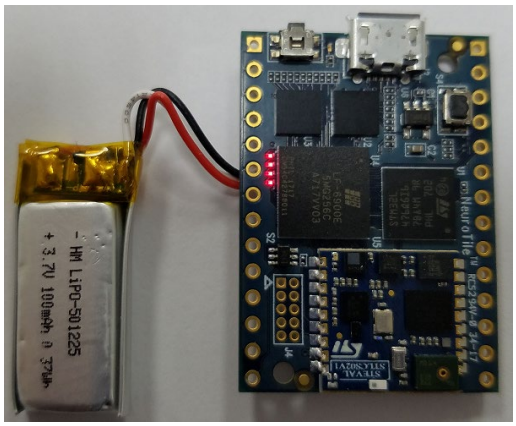
NeuroMem Smart!

NEUROTILE

AI FOR IOT



Unique combination of sensors, microcontroller, FPGA and a NeuroMem® neuromorphic chip in a miniature module perfect for wearable and low-power IoT applications.

The multiplicity of onboard sensors including accelerometer, gyroscope, pressure, and audio allows you to create plenty of imaginative projects for wearable, home and building automation and IOT smart things.

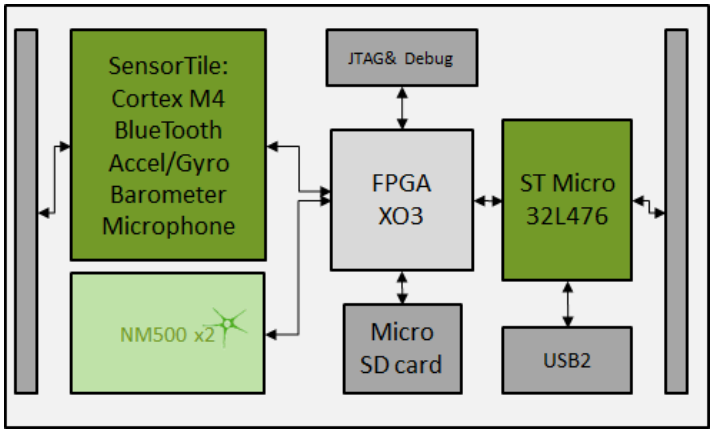
Single or multiple sensor signals can be collected and matched with models stored in the NeuroMem neurons. The NeuroMem network is trainable on-the-go or off-line.

Decision can be taken immediately without any requirement for connectivity and cloud-based software. Bluetooth Low-Energy (BLE) transmission can be triggered when an event of interest is detected. Storage of the data on the SD card can become selective too.

NeuroTile can be programmed using the Arduino IDE or the ST development tools for the STM32. Support external Li-Ion battery to power portable and wearable for rapid prototyping.

Main board

- NeuroMem digital neural network (1152 neurons))
- STM32L476 microcontroller
- Lattice FPGA XO3
- 14 GPIO lines (SPI, I2C and digital lines)
- MicroSD card
- Micro USB
- Battery-charging circuitry
- Up to 800mAh Li-Ion battery



SensorTile

- Bluetooth Low Energy
- 6-axis accelerometer + gyroscope
- 6-axis accelerometer + magnetometer
- Pressure sensor
- Microphone