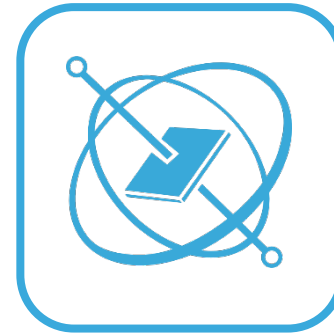


SensorTile:

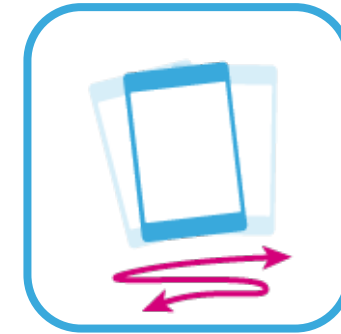
The IoT design Lab on the tip of a Pencil



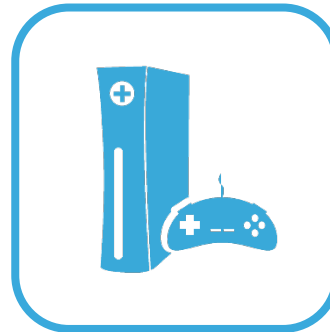
Motion



Algorithms



Gaming



Audio




Augmented living



SensorTile

Sensing, processing & Bluetooth Low Energy connectivity

 Sensors

 Motion MEMS

LSM6DSH
LSM303AGR 

 Environmental Sensors

LPS22HB 

 Low-Power MCU

 MEMS microphones

MP34DT04 

 Low-power brain

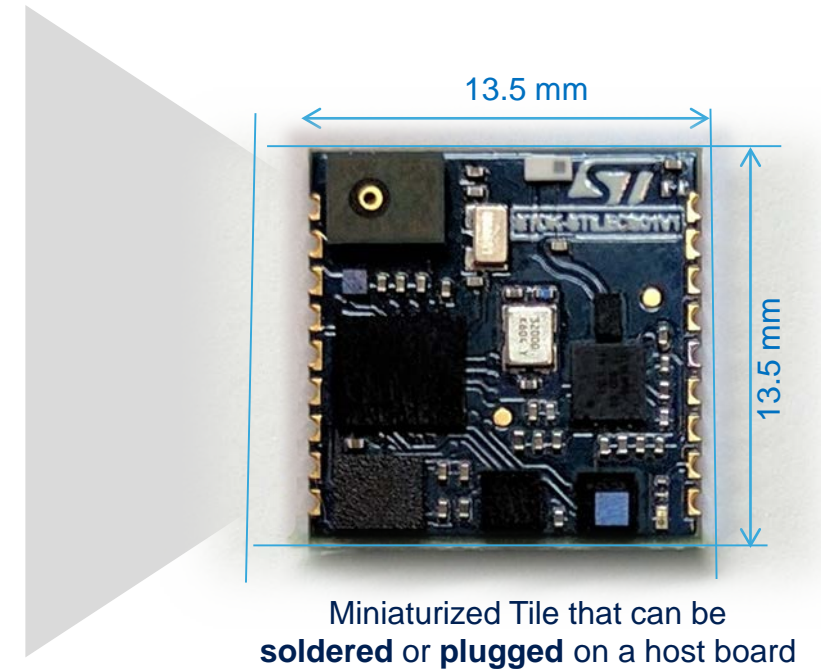
STM32L4 

 Sensor fusion

 Ultra Low Power Connectivity

 Bluetooth Smart

BlueNRG-MS 



open.AUDIO
open.MEMS
open.RF

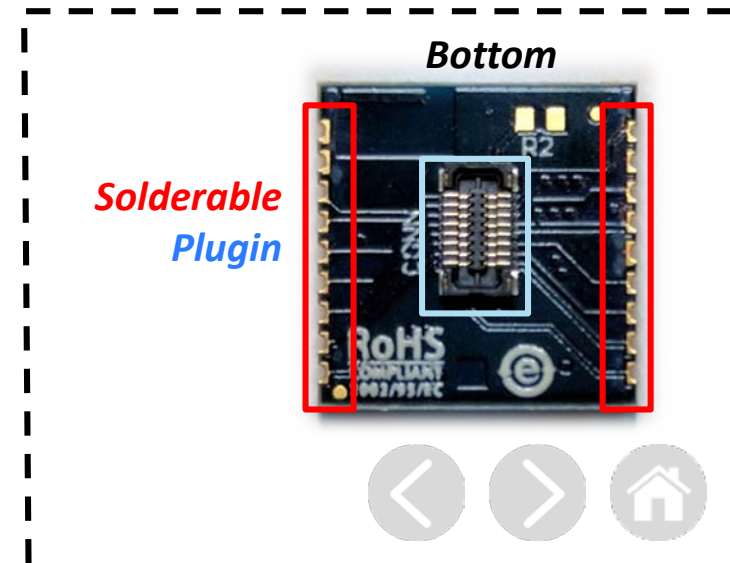
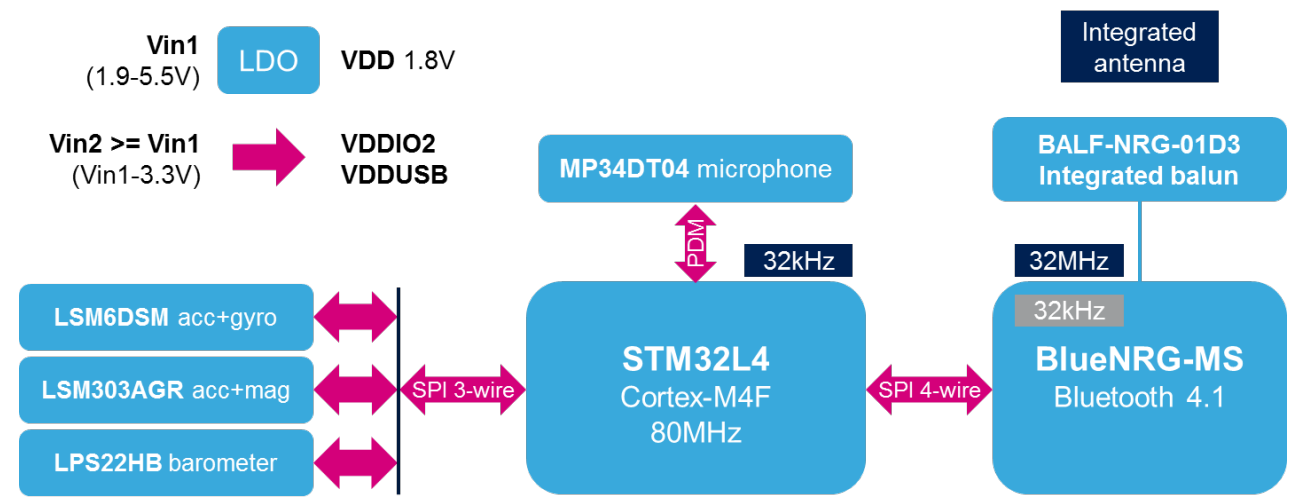
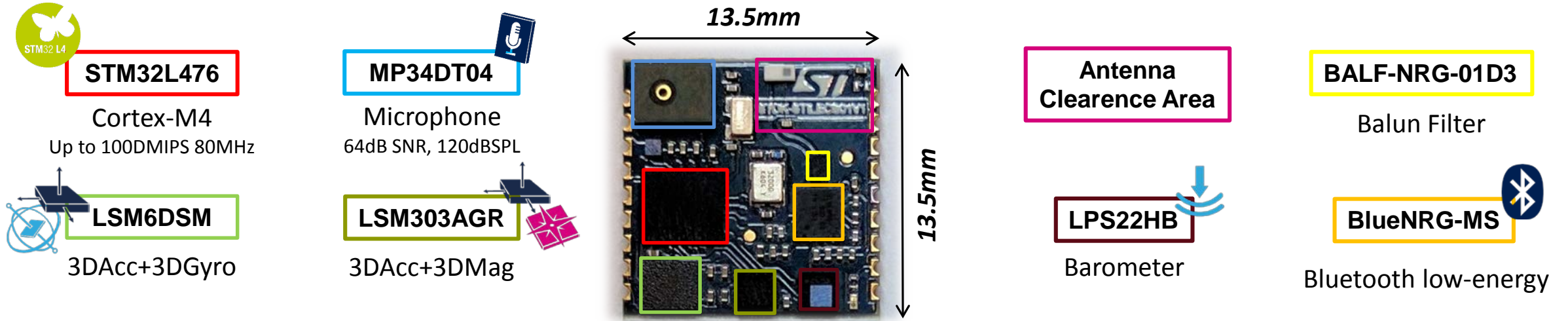


SensorTile is a Bluetooth Smart sensorized development kit.

The miniaturized tile-shaped design includes all that is needed to remotely sense and measure motion, environmental and acoustical parameters.

SensorTile Architecture

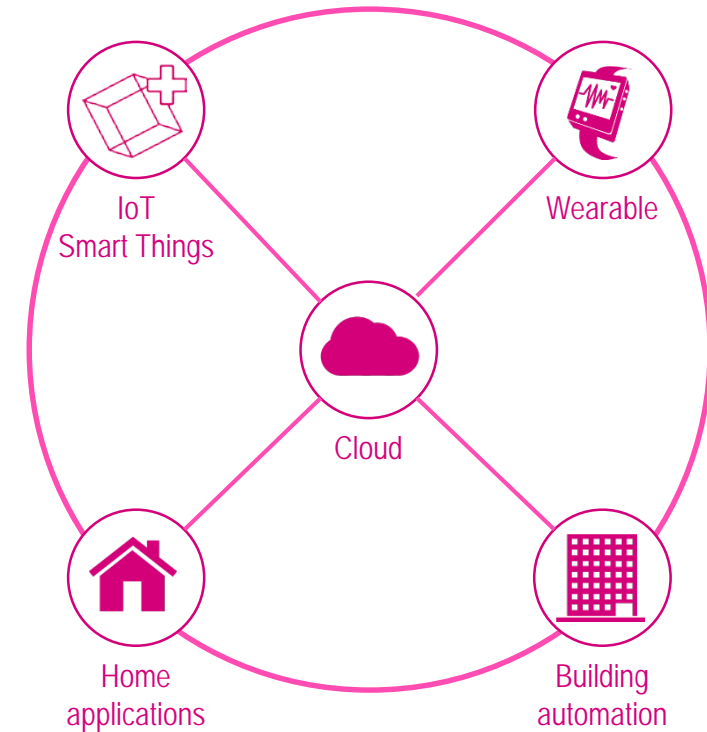
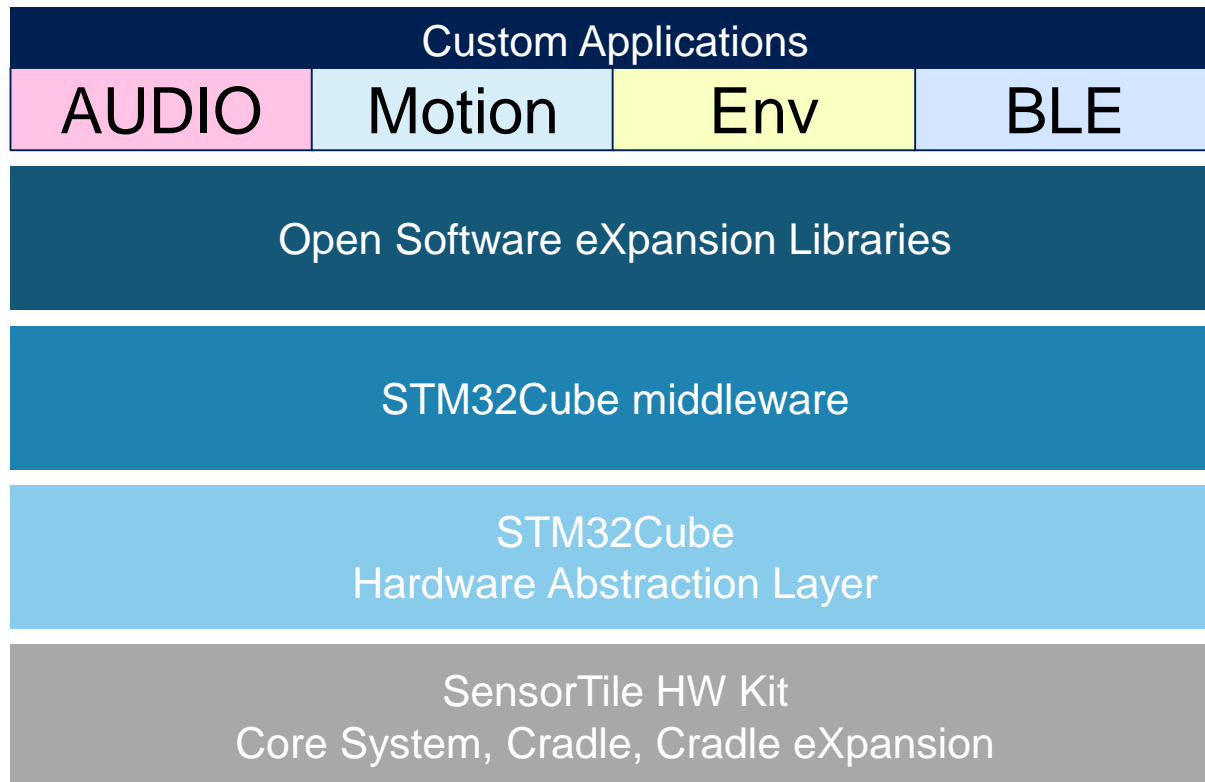
www.st.com/sensortile



SensorTile Software

for Design and Prototyping

Modular design environment to fast prototype your designs in all application domains



SensorTile Development Kit is built on STM32Cube and supported by the STM32 Open Development Environment

SensorTile

Simple, powerful, flexible

- Designed to fit your needs
 - Used as a **standalone sensor node** to **monitor**, **track** and **remotely connect** to an iOS or Android smartphone app
 - Easily **plug into new designs** to add **sensing** and **connectivity** capabilities through a **Smart Hub** solution
- Engineered for makers and developers:
 - **Standalone mode**: Turn it on, configure it via Bluetooth Low Energy and start acquiring sensor data remotely on your Smartphone
 - **Sensor and connectivity HUB mode**: Plug the SensorTile into new designs and access all features through a convenient command interface (SPI/UART)
 - **Programmable development kit**: Leverage the on-board STM32 processing capability and the provided software API to create your new BLE-connectable sensor node



BLUEMICROSYSTEM on SensorTile

BLUEMICROSYSTEM demo on SensorTile platform

HARDWARE

SensorTile Reference Design

STM32L4 - BlueNRG-MS - LSM6DSM - LSM303AGR - LPS22HB - MP34DT04



STEVAL-STLCS01V1



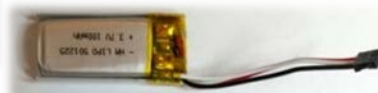
SensorTile Cradle Expansion

SensorTile Motherboard with Arduino Connectors

STEVAL-STLCX01V1



STEVAL-STLCR01V1



SensorTile Cradle

HTS221 - STBC08 - Battery - SDCard



BLUMICROSYSTEM SW package includes:

SOFTWARE

Free of charge

X-CUBE-BLE1

Bluetooth LE software expansion for STM32Cube



X-CUBE-MEMS1

Sensors software expansion for STM32Cube

open.MEMS

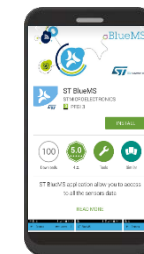
Motion & Gesture Open Software expansion libraries

open.AUDIO

Voice over Bluetooth Low Energy - BlueVoice

BlueMS Mobile App

Android™ and iOS™

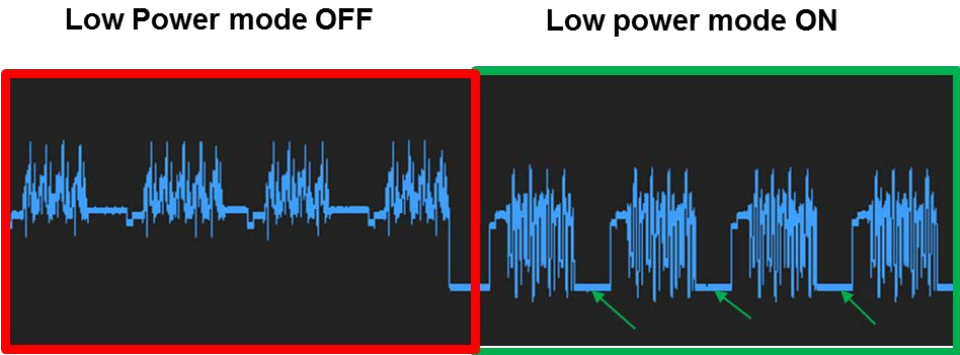


www.st.com/bluemicrosystem



Android BlueVoice for Wearable Systems

Low Power Architecture

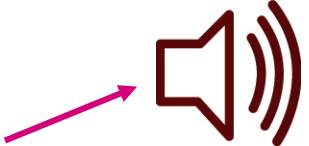


STM32 current consumption profile on STM32L4

BLE Peripheral - Tx



Voice



BLE Central - Rx

BlueVoice system streaming ADPCM voice @ 8KHz
Overall* power consumption: **5.1mA @ 2.1V**
Less than 10 mW

*STM32 + BlueNRG + MEMS microphone

Google
Speech 2 Text API
(create your own service!)



BlueVoice with Mobile Devices

