

SensorTile: an IoT design lab on the tip of a pencil

SensorTile is a **tiny, turnkey, IoT sensor module** that packs powerful processing capabilities leveraging an ultra-low-power STM32L4 microcontroller and Bluetooth Low Energy connectivity based on our BlueNRG network processor as well as a wide spectrum of MEMS motion and environmental sensors and including a digital microphone.



SensorTile can snugly fit into your IoT hub or sensor network node and be at the core of your own solution for wearables, gaming accessories, and smart-home or Internet-of-Things (IoT) devices.

Start exploring and exploit all the capabilities of the SensorTile with the STEVAL-STLKT01V1, a [comprehensive development kit](#) that comes with all the hardware required to begin prototyping your idea right away.

Alongside the hardware, there's a powerful open software ecosystem for faster time to market including software and firmware libraries and tools that will enable you to easily develop your IoT hub or sensor node:

- **BlueMS** [mobile app for smartphones and tablets](#) (Android and iOS), built on BlueST-SDK, lets you display raw and processed sensor data through a convenient graphical interface.
- **STSW-STLKT01** [basic firmware package](#) that includes all the low-level drivers to manage the on-board devices and system-level interfaces as well as DataLog and AudioLoop sample applications so you can get started with the SensorTile in minutes.
- **BLUEMICROSYSTEM2** [expansion software package](#) lets you read and display real-time environmental sensor data, battery level, digital microphone levels and voice communication over Bluetooth low energy enabling advanced development based on the SensorTile.
- **BlueST-SDK**, a [complete Bluetooth Low Energy and sensor technology software development kit \(SDK\)](#) that lets you develop your own Android™ and iOS™ applications.

Watch this [unboxing video](#) and discover the SensorTile development kit. You'll get a set of boards that will enable you to explore and take advantage of all the capabilities of the SensorTile IoT design lab. This video gives you a **step-by-step tutorial** on how to get started inventing.