



P4266D

## STMicroelectronics' Reference Design Enables Compact and Cost-Effective Wearables with Social-Distancing, Contact-Tracing, and Remote Capabilities

- *Scalable solution leverages Bluetooth LE SoC, MEMS accelerometer, and Sub-GHz RF transceiver for accuracy, anti-tampering, remote notifications, and long battery life*
- *Suited to bands and bracelets for use in open-air or closed professional environments such as factories, offices, and medical facilities*

**Geneva, June 8, 2020 – STMicroelectronics (NYSE: STM)**, a global semiconductor leader serving customers across the spectrum of electronics applications, announces the availability of a compact and cost-effective reference design ideally suited for monitoring social distancing, assuring remote operation, provisioning, as well as warning, anti-tampering, and potentially providing contact tracing to protect human health in all environments, including in response to global or local pandemic conditions.

Leveraging Bluetooth Low Energy technology through its incorporation of ST's ultra-low-power [BlueNRG-2](#) System-on-Chip with tunable RF output power, the [BlueNRG-Tile reference design](#) measures the signal strength of nearby Bluetooth non-connecting beacons and, in real-time, calculates proximity to these sources. The circuit can be provisioned and then operate, issuing warnings when another beacon intrudes on an adjustable perimeter or when tampered with – even when not connected to a smartphone or 5G network. The base reference design can be supplemented with ST's [S2-LP sub-GHz ultra-low-power RF transceiver](#) to add bi-directional tag-to-cloud communication through the Sigfox "OG" Global Network, allowing private and anonymous tag provisioning, notifications, and an advisory return-channel for emergency warnings. To assure power economy and extend battery lifetime, the ultra-low power components are further enhanced with a MEMS (Micro-Electro-Mechanical Systems) [accelerometer](#) that power cycles the unit when it isn't moving. Optionally, internal or external memory could provide long-term storage of nearby beacons, allowing contact tracing.

*"Developing this highly-efficient and cost-effective social distancing reference design has significant value in any environment where people need to work safely,"* said Benedetto Vigna, President Analog, MEMS and Sensors Group, STMicroelectronics. *"This compact design can be used as is or enhanced for a wide range of applications, including as bracelets and bands or as plugins or add-ons to eyeglasses, helmets, and masks and shields."*

Several members of the ST Partner Program have evaluated and adopted the reference design as a foundation for location-monitoring and contact-tracing platforms. These platforms provide a range of capabilities, including proximity alerts and contact recording, using the ST reference design packaged in compact, ultra-low-power tags.

The Social Distancing reference design, including further technical detail on its operation, is available on [ST.com](#) and through local ST sales offices.

## **About STMicroelectronics**

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented. In 2019, the Company's net revenues were \$9.56 billion, serving more than 100,000 customers worldwide. Further information can be found at [www.st.com](http://www.st.com).

## **For Press Information Contact:**

Michael Markowitz  
Director Technical Media Relations  
STMicroelectronics  
Tel: +1 781 591 0354  
Email: [michael.markowitz@st.com](mailto:michael.markowitz@st.com)