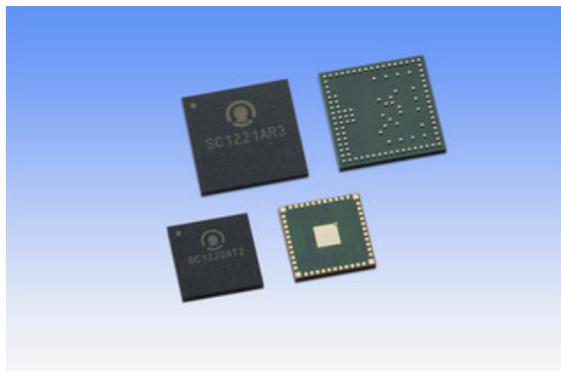


## Socionext Delivers Ultra-Compact, Low-Power 60GHz Wide-Band Radar Sensors for Advanced Applications

**Langen/Germany, 11. October, 2019** --- Socionext Europe GmbH today introduced the SC1220 Series radio wave ranging sensors, a new addition to the company's family of radar sensors, which utilizes 60GHz frequency band and detects individual's location and movement with very high accuracy and precision. Samples are now available, with volume production scheduled in the second quarter of 2020.

The SC1220 series radar sensors comply with the new 60GHz wireless equipment band, which is available in North America and Europe. High-precision sensing using a 7GHz (57 ~ 64GHz) bandwidth allows the SC1220 series to detect a person's location and very minute movements. These capabilities make the series ideal for advanced applications such as operating appliances using hand gestures. Since the radar sensors are generally not susceptible to environmental conditions such as temperature and light fluctuations, they can be used in a variety of applications, including smart home devices.



SC1220 Series

[\(view larger image\)](#)

By leveraging the expertise gained through the development of millimeter-wave wireless communication ICs and 24GHz radar sensors, Socionext was the first company worldwide to develop 60GHz radar sensor in a small package of only 7mm X 7mm X 0.83mm. The sensors also operate with very low power consumption of 1~2.5mW. The SC1220 radar sensors are highly-integrated and easy-to-use devices that incorporate antenna, wireless circuit, A/D converter, FIFO memory, SPI

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interface and intelligent power control sequencer for flexible duty cycle control, and do not require advanced knowledge by users in handling high-frequency devices.

Two types of products are now available. The "SC1220AT2" detects three-dimensional movements such as the lifting and lowering of a person's hands. The "SC1221AR3" specializes in high-precision detection of two-dimensional movements, and is capable of detecting multiple moving objects in a specific area.

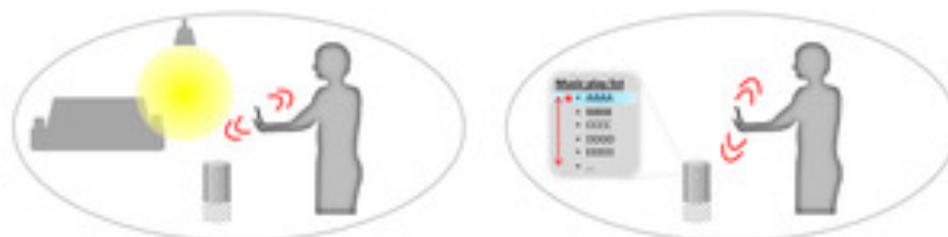
Socionext proposes advanced sensing applications through its unique lineup of radar sensor products, and aims to become a market leader in this field by bringing new and enhanced user experiences.

### Details and Specifications for the SC1220

	SC1220AT2	SC1221AR3
Power Consumption	2.5mW (at 0.5% Duty Cycle)	1mW (at 0.2% Duty Cycle)
Transmitter	Frequency 57.1 – 63.9GHz	Frequency 60.025 – 61.475GHz
Package	FC-LGA 7mm X 7mm X 0.83mm	FC-BGA 9mm X 9mm X 0.98mm

#### SC1220AT2

The most suitable sensor for detecting three-dimensional motions. It comes with a built-in antenna of 2 transmission systems and 2x2 reception array, and can detect azimuth, elevation angle, speed and distance. In addition to presence detection, the device can sense the position of a person's hands in a three-dimensional space, which is ideal for operations requiring gestures.



SC1220AT2 Usage Examples (lights on and off / music playback)

[\(view larger image\)](#)

## SC1221AR3

This sensor is ideal for two-dimensional motion detection. It incorporates a 1x4 linear array receiver antenna to detect azimuth, speed and distance of multiple moving objects. Although the angle detection is only available in the azimuth direction, it is two times more precise than SC1220AT2, which is suitable for detecting a person entering a specific area.



SC1221AR3 Usage Examples (detecting multiple movements / entering specific area)

[\(view larger image\)](#)

### See Also

Radar Sensors Product Page

<http://www.socionext.com/en/products/assp/radar-sensor/>

### About Socionext

Socionext is a global, innovative enterprise that designs, develops and delivers System-on-Chip solutions to customers worldwide. The company is focused on technologies that drive today's leading-edge applications in consumer, automotive and industrial markets. Socionext combines world-class expertise, experience, and an extensive IP portfolio to provide exceptional solutions and ensure a better quality of experience for customers. Founded in 2015, Socionext Inc. is headquartered in Yokohama, and has offices in Japan, Asia, United States and Europe to lead its product development and sales activities. For more information, visit [www.socionext.com/](http://www.socionext.com/).

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