Socionext to Showcase Advanced Image and Sensor Technologies for Aerial Drones at InterDrone Show in Las Vegas Sep. 7-9
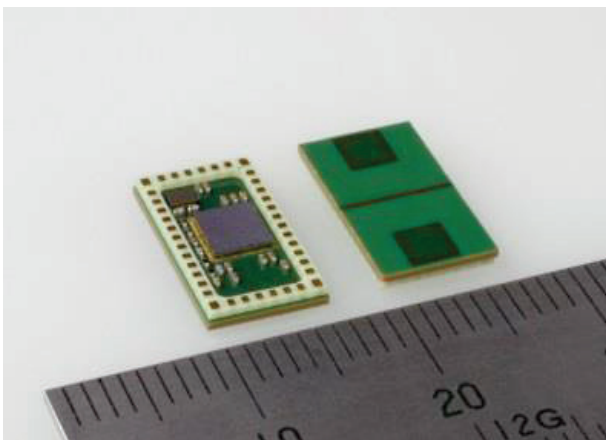
Robust, Single-Chip 24GHz Radar to be Featured at Booth 105 in Demonstrations of Imaging and Radar Solutions for Drone Applications

SUNNYVALE, Calif. Aug. 25, 2016, --- Socionext America Inc., a leading total solutions provider for UAVs, will demonstrate its innovative IC technologies for drone applications at the annual International Drone Conference & Exhibition at Paris Hotel in Las Vegas Sep. 7-9.

In booth 105 at the expo, Socionext will feature a 24GHz radar which allows for ease of integration with a wide range of safety features ideal for drones including collision avoidance and object detection. The company will also demonstrate an aerial drone using the company's small profile, high-performance Milbeaut™ image processor with EIS (Electronic Image Stabilization), and a 360-degree wrap-around video imaging technology. The 360-degree wraparound video uses three-dimensional algorithms to smoothly combine images from multiple cameras, delivering a clear, seamless surround view. The drone will simultaneously capture live videos projected on to a display monitor at the booth.

Socionext's MB86S27 image processor combines with drone technology developed by FotoNation's EIS technology to deliver outstanding video image stabilization and dramatically extended drone flight times with far lower power consumption than rival solutions.

Single-Chip 24GHz RF Radar from Socionext

24GHz radar "MN87900"

The company will feature MN87900, a 24GHz radar solution suitable for unmanned aerial flying vehicles such as drones. The 24GHz radar uses a simple SPI interface for connecting to most digital systems. The module incorporates excellent analog capabilities in a tiny 12mm x 7mm system. Along with the hardware, a simple API system was developed to support the designs of CW, FSKCW, and FMCW mode capabilities to provide distance, direction, and relative velocity information for objects up to 30 meters away with radome/horn, a metal shield that narrows the field of view (FOV) and increases detection range.

Socionext's 24GHz radar is compatible with a microcontroller to provide application level information on an object's distance, direction, and relative velocity.

With the robust 24GHz radar, the range measurement software solution, and time-proven engineering expertise in radar technology, Socionext provides a full solution to drone makers, OEMs and developers.

24GHz Radar - MN87900

The single-chip 24GHz radar comes with a variable-frequency transmitter and an ultra-high sensitivity radio wave receiver. This module has 3 sensing modes (CW, FSKCW, and FMCW mode) for detecting stationary or moving objects and measuring the distance.

Diagram of Socionext's radar API solution with microcontroller for drone applications

Key Features:
- High-performance clutter cancellation function for preventing direct leakage of transmission wave, enabling highly accurate motion sensing
- Automatic components and temperature adjustment functions for detecting variation in transmission power, receiver gain, and other parameters

The 24GHz radar features the following specifications:
- Variable frequency width: 24.15±0.1 GHz
- Sensing mode: CW, FSKCW, FMCW (moving or stationary)
- Transmission Power: 0.8mW
- Detection of motion direction: Up to 220 km/h
- Fast frequency pull-in: 100 µs
- Automatic adjustment: Built-in initial adjustment function (e.g., adjustment of RC for filter)
- Power supply voltage: 2.5V
- Current consumption: 200mA
- Module size: 12mm x 7mm x 1mm

For the InterDrone website and programs, visit http://www.interdrone.com/

About Socionext Inc.

Socionext is a new, innovative enterprise that designs, develops and delivers System-on-Chip products to customers worldwide. The company is focused on imaging, networking, computing and other dynamic technologies that drive today's leading-edge applications. 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 socionext.com.
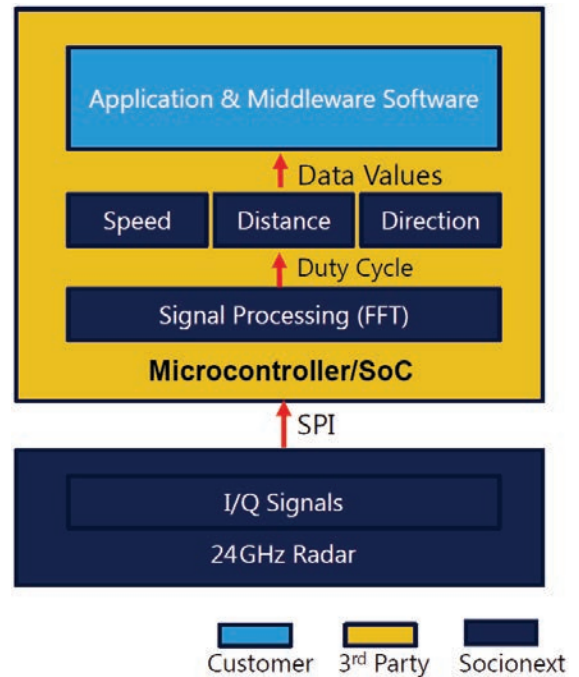
For product information, visit the company's website at http://www.socionext.com, e-mail sna_inquiry@us.socionext.com or call 1-844-680-3453. For company news and updates, connect with us on Twitter (https://www.twitter.com/socionextus) and Facebook (https://www.facebook.com/socionextus)

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