Broadcom Introduces World's First Dual Frequency GNSS Receiver with Centimeter Accuracy for Consumer LBS Applications

September 21, 2017

Next Generation GNSS Sensor Hub Enables Lane-level Vehicle Navigation for Mobile Devices

SAN JOSE, Calif. and SINGAPORE, Sept. 21, 2017 (GLOBE NEWSWIRE) -- Broadcom Limited (NASDAQ:AVGO), a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions, today announced the world's first mass-market, dual frequency GNSS receiver device, the BCM47755, designed to enhance location based services (LBS) applications for mobile phones, tablets and fitness wearables. Equipped with the latest GNSS innovations, the device is capable of centimeter accuracy with minimal power consumption and footprint, enabling an entirely new suite of high-precision LBS applications including lane-level vehicle navigation and mobile augmented reality (AR).

Until now, mobile location based applications have been powered by single frequency GNSS receivers operating under stringent battery power and footprint constraints. The expanded availability of L1/E1 and L5/E5 frequencies in satellite constellations enables the use of two frequencies to compute position much more accurately in both urban and open area environments. The BCM47755 delivers this higher level of location accuracy while meeting the rigorous battery power and footprint needs in mobile phones.

The BCM47755's accuracy allows location-based applications to offer a richer consumer experience. For example, lane-level knowledge of the vehicle's location vastly improves the turn-by-turn navigation performance. Further, combining this accurate location with the lane's traffic pattern gives consumers a significantly better estimate of arrival times. In the same vein, ride hailing applications can be enhanced to more precisely pinpoint driver and client location.

The BCM47755 consumes less than half the power of previous generation GNSS chips. Since GNSS and sensor applications are always on, this power efficiency has a proportional impact on the battery life of the mobile device. So, even while benefiting from a richer navigation experience, consumers will have a longer lasting battery on mobile devices that use the BCM47755.

Product Highlights

- Advanced dual frequency GNSS receiver capable of processing satellite signals in both L1/E1 and L5/E5 frequency bands providing higher level of location accuracy
- Incorporates new low power GNSS radio and dual-core ARM® CM4-CM0 sensor hub
- More than 50% lower power consumption compared to previous generation GNSS receiver
- Delivers high quality raw GNSS measurements for both code and carrier phase enabling advanced location-based applications

"With the launch of the dual-frequency GNSS sensor hub, Broadcom continues the tradition of raising the bar for mobile GNSS," said Vijay Nagarajan, senior director of product marketing of the Mobile Connectivity Products Division at Broadcom. "Location-based consumer applications can be disruptively enhanced with centimeter-level accuracy. On the other hand, lower power consumption and smaller footprint continue to be defining requirements for any mobile phone chip. The BCM47755 achieves these twin objectives for a richer consumer experience."

"An important technical milestone has been reached with the addition of the L5 frequency band," said Samuel McLaughlin, research analyst at ABI Research. "As smartphones incorporate this technology, developers can make use of lane-level location information to enable exciting, new applications. Our research shows that currently over 90% of automotive navigation systems are handset-based as opposed to dedicated systems such as personal navigation devices, and Broadcom's new BCM47755 chipset is well poised to take advantage of this industry shift."

"We optimized the design of Galileo for dual frequency services," said Javier Benedicto, Galileo project manager at the European Space Agency. "The availability of mass-market chips processing Galileo E1/E5 will allow users to experience Galileo at its best."

"We are glad to see the industry recognizing the advantages of dual frequency GNSS receivers, including Galileo E1 and E5," said Carlo des Dorides, executive director of European GNSS Agency, Galileo market development. "We believe Galileo's contribution is instrumental to reach mass market GNSS centimeter level accuracy."

Availability

Broadcom is currently sampling the BCM47755 dual frequency GNSS receiver to its early access partners and customers. Please contact your local Broadcom sales representative for samples and pricing.

Further information on Broadcom's BCM47755 product is available online at https://www.broadcom.com/products/wireless/gnss-gps-socs/bcm47755/. Additionally, Broadcom will be presenting further information on the BCM47755 in the Ubiquitous Navigation panel at the ION GNSS+ 2017 on September 27th, 2017.

About Broadcom Limited

Broadcom Limited is a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions. Broadcom Limited's extensive product portfolio serves four primary end markets: wired infrastructure, wireless communications, enterprise storage and industrial & other. Applications for our products in these end markets include: data center networking, home connectivity, set-top box, broadband access, telecommunications equipment, smartphones and base stations, data center servers and storage, factory automation, power generation and alternative energy systems, and electronic displays. For more information, go to www.broadcom.com.

Press Contact:
Khanh Lam
Corporate Communications
press.relations@broadcom.com
Telephone: +1 408 433 8649

Broadcom Limited