



Synaptics Launches SYN4778, the Lowest Power, Smallest, Most Accurate GNSS IC for IoT Devices

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Features 80% lower power consumption in a 30% smaller package with 50% greater accuracy

LAS VEGAS, Jan. 03, 2023 (GLOBE NEWSWIRE) -- Synaptics® Incorporated (Nasdaq: [SYNA](#)) today announced the SYN4778—the smallest, lowest power, most accurate Global Navigation Satellite Systems (GNSS) IC for the Internet of Things (IoT). The chip draws 80% less power and comes in a package that is 30% smaller than comparable devices while providing a 50% improvement in accuracy. It extends battery life, reduces product size, and enhances the performance of advanced location-based services (LBSs) for IoT devices such as wearables, as well as mobile accessories, asset tagging and tracking systems, drones, and transportation navigation.

CES 2023: See the SYN4778 GNSS IC, and our other game-changing wireless solutions, at the Venetian Hotel, Level 2 Exhibitor, Bellini Ballroom, #2105. Email press@synaptics.com for an appointment.

The GNSS receiver typically consumes an out-sized portion of available power in battery-powered IoT devices. The SYN4778's advanced 7-nm semiconductor process and on-chip power management greatly reduce this power draw. In addition, the chip uses both the L1 and L5 satellite bands to reduce the GNSS chip's time to first fix (TTFF) by 35% and the power consumed for first fix by 72%. Fast, low-power TTFF greatly improves the end-user experience, while lower overall power and smaller footprint give product developers the ability to extend battery life and shrink the overall product size. Alternatively, they can add more device functionality and features—such as biometrics, movement, or ambient sensors—for a given product power budget and form factor.

“Synaptics provides a unique combination of short-range wireless and GNSS capabilities — making us a one-stop shop for high-performance IoT,” said Brandon Bae, Sr. Director of Product Marketing at Synaptics. “With the SYN4778, we’re now able to add more location-based functionality as a significant differentiator for handheld and wearable IoT device developers who can now also couple GPS with complementary localization features such as Bluetooth’s High Accuracy Distance Measurement (HADM). The market response has been overwhelmingly positive, and we already have design wins with key customers.”

“Low-power GNSS chips are key to opening up the market to a wide variety of IoT products where battery life is important,” said Phil Solis, research director at IDC. “Many of these applications also have size constraints while still requiring the highest possible performance to accommodate advanced services. The key differentiation GNSS ICs can provide means discrete implementations for IoT products continue to form a significant portion of the total market for GNSS chips.”

Additional SYN4778 features include:

- Advanced multipath interference mitigation using L5 band signals from GPS, Galileo, BeiDou, NAVIC, SBAS, and Quasi Zenith Satellite Systems (QZSS)
- LTE jamming and signal filtering, and continuous—highly parallel—search and track of the complete GNSS channels (including the L5 band) for greater positioning accuracy for LBS applications, particularly in urban environments
- Support for multiple operating systems (such as Android, Linux, and FreeRTOS) and third-party software to enable a broader range of application-optimized IoT devices
- Low-noise, high-linearity RF front end makes an external LNA and second SAW filter optional to reduce BOM and increase layout flexibility
- Measures 2.4 x 2.7 mm (40-ball FCBGA package)
- 50% improvement in accuracy achieved in deep urban city environment

Availability

Synaptics is sampling the SYN4778 to select customers now.

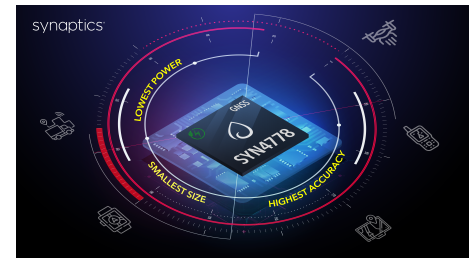
For more information, contact your [local Synaptics sales representative](#).

To schedule an appointment at CES, email press@synaptics.com.

About Synaptics Incorporated

Synaptics (Nasdaq: [SYNA](#)) is changing how humans engage with connected devices and data, engineering exceptional experiences throughout the home, at work, in the car, and on the go. Synaptics is the partner of choice for the world's most innovative intelligent system providers who are integrating multiple experiential technologies into platforms that make our digital lives more productive, insightful, secure, and enjoyable. These customers combine Synaptics' differentiated technologies in touch, display, and biometrics with a new generation of advanced connectivity and AI-enhanced video, vision, audio, speech, and security processing. Follow Synaptics on [LinkedIn](#), [Twitter](#), and [Facebook](#), or visit www.synaptics.com.

The SYN4778 is offered as the lowest power, smallest, most accurate GNSS chip for the Internet of Things



The SYN4778 Global Navigation Satellite System (GNSS) chip draws 80% less power and comes in a package that is 30% smaller than comparable devices while providing a 50% improvement in accuracy.

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A photo accompanying this announcement is available at <https://www.globenewswire.com/NewsRoom/AttachmentNg/9609bd21-231a-4303-aa7a-63a5e02c197a>