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STMicroelectronics Upgrades Automotive Positioning Accuracy with Single-Chip Triple-Band Satellite-Navigation Receiver

- ❖ *STA8135GA is first automotive-qualified single-chip GNSS receiver to integrate triple-band positioning measurement engine*
- ❖ *Highly integrated solution enhances system reliability and cost-effectiveness*
- ❖ *Performance comparable to highest-accuracy surveying/mapping instruments*

Geneva, November 16, 2021 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has introduced a world-first automotive satellite-navigation chip that delivers high-quality position data needed by advanced driving systems.

Joining ST's Teseo V family, [the STA8135GA](#) is the first automotive-qualified GNSS (Global Navigation Satellite System) receiver to integrate a triple-band positioning measurement engine on-chip, in addition to standard multi-band Position-Velocity-Time (PVT) and dead-reckoning.

Triple band has historically been used in professional applications such as surveying, mapping, and precision agriculture that demand millimeter accuracy with minimal reliance on correction data. Until now only available in chipsets or modules, which are typically larger and more expensive than ST's single-chip solution, triple-band enables the receiver to efficiently acquire and track the largest number of satellites in multiple constellations simultaneously for superior performance in difficult conditions such as in urban canyons and under tree cover.

Bringing this capability to the automotive market in a compact and convenient package, the STA8135GA helps driver-assistance systems make accurate decisions about the road ahead. The multi-constellation receiver delivers raw information for the host system to run any precise-positioning algorithm, such as PPP/RTK (Precise Point Positioning / Real-Time Kinematic). The STA8135GA also enhances the performance of in-dash navigation systems, telematics equipment, smart antennas, and V2X communication systems, as well as marine navigation systems, drones, and other vehicles.

"The high precision and single-chip integration delivered by the STA8135GA satellite receiver enables the creation of reliable and affordable navigation systems that enable vehicles to be safer and more context aware," said Luca Celant, General Manager, ADAS, ASIC and Audio Division, Automotive and Discrete Group, STMicroelectronics. *"Our unique in-house design resources and processes for high-yield manufacturing are among the critical capabilities that have made this industry-first device possible."*

The STA8135GA is housed in a 7mm x 11mm x 1.2mm QFN package. Samples are available now and full qualification AEC-Q100 and Start Of Production are scheduled in Q1 2022.

Technical Note to Editors:

The STA8135GA also integrates separate [low-dropout \(LDO\) voltage regulators](#) on-chip to supply the IC's analog circuitry, digital core, and I/O transceivers thereby simplifying selection of the external power supply. The receiver can track satellites in GPS, Glonass, BeiDou, Galileo, QZSS, and NAVIC/IRNSS constellations.

For more information please go to www.st.com/gnss-ic-sta8135ga.

About STMicroelectronics

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with more than 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at www.st.com.

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