# 5 Questions toâ€¦Xiaohua Wen (Tersus GNSS)

The GNSS industry is a very dynamic market full of growth opportunities, as several reports confirm. In China, Tersus GNSS is one of the ambitious companies looking to expand in the international GNSS business. This month, we've asked Xiaohua Wen, founder and CEO of Tersus GNSS, to share his views.

**Can you introduce Tersus GNSS to our readers?**

Let me tell you a story: in the past, a surveyor's job was not an easy one. It involved manual and time-consuming work with traditional solutions. But one day, a company designed cost-efficient positioning solutions based on real-time kinematic (RTK) centimetre-level positioning. Unlike other solutions, this technology is ideal for many applications: unmanned aerial vehicles (UAVs), autonomous farming, high-precision surveying and mapping. This new technology makes surveyors happy in their daily work thanks to less manual input, greater productivity and more precise data. While a lot of companies are developing GNSS modules and systems for positioning, Tersus GNSS is dedicated to doing it in an excellent yet affordable way and with focus on cutting-edge and high-precision applications for customers. We are a start-up company, heavily investing in R&D to provide the market with solutions that are able to pinpoint objects to within centimetres to ensure accurate surveying and an easier life for surveyors.

**What is your view on the current GNSS industry?**

The GNSS industry has been increasingly attracting attention in the context of different applications and the global GNSS market has been steadily rising over the past decades. More and more people have recognised the importance of positioning and hence have found new applications for GNSS technology. Location awareness has become a key feature of the latest high-tech products, such as virtual reality (VR), UAVs and autonomous ground vehicles (AGVs). New demands breed new markets. From the technology perspective, Beidou and Galileo bring opportunities to further improve the performance of GNSS and also the Internet of Things (IoT) is creating new demands for low-cost and low-power location trackers.

**What does Tersus GNSS add in the highly competitive market?**

Tersus GNSS is currently dedicated to the high-precision, multi-GNSS market; we provide a flexible, high-performance OEM board to help our customers build their own applications. In addition to the surveying market, we are targeting the new GNSS markets such as UAVs, AGVs, machine control and guidance. We provide compact, energy-efficient, well-designed OEM boards for system integrators and design the best high-precision solutions according to their requirements. We are always open to embracing new challenges, new technologies and new applications, which will help us to reinforce our position in the GNSS industry as a whole.

**Many new technologies are gaining ground in the geomatics sector. Does this bring new opportunities for a company like yours?**

We dare to think about and venture into previously unexplored areas where highly dynamic positioning solutions are needed. For surveying or GIS-related applications, the traditional requirement for positioning accuracy was at metre or sub-metre level, in static mode. However, emerging applications such as UAV surveying & mapping, laser scanning mapping, remote sensing imaging, VR and so on not only require high precision at centimetre level, but also operate in moving, kinematic modes. That presents both challenges and new opportunities for us. Thus, our core RTK technology enables us to be one of the leading surveying instrument suppliers to meet and exceed the needs of state-of-the-art applications, which extend beyond conventional surveying, UAV surveying, autonomous vehicles and high-precision GIS. We are more than ready in terms of products and solutions, and we have accumulated plenty of feedback and experience in real-world cases.

**Can you share your expectations about the GNSS industry/technology for the coming years?**

Since RTK is not yet deployed in surveying and mapping on a large scale, the costs are still high. The rapid development of unmanned aerial surveying, automatic driving and precision agriculture is bringing RTK technology to a broader market. As a result the price will become more attractive, and the greater market need will further boost the development of RTK. For example, unlike traditional surveying and mapping, which requires clear skies, RTK can be used in challenging environments where there is high interference, multipath effects and occlusions. As RTK technology is developed further and boosted in terms of antenna, baseband and algorithms, it will increasingly be able to overcome all the difficulties.