

COMNAV

Making GNSS Receivers a Creative Technology

Located in Shanghai, China, ComNav Technology Ltd. develops and manufactures multi-constellation, multi-frequency GNSS measurement engine boards and receivers for ultimate high-precision positioning applications. It is the first Chinese company to have developed, designed and produced combined GNSS (GPS and GLONASS) plus BeiDou OEM boards. With its fast-paced business growth, ComNav is making waves in the global high-precision GNSS industry.

China has a long legacy in astronomy, space exploration and the invention, design and manufacture of precise observation instrumentation, and ComNav Technology Ltd. is

▼ Dr Yongquan Wang.



Every month *GIM International* invites a company to introduce itself in these pages. The resulting article, entitled Company's View, is subject to the usual copy editing procedures, but the publisher takes no responsibility for the content and the views expressed are not necessarily those of the magazine.

continuing this tradition. ComNav is located in Shanghai, the commercial and economic centre of China. The company develops and manufactures multi-constellation, multi-frequency GNSS measurement engine boards and receivers for ultimate high-precision positioning applications. ComNav addresses specific demands in four key business areas: intelligent transportation applications; the entire geospatial industry including surveying, geodesy and civil engineering applications; deformation monitoring including the surveillance of man-made infrastructures and natural hazards; and precision farming.

R&D-DRIVEN

ComNav was founded in March 2012 by Dr Yongquan Wang, who is an undisputed expert within the Chinese high-precision GNSS industry: in 1996, Dr Wang developed the first Chinese GNSS receiver, and in 2008 he developed the first Chinese high-precision GPS OEM

board. As an R&D-driven company ComNav invests 10% of its annual revenue in R&D, and over half of all ComNav employees have extensive experience in high-precision GNSS or engineering. The company currently employs 120 people, and that figure is increasing all the time.

ComNav has enjoyed rapid growth thanks in particular to two important factors. One was the BeiDou navigation satellite system which started deployment in 2012, and the other is the large demand from intelligent transportation systems. Within one year of being founded, ComNav had sold more than 10,000 units of its high-precision GNSS OEM board in the Chinese domestic market. On the day that milestone was passed, ComNav allocated USD15 million to building the largest R&D and manufacturing GNSS plant in China to enable production to keep pace with demand. In 2013, ComNav sold more than 20,000 units of its GNSS OEM board in China, accounting for 25% of the Chinese market. ComNav has already gained a reputation for supplying products with high quality and performance at a fair price. "We just want everyone to be able to invest in and enjoy a highly accurate GNSS receiver which is easy to use and does the job smoothly and efficiently



◀ Bird's-eye view of ComNav GNSS industrial park.



▲ T300 GNSS receiver.

at the right price and without any concession in term of accuracy and reliability. We are quality-driven, and we respect the industry standards in term of file format (RINEX) and data streams (RTCM, BINEX)," says Dr Yongquan Wang.

INTERNATIONAL EXPANSION

ComNav is already selling to more than 20 countries, and its customers are happy with the products and the support. Building on this success, the company is now looking to expand further in the international market. In particular, ComNav has defined two important targets. The first one is the OEM board market where ComNav believes the system integrators will enjoy clear documentation, easy plug-in and ultimate robustness with impressive tracking performances. The second one is the integrated GNSS RTK receiver for land surveying and construction. Needless to say, the GNSS reference station receiver will be part of the proposal including a totally fresh, new approach in terms of processing scheme.

ComNav believes that the quality, performance and reliability will make the difference. "We strictly manufacture every piece board/

receiver based on the ISO standard. We have a complete double-step testing process to certify the quality of our products. And for the international market we apply a complete testing cycle after the initial QC to ensure our overseas customers that we are very serious on delivering the excellence," explains Dr Yongquan Wang.

NEW GENERATION

In 2014, ComNav is launching the new-generation RTK GNSS receiver T300 which is based on a totally new concept. It is not only the smallest and lightest of its category but it has also been built with lots of user-friendly functionalities. Considering the growing demands for the geodetic GNSS RTK receiver in Asia, Latin America and Africa, the company expects the T300 to rapidly gain a significant part of the market share thanks to its reliability and quality at affordable and competitive pricing. Likewise, ComNav anticipates that Russia and the Middle East will be equally excited by the newcomer. Meanwhile, in Europe it sees a clear and current need for setting up high-accuracy and reliable instrumentation at the correct pricing level.

ComNav intends to keep focusing on the GNSS core technology with ever-changing GNSS OEM board-integrated abilities (sensors, 4G, Bluetooth, Wi-Fi, embedded applications, etc.), new satellite systems, new processing schemes and other advanced positioning technologies.

FUTURE AMBITIONS

In 2015, ComNav will move to ComNav Industrial Park where it will have more space and facilities for continuing to develop and manufacture its large range of GNSS products. With a team of passionate and dedicated people for GNSS technology, ComNav is committed to maintaining its leading position as game rule-breaker to delight engineers and users looking for the ultimate high-precision multi-constellation and multi-frequency GNSS receiver technology. Who better to master the digital signal processing of China's first GNSS constellation, BeiDou, in order to deliver highest-accuracy positions than a Chinese high-tech company? ComNav has the ambition to be the only answer to that question. ◀

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