

# Global and China Telematics-Box(T-Box) Industry Report, 2019

July 2019

## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications. Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

## INFORMATION SOURCES

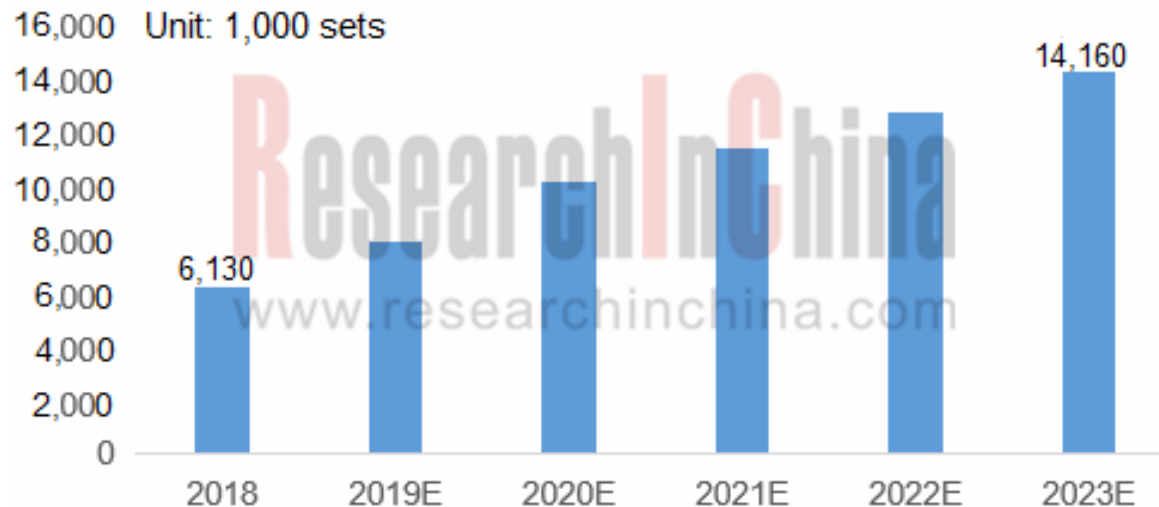
The primary information sources include Company Reports, and National Bureau of Statistics of China etc.

## Abstract

### More than 14 Million Passenger Cars will be Equipped with T-Box in China in 2023

In China, passenger car T-Box installation in OEM market reached 6.13 million sets in 2018, before 2.25 million ones were installed in the first four months of 2019, a spurt of 28.9% from the same period of last year; it is predicted that the figure will hit 14.16 million in 2023, according to our Global and China T-BOX Industry Report, 2019.

### OEM Installation of Passenger Car T-box in China, 2018-2023E



T-Box (Telematics-Box), also called telematics control unit (TCU), refers to an automotive embedded system installed to control and track vehicles, including GPS unit, external interface electronic processing unit for mobile communications, microcontroller, mobile communication unit and memory. T-Box is able to acquire core vehicle data through communicating with CAN bus to send instructions and information, enabling online applied features from remote monitoring and remote control to safety monitoring & warning and remote diagnosis so that vehicles and telematics service providers (TSP) can be connected.

T-Box will deliver more powerful capabilities. The new-generation T-BOX products are mainly composed of mobile communication unit (4G/5G), C-V2X communication unit, GNSS-based high accuracy positioning module, microprocessor, in-vehicle bus controller and memory. Besides satisfying general needs, T-Box tends to be a connected controller for vehicle-to-cloud platform, vehicle-to-vehicle and vehicle-to-infrastructure communications in real time among all traffic participants. It plays a key role in intelligent connected vehicles and government's ambition of intelligent transportation system.

In the Chinese passenger car T-Box market, vendors like LG, Continental, Shanghai Changxing Software, Huawei and Flaircomm Microelectronics, are the leading forces.

Continental ships at least 2 million sets of T-Box annually, and over 30 million connected vehicles having used its devices.



The 5G T-BOX being developed by Continental is integrated with not only 4G/5G network access technology but also DSRC and C-V2X communication technologies.

Establishing close partnerships with automakers like Geely and BYD, GosuncnWelink shipped more than 1 million pieces of 4G automotive modules and over 200,000 sets of T-Box in 2018.

Wuhan Intest Electronic Technology Co., Ltd. (Intest for short), a conventional T-BOX vendor that has supplied passenger car T-BOX for BAIC BJEV, also expanded into the commercial vehicle market in recent years, with more than 40 OEM clients such as Zhongtong Bus, Nanjing Golden Dragon Bus, Beiqi Foton Motor, Geely New Energy Commercial Vehicle Group, Brilliance Renault New Energy Commercial Vehicle and BYD Commercial Vehicle.

Intest projected to develop fifth-generation terminal inBOX5.0 in 2018 as a preparation for the introduction of 5G communication in 2019. The new product will feature inertial navigation based on C-V2X communications, and improved and upgraded technologies like automotive Ethernet, CAN FD and Beidou high accuracy positioning. In response to the intelligent connected vehicle (ICV) development tendency, Intest also has planned development of “smart antenna” products using its inBOX5.0 technology platform, and will launch them on market in the form of usual TCU and smart antenna once they are developed.

Another T-BOX bellwether Flaircomm Microelectronics rolled out Ethernet architecture-based T-BOX 4.0 in March 2019, being featured as follows: computing power of MCU and MPU gets improved significantly; 4G wireless communications are subject to LTE CAT6 and vehicle body wireless communications support 802.11ac & BT 5.0, with ever higher bit rates; capabilities like TPMS and Bluetooth key are added; the latest 100base T1 automotive Ethernet bus becomes available and speed of CAN-FD bus is 16 times faster than the previous ones; AUTOSAR standard of latest version is supported.

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