Global and China Commercial Vehicle Telematics Industry Report, 2020

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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.

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Abstract

Commercial vehicle telematics research: before 2023, policies will drive the penetration up to 76% and the market will be worth more than RMB20.7 billion.

Differing from passenger car telematics mainly for better user experience, commercial vehicles that take first into account cost reduction, higher efficiency and safe operation because of their attribute of means of production, focusing more on telematics availability to improve vehicle efficiency and cost performance.

Comparison of Telematics between Commercial Vehicle and Passenger Car

	Passenger Car	Commercial Vehicle
Purpose	Better driving experience	**Means of production, cost reduction and efficiency improvement**
Function	For the convenience of car owners	**Greater demand for vehicle monitoring and safety**
Application	Online entertainment, voice assistant, online navigation, safety assistance, remote control	**Fuel consumption management, driver attendance, scheduling management, monitoring, and warning, maintenance & repair, vehicle tracking**
Player	Automakers, consumers, telematics service providers	**Automakers, logistics drivers, logistics fleets, Party A's customers, consignors, telematics service providers**
Device	Few, just one interface reserved for a telematics device	**Several, probably 7 or 8 telematics devices for a large truck**

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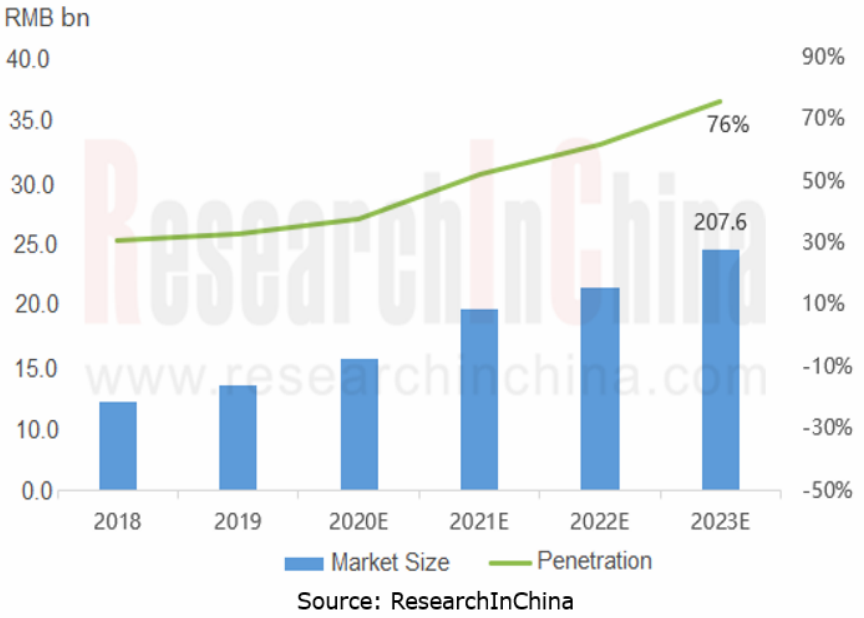
Policies and regulations serve as key drivers

Mandatory installation of driving record-enabled satellite positioning devices into “two buses, one special vehicle” (tourism chartered buses, Category III scheduled buses, and special vehicles for transporting hazardous chemicals, fireworks and firecrackers, and civil explosives), heavy trucks and tractors as policies required in 2013, ushered in an epoch-making era of commercial vehicle telematics.

Semi-trailer tractors and >12t trucks are required to pack driving record-enabled satellite positioning devices and intelligent video surveillance devices, and to be connected to standards-compliant monitoring platforms, according to the Regulation on Road Transport (Revised Draft for Comment) the Ministry of Transport of China drafted in November 2020, which invigorates China’s commercial vehicle telematics market further.

In the next three years, China’s Phase VI Emission Standard will be a key contributor to the market growth, according to which all sold and registered heavy vehicles should be subject to the Stage A requirements from July 1, 2020 onwards and all sold and registered light vehicles should be subject to the Stage B requirements starting from July 1, 2023. In the upcoming three years, the demand for telematics terminals that can monitor vehicles remotely online and detect exhaust will be blooming. On one estimate, the penetration of OEM telematics for commercial vehicles in China will hit 76% in 2023, with the market being valued over RMB20 billion.

Market Size and Penetration of Commercial Vehicle OEM Telematics in China, 2018-2023E



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OEMs' deployments are being made inch by inch.

Stimulated by policy requirements and robust demand, major heavy truck manufacturers like FAW Jiefang, Shaanxi Automobile and Dongfeng Trucks have taken the lead in deploying and raced to make plans of using telematics as a standard configuration.

Comparison of Telematics Platform Layout between Commercial Vehicle OEMs in China (Partial)

Automaker	FAW Jiefang		Shaanxi Heavy Duty Automobile		Foton Motor	SAIC Iveco Hongyan Commercial Vehicle	Yutong Bus
Telematics Platform	Jiefangxing		Tianxingjian		iTink	GEN-Star	Anruitong
Partner	Qiming Information Technology		Hopechart		Sinoiov	TIZA Information	Nokia Siemens Networks (1st Gen)
First Launch Time	2008		2011		2016	2015	2011
Terminals	OBU, smartphone, PC, 10-inch screen, voice + touch control		OBU, smartphone, PC, 10-inch screen, voice + touch control		OBU, smartphone, PC, 7/8/9/10.1-inch screen, touch control + button	OBU, smartphone, PC, 7-inch screen, touch control + button + voice	OBU, PC, 7-inch screen, button
Vehicle Terminal							
Core Features	Individual · Online service station · Driving monitoring · Driving instructor · Social contact and entertainment · OTA · Vehicle WiFi · Remote control	Fleet management · Location monitoring · Fuel monitoring · Report center · Maintenance & repair	**Platform** · Gasoline consumption management · Driving behavior statistics · Remote fault diagnosis · On-schedule arrival monitoring · Statistics report · Route management · System management · Real-time monitoring	**Smartphone** · Remote diagnosis · Service station inquiry · Location billboard · Map-based monitoring · Warning message · Mileage statistics · Gasoline refueling statistics · Abnormal fuel volume statistics ·	· OTA update · Truck navigation · Message issuance · Online entertainment · Wake-up free voice · Truck navigation · Online audio · Smartphone mirroring	· Maintenance reminder · Remote fault diagnosis · Real-time monitoring · Vehicle information provision · Accident alarm · Fleet management · Operation analysis · Location query · Customized report · Online entertainment · Sales and loan management	· Fault monitoring · Repair management · Maintenance management · Energy consumption management · Mobile request for repair · Smart station · Scheduling supervision · Operation statistics · Dispatching and scheduling · Video surveillance · Map-based monitoring · .....

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"Jiefang Pilot" and "Jiefangxing", respective telematics platform of **FAW Jiefang** Changchun Base and Jiefang Qingdao Base, was reshuffled into one in March 2020. The full family of FAW Jiefang models have been equipped with telematics system as a standard configuration since 2019, with more than 700,000 units connected since then.

Shaanxi Automobile Group Commercial Vehicle Co., Ltd. has started deploying telematics since 2010. Its "Tianxingjian" telematics system launched together with Hopechart in 2019 has been a standard configuration of its full range of trucks, with 600,000 units installed.

Foton Motor has set about deploying telematics since 2011, and established Foton iTink Information Technology Service Company for telematics development in 2012. Since its launch in 2016, Foton iTink Telematics System has boasted more than 1 million installs.

Telematics platform will deepen data application.

Operating platform remains the epicenter of telematics. OEMs and platform providers forge close partnerships now. Examples include Shaanxi Heavy Duty Automobile developing Tianxingjian with Hopechart, and Dongfeng Trucks in harness with Xiamen Yaxon Network to develop "Dongfeng Commercial Vehicle Fleet Management", with telematics capabilities available during the lifespan of vehicles. Deeper application of telematics data will be the next development priority of platforms.

Major Commercial Vehicle Telematics Platform Providers in China

Provider	Partner (s)	Content of Cooperation	Product Features
Hopechart	Shaanxi Heavy Duty Automobile	Tianxingjian	Gasoline consumption management, driving behavior statistics, remote fault diagnosis, real-time monitoring, on-schedule arrival monitoring, statistics report, route management, system management, etc.
Xiamen Yaxon Network	Dongfeng Trucks	Dongfeng Commercial Vehicle Fleet Management	Simultaneous stewardship of multiple vehicles, real-time running status check by multi/single-vehicle way, statistics function, statistical analysis of fleet mileage, fuel consumption, wrong driving behaviors, fleet report, etc.
	Sinotruk	TELEMATICS	Location monitoring, trajectory playback, driving data statistics, operation monitoring, driving analysis, driving recommendations, fuel consumption monitoring, remote fault diagnosis, etc.
Qiming Information Technology	FAW Jiefang	Jiefangxing	Online service station, driving monitoring, driving instructor, social contact and entertainment
TIZA Information	SAIC Iveco Hongyan Commercial Vehicle	SAIC Iveco Hongyan Driver Version	Maintenance reminder, remote fault diagnosis, real-time monitoring, vehicle information provision, sales and loan management, accident alarm, fleet management, operation analysis, location query, customized report, online entertainment, etc.
China Satellite Navigation and Communications	FAW Jiefang, Dongfeng Trucks, SAIC Iveco Hongyan Commercial Vehicle, JAC, etc.	Help OEMs build their own commercial vehicle telematics platforms to provide software/hardware building and operation services	Key operating vehicles monitoring, engineering machinery location-based service, driving and training management, freight capacity management, fuel saving analysis, predictive maintenance, etc.
Beijing Huitong Tianxia IOT Technology (G7)	SF Express, STO Express, YUNDA Express, Changjiu Logistics, etc.	Start from aftermarket to provide fleet management services	Provide services, e.g., driving behavior monitoring, driver training, driving data statistics and scheduling management for express and courier, food, coal, automotive, etc.
Sinoiov	Ministry of Transport of China, Ministry of Public Security of China, State Administration of Work Safety	Start from government regulators to acquire data through official regulation platforms and provide related data application services	Data platform, data service, trading service, financial service, transport capacity service, etc.

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FAW Jiefang: underline telematics data + scenario enabler.

In May 2020, FAW Jiefang and China Satellite Navigation and Communications set up Smartlink Intelligent Technology (Nanjing) Co., Ltd.. Based on the new-generation "Jiefangxing" telematics platform, the joint venture provides partners with telematics data enabling 'vehicle data plus scenario data', combining FAW Jiefang's three key products, Jiefangxing Individual APP, Fleet Management System (FMS) and Transportation Management System (TMS).

Shaanxi Heavy Duty Automobile: commercialize telematics data + insurance applications.

In October 2020, Shaanxi Tianxingjian Telematics Information Technology Co., Ltd., Maxim Insurance Brokers (Shanghai) Co., Ltd. and China Pacific Property Insurance Co., Ltd. (CPIC Property) negotiated about collaboration on commercial vehicle UBI. This move will broaden Tianxingjian Telematics' big data use in the aftermarket.

Intelligent vehicle terminals will be a future hit.

In China, typical commercial vehicle telematics terminal suppliers like Hopechart and Yaxon Network have sharp edges in both OEM market and aftermarket on strength of their large customer bases. The implementation of China Phase VI Emission Standard, the Regulation on Road Transport and other polices will bring in more revenues to them.

Commercial Vehicle Telematics Terminal Suppliers in China

Supplier	Product	Revenue (RMB mln)		Customer(s)
		2019	2020H1	
Hopechart	Beidou-based dual-mode driving recorders, intelligent vehicle center console displays, telematics modules (T-Box), new energy vehicle T-Box, 4G vehicle video recorders, portable positioning terminals, etc.	313	198	Shaanxi Automobile, Beiqi Foton Motor, Dongfeng Trucks, Sinotruk, Beiben Trucks, Anhui Hualing Automobile, Sany
Yaxon Network	Commercial vehicle telematics terminals, safety T-Box, Beidou-based terminals, etc.	721	390	Dongfeng Motor, Beiqi Foton Motor, Sinotruk, King Long, JAC, Qingling Motors
Qiming Information Technology	Driving recorder, vehicle T-Box, OBD subject to China Phase VI Standard, etc.	1,521	606	FAW Jiefang
TIZA Information	Intelligent vehicle terminals, smart AIOs (all-in-one), OBD, etc.	299	129	SAIC Iveco Hongyan, Dongfeng Motor, Nanjing Golden Dragon Bus
Wuhan INTEST Electronic Technology	Data collection terminals, intelligent vehicle terminals, etc.	238	29	Beiqi Foton Motor, Nanjing Golden Dragon Bus, Sinotruk, SAIC Maxus, Nanjing Iveco Automobile
Shenzhen Guomai Changxing Technology	Remote telematics terminals, satellite localization-based wireless terminals, driving recorders, multimedia driving recorders, multimedia video surveillance terminals, intelligent driving assistance peripherals, intelligent telematics terminals, etc.	-	-	Sany Heavy Industry, Hubei Runli Special Automobile, Sinotruk, Yutong Bus, etc.
Shenzhen Yuwei Information & Technology Development	T-Box, video recorders, driving recorders, vehicle terminals, etc.	-	-	FAW Jiefang
HiRain Technologies	Intelligent telematics terminals, etc.	-	-	FAW Jiefang, Jiangling Motors

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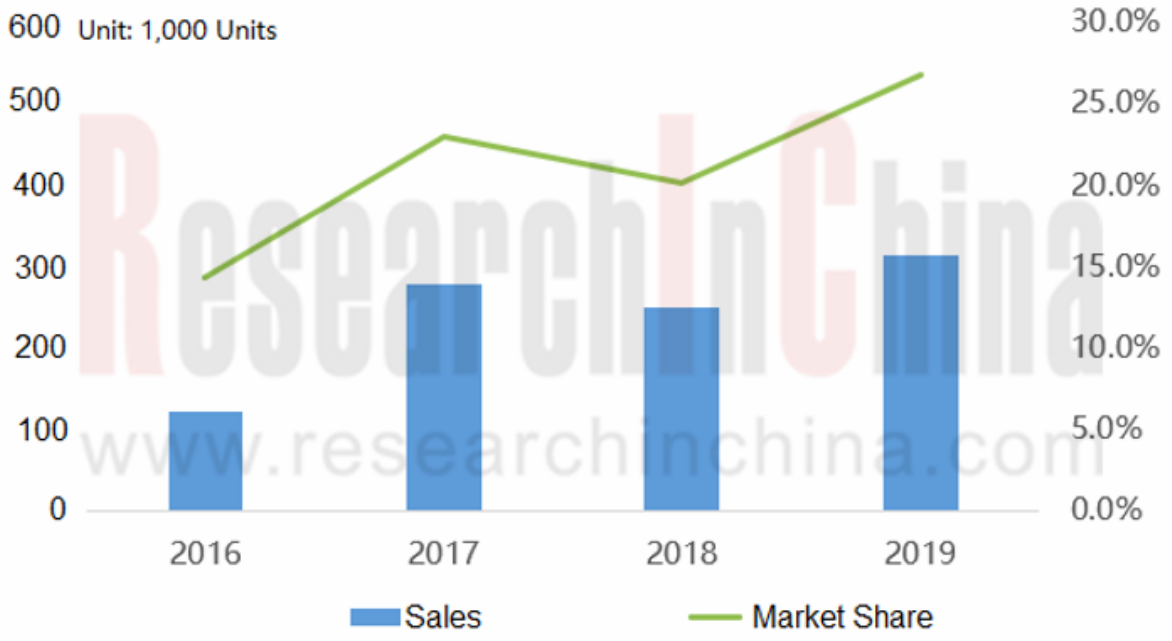
Hopechart, China's biggest supplier of commercial vehicle telematics terminals, sold 313,000 sets of "intelligent enhanced driving terminals" (including hardware devices (T-BOX, driving recorder, etc.), intelligent enhanced driving modules and big data cloud platform) in 2019, commanding over 20% of the heavy duty truck market. In 2020, Hopechart becomes a qualified supplier of Sinotruk, which will further push up its share in the market.

Hopechart's Sales of Intelligent Enhanced Systems and Its Share in Heavy Duty Truck Market, 2016-2019



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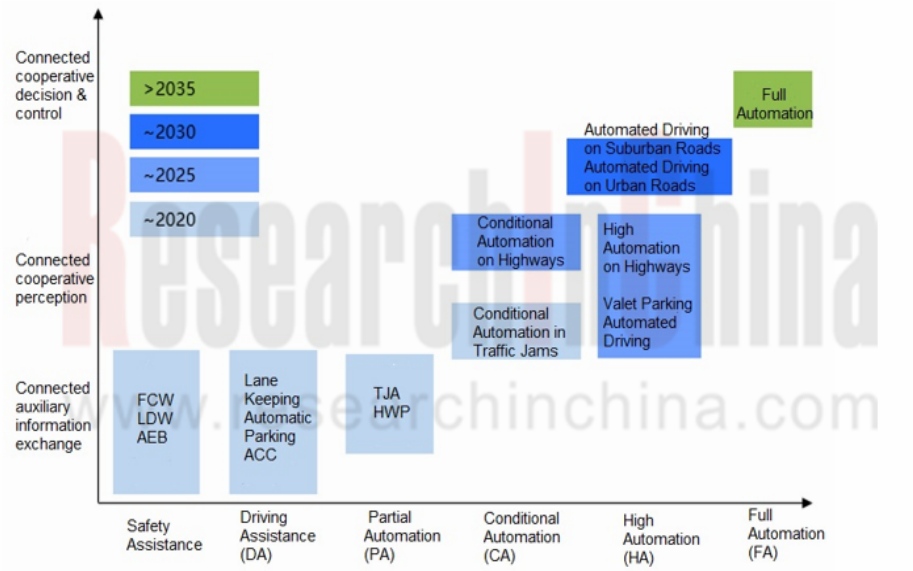
Commercial vehicle telematics will fuse with automated driving features.

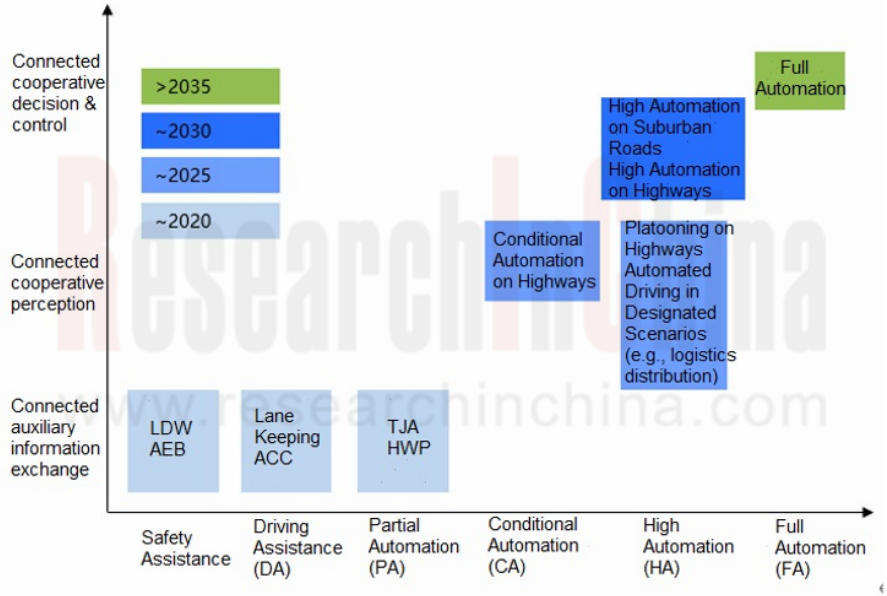
In an age of intelligence, telematics and automated driving lean toward a fusion with the support of V2X and 5G, and capabilities like platooning and predictive cruise are expected to become available first.

Development Roadmap of Intelligent Connected Passenger Vehicles in China



Source: Intelligent Connected Vehicle Technology Roadmap 2.0

Development Roadmap of Intelligent Connected Freight Vehicles in China



Source: Intelligent Connected Vehicle Technology Roadmap 2.0

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Platooning: commercial vehicle platooning is hopefully the first application where automated driving is implemented, an effective solution to control on the distance between vehicles and feet driving status for a big cut in fuel consumption (by 10%-15% in truck platooning according to TNO, the Netherlands Organization for Applied Scientific Research), labor cost reduction, lower driver working intensity, and less cost of operating commercial vehicles. At present, quite a few OEMs have set foot in the field.

Predictive cruise: data like slope, curvature, heading and speed limit are extracted from telematics-based map data to make driving decisions and reduce fuel consumption, coupled with improving fuel saving algorithms.

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