The integrated monitoring software platform for urban rail transit of “Hisense” has passed international safety certification

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In early March 2013, Qingdao Hisense Network Technology Co., Ltd. (Hisense) independently developed the integrated monitoring system software platform for urban rail transit (HiSCADA), which successfully obtained the SIL2 product functional safety certification issued by the French BV International Inspection Bureau. This indicates that the safety performance of the integrated monitoring system of Hisense has fully met the international safety standards, and will provide a higher level of safety guarantee for the smooth operation of the system in the unmanned environment of urban rail transit.

With the development of driverless technology in the field of rail transit, the level of intelligence, automation, and platformization of the integrated monitoring system has been given higher requirements. The unmanned driving technology of rail transit requires the integration and unified management of automatic train monitoring systems, integrated monitoring systems, communication systems, and vehicle systems. The complexity of the system increases exponentially, and the risk factor and the difficulty in guaranteeing system safety also increase. Therefore, it is imperative to introduce SIL international safety certification to ensure the safe operation of unmanned driving.

SIL certification is currently an internationally recognized functional safety certification which covers all safety activities in the whole life cycle of the certified system. The HiSCADA system of Hisense, which has passed the SIL2 authority certification, has obtained international professional authority certification for its performance, safety and reliability. It can not only greatly improve the safety and enhance the core competitiveness of the product, but also effectively protect the safety of passengers and properties.

The SIL2 certification of the HiSCADA platform has a great significance to the further exploration of Hisense in the field of unmanned rail transit. As early as January 2019, Hisense and Weilian Technology Co., Ltd. of Beijing Jiaotong University jointly established a rail signal joint venture company, focusing on the research, development, and promotion of rail signal systems and deployment of unmanned driving. Nowadays, Hisense, as one of the few companies in the global rail transit industry with independent intellectual property rights of integrated monitoring systems and signal systems, has the SIL international certification for integrated monitoring systems and signaling systems, which will further improve the overall reliability and project implementation efficiency of such systems, and provide better protection for unmanned driving and construction of the intelligent station of urban rail transit.

It is reported that the integrated monitoring software system based on the HiSCADA platform of Hisense
has been applied in Qingdao, Guiyang, Changsha and other cities, of which, the integrated monitoring system simulation test platform for Qingdao Metro Line 1 and Line 8 won the second prize of Qingdao Metro Work Innovation, which was highly approved by customers.

**Figure. 9.** SIL certification of the signal system.
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