AUTOSAR X **CETC** 普华基础软件

Success Story: Smart Lighting Solution Powered by iSOFT ORIENTAIS® Classic AUTOSAR Platform
by Xinyu Jiang

iSOFT became an AUTOSAR partner in 2010. As the first Chinese automotive basic software firm to achieve AUTOSAR Premium Partnership, iSOFT has been firmly committed to the R&D and industrialization of AUTOSAR software. iSOFT has successfully released the ORIENTAIS® Classic AUTOSAR Platform (CP) and ORIENTAIS® Adaptive AUTOSAR Platform (AP). Notably, iSOFT is the first Chinese AUTOSAR software vendor to secure ISO 26262 ASIL D product certification from TÜV Rheinland.

In 2024, iSOFT collaborated with a leading automotive lighting supplier to develop an integrated "basic software + application" smart lighting solution. Acting as the "brain" of smart headlights, the lighting domain controller enabled the control of multiple proprietary headlight nodes and features such as AFS (Adaptive Front-lighting System) headlight follow-up steering, ADB (Adaptive Driving Beam) adaptive matrix lighting, smart projection, and intelligent matrix interaction. The ORIENTAIS® Classic AUTOSAR Platform contains modules such as OS, communication, network management, diagnosis, memory, WDG, E2E, system mode management, and Bootloader, providing a safe and stable underlying software platform for the system. This enabled the execution of intricate algorithm logic for high-efficiency headlight matrices, multi-channel high-load communication transmission and reception of headlight matrix signals, and the seamless upgrade and flashing of multiple proprietary headlight nodes.

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Leveraging AUTOSAR's standardized interfaces and modular decoupling methodology, the efficiency of controller function development and functional safety implementation has been significantly improved. From software freeze to mass production, this project was accomplished in a mere 12 months, fully compliant with the ASPICE development process and the functional safety ASIL B requirements. The controller has been integrated into a premium flagship vehicle model, becoming one of its three major marketing highlights. The model quickly became a smash hit upon its launch. By March 2025, cumulative deliveries have exceeded 170,000 units, with monthly sales reaching nearly 20,000 units.

iSOFT provided highly responsive support throughout the project development cycle. We actively assisted the client in establishing the functional safety process and overcoming critical technical challenges, ultimately successfully integrating the ORIENTAIS® Classic AUTOSAR Platform into the headlight domain controller. This achievement enabled seamless integration of intelligent interaction and precision lighting functionalities in the final product, earning widespread acclaim from the client.