MCAL Development

Business Challenge

To develop MCAL drivers for Infineon AURIX micro controllers according to AUTOSAR and ISO26262 standard.

Requirement

- Analyse the target application and identify the functionalities and interaction with microcontroller interfaces.
- Design architecture of MCAL into consideration for hardware interfaces, and the software API for higher-level components.
- Peripherals configuration such as GPIO timers, UART, SPI etc.. It should provide an interface for other SW components to interact with these peripherals seamlessly
- Implementation of drivers according to spec, process and compliances.

Technology & Tools

- **Hardware** : Multi core AURIX family of 32/64 -bit microcontrollers.
- **Compilers** : GNU, GHS, Tasking
- **Tools** : Windriver PLS Universal Debug Engine, EB Tresos, Clearcase and JIRA
- **Language** : Embedded C

Value add by Mirafra

- Mirafra analyzed the requirements and identified the lead to kick off project.
- Mirafra was appreciated on multiple instances on Delivery Excellence and one time Milestone Achievements
- Resource was ready from Day “Zero”
- Enhanced the team to large extend and continuing in multiple projects delivery at client.
- optimized for performance, ensuring efficient resource utilization and minimizing interrupt latency. The code size was kept minimal, and data transfer rates were optimized.
- functionality was thoroughly tested and verified, ensuring reliable and efficient operation