

Renesas Ready Ecosystem Partner Solution



ABUP ELB Bootloader

Solution Summary

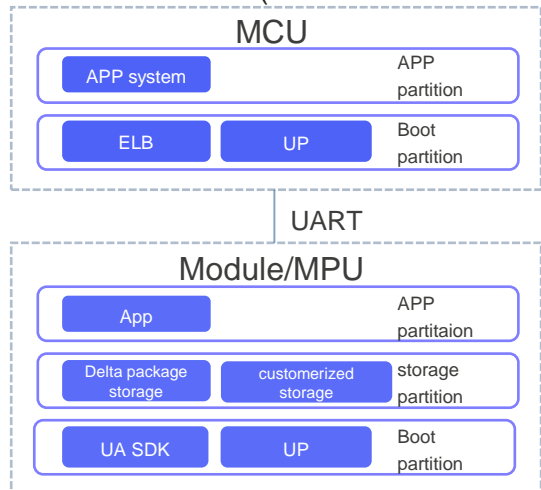
External Lite Bootloader (ELB) is a bootloader program from ABUP that generates a lightweight low code. ELB can boot and upgrade target MCU system through communication with MPU module by greatly reducing MCU resources occupied by OTA upgrade. ABUP ELB reduces investment for software development, and improves upgrade efficiency, stability and security. It supports Renesas [RL78](#), [RX100](#), [RA2](#) series MCUs, and can provide demonstration programs on Renesas EK-RA2L1, TB-RX140 and FPB-RL78G23.

Features/Benefits

- OTA upgrade of the whole machine – ELB and related coprocessors form a distributed upgrade capability, any chip connected to the bus in the machine can be upgraded
- Delta OTA uses very little flash resources to maximize MCU resources
- Low-code program generation – Customer just selects the corresponding Renesas MCU model to generate the ELB program
- Makes MCU and other coprocessor OTA upgrades more stable, reliable and safe

Diagrams/Graphics

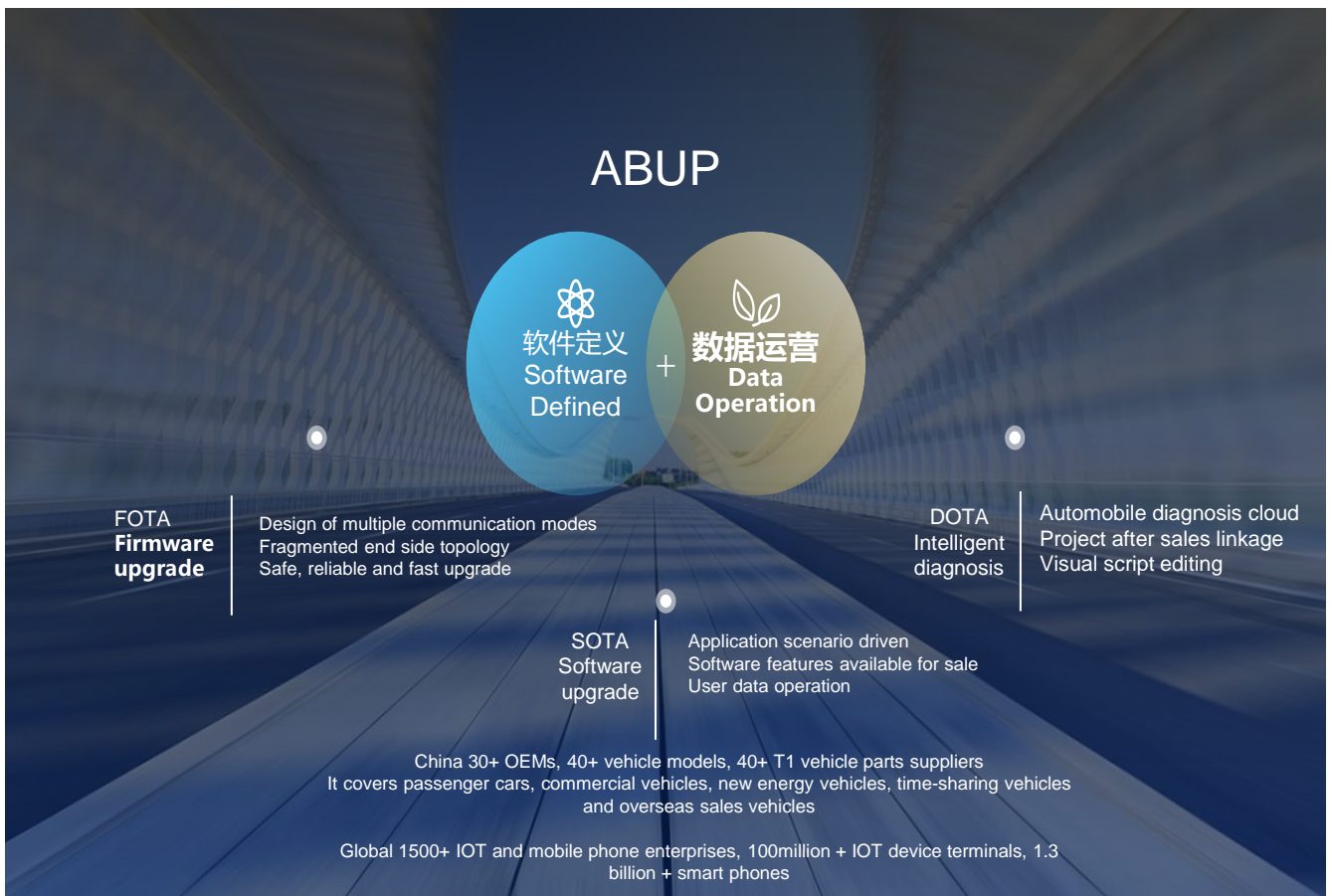
Basic framework (MCU + Communication module example)



Target Markets and Applications

- Smart meter
- Industrial IoT
- Intelligent security
- Smart homes
- Smart wearables
- Consumer electronics

The core team of ABUP was established in 2012, focusing on the research and development of OTA technology for nearly 10 years. In 2017, ABUP operated independently, focusing on OTA R&D services in the automotive and Internet of things fields. As an independent OTA innovation enterprise in China, it actively participates in the formulation of national standards and regulatory standards. It has more than 30 related patents and more than 40 software copyrights in the OTA field, and has passed the international software cmmi-3 certification. It has been rated as Shanghai double software enterprise, high-tech enterprise, specialized and special new enterprise. At present, elabi has served more than 30 OEMs in the automotive field, and has carried out practical project cooperation with 50+ parts suppliers and software service providers. In total, it has reached OTA System Construction Projects for more than 50 model platforms, and has completed the acceptance and delivery of many projects. In the field of Internet of things, it has served more than 30 fields, 1000+ customers, more than 100million access devices, and hundreds of millions of upgrades.



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