BAULDS

YOUR PRODUCT **SMARTER**

GESP

GENIUS EMBEDDED SOFTWARE PLATFORM

ABOUT

All Baulds products are provided with an embedded software platform that is developed by ourself. This generic platform provides the possibility to facilitate incremental innovation.
The development of drivers and software modules is being done in a modular fashion. The platform consists out of a couple software layers that each have a specific functionality.
The modularity provides the possibility to switch between the different hardware products within the Baulds product range.

"This is the engine that makes available the drivers to the software application."

BOARD SUPPORT PACKAGE (BSP)

There are a lot of different chips and processors used in the hardware development. The Board Support Package (BSP) is developed to support all the various hardware. It is the first essential layer within the platform andconsist out of low-level drivers that drive the hardware. The BSP development is done only once per hardware development cycle. It supports interface like:

- UART
- SPI
- I2C
- CANbus
- SDIO (µSD-card, eMMC)
- RS485
- RS422
- FRAM
- FRAM
- LTE modem (Telit, Quectel)
- Bluetooth 4.x/5.x
- EEPROM

GENIUS EMBEDDED SOFTWARE PLATFORM (GESP)

On top of the BSP is the Genius Embedded Software Platform. This is the engine that makes available the drivers to the software application. GESP runs on an embeddedReal-Time Operating System (RTOS) which makes it even more scalable.

The platform has a couple of features that are essential for every application.

- Event logging
- Data logging
- Parameters
- Console
- Ringbuffer
- JSON parser

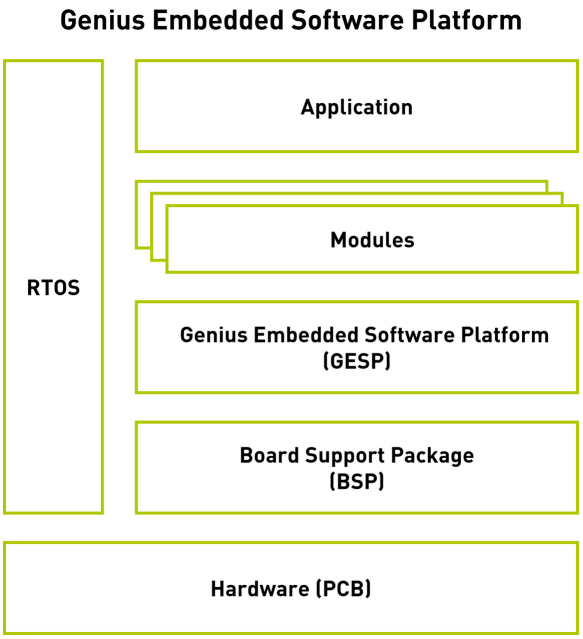
MODULES

The past years Baulds did develop a lot of essential embedded software modules that have significant value to all customer applications. These modules are based on GESP which makes it possible to use these modules in any application without rewriting a single line of code. This level of modularity makes the software good to maintain in a single place. Updates of new features are easy to deliver to all the diverse applications.

- Portal connection
- Firmware update Over The Air (FOTA)
- Firmware update over the CANbus
- Logging upload to cloud (Azure, Google, AWS etc)
- Battery management software (BMS)
- CANopen & J1939 hybrid software stack

APPLICATIONS

All the existing software is used when composing the specific customer application. The development of the new application can be done with complete focus on the new software and its algorithms. This all provides the possibility to meet the customer requirements in a fast pace.



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