**BOSCH**

Sensor evaluation board

Application board 3.1

The application board 3.1 is a versatile and sensor independent development platform, enabling a fast and easy experience with Bosch Sensortec's sensors. As shuttle boards 3.0, a wide variety of Bosch Sensortec's sensors can be plugged into the application board's shuttle board socket. The combination of the application board 3.1 and shuttle board 3.0 can be used to evaluate the sensors and build prototypes to test use cases.
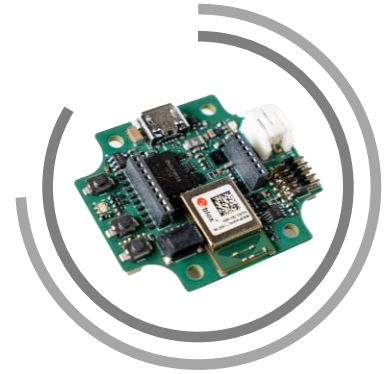
Benefits

Small form factor
The handling is improved, and the small size (38.0 x 33.0 x 6.0 mm³) makes testing easier

Scalable solution
Versatile and sensor independent development platform to prototype use cases for Industry 4.0, IoT, Smart Home systems and wrist- and head mounted wearables

Wireless connectivity BLE support
Robust BLE module with an integrated antenna

Technical features

Application board 3.1 technical data	
Dimensions	Length 38 mm x Width 33 mm x Height 6 mm
Supply voltage	5V DC USB, 3.7V Li-ion Battery
Memory capacity (user data memory)	256 KB RAM, 1MB internal flash, 2Gb external flash
Communication	BLE 5.0 / USB 2.0
Bluetooth Low energy frequency band	2.4 GHz, 40 channels
Typical conducted output power	+0 dBm
Radiated output power (EIRP)	+2 dBm

System operation

The application board 3.1 uses the uBlox NINA-B302 Bluetooth Low Energy module based on the nRF52840 chipset from Nordic Semiconductor. The nRF52840 among other features supports USB 2.0 and Bluetooth Low Energy 5.0 details about the module and the chipset can be found in the NINA-B306 datasheet and nRF52840 product specification respectively. It is based on an Arm® Cortex®-M4F CPU and flash program memory.

System compability

The application board 3.1 applies a flexible shuttle board concept. All sensor shuttle boards have an identical footprint and can be plugged into the application board's shuttle board socket. The PC software autonomously detects the sensor that has been plugged-in and starts the corresponding software application. The application board 3.1 supports multiple sensor shuttle boards, which enables customers to evaluate 6-DoF or higher DoF platforms, thus reducing the product development effort and time to market.

The application board 3.1 is certified and compliant with the following directives:

▶ CE
▶ RoHS and China RoHS
▶ FCC + IC
▶ VCCI
▶ NCC
▶ SRRC

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