



Release Notes

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Product name	BSEC
Compatible hardware	BME680 and BME688
Release version (number)	2.6.1.0
Date of release	29-07-2024
Name of release package	BSEC_2.6.1.0_Generic_Release_29072024
Release type (reason for the release)	Website release of Version 2.6.1.0

Purpose of the software	Software components required for BME680 and BME688
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Components included	<ul style="list-style-type: none">• BSEC binaries• Integration Guide• BSEC Binary Size Information• Config String for specific settings• Example code for integration
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New features and changes implemented compared to the previous release	<ul style="list-style-type: none">• Included a lesser memory footprint variant of BSEC static library named 'bsec_IAQ' as part of the package which supports IAQ feature only. Additionally, the BSEC variant 'bsec_IAQ_Sel' will continue supporting either the IAQ feature or selectivity at a time.• Run in time improvement implemented for quicker sensor stabilization after an off period or sleep mode.• Improved compensation implemented for influence of T and rH on gas resistance enabling more reliable IAQ output.
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Defects fixed according to the previous release	<ul style="list-style-type: none">• Issue with baseline adaptation during sensor stabilization fixed.
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Known issues	<ul style="list-style-type: none">• Enabling the pressure channel for gas scanning is only recommended in applications with clear correlation to classes. In other cases, misclassification can happen due to "unknown / untrained" pressure signal characteristics.• Raw temperature outputs might not be within +/-2 degrees of surrounding environment during scan mode.
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	<ul style="list-style-type: none"> • IAQ outputs are calculated as well in scan mode, but are not accurate and thus not recommended to be used. • Gas resistance spike at the initial 30 seconds of run in period may be observed.
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Additional comments (optional)	<ul style="list-style-type: none"> • BME AI Studio v2.3.4 supports this BSEC version. • BME Development Kit firmware v2.1.5 supports this BSEC version. • BME AI Studio Mobile App v2.4.19 supports this BSEC version. • Tested MCUs: <ul style="list-style-type: none"> ○ Cortex_M4F (gcc) ○ Cortex-M33F (gcc) ○ ArmV8 ○ ESP32-C2C3
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Version history	Changes
BSEC 2.5.0.2	<ul style="list-style-type: none"> • Included the Data Augmentation feature to optimize the sensor to sensor deviation effects • Introduced the regression estimation feature to enable quantitative output
BSEC 2.4.0.0	<ul style="list-style-type: none"> • Multi instance interface support – BSEC will support multiple sensors. Additional interface file ‘bsec_interface_multi.h’ added to support multi instance APIs. • Unified static library to support sensor variants, Configuration files offered separately for BME680 and BME688 sensors. • Reduced library size by optimizing configuration and state properties for catering to multi instance support.
BSEC 2.2.0.0	<ul style="list-style-type: none"> • configuration update. • IAQ algorithm improved w/r to interaction and performance by optimized baseline adaptation. Accordingly, the IAQ adaptation points have been updated to 50 & 200 for best user experience (former versions used 25 & 250). • IAQ output available in continuous mode operation (ODR 1 Hz). • Temperature-Humidity compensation in IAQ output updated (adopted from BSEC version 1.4.8.0). • Merged BSEC 1.x and BSEC 2.x (means BSEC 2.2.0.0 incl. full functionality of BSEC 1.4.9.2).

	<ul style="list-style-type: none">• Static code error/warning fixes.
BSEC 2.0.6.1	-/- (initial release)