



Release Notes

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Product name	BSEC 1.x
Compatible hardware	BME680
Release version (number)	1.4.9.2
Date of release	13-06-2022
Name of release package	BSEC_1.4.9.2_Generic_Release_13062022
Release type (reason for the release)	Website release of Version 1.4.9.2

Purpose of the software	Software components required for BME680
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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"> • 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). • Integration document is updated. • Example codes for integration have been inspected and integrated.
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Defects fixed according to the previous release	<ul style="list-style-type: none"> • Heatsource input could be enabled with process data bit setting, if temperature input is also enabled. • Gas percentage limit fix - lowest value for gas percentage is limited to zero.
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Known issues	<ul style="list-style-type: none"> • Not system tested in all target microcontroller platforms • Initial value of CO₂-equivalent output is 600 instead of 400 due to new baseline algorithm. This will be fixed w/ next release.
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Additional comments (optional)	<ul style="list-style-type: none"> • Recommended configuration for BSEC 1.4.9.2 improved IAQ output is 'Generic_18V_3s_28d/ Generic_33V_3s_28d'.
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Version history	Changes
BSEC 1.4.8.0	<ul style="list-style-type: none"> • enable high power mode with compensation of temperature offset, humidity offset & sensitivity in IAQ calculation • add lib for Linux gcc, Windows gcc, macOS • Bugfix in example code about buffer size
BSEC 1.4.7.4	<ul style="list-style-type: none"> • Extended BSEC working range down to temperatures up to -40°C • Removed lib compiled by MPLAB
BSEC 1.4.7.3	<ul style="list-style-type: none"> • Bugfix in state file: added 2 more parameters to state file so that it is not set incorrectly with update subscription
BSEC 1.4.7.2	<ul style="list-style-type: none"> • Added release for compiler IAR version 8 • Removed unexpected "bsec_datatypes_hidden.h" file • Added both hard and soft FPU version for cortex m4 with GCC compiler • Added lib compiled by maplab with compiler xc16
BSEC 1.4.7.1	<ul style="list-style-type: none"> • Added new outputs (see bsec_datatypes.h) • Simulate data sets from multiple sensors using 1 BSEC instance (see "2.8 Simulate multiple sensors using single BSEC instance" in integration guide) • Added Arduino library to log BME680 data without the need of BSEC (bme680_data) • Enable LP ODR for Temperature, Pressure, Humidity while IAQ is in ULP (example: basic_config_state_ULP_LP)
BSEC 1.4.6.0	<ul style="list-style-type: none"> • New ULP+ feature for additional measurements on demand, • Improved behavior on dynamic changes in LP mode, • BSEC lite version with reduced memory requirements included, • size of state string defined, size of config string reduced, • Option to (temporarily) disable baseline tracker for special applications, • Documentation & code improvements.
BSEC 1.4.5.1	<ul style="list-style-type: none"> • Improved humidity compensation, • Improved accuracy status, • Additional config strings included, • Fixed accuracy / IAQ value after initialization, • Code optimization.
BSEC 1.3.4.1	-/- (initial release)