ANR031

CERTIFICATION OF CUSTOM MODULES

HOW TO GAIN THE CERTIFICATION OF RADIO MODULES WITH CUSTOM FIRMWARE?

VERSION 1.2

OCTOBER 28, 2022

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Revision history

Manual version	Notes	Date
1.0	• Initial version	July 2022
1.1	• Added examples on permissive change class 1 documents in chapter `Example documents`	September 2022
1.2	• Added examples on declaration of identity documents in chapter `Example documents` • Updated compatible radio settings in chapter `Radio configuration`	October 2022

Abbreviations

Abbreviation	Name	Description
BYOF	Build Your Own Firmware	Approach where the firmware of the radio module is povided by the customer
CE	Conformité Européenne	European conformity, indicating that a product is in conformity with Community harmonisation legislation.
FCC	Federal Communications Commission	Independent agency of the United States federal government that regulates communications by radio, television, wire, satellite, and cable across the United States.
HVIN	Hardware Version Identification Number	Number identifying the hardware used for Canada certification
IC	Industry Canada	Government agency, IC is responsible for the certification for electronic and electrical products entering the Canadian market.
ISED	Innovation, Science and Economic Development Canada	See IC.
TCB	Telecommunications Certification Body	Consultant supporting the FCC certification
TELEC	Telecom Engineering Center	Organization for Japanese radio equipment certification and testing.
UKCA	United Kingdom Conformity Assessed	Certification mark that indicates conformity with the applicable requirements for products sold within Great Britain.

Contents

1 Introduction

Würth Elektronik eiSos provides various certified radio modules enabling the radio data transmission in numerous radio frequency bands and radio standards. The radio modules are designed in a way that the mode of operation can be configured via external host micro controller to meet best the requirements of the underlying application.

Nevertheless, there are still cases where an adoption or complete change of the firmware is necessary to enable standalone operation, provide new interfaces or simply to optimize the behaviour of the underlying application. Due to the change in firmware the radio certification of the adopted radio module must be verified again.

This application note describes in which cases the certification of an adapted radio module can be created on base of the certification of the Würth Elektronik eiSos standard product.

> Please note that the certification of the end device, that integrates the radio module, will not be considered in this application note.

2 How to gain the radio certification?

There are mainly two cases of customized firmware:

1. Firmware that has been developed by Würth Elektronik eiSos (see section 2.1).

2. Firmware that has been provided by a customer and Würth Elektronik eiSos just brings it on the radio module hardware during device production as a service (see section 2.2).
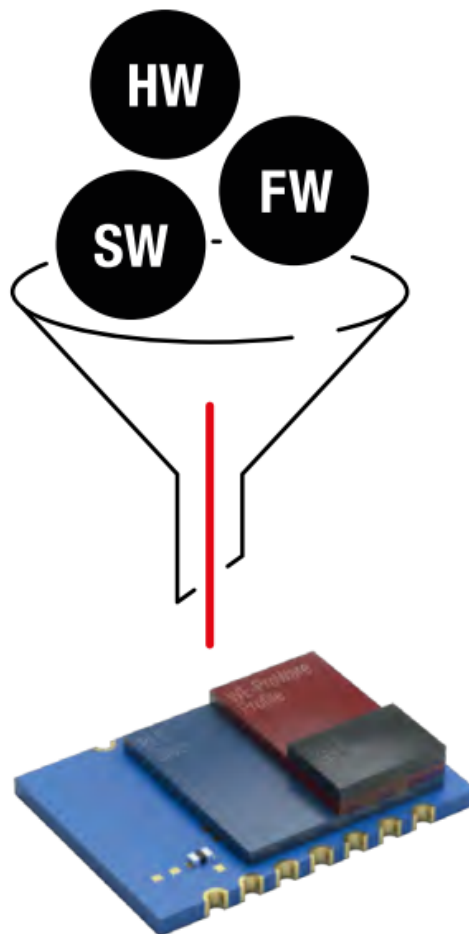

Figure 1: A product and its certification consist of hardware and firmware parts

2.1 Firmware developed by Würth Elektronik eiSos

In case the firmware has been created by Würth Elektronik eiSos, Würth Elektronik eiSos ensures during the development process that the radio behaviour of the new product will be kept conform to the radio tests done during certification of the standard product.

In most cases, this allows to derive the radio certification of the new radio module from the standard module. What this means for the individual certifications is shown in the following sub chapters.

> **STOP** Firmware adaptions that change the radio behaviour will not be considered in this chapter. In such a case, complete radio test must be done to prove the conformity of the new radio behaviour.

2.1.1 European Declaration of Conformity / CE

On base of the test reports of the standard product, Würth Elektronik eiSos can self declare the conformity of the new product for CE. For proper documentation Würth Elektronik eiSos sets up a "Declaration of Identity" document stating that the product variant is identically in terms of radio parameters. With this, the conformity of the new product is proven and the same Declaration of Conformity is valid.

2.1.2 United Kingdoms Declaration of Conformity / UKCA

UKCA works with designated EU standards. Therefore the UKCA declaration is based on the EU test reports. On base of the test reports of the standard product, the UK representative can self declare the conformity of the new product for UKCA. For proper documentation Würth Elektronik eiSos sets up a "Declaration of Identity" document stating that the product variant is identically in terms of radio parameters. With this, the conformity of the new product is proven and the same Declaration of Conformity is valid.

2.1.3 FCC Certification (USA)

On base of the FCC ID of the standard product, Würth Elektronik eiSos can internally run a "Permissive Change Class 1" process. No official filling is needed. To properly document this approach Würth Elektronik eiSos sets up a "Declaration of Identity" document stating that the product variant is identically in terms of radio parameters (see chapter 4). With this, the conformity of the new product is proven and the same FCC ID is valid.

2.1.4 Technical Acceptance Certificate ISED (Canada)

See chapter `FCC Certification (USA)`. Instead of the FFC ID, the IC uses the ISED number to identify the product.

Special care must be taken that the marketing name and HVIN is not changed.

2.1.5 TELEC Certification (Japan)

For Japan some official filling is required. To receive the TELEC certification for the new product, Würth Elektronik eiSos sets up a "Declaration of Identity" document that is placed at the Japanese authority by an assigned test house (operating as Conformity Assessment Body). This will be done only on request of the customer and will generate additional costs.

2.1.6 Get the Bluetooth listing

If the module uses Bluetooth® technology, a Bluetooth® listing is required. The module itself can be added to the listing of the standard product as long as the used Bluetooth® stack uses the same qualified sub-parts.

2.2 Firmware provided by customer (BYOF)

> (!) The chapter applies to the BYOF approach of Würth Elektronik eiSos, where customer developes and provides the firmware.

In case customer writes his own firmware, he is fully responsible for the certification of the product. In general, it is not possible to reference the certificates or tests of the original product.

However, products with standardized radio protocols (e.g. Bluetooth®) are a special case. Here, depending on the change, it is possible to reference to certificates or tests of the original product. How the individual certification can be created is shown in the following sub chapters.

> **STOP** Firmware adaptions that change the radio behaviour will not be considered in this chapter. In such a case, complete radio test must be done to prove the conformity of the new radio behaviour.

> (!) Würth Elektronik eiSos is excluded from any conformity responsibility. Thus customer must specify which conformity marks must be shown on the label in case Würth Elektronik eiSos is taking over the production of the adapted radio modules.

2.2.1 European Declaration of Conformity / CE

In case the new product has the same radio behaviour as the original product, the customer can declare the radio conformity of the new product with help of the test reports of the original product. See example on figure 4.
Please refer to chapter 2.3 to get information how the radio must be configured to match the radio behaviour of the standard product.

2.2.2 United Kingdoms Declaration of Conformity / UKCA

See chapter European Declaration of Conformity / CE. Instead of the CE marking the UKCA marking is used.

2.2.3 FCC Certification (USA)

In case the new product has the same radio behaviour as the original product, the customer can run a "Permissive Change Class 1" process to document the conformity of the new product.

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> (b) Three classes of permissive changes may be made in certificated equipment without requiring a new application for and grant of certification. None of the classes of changes shall result in a change in identification.
>
> (1) A Class I permissive change includes those modifications in the equipment which do not degrade the characteristics reported by the manufacturer and accepted by the Commission when certification is granted. No filing is required for a Class I permissive change.

Figure 2: Official statement of the FCC

To do so, it is recommended to perform an internal documentation that the changes do not degrade the characteristic reported for example by declaring its radio identity (see example on figure 6). In this case, the old FCC ID is still valid and can be used in the end device.
Refer to chapter 2.3 to get information how the radio must be configured to match the radio behaviour of the standard product.

2.2.4 Technical Acceptance certificate ISED (Canada)

See chapter `FCC Certification (USA)`. In analogy to the FCC ID, the IC uses the ISED number to identify the product.

2.2.5 Get the TELEC (Japan)

The certification for Japan does not allow any sort of inheritance from an already existing certification of another manufacturer. Thus a full certification process must be run.

2.2.6 Get the Bluetooth listing

If the module uses Bluetooth® technology, a Bluetooth® listing is required. In case of a custom firmware, a new listing is required already on module level. When the listing of the new module has been done, it is also possible to add the end product to this listing for free.

A Bluetooth® listing can be created out of the Bluetooth® listing of the utilized Bluetooth® stack and the Bluetooth® listing of the underlying radio chip. Please refer to application note ANR027 [2] for details on the listing process of the new radio module.

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2.3 Radio configuration

As described in the previous chapters, customers that write their own firmware must attest Würth Elektronik eiSos that the new firmware is compliant with the respective regulatory radio laws. To prove that, the most convenient way is to use the same radio stack and configuration as used in the standard product of Würth Elektronik eiSos. This shows that custom firmware is radio identical with the Würth Elektronik eiSos original product.

Product	Radio configuration
Adrastea-I	• Using stack ALT1250_03_00_00_00_11952_FW for LTE-M • Using stack ALT1250_03_00_00_00_11951_NB for NB-IoT
Calypso	• Using SimpleLink SDK version 5.20.00.06 and NWP version 3.20.0.1
Proteus-e, Ophelia-I	• Using Bluetooth® LE radio of the nRF52805 • Using 1 MBit or 2 MBit phy • Output power register of the radio chip set to maximum 4 dBm • Maximum duty cycle of 25 % • Use Bluetooth® LE stack Nordic Semiconductor S112 in version 7.3.0[1] or nRFConnect SDK [1]
Proteus-I	• Using Bluetooth® LE radio of the nRF52832 • Using 1 MBit phy • Output power register of the radio chip set to maximum 4 dBm • Using Bluetooth® LE stack Nordic Semiconductor S132 Version 3.1.0[1] or nRFConnect SDK [1]

Proteus-II	• Using Bluetooth® LE radio of the nRF52832 • Using 1 MBit or 2 MBit phy • Output power register of the radio chip set to maximum 4 dBm • Using Bluetooth® LE stack Nordic Semiconductor S132 Version 6.0.0[1] or nRFConnect SDK [1]
Proteus-III, Proteus-III-SPI, Setebos-I	• Using Bluetooth® LE radio of the nRF52840 • Using 1 MBit, 2 MBit or LE-Coded phy • Output power register of the radio chip set to maximum 8 dBm • Using Bluetooth® LE stack Nordic Semiconductor S140 Version 7.0.1[1] or nRFConnect SDK [1]

Table 1: Radio configuration

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[1]Newer versions of the corresponding Nordic Semiconductor Sxxx Bluetooth® stack can be also used.

3 Labelling of adapted radio modules

For production and selling of radio modules, the label must contain the respective information of its radio certification. This may include the CE logo as well as the FCC ID and others.

In case the firmware of the adapted product has been developed by Würth Elektronik eiSos, Würth Elektronik eiSos will take care of the correctness of the label information.

In case the firmware of the adapted product has not been developed by Würth Elektronik eiSos, the customer must provide the needed label information (CE declaration, FCC ID, ...) and the evidence that the product conforms with the dedicated national radio regulations before any device production may start.

Please refer to the user manual of the standard radio module, chapter "General labelling information", to check which information can be placed on the module label.

Figure 3: (Example) Proteus-III label containing the CE logo and the FCC ID R7T1101102

4 Example documents

WIRELESS CONNECTIVITY & SENSORS
EU Declaration of identity

Würth Elektronik eiSos GmbH & Co. KG
Wireless Connectivity
Max-Eyth-Straße 1
74638 Waldenburg

DECLARATION OF IDENTITY RED
newproduct

October 28, 2022

We declare that the radio device

newproduct

is equivalent regarding all radio equipment directive aspects, as there are for radio spectrum, electromagnetic compatibility and safety aspects, to the product:

referenceproduct

due to the proven conformity of referenceproduct to:

EN norms the reference product is conform to

the newproduct complies to this standard alike.

Both, the newproduct and referenceproduct, are electrical identical using the same chip-sets, circuits, PCB and shielding. The firmware uses the same tested radio profiles as the referenceproduct.

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Figure 4: Example RED Declaration of Identity

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UKCA Declaration of identity

Würth Elektronik eiSos GmbH & Co. KG
Wireless Connectivity
Max-Eyth-Straße 1
74638 Waldenburg

DECLARATION OF IDENTITY UKCA
newproduct

October 28, 2022

We declare that the radio device

newproduct

is equivalent regarding all radio equipment directive aspects, as there are for radio spectrum, electromagnetic compatibility and safety aspects, to the product:

referenceproduct

due to the proven conformity of referenceproduct to:

UKCA norms the reference product is conform to

the newproduct complies to this standard alike.

Both, the newproduct and referenceproduct, are electrical identical using the same chip-sets, circuits, PCB and shielding. The firmware uses the same tested radio profiles as the referenceproduct.

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Figure 5: Example UKCA Declaration of Identity

Würth Elektronik eiSos GmbH & Co. KG
Wireless Connectivity
Max-Eyth-Straße 1
74638 Waldenburg

DECLARATION OF IDENTITY FCC
newproduct

September 30, 2022

We declare that the radio module

newproduct

is radio equivalent to the product

referenceproduct

and thus inherits its FCCID

referenceFCCID

Both, the newproduct and referenceproduct, are electrical equivalent and use the same hardware and radio settings. As this modification does not degrade the characteristics it is rated as class I permissive change with no additional filing needed.

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Figure 6: Example FCC Permissive change class 1 document stating radio identity

WIRELESS CONNECTIVITY & SENSORS
IC Declaration of identity

Würth Elektronik eiSos GmbH & Co. KG
Wireless Connectivity
Max-Eyth-Straße 1
74638 Waldenburg

DECLARATION OF IDENTITY IC
newFVIN

September 30, 2022

We declare that the product version

HVIN	PMN	UPN	FVIN
referenceHVIN	referencePMN	referenceUPN	referenceFVIN

is radio equivalent to the product version

HVIN	PMN	UPN	FVIN
referenceHVIN	referencePMN	referenceUPN	newFVIN

and thus inherits its ISED

referenceISED

Both versions are electrical equivalent and use the same hardware and radio settings. Thus this document serves as permissive change class I certificate.

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Figure 7: Example IC Permissive change class 1 document stating radio identity

5 References

[1] Nordic Semiconductor. nRF Connect SDK. `https://www.nordicsemi.com/Products/Development-software/nRF-Connect-SDK`.

[2] Würth Elektronik. Application note 27 - Bluetooth listing guide. `http://www.we-online.com/ANR027`.

6 Important notes

The following conditions apply to all goods within the wireless connectivity product range of Würth Elektronik eiSos GmbH & Co. KG:

6.1 General customer responsibility

Some goods within the product range of Würth Elektronik eiSos GmbH & Co. KG contain statements regarding general suitability for certain application areas. These statements about suitability are based on our knowledge and experience of typical requirements concerning the areas, serve as general guidance and cannot be estimated as binding statements about the suitability for a customer application. The responsibility for the applicability and use in a particular customer design is always solely within the authority of the customer. Due to this fact, it is up to the customer to evaluate, where appropriate to investigate and to decide whether the device with the specific product characteristics described in the product specification is valid and suitable for the respective customer application or not. Accordingly, the customer is cautioned to verify that the documentation is current before placing orders.

6.2 Customer responsibility related to specific, in particular safety-relevant applications

It has to be clearly pointed out that the possibility of a malfunction of electronic components or failure before the end of the usual lifetime cannot be completely eliminated in the current state of the art, even if the products are operated within the range of the specifications. The same statement is valid for all software sourcecode and firmware parts contained in or used with or for products in the wireless connectivity and sensor product range of Würth Elektronik eiSos GmbH & Co. KG. In certain customer applications requiring a high level of safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health, it must be ensured by most advanced technological aid of suitable design of the customer application that no injury or damage is caused to third parties in the event of malfunction or failure of an electronic component.

6.3 Best care and attention

Any product-specific data sheets, manuals, application notes, PCN's, warnings and cautions must be strictly observed in the most recent versions and matching to the products firmware revisions. This documents can be downloaded from the product specific sections on the wireless connectivity homepage.

6.4 Customer support for product specifications

Some products within the product range may contain substances, which are subject to restrictions in certain jurisdictions in order to serve specific technical requirements. Necessary information is available on request. In this case, the field sales engineer or the internal sales person in charge should be contacted who will be happy to support in this matter.

6.5 Product improvements

Due to constant product improvement, product specifications may change from time to time. As a standard reporting procedure of the Product Change Notification (PCN) according to the JEDEC-Standard, we inform about major changes. In case of further queries regarding the PCN, the field sales engineer, the internal sales person or the technical support team in charge should be contacted. The basic responsibility of the customer as per section 6.1 and 6.2 remains unaffected. All wireless connectivity module driver software ¨wireless connectivity SDK¨ and it's source codes as well as all PC software tools are not subject to the Product Change Notification information process.

6.6 Product life cycle

Due to technical progress and economical evaluation we also reserve the right to discontinue production and delivery of products. As a standard reporting procedure of the Product Termination Notification (PTN) according to the JEDEC-Standard we will inform at an early stage about inevitable product discontinuance. According to this, we cannot ensure that all products within our product range will always be available. Therefore, it needs to be verified with the field sales engineer or the internal sales person in charge about the current product availability expectancy before or when the product for application design-in disposal is considered. The approach named above does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.

6.7 Property rights

All the rights for contractual products produced by Würth Elektronik eiSos GmbH & Co. KG on the basis of ideas, development contracts as well as models or templates that are subject to copyright, patent or commercial protection supplied to the customer will remain with Würth Elektronik eiSos GmbH & Co. KG. Würth Elektronik eiSos GmbH & Co. KG does not warrant or represent that any license, either expressed or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, application, or process in which Würth Elektronik eiSos GmbH & Co. KG components or services are used.

6.8 General terms and conditions

Unless otherwise agreed in individual contracts, all orders are subject to the current version of the "General Terms and Conditions of Würth Elektronik eiSos Group", last version available at *www.we-online.com*.

7 Legal notice

7.1 Exclusion of liability

Würth Elektronik eiSos GmbH & Co. KG considers the information in this document to be correct at the time of publication. However, Würth Elektronik eiSos GmbH & Co. KG reserves the right to modify the information such as technical specifications or functions of its products or discontinue the production of these products or the support of one of these products without any written announcement or notification to customers. The customer must make sure that the information used corresponds to the latest published information. Würth Elektronik eiSos GmbH & Co. KG does not assume any liability for the use of its products. Würth Elektronik eiSos GmbH & Co. KG does not grant licenses for its patent rights or for any other of its intellectual property rights or third-party rights.

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7.2 Suitability in customer applications

The customer bears the responsibility for compliance of systems or units, in which Würth Elektronik eiSos GmbH & Co. KG products are integrated, with applicable legal regulations. Customer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of Würth Elektronik eiSos GmbH & Co. KG components in its applications, notwithstanding any applications-related in-formation or support that may be provided by Würth Elektronik eiSos GmbH & Co. KG. Customer represents and agrees that it has all the necessary expertise to create and implement safeguards which anticipate dangerous consequences of failures, monitor failures and their consequences lessen the likelihood of failures that might cause harm and take appropriate remedial actions. The customer will fully indemnify Würth Elektronik eiSos GmbH & Co. KGand its representatives against any damages arising out of the use of any Würth Elektronik eiSos GmbH & Co. KG components in safety-critical applications.

7.3 Trademarks

AMBER wireless is a registered trademark of Würth Elektronik eiSos GmbH & Co. KG. All other trademarks, registered trademarks, and product names are the exclusive property of the respective owners.

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Würth Elektronik eiSos GmbH & Co. KG products have been designed and developed for usage in general electronic equipment only. This product is not authorized for use in equipment

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8 License terms

This License Terms will take effect upon the purchase and usage of the Würth Elektronik eiSos GmbH & Co. KG wireless connectivity products. You hereby agree that this license terms is applicable to the product and the incorporated software, firmware and source codes (collectively, "Software") made available by Würth Elektronik eiSos in any form, including but not limited to binary, executable or source code form.

The software included in any Würth Elektronik eiSos wireless connectivity product is purchased to you on the condition that you accept the terms and conditions of this license terms. You agree to comply with all provisions under this license terms.

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You are not allowed to reproduce, translate, reverse engineer, decompile, disassemble or create derivative works of the incorporated Software and the source code in whole or in part. No more extensive rights to use and exploit the products are granted to you.

8.2 Usage and obligations

The responsibility for the applicability and use of the Würth Elektronik eiSos wireless connectivity product with the incorporated Firmware in a particular customer design is always solely within the authority of the customer. Due to this fact, it is up to you to evaluate and investigate, where appropriate, and to decide whether the device with the specific product characteristics described in the product specification is valid and suitable for your respective application or not.

You are responsible for using the Würth Elektronik eiSos wireless connectivity product with the incorporated Firmware in compliance with all applicable product liability and product safety laws. You acknowledge to minimize the risk of loss and harm to individuals and bear the risk for failure leading to personal injury or death due to your usage of the product.

Würth Elektronik eiSos' products with the incorporated Firmware are not authorized for use in safety-critical applications, or where a failure of the product is reasonably expected to cause severe personal injury or death. Moreover, Würth Elektronik eiSos' products with the incorporated Firmware are neither designed nor intended for use in areas such as military, aerospace, aviation, nuclear control, submarine, transportation (automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network etc. You

shall inform Würth Elektronik eiSos about the intent of such usage before design-in stage. In certain customer applications requiring a very high level of safety and in which the malfunction or failure of an electronic component could endanger human life or health, you must ensure to have all necessary expertise in the safety and regulatory ramifications of your applications. You acknowledge and agree that you are solely responsible for all legal, regulatory and safety-related requirements concerning your products and any use of Würth Elektronik eiSos' products with the incorporated Firmware in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by Würth Elektronik eiSos. YOU SHALL INDEMNIFY WÜRTH ELEKTRONIK EISOS AGAINST ANY DAMAGES ARISING OUT OF THE USE OF WÜRTH ELEKTRONIK EISOS' PRODUCTS WITH THE INCORPORATED FIRMWARE IN SUCH SAFETY-CRITICAL APPLICATIONS.

8.3 Ownership

The incorporated Firmware created by Würth Elektronik eiSos is and will remain the exclusive property of Würth Elektronik eiSos.

8.4 Firmware update(s)

You have the opportunity to request the current and actual Firmware for a bought wireless connectivity Product within the time of warranty. However, Würth Elektronik eiSos has no obligation to update a modules firmware in their production facilities, but can offer this as a service on request. The upload of firmware updates falls within your responsibility, e.g. via ACC or another software for firmware updates. Firmware updates will not be communicated automatically. It is within your responsibility to check the current version of a firmware in the latest version of the product manual on our website. The revision table in the product manual provides all necessary information about firmware updates. There is no right to be provided with binary files, so called "Firmware images", those could be flashed through JTAG, SWD, Spi-Bi-Wire, SPI or similar interfaces.

8.5 Disclaimer of warranty

THE FIRMWARE IS PROVIDED "AS IS". YOU ACKNOWLEDGE THAT WÜRTH ELEKTRONIK EISOS MAKES NO REPRESENTATIONS AND WARRANTIES OF ANY KIND RELATED TO, BUT NOT LIMITED TO THE NON-INFRINGEMENT OF THIRD PARTIES' INTELLECTUAL PROPERTY RIGHTS OR THE MERCHANTABILITY OR FITNESS FOR YOUR INTENDED PURPOSE OR USAGE. WÜRTH ELEKTRONIK EISOS DOES NOT WARRANT OR REPRESENT THAT ANY LICENSE, EITHER EXPRESS OR IMPLIED, IS GRANTED UNDER ANY PATENT RIGHT, COPYRIGHT, MASK WORK RIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT RELATING TO ANY COMBINATION, MACHINE, OR PROCESS IN WHICH THE WÜRTH ELEKTRONIK EISOS' PRODUCT WITH THE INCORPORATED FIRMWARE IS USED. INFORMATION PUBLISHED BY WÜRTH ELEKTRONIK EISOS REGARDING THIRD-PARTY PRODUCTS OR SERVICES DOES NOT CONSTITUTE A LICENSE FROM WÜRTH ELEKTRONIK EISOS TO USE SUCH PRODUCTS OR SERVICES OR A WARRANTY OR ENDORSEMENT THEREOF.

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8.7 Applicable law and jurisdiction

Applicable law to this license terms shall be the laws of the Federal Republic of Germany. Any dispute, claim or controversy arising out of or relating to this license terms shall be resolved and finally settled by the court competent for the location of Würth Elektronik eiSos' registered office.

8.8 Severability clause

If a provision of this license terms is or becomes invalid, unenforceable or null and void, this shall not affect the remaining provisions of the terms. The parties shall replace any such provisions with new valid provisions that most closely approximate the purpose of the terms.

8.9 Miscellaneous

Würth Elektronik eiSos reserves the right at any time to change this terms at its own discretion. It is your responsibility to check at Würth Elektronik eiSos homepage for any updates. Your continued usage of the products will be deemed as the acceptance of the change.
We recommend you to be updated about the status of new firmware and software, which is available on our website or in our data sheet and manual, and to implement new software in your device where appropriate.
By ordering a wireless connectivity product, you accept this license terms in all terms.

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WÜRTH ELEKTRONIK MORE THAN YOU EXPECT