



TARVOS-III PLUG REFERENCE MANUAL

AMB8865 / 2609026281001

VERSION 1.3

DECEMBER 21, 2020

Revision history

Manual version	HW version	Notes	Date
1.0	2.0	<ul style="list-style-type: none"> Initial version of the manual 	July 2019
1.1	2.0	<ul style="list-style-type: none"> Added table for CBUS pins. Correction of block diagramm, wake up has not been connected. 	August 2019
1.2	2.0	<ul style="list-style-type: none"> Updated address of Division Wireless Connectivity & Sensors location 	October 2019
1.3	2.0	<ul style="list-style-type: none"> Updated Declaration of EU conformity in chapter Regulatory compliance information. 	December 2020

Abbreviations and abstract

Abbreviation	Name	Description
FSE	Field Sales Engineer	Support and sales contact person responsible for limited sales area
HIGH	High signal level	
LOW	Low signal level	
RF	Radio frequency	Describes everything relating to the wireless transmission.
UART		Universal Asynchronous Receiver Transmitter allows communicating with the module of a specific interface.
VDD	Supply voltage	

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1 Introduction

The Tarvos-III is a radio sub module that provides wireless connectivity capabilities in the 868 MHz frequency band. The Tarvos-III Plug incorporates the Tarvos-III in a USB stick form factor enabling easy interfacing with any USB enabled device like personal computer or laptop. The Tarvos-III Plug allows quick set-up of a radio link between PC and any system with integrated Tarvos-III radio module.

1.1 Ordering information

WE order code	Former order code	Description
2609026281001	AMB8865	Radio dongle 868 MHz with SMA connector

Table 1: Ordering information

2 Functional description

The Tarvos-III Plug consists of Tarvos-III radio module along with an serial-to-USB adapter that enables direct connection to any USB compatible device. An FTDI serial-to-USB converter chip **FT232R** connects the USB interface of the Tarvos-III Plug to the UART pins of the integrated radio module. Besides UART, additional digital GPIO pins (CBUS) are connected to the radio module to provide special functions like reset. Figure 1 illustrates all the functional components of Tarvos-III Plug.

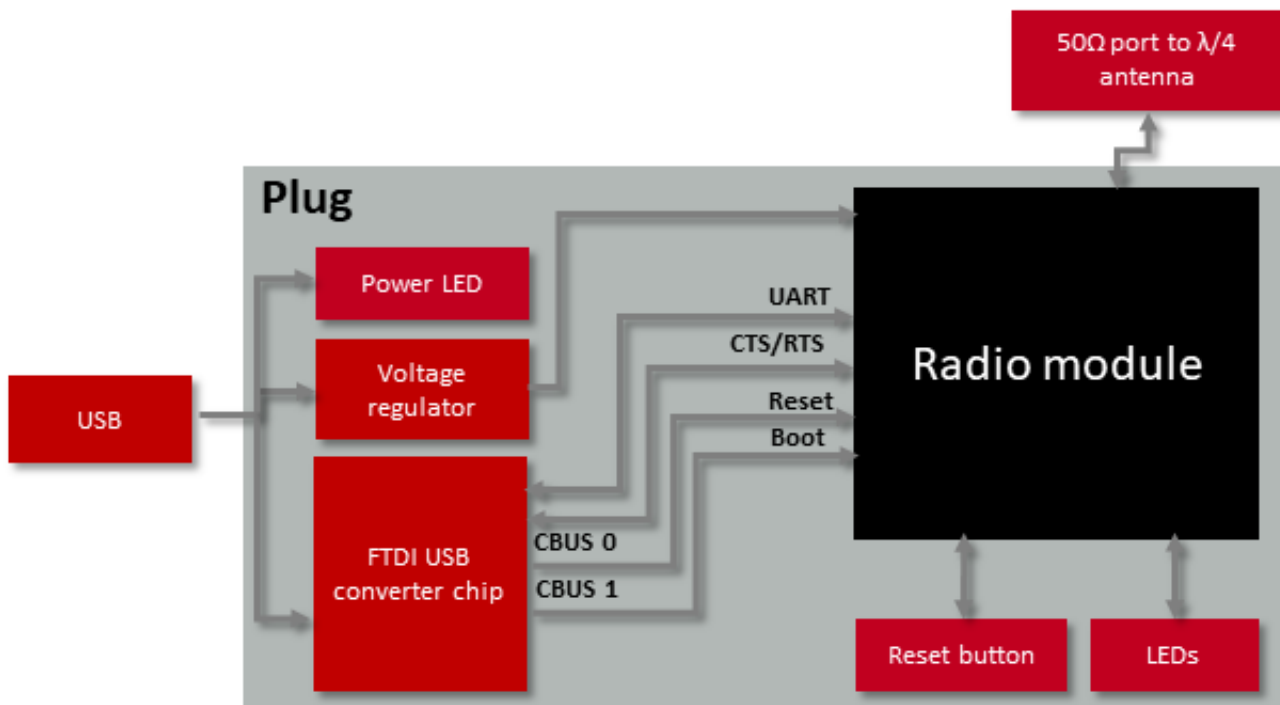


Figure 1: Block diagram of the Tarvos-III Plug



The complete functionality is described in the user manual of the module.

2.1 Taking into operation

To use the Tarvos-III Plug, the VCP driver of FTDI has to be installed by following the installation guides of FTDI:

<https://www.ftdichip.com/Drivers/VCP.htm>



It is recommended to restart the PC after installation of drivers.

On proper installation of the drivers, the module appears as a virtual COM port on the PC. This COM port can be opened in any serial emulator program to communicate with the radio module. The radio module responds to commands in a specific format. Please refer to the corresponding user manual for the complete description of the command set.

2.1.1 Usage of CBUS pins

To switch the CBUS pins high or low and thus to use the provided pins functions of the Tarvos-III radio module, the D2XX driver of FTDI has to be used. This driver is part of the previous mentioned VCP driver installation.

Examples codes for "how to use the D2XX driver within your own software tool" can be found in the software example section of:

<https://www.ftdichip.com/Support/SoftwareExamples/CodeExamples.htm>



The stick works properly as intended without the need of setting the CBUS pins. CBUS pins can be used for additional functionality as resetting the module via USB interface.

CBUS pin	Module Pin	Function
CBUS0	19	/RESET internally pulled high
CBUS1	12	BOOT internally pulled low

Table 2: CBUS functions

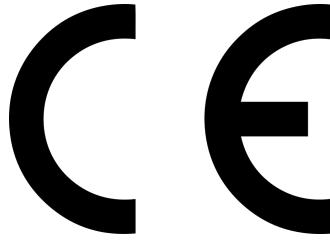
3 Regulatory compliance information

3.1 Important notice EU

The use of RF frequencies is limited by national regulations. The Tarvos-III Plug has been designed to comply with the R&TTE directive 1999/5/EC and the RED directive 2014/53/EU of the European Union (EU).

The Tarvos-III Plug can be operated without notification and free of charge in the area of the European Union. However, according to the R&TTE / RED directive, restrictions (e.g. in terms of duty cycle or maximum allowed RF power) may apply.

3.2 EU Declaration of conformity



EU DECLARATION OF CONFORMITY

Radio equipment: 2609026281001

The manufacturer: Würth Elektronik eiSos GmbH & Co. KG
Max-Eyth-Straße 1
74638 Waldenburg

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Object of the declaration: 2609026281001

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation Directive 2014/53/EU and 2011/65/EU with its amending Annex II EU 2015/863. Following harmonised norms or technical specifications have been applied:

EN 300 220-1 V3.1.1 (2017-02)
EN 300 220-2 V3.1.1 (2017-02)
EN 301 489-1 V2.2.3 (2019-11)
EN 301 489-3 V2.1.1 (2019-03)
EN 62479 : 2010
EN 62368-1: 2014/AC: 2015/A11: 2017

i.A. G. Eslerdt

Trier, 21th of December 2020
Place and date of issue

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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 4.1 and 4.2 remains unaffected. All wireless connectivity module driver software "wireless connectivity SDK" and its source codes as well as all PC software tools are not subject to the Product Change Notification information process.

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