BOSCH

Telemetry System LTE65-EU/JP/US
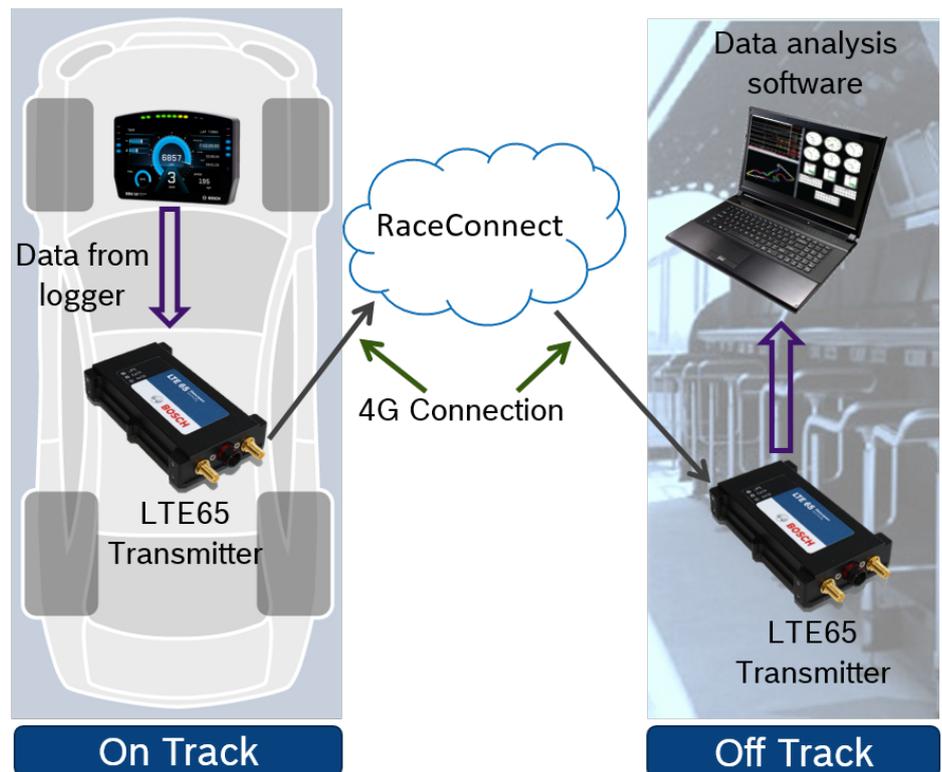
Manual

Version 1.6 05/10/2022

Content

1 Introduction

1.1 System Overview and Limitations

The LTE65 is a 4G-LTE based telemetry modem designed for real time telemetry data transfer on racetrack. The combination of LTE65 with RaceConnect cloud provides a highly flexible telemetry data distribution platform, where one transmitter can send to many receivers and many transmitters can send to one receiver. DirectLink can be used in place of a receiver, allowing data to be received anywhere there is an internet connection. The usage of 4G-LTE cellular service allows for Plug & Play operation with minimal setup. The transmitter communicates to the data system in the car via RS232 serial or Ethernet and the receiver device is connected to a computer via RS232 or Ethernet.

1.2 Software Installation

Please note that device configuration is done through the RaceConnect website. Only a browser is needed:

– https://raceconnect.Bosch-Motorsport.com

This manual, additional resources and software installers are available on our website:

– www.bosch-motorsport.com

– WinDarab V7 – Data analysis software.

– WDServer – Telemetry server software.

– RaceCon – Device configuration software

– Bosch Motorsport Catalog

Run the installation executable files to install all programs on your computer. Software updates for all tools are made available on the Bosch Motorsport website.

1.3 Part List

LTE65-EU

Part Number	Description
F02U.V02.932-01	Modem LTE65-EU + Racer Subscription, 500 MB/20 h (1 year)
F02U.V02.933-01	Modem LTE65-EU + Pro Subscription, 2 GB/60 h (1 year)
F02U.V02.934-01	Modem LTE65-EU + Pro-High Subscription, 10 GB/100 h (1 year)
F02U.V02.936-01	LTE65-EU Basic Kit Racer – GT: 2 Modems LTE65-EU 2 Racer Subscriptions, 500 MB/20 h (1 year) Car Antenna Pit Antenna Pit Harness
F02U.V02.937-01	LTE65-EU Basic Kit Pro – GT: 2 Modems LTE65-EU 2 Pro Subscriptions, 2 GB/60 h (1 year) Car Antenna Pit Antenna Pit Harness
F02U.00U.938-01	LTE65-EU Basic Kit Pro-High – GT: 2 Modems LTE65-EU 2 Pro-High Subscriptions, 10 GB/100 h (1 year) Car Antenna Pit Antenna Pit Harness
F02U.V02.929-01	Racer Subscription, 500 MB/20 h (1 year)
F02U.V02.930-01	Pro Subscription, 2 GB/60 h (1 year)
F02U.V02.931-01	Pro-High Subscription, 10 GB/100 h (1 year)

LTE65-JP

Part Number	Description
F02U.V03.042-01	Modem LTE65-JP
F02U.V03.043-01	Modem LTE65-JP + Racer Subscription, 500 MB/20 h (1 year)
F02U.V03.044-01	Modem LTE65-JP + Pro Subscription, 2 GB/60 h (1 year)
F02U.V03.045-01	Modem LTE65-JP + Pro-High Subscription, 10 GB/100 h (1 year)
F02U.V03.046-01	LTE65-JP Basic Kit Racer – GT: 2 Modems LTE65-JP 2 Racer Subscriptions, 500 MB/20 h (1 year) Car Antenna Pit Antenna Pit Harness
F02U.V03.047-01	LTE65-JP Basic Kit Pro – GT: 2 Modems LTE65-JP 2 Pro Subscriptions, 2 GB/60 h (1 year)

Part Number	Description
	Car Antenna Pit Antenna Pit Harness
F02U.V03.048-01	LTE65-JP Basic Kit Pro-High – GT: 2 Modems LTE65-JP 2 Pro-High Subscriptions, 10 GB/100 h (1 year) Car Antenna Pit Antenna Pit Harness
F02U.V02.929-01	Racer Subscription, 500 MB/20 h (1 year)
F02U.V02.930-01	Pro Subscription, 2 GB/60 h (1 year)
F02U.V02.931-01	Pro-High Subscription, 10 GB/100 h (1 year)

LTE65-US

Part Number	Description
F02U.V02.746-01	Modem LTE65-US
F02U.V0U.417-01	Modem LTE65-US + Racer Subscription, 500 MB/20 h (1 year)
F02U.V0U.418-01	Modem LTE65-US + Pro Subscription, 2 GB/60 h (1 year)
F02U.V0U.419-01	Modem LTE65-US + Pro-High Subscription, 10 GB/100 h (1 year)
F02U.V0U.420-01	LTE65-US Basic Kit Racer - GT; 2 Modems LTE65-US 2 Racer Subscription, 500 MB/20 h (1 year) GT Car Antenna Pit Antenna Pit Harness
F02U.V0U.421-01	LTE65-US Basic Kit Pro - GT; 2 Modems LTE65-US 2 Pro Subscription, 2 GB/60 h (1 year) GT Car Antenna Pit Antenna Pit Harness
F02U.V0U.422-01	LTE65-US Basic Kit Pro High - GT; 2 Modems LTE65-US 2 Pro-High Subscription, 10 GB/100 h (1 year) GT Car Antenna Pit Antenna Pit Harness
F02U.V0U.426-01	LTE65-US Basic Kit Racer – Open Wheel; 2 Modems LTE65-US 2 Racer Subscriptions, 500 MB/20 h (1 year) 2 Open Wheel Car Antennas Pit Antenna Pit Harness
F02U.V0U.427-01	LTE65-US Basic Kit Pro - Open Wheel; 2 Modems LTE65-US 2 Pro Subscriptions, 2 GB/60 h (1 year)

Part Number	Description
	2 Open Wheel Car Antennas Pit Antenna Pit Harness
F02U.V0U.428-01	LTE65-US Basic Kit Pro-High - Open Wheel; 2 Modems LTE65-US 2 Pro-High Subscriptions, 10 GB/100 h (1 year) 2 Open Wheel Car Antennas Pit Antenna Pit Harness
F02U.V0U.355-01	Racer Subscription, 500 MB/20 h (1 year)
F02U.V0U.357-01	Pro Subscription, 2 GB/60 h (1 year)
F02U.V0U.358-01	Pro-High Subscription, 10 GB/100 h (1 year)

In general

Part Number	Description
F02U.00U.054-01	Car Antenna - GT
F02U.00U.069-01	Car Antenna - Open Wheel (2 required / car)
F02U.00U.070-01	Pitstand Antenna
F02U.V02.804-02	Pitstand Harness

1.4 Annual Data Plans

Each LTE65 device and DirectLink connection require an annual subscription to be purchased. Transmitters, receivers and spares all must have an annual subscription for use.

The plan must be renewed on a yearly basis. You will be notified by RaceConnect when expiration of the subscription nears. Please contact your dealer to place an order for renewal.

1.5 System Limitations

The system has been validated with Bosch Motorsport loggers. Third party loggers using RS232 at 19,200, 57,600, or 115,200 baud have been shown to function, but technical support is limited.

The system has been tested with computers running Windows 10 operating system. Other operating systems may work but are not tested and technical support is limited.

Bosch Motorsport has validated 4G-LTE telemetry access at over 60 racetracks in the USA and Europe. However, Bosch does not operate the LTE networks and cannot guarantee performance. If you have queries about network access at a track you plan to test on, please request this information from an authorized Bosch Motorsport telemetry dealer.

1.6 Frequencies and Output Power

Telemetry Module LTE65-EU

	3G	**4G**
Band# Frequency [MHz]	B1 [2100] B8 [900]	B1 [2100] B3 [1800] B7 [2600] B8 [900] B20 [800]
Output Power	Class 3 (0.25 W, 24 dBm)	Class 3 (0.2 W, 23 dBm)

Telemetry Module LTE65-JP

	3G	**4G**
Band# Frequency [MHz]	B1 [2100] B5 [850] B6 [800] B8 [900] B19 [800]	B1 [2100] B3 [1800] B5 [850] B8 [900] B9 [1800] B18 [850] B19 [850] B26 [850] B28 [700]
Output Power	Class 3 (0.25 W, 24 dBm)	Class 3 (0.2 W, 23 dBm)

Telemetry Module LTE65-US

	3G	**4G**
Band# Frequency [MHz]	B2 [1900] B4 [1700] B5 [850]	B2 [1900] B4 [1700] B5 [850] B12 [700] B13 [700] B14 [700] B66 [1700] B71 [600]
Output Power	Class 3 (0.25 W, 24 dBm)	Class 3 (0.2 W, 23 dBm)

2 Hardware Details

2.1 Device Pinout and Connector

Pin #	Description
1	Battery positive
2	RS232_RX
3	Reset
4	RS232_TX
5	Battery negative
6	ETH_RX+
7	ETH_RX-
8	ETH_TX+
9	ETH_TX-

Mating Connector: ASDD606-09SN

2.2 Recommended Antennas

Antennas used with the LTE65 should be purchased from Bosch Motorsport or an Authorized dealer. FCC and CE certifications are conditional on the type of antenna used. Bosch Motorsport has performed testing to select the antennas with the best efficiency for motorsport applications.

Two different in car antennas and one pit stand antenna are available from Bosch Motorsport, see also Car Specific Antennas [▶ 9].

Recommended torque spec for the antenna connection: 4 in-lbs (0.45 Nm)

For LTE65-US, the antenna gain must be smaller 3 dBi to keep FCC-certification.

2.3 Mounting and Environmental Considerations

Operating Temperature ambient	-30 to 65°C
Storage Temperature	-30 to 85°C
Max Vibration	MSD Vibration Profile 1*
Sealing Tightness	IP67

*Vibration profile defined and available on the Bosch Motorsport Website.

2.4 Drawings

– A mechanical offer drawing is available in Offer Drawing [▶ 24].

– A pit box harness layout drawing and schematic is available in Pit Stand Harness Drawing.

3 Installation

Mount the LTE65 transmitter device in the vehicle in a place that will remain relatively dry and away from direct heat sources. The receiver device should be placed on the pit stand in free air.

Tapped mounting holes are provided on the LTE65 transmitter device if you wish to hard-mount the device in your vehicle. Please see the Offer Drawing [▶ 24] for whole thread size, depth, and placement.

Metal, carbon fibre panels, and heated windscreens negatively affect antenna performance.

3.1 Power Supply and Voltage

|	
Min. Supply Voltage	8 V DC
Max. Supply Voltage	18 V DC
	24 V operation possible on agreement with customer
Internal Power Backup	30+ seconds
Power Consumption	6 W

3.2 Car Specific Antennas

3.2.1 GT Car

The GT car antenna available from Bosch Motorsport is a dual 4G MIMO antenna with 3G fallback, both MIMO antennas are in the same housing.

Recommended torque spec for the antenna connection: 4 in-lbs (0.45 Nm)

Suggested installation locations shown in in the figure below.

Preferred Locations:	
Secondary Locations:	
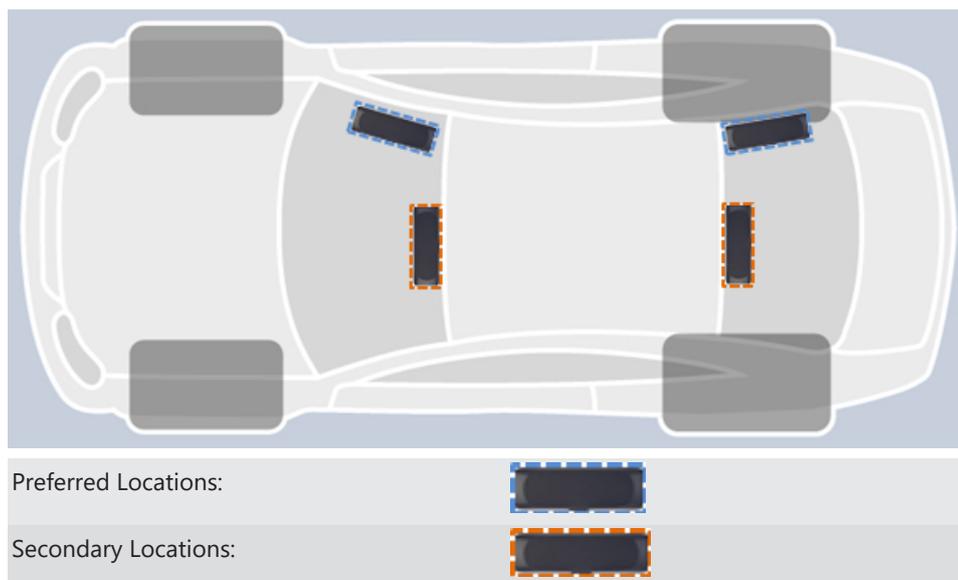
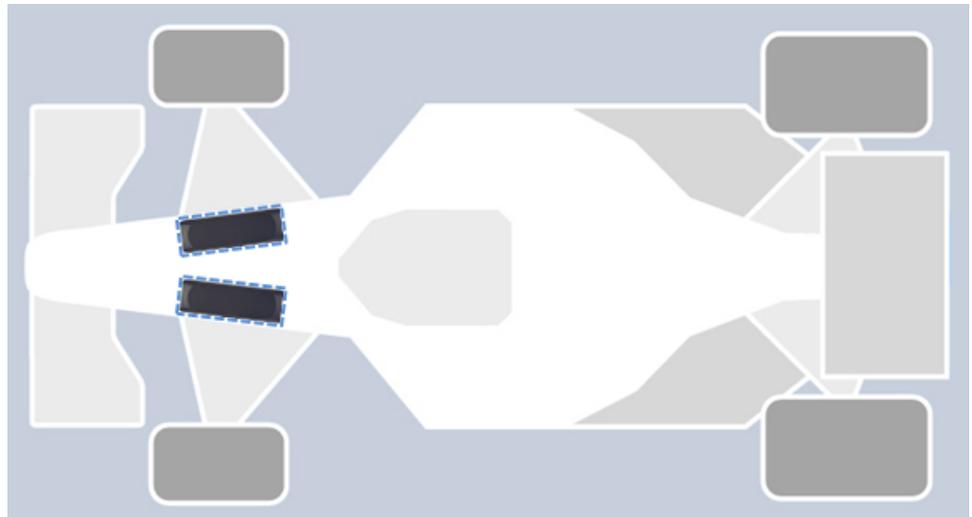A picture of the GT style antenna is below for reference.

3.2.2 Prototype/Open Wheel

The Prototype / Open Wheel antenna available from Bosch Motorsport is sold as a single antenna, with two antennas required for a single device.

Recommended torque spec for the antenna connection: 4 in-lbs (0.45 Nm)

Suggested installation locations shown in the figure below.

A picture of the Prototype/Open Wheel antenna is below for reference.

3.3 Pit Stand Installation

The pit stand antenna available from Bosch Motorsport is a dual 4G MIMO antenna with 3G fallback, both MIMO antennas are in the same housing. This antenna should be installed in an open location not obstructed by carbon fiber or metal objects.

Pit stand harness specifications	
Min Supply Voltage	8 V DC
Max Supply Voltage	18 V DC
Power Consumption	6 W
Power Mating Connector	DTM06-2S
Power Mating Connector Pinout	1=Bat Pos, 2=Bat Neg

3.4 Safety Notices

⚠ **CAUTION**

Disconnect power before handling of the antenna.

⚠ **CAUTION**

LTE65-EU: Keep a minimum safety distance of 5 cm from the human body to the antenna.

LTE65-JP and LTE65-US: Keep a minimum safety distance of 20 cm from the human body to the antenna.

3.5 Antenna Installation

When installing antennas, ensure that you are not spinning the cable or antenna body relative to the LTE65. To tighten the SMA connection, only turn the collar of the cable or antenna. Spinning the entire cable or antenna can lead to damage of the internal co-ax cable of the LTE65 and reduced RF performance. It is also recommended to tighten the SMA connections to 3 in-lbf (0.3 Nm). SMA specific torque wrenches are available from many retailers.

3.6 Receiver Ethernet Connection

Note that an LTE65 receiver must be plugged directly into a computer and not into a switch or router. USB to Ethernet adaptors are ok to use with the computer. When the device is used as a receiver with an Ethernet connection, it will act as a DHCP server and assign an IP to the connected computer. The default configuration for LTE65 IP and DHCP is 10.10.0.235/24 with a lease range from 10.10.0.65-69.

Static IP addresses are not recommended, as the LTE65 receiver may not reliably detect the IP of the connected laptop.
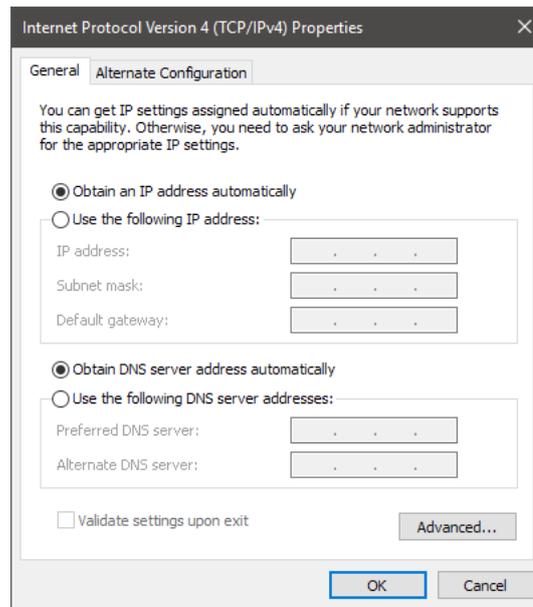
3.7 Reset Feature

In the case of connectivity issues, the LTE65 has a reset strategy. First, the radio is reset and if connectivity issues continue, the device will reset automatically.

The device has a power backup system that may keep the device powered for 30 to 90 seconds. This variation depends on the power output of the LTE radio, which is controlled by the cell tower.

– Remove power from the device until the LEDs turn off (30 to 90 seconds)

– Device will power down, reapply power and the device will be reset

To utilize the reset pin (immediate reset):

– Remove power from pin 1 and connect pin 3 to ground

– Device will reset

– Disconnect pin 3 from ground and reapply power

To utilize the reset button on the pit stand harness (immediate reset):

– Remove power from the power connector (DTM Connector, VBATT)

– Press the reset button

– Device will reset

– Release the reset button and reapply power

4 Tools

4.1 LED Status Lights

– The LTE65 has 3 LED status lights providing information on the LTE65's connection, data type, and signal strength.

– At device power on, the life LED will turn blue indicating boot. After boot an LED function check will occur where all three LEDs will cycle through Red, Green, and Blue for 0.5 seconds each.

– If there is an initialization error, all three LEDs will turn red, and the device will reset itself.

– After the LED function check is complete, the table below can be used to understand device information provided by the LEDs.

Life LED		**Blue solid** Booting **Green blinking** Cloud connection in progress **Red solid** No cloud connection **Green solid** Cloud connection
Data LED		**Green blinking** Ethernet data INTO device **Violet blinking** RS232 data INTO device **Blue blinking** Ethernet data OUT of device **Red blinking** RS232 data OUT of device
WAN LED		**Red solid** SIM / Cell network error **Red blinking** Connecting to cell network **Green blinking** Connected to cell network, signal good **Blue blinking** Connected to cell network, signal ok **Violet blinking** Connected to cell network, signal bad

4.2 RaceCon

RaceCon is for configuring and calibrating with Bosch Motorsport devices. For general RaceCon setup and usage, please refer to the DDU 9 manual on the Bosch Motorsport website. The information below deals specifically with telemetry setup in an existing RaceCon project.

4.2.1 Adding the LTE65

In the RaceCon project for your vehicle, insert a telemetry device from the Devices toolbox by clicking and dragging it into the project window. Please note that in order for this action to be available, a data logging device must first be configured in RaceCon. A window will pop-up for configuring the device. Highlighting the Telemetry icon now in the RaceCon project should bring up the relevant details about the device in the Properties window.If this window is not visible in your project, select View Properties.
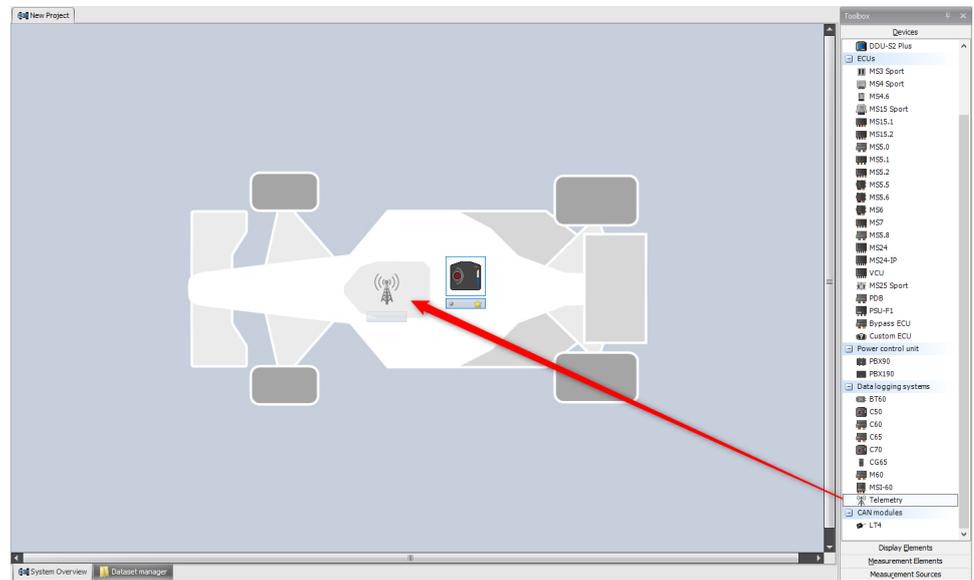
The name of the device can be changed to LTE65 by right clicking on Telemetry in the project tree and selecting Rename.

Either a laptrigger channel must be available in the project or the logger must be in "Test-bench" mode, which is configured via the logger's settings pages, for telemetry to work.

For the MS 6/MS 7 and logger/display devices, the LapTrigger and Fuel blocks need to be added to the project to create the channels above.

4.2.2 Communication Specific Settings

Ethernet TX Telemetry

To send Ethernet telemetry from a Bosch Motorsport device, the Ethernet telemetry feature must be active. Excluding cases where older logger firmware versions are used, Ethernet telemetry is already enabled on Bosch logging devices.

Set Ethernet telemetry settings on the device by opening the Telemetry Settings window.

Note the following parameters and their settings

– WDServer folder – this is the folder where the ".INI" files for WDServer are stored. Please make note of this folder path as this path will need to be referenced by WD-Server in order to enable telemetry live viewing and logging.

– Project Key – The project key is a data security function that is used by WinDarab to differentiate data from different users. This key should always be a 4-character hexa-decimal value.

– Configure on Device: Select the device which will be the master for telemetry

– Type: Select your telemetry unit type

– Mode: Select Ethernet or Serial depending on your desired input configuration. Modem must also be configured accordingly.

– Baud rate: Set to desired board rate. Rate of up to 200 kBit/s is possible with Ethernet telemetry. For serial data input, baud rates under 115 kBit/s must be selected.

– Destination IP: Do not change from above value unless specifically instructed.

– Destination Port: The logger sends for telemetry to this port. Do not change from above value unless specifically instructed

– In a new Calibration/Measuring window, 'telemetry_state' should be viewed. This will inform you about the data out streaming status.

– Channel setting examples:

Column1	MS 6/MS 7/C 60/C 70	MS 5
Distance Channel	disttrip	distlap
Lap Number Channel	Laptrigger_lapctr_dls	lapctr
Lap Fuel Channel (optional)	Fuel_fuellapold_dls	fuellap
Lap Time Channel	Laptrigger_laptimeold_dls	laptimeold
Lap Distance Channel (optional)	Laptrigger_lapdist_dls	

Serial TX Telemetry

To send serial telemetry the TELEMETRY_Mode should be set to Serial. No other changes are required or values need to be set to specific values. Baudrate can be configured based on use case needs if required.

Note: With serial-to-serial configuration, it is recommended that the transmitter transmits at 57,600 bps and the receiver receives at 115,200 bps.

Note: It is recommended to keep serial bus usage below 80 % when sending serial data.

4.2.3 Configuration of Data Stream

To configure channels to be sent over telemetry, the channels must first exist in the Race-Con project.

To add channels to be sent over the telemetry system, double-click the LTE65 icon in the RaceCon project window. This will bring up the LTE65 Configuration Management page. Channels can be added by single-clicking on the data logs and drag and drop the channel into the LTE65 window.
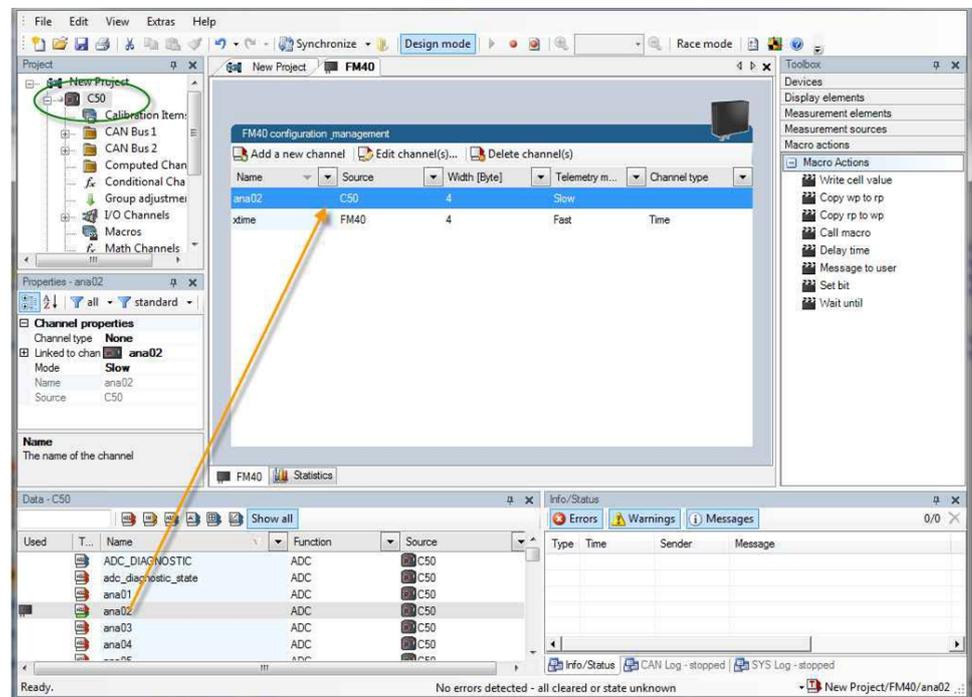
'Fast' and 'Slow' telemetry mode are configurable for each data channel. Shown in the window below opened by double clicking the channel in the Telemetry Configuration Measurement window.
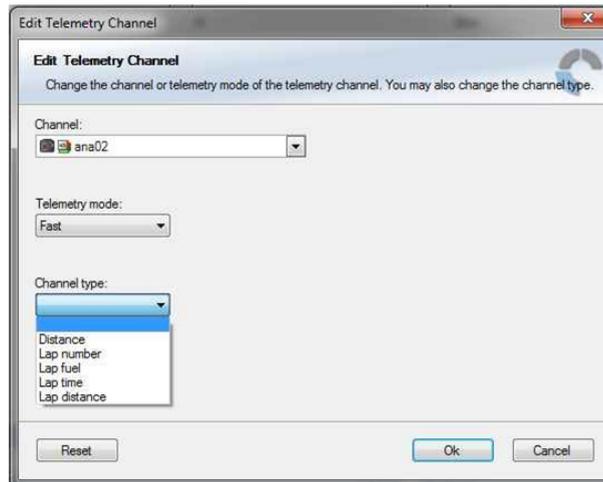
The telemetry uses available bandwidth and channels are grouped into fast and slow frequency blocks, an explanation and visual representation below:

Fast block (block 1): transferred every cycle and used for a high-frequent transmission of channel information (e.g. speed, rpm).

Slow blocks (block 2...n): transferred every nth cycle and used for a low-frequent transmission of channel information (e.g. tire pressure, oil temperature).


Transmission Scheme

Only one fast block exists, up to seven fast blocks will automatically be created by Race-Con depending on the number and data types of channels. If the maximum bandwidth of a block is reached, a warning will be displayed. To fix this problem you can view the allocation of the channels and data rate in the 'Statistics' tab of the Main Area.
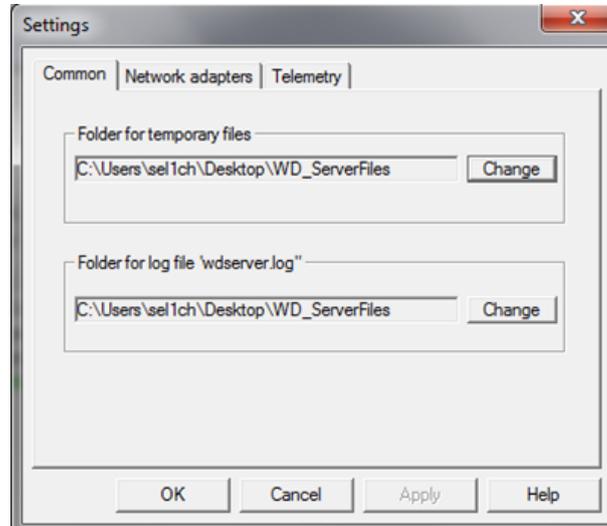
4.3 WDServer

WDServer is used to capture data streaming from transmitters and convert to WinDarab file format; WDServer also creates a log of the data received over telemetry.
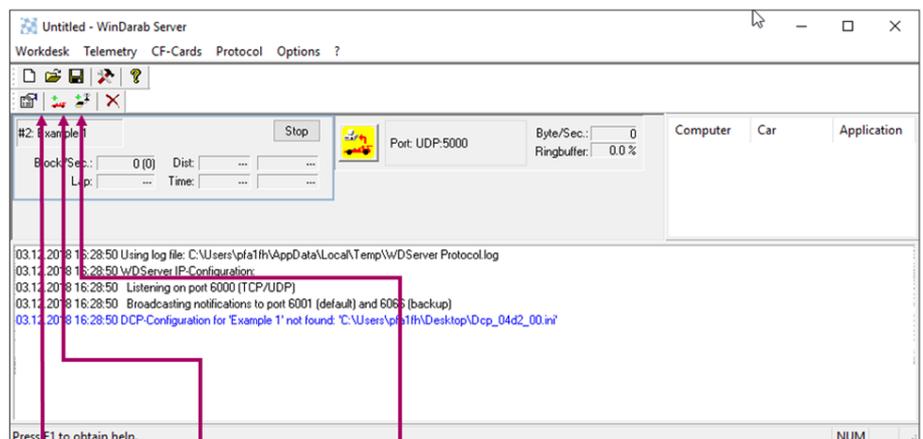
Car Settings   Add Car   WDServer Settings

4.3.1 Settings

Settings are selected by clicking the settings button at the top of the WDServer window. Under the "Common" tab, choose directories where WDServer can store its temporary files and log files. These are created during telemetry reception and can be used to help diagnose issues.

Under the "Telemetry" tab, the first section requests a folder path for the DCP- configuration files. This is the folder path where RaceCon stored the INI files required by WDServer. Select the "Change" button next to this section and navigate to this folder. A template can also be specified for the file nomenclature for logged telemetry as well as a save location.

– To insure proper communication between WDServer and the receiver, do not delete any old INI files from this folder path. As mentioned previously, RaceCon will generate a new INI file each time a project is synchronized or saved; each new INI file instance has an incremented file name. Retaining all of these INI file iterations will insure that

WDServer always has a reference to whichever configuration is programmed into your vehicle's logger system.
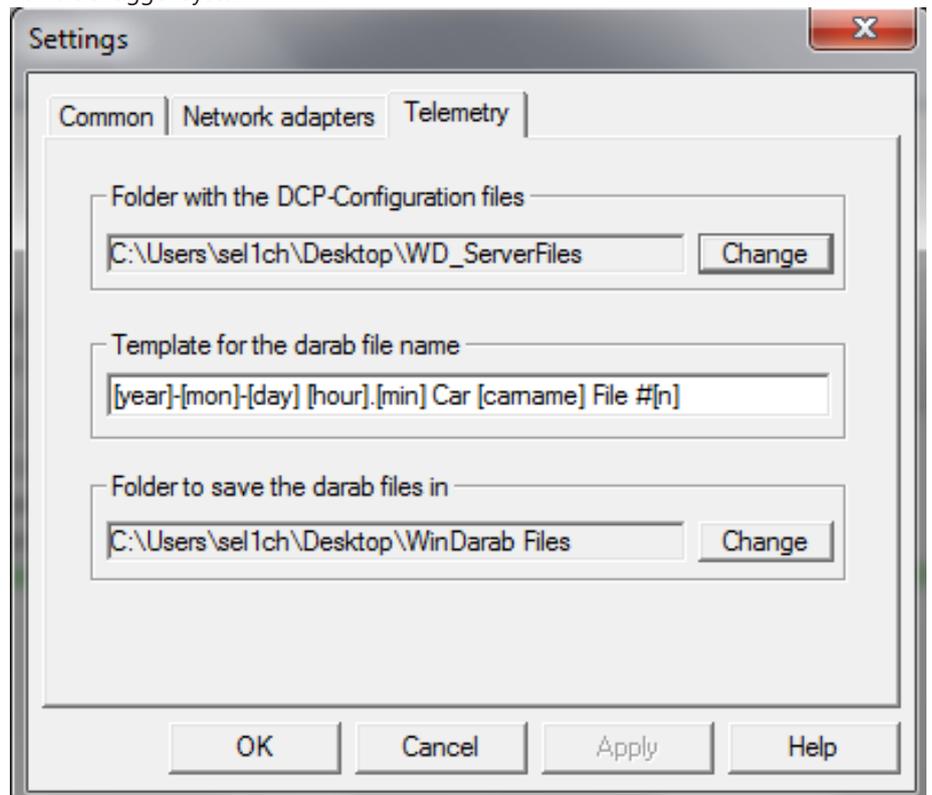
– If the RaceCon project for the vehicle resides on a different computer than that which is used for telemetry, then all INI files for a given project should be transferred to the telemetry computer after every data synchronization in RaceCon. WDServer may have trouble recognizing INI files stored on removable media, so best practice is to copy these files to the telemetry computer's hard drive.

4.3.2 Adding car in WDServer

To set up a new car, select Add Car.

In the Car settings tab, enter a name for the new vehicle. This name will be used as part of the file name for WDServer's log of received telemetry data and will also show up in Darab when searching for the telemetry stream in the Network folder.
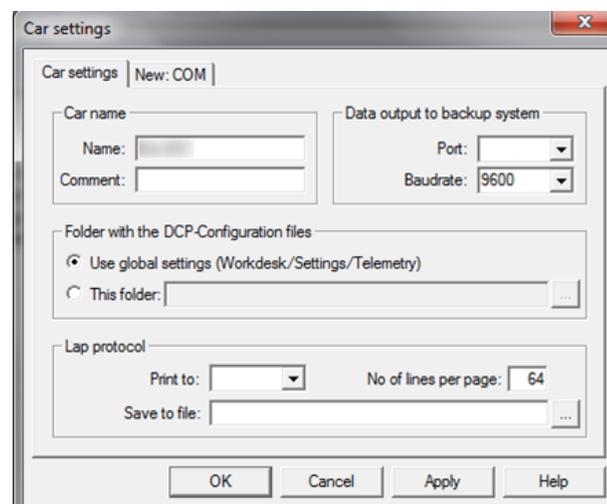
4.3.3 Communication Specific Settings

Ethernet RX Settings

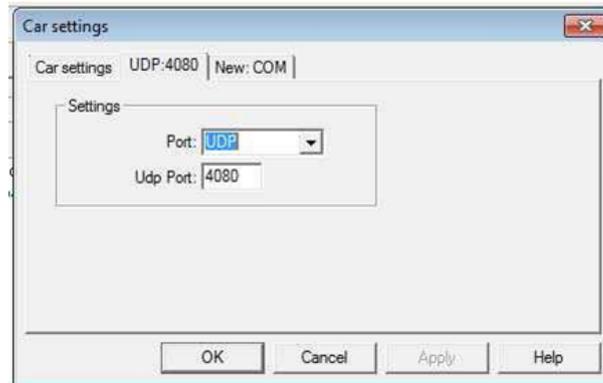In the New: COM tab, select the drop-down menu and type in "UDP". For the Udp Port, type in the port number assigned to the device. Each vehicle being read by a single receiver device must have a unique port number. This information is found in the Port column of the Routes page in RaceConnect.

Serial RX Settings

In the New: COM tab, select the drop-down menu select the COM port being used to receive the serial data. Select the Baudrate being used by the LTE65 receiver.

Once complete, select OK to close the window.
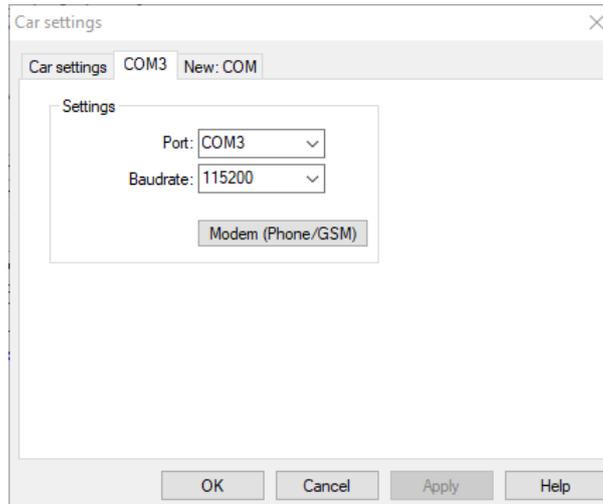
4.3.4 Status Information

WDServer gives status information on each car configured in the tool. Data given includes the lap number, distance, and time. Additional troubleshooting information is given for Byte/Sec received and Block/Sec decoded. Byte/Sec is data received by WDServer from the LTE65 while Block/Sec is data decoded by WDServer using the INI file.

4.4 DirectLink

DirectLink allows telemetry streams to be received on a PC without using a receiver. DirectLink can be used with any PC that has an internet connection. DirectLink requires the use of WDServer v3. DirectLink telemetry streams can be received across regions; ex. data stream generated in EU can be received in NA. Please reference the RaceConnect Direct-Link Quick Start Guide on the RaceConnect product page, chapter "Downloads" for detailed information on configuration and operation of DirectLink.

To use DirectLink, purchase an access token from Bosch Motorsport or a Bosch Motorsport dealer. Each token can support multiple telemetry streams but can only be used on a single PC. Data consumption and connected hour limits are valid for DirectLink tokens and are purchased as a data package (Racer, Pro, Pro-High).

4.5 WinDarab

WinDarab is the data analysis program for Bosch Motorsport devices, including streamed telemetry from Bosch Motorsport loggers.

Extensive WinDarab Documentation is available on the Bosch Motorsport website.

4.5.1 Loading the Telemetry Data

The following is an example of file name and data format. File is typically located in Win-Darab/WDServer which will automatically be in the computer tree portion of the file explorer when opening a file in WinDarab as shown below.
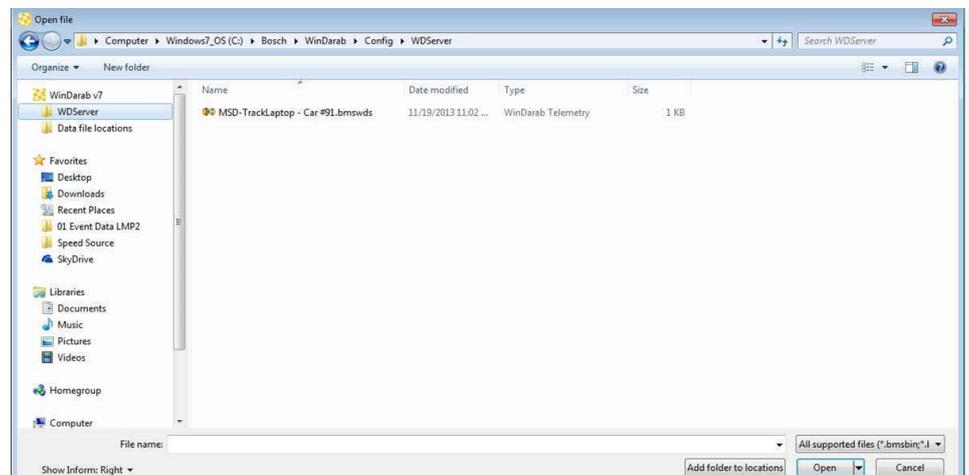
In the File Explorer, click 'Open' and navigate to the data set. Under 'Network', search for the car or cars that are required for viewing.
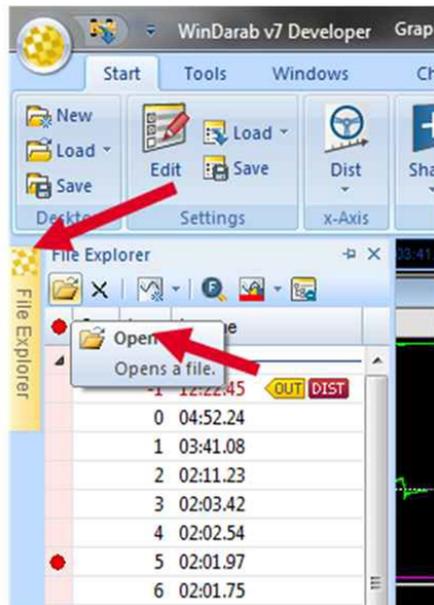
Note: The channel named "Quality" will be generated by WDServer and available in the WinDarab data. This channel is an indicator of the quality of data received by WDServer and can be useful in diagnosing issues with your Bosch Motorsport support.

5 Troubleshooting/FAQ

My transmitter and/or receiver will not connect to the cell network indicated by a flashing green life LED and flashing red WAN LED,

– Indication of an antenna problem. Check for correct connectivity and placement of transmitter antenna.

My devices are connected to the network, but my transmitter is not sending data indicated by no flashing on the data LED.

– Check that the datalogger's TX port is wired properly to LTE65's RX port.

My devices are connected to the network and both my transmitter and receiver devices are showing activity ("WAN" lights are flashing and not red during use), but I am unable to receive data in WDServer.

– Check that the LTE65 receiver's TX port is wired properly to your laptop.

– Indication of a network issue on your PC. Please contact your dealer for assistance.

My telemetry file in WinDarab has no data but all lights on the LTE65s show data is being sent and received.

– Check in WDServer if Block/Sec and Byte/Sec are received. If Byte/Set is greater than 0 and Block/Sec is 0 this is likely an INI file. Confirm the INI file in the directory referenced by WDServer matches the directory the INI file from the latest configuration sent to the logger device.

I have another issue, or my problem is not solved.

– Note the telemetry_state mode in RaceCon or WinDarab and contact your Bosch Motorsport contact.

6 Offer Drawing

22 ±0.2
12
20
1.5

13 ±0.2
9.5 ±0.2

114 ±0.2
65.5 ±0.2
(125.6 ±1.5)

LTE65 Motorsport Telemetry
LIFE DATA WAN
BOSCH

2 x ANTENNA
Mating Connector
SMA (m)

Mating Connector
DEUTSCH ASDD606-09SN-HE
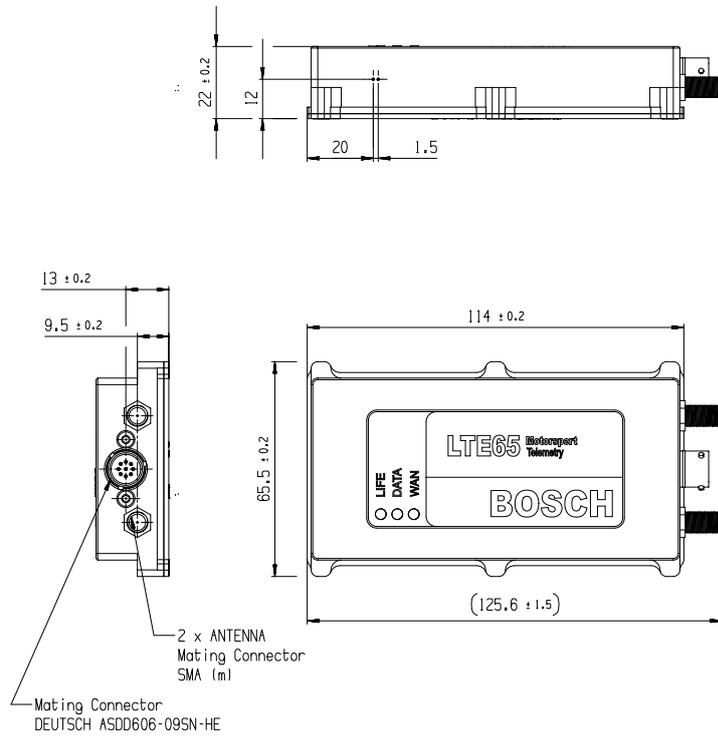
7 Disposal

Hardware, accessories and packaging should be sorted for recycling in an environment-friendly manner.

Do not dispose of this electronic device in your household waste.

8 Legal

8.1 Legal Restrictions of Sale

The sale of this product in Mexico is prohibited.

Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

8.2 Legal Restrictions of Use

Operation of LTE65-EU is permitted in EU countries only.

Operation of LTE65-JP is permitted in Japan only.

Operation of LTE65-US is permitted in the USA and Canada only.

8.3 EC/EU Declaration of Conformity

see following pages

Bosch Engineering
BOSCH

EU Declaration of Conformity

1. Name and address of the manufacturer or his authorised representative:

Company name:	Bosch Engineering GmbH
Postal address:	Robert-Bosch-Allee 1
Postcode / city / country:	74232 Abstatt, Germany

2. Product model/product (product, type, batch or serial number):

Apparatus model/product:	LTE65-EU
Type/batch/serial number:	

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

Company name:	Bosch Engineering GmbH
Postal address:	Robert-Bosch-Allee 1
Postcode / city / country:	74232 Abstatt, Germany

4. Object of the declaration (identification of apparatus allowing traceability; it may include a colour image of sufficient clarity where necessary for the identification of the apparatus):

Product model name:	LTE65-EU F02U-V02-909-01
Product description:	Telemetry Modem

5. The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Radio Equipment Directive 2014/53/EU

6. References to the relevant harmonised standards used, including the date of the standard, or references to the other technical specifications, including the date of the specification, in relation to which conformity is declared:

Safety	EN 62368-1:2014/AC:2015/A11:2017
Health	EN 50665:2017, EN 62311:2008
EMC	Final Draft EN 301 489-1 V2.2.2, Draft EN 301 489-52 V1.1.0, EN 55032:2015
Radio spectrum	EN 301 908-1 V15.1.1; EN 301 908-2 V13.1.1, EN 301 908-13 V13.1.1

7. Where applicable, the notified body (name, number) performed EU-type examination and issued the certificate:

Name: CTC advanced GmbH   4 digit notified body number: 0682
Reference number of the certificate of notified body: T818613L-02-TEC

8. Where applicable, description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the EU declaration of conformity:

Antenna information	Maximum gain 3 dBi

9. Additional information:

Bosch Engineering
BOSCH

EU Declaration of Conformity

Signed for and on behalf of Bosch Engineering GmbH:

Abstatt	17.09.2022
Place of issue	Date of issue

i.V. MARTIN FROHNMAIER

Name, function, signature

i.V. _(signature)_

Digitally signed by pki, BOSCH,
DE, I, N, Ingo.Mauel
Date: 2022.09.06 08:44:38
+02'00'

Name, function, signature

Bosch Engineering

⊛ BOSCH

EU Declaration of Conformity

(EN) EU declaration of conformity / (DE) EU-Konformitätserklärung / (BG) ЕС декларация за съответствие / (ES) Declaración UE de conformidad / (CS) EU PROHLÁŠENÍ O SHODĚ / (DA) EU-overensstemmelseserklæring / (ET) ELi vastavusdeklaratsioo / (EL) Δήλωση συμμόρφωσης ΕΕ / (FR) Déclaration UE de conformité / (HR) EU izjava o sukladnosti / (IT) Dichiarazione di conformità UE / (LV) ES atbilstības deklarācija / (LT) ES atitikties deklaracija / (HU) EU-megfelelőségi nyilatkozat / (MT) Dikjarazzjoni ta' konformità tal-UE / (NL) EU-conformiteitsverklaring / (PL) Deklaracja zgodności UE / (PT) Declaração UE de conformidade / (RO) Declaraţia UE de conformitate / (SK) EÚ vyhlásenie o zhode / (SL) Izjava EU o skladnosti / (FI) EU-vaatimustenmukaisuusvakuutus / (SV) EU-försäkran om överensstämmelse

1. **(EN) Name and address of the manufacturer or his authorised representative:** / (DE) Name und Anschrift des Herstellers oder seines Bevollmächtigten: / (BG) Наименование и адрес на производителя или на неговия упълномощен представител: / (ES) Nombre y dirección del fabricante o de su representante autorizado: / (CS) Jméno a adresa výrobce nebo jeho zplnomocněného zástupce: / (DA) Navn og adresse på fabrikanten eller dennes bemyndigede repræsentant: / (ET) Tootja või tema volitatud esindaja nimi ja aadress: / (EL) Όνομα και διεύθυνση του κατασκευαστή ή του εξουσιοδοτημένου αντιπροσώπου του: / (FR) Nom et adresse du fabricant ou de son mandataire: / (HR) Ime i adresa proizvođača ili njegovog ovlaštenog zastupnika: / (IT) Nome e indirizzo del fabbricante o del suo rappresentante autorizzato: / (LV) Ražotāja vai viņa pilnvarotā pārstāvja vārds, uzvārds jeb nosaukums un adrese: / (LT) Gamintojo arba jo įgaliotojo atstovo pavadinimas ir adresas: / (HU) A gyártó vagy meghatalmazott képviselőjének neve és címe: / (MT) L-isem u l-indirizz tal-manifattur jew tar-rappreżentant awtorizzat tiegħu: / (NL) Naam en adres van de fabrikant of zijn gemachtigde: / (PL) Nazwa i adres producenta lub jego upoważnionego przedstawiciela: / (PT) Nome e endereço do fabricante ou do respetivo mandatário: / (RO) Denumirea şi adresa producătorului sau a reprezentantului său autorizat: / (SK) Meno a adresa výrobcu alebo jeho splnomocneného zástupcu: / (SL) Ime in naslov proizvajalca ali njegovega pooblaščenega zastopnika: / (FI) Valmistajan tai hänen valtuutetun edustajansa nimi ja osoite: / (SV) Namn på och adress till tillverkaren eller dennes representant:

2. **(EN) Product model/product (product, type, batch or serial number):** / (DE) Produktmodell/Produkt (Produkt-, Chargen- Typen- oder Seriennummer):** / (BG) Модел на продукт/продукт (номер на продукта, тип, партиден или сериен номер): / (ES) Modelo de producto/producto (producto, tipo, lote o número de serie): / (CS) Model výrobku/výrobek (číslo dávky, výrobku či typu nebo sériové číslo): / (DA) Produktmodel/produkt (produkt-, type-, parti- eller serienummer): / (ET) Toote mudel/toode (toote-, tüübi-, partii- või seerianumber): / (EL) Μοντέλο προϊόντος / Προϊόν (αριθμός προϊόντος, τύπου, παρτίδας ή σειράς): / (FR) Modèle de produit/produit (numéro de produit, de type, de lot ou de série): / (HR) Uzorak proizvoda/proizvod (broj proizvoda, tipa, šarže ili serijski broj): / (IT) Modello di prodotto/prodotto (numero di prodotto, tipo, lotto o serie): / (LV) Produkta modelis / produkts (produkta, tipa, partijas vai sērijas numurs): / (LT) Gaminio modelis / gaminys (gaminys, tipas, partija ar serijos numeris): / (HU) Termékmodell/termék (termék-, típus-, tétel-, vagy sorozatszám): / (MT) Il-prodott (numru tal-prodott, tal-lott, tat-tip jew tas-serje): / (NL) Product (product-, type-, partij- of serienummer): / (PL) Model produktu/produkt (numer produktu, typu, partii lub serii): / (PT) Modelo do produto/produto (número do produto, do tipo do lote ou da série): / (RO) Modelul de produs/produsul (numărul produsului, al tipului, al lotului sau numărul de serie): / (SK) Typ výrobku/výrobok (číslo výrobku, typu, šarže alebo sériové číslo): / (SL) Model proizvoda/proizvod (proizvod, serija, tip ali serijska številka): / (FI) Tuotemalli/tuote (tuote-, tyyppi-, erä- tai sarjanumero): / (SV) Produktmodell/produkt (produkt-, typ-, parti- eller serienummer):

3. **(EN) This declaration of conformity is issued under the sole responsibility of the manufacturer.** / (DE) Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller. / (BG) Настоящата декларация за съответствие е издадена на отговорността на производителя: / (ES) La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante. / (CS) Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce. / (DA) Denne overensstemmelseserklæring udstedes på fabrikantens ansvar. / (ET) Käesolev vastavusdeklaratsioon on välja antud tootja ainuvastutusel. / (EL) Η παρούσα δήλωση συμμόρφωσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή. / (FR) La présente déclaration de conformité est établie sous la seule responsabilité du fabricant. / (HR) Za izdavanje EU izjave o sukladnosti odgovoran je isključivo proizvođač. / (IT) La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante. / (LV) Šī atbilstības deklarācija ir izdota vienīgi uz ražotāja atbildību. / (LT) Ši atitikties deklaracija išduota tik gamintojo atsakomybe. / (HU) Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelőssége mellett adják ki. / (MT) Din id-dikjarazzjoni tal-konformità qiegħda tinħareġ taħt ir-responsabbiltà unika tal-manifattur. / (NL) Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant. / (PL) Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta. / (PT) A presente declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante. / (RO) i adresa persoanei autorizate pentru întocmirea cărţii tehnice, care trebuie să aibă domiciliul în / (SK) Toto vyhlásenie o zhode sa vydáva na výhradnú zodpovednosť výrobcu. / (SL) Ta izjava o skladnosti je izdana na lastno odgovornost proizvajalca. / (FI) Tämä vaatimustenmukaisuusvakuutus on annettu

valmistajan yksinomaisella vastuulla. / (SV) Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar.

4. **(EN) Object of the declaration (identification of apparatus allowing traceability; it may include a colour image of sufficient clarity where necessary for the identification of the apparatus):** / (DE) Gegenstand der Erklärung (Bezeichnung des Geräts zwecks Rückverfolgbarkeit; dazu kann eine hinreichend deutliche Farbabbildung gehören, wenn dies zur Identifikation des Geräts notwendig ist): / (BG) Предмет на декларацията (идентификация на устройството, позволяваща проследяването му. Това може да включва достатъчно ясно цветно изображение, когато това е необходимо за идентификацията на устройството): / (ES) Objeto de la declaración (identificación del aparato que permita la trazabilidad; podrá incluir una imagen en color de nitidez suficiente si resulta necesario para la identificación del aparato). / (CS) Předmět prohlášení (identifikace přístroje umožňující jej zpětně vysledovat; je-li to nezbytné pro identifikaci daného přístroje, může zahrnovat dostatečně zřetelné barevné vyobrazení): / (DA) Erklæringens genstand (identifikation af apparatet, så det kan spores; den kan indeholde et farvebillede, der er tilstrækkelig klart, hvis det er nødvendigt for at muliggøre identifikation af apparatet): / (ET) Deklareeritav toode (aparatuuri identifitseerimine, mis võimaldab aparatuuri jälgida. Lisada võib ka piisavalt selge värvilise kujutise, kui see on vajalik aparatuuri identifitseerimiseks): / (EL) Στόχος της δήλωσης (ταυτοποίηση προϊόντος που επιτρέπει την ιχνηλασιμότητα· μπορεί να περιλαμβάνει έγχρωμη εικόνα επαρκούς ευκρίνειας, αν είναι αναγκαίο για την ταυτοποίηση της συσκευής). / (FR) Objet de la déclaration (identification de l'appareil permettant sa traçabilité; si nécessaire, une image en couleur suffisamment claire peut être jointe pour identifier l'appareil): / (HR) Predmet izjave (identifikacija uređaja koja omogućava sljedivost; može uključivati dovoljno jasnu sliku u boji ako je potrebno za identifikaciju uređaja): / (IT) Oggetto della dichiarazione (identificazione dell'apparecchio che ne consenta la rintracciabilità; può comprendere un'immagine a colori di chiarezza sufficiente laddove necessario per l'identificazione dell'apparecchio): / (LV) Deklarācijas priekšmets (aparāta identifikācija, kas nodrošina tā izsekojamību; vajadzības gadījumā tajā var iekļaut pietiekami skaidru krāsainu attēlu, lai aparātu varētu identificēt). / (LT) Deklaracijos objektas (aparato identifikaciniai duomenys, pagal kuriuos jį galima atsekti; gali būti pateikiamas spalvotas atvaizdas, pakankamai aiškus, kad prireikus būtų galima aparatą identifikuoti): / (HU) A nyilatkozat tárgya (a készülék azonosítása a nyomonkövethetőség biztosítására; adott esetben a készülék megfelelő azonosításához szükséges, megfelelően látható színes fényképet is tartalmazhat). / (MT) L-għan tad-dikjarazzjoni (l-identifikazzjoni tal-apparat li tippermetti t-traċċabbiltà; tista' tinkludi immaġni bil-kulur ta' ċarezza suffiċjenti fejn meħtieġ għall-identifikazzjoni tal-apparat): / (NL) Voorwerp van de verklaring (beschrijving aan de hand waarvan het apparaat kan worden getraceerd; wanneer dat voor de identificatie van het apparaat noodzakelijk is, mag een voldoende duidelijke afbeelding in kleur worden bijgevoegd): / (PL) Przedmiot deklaracji (identyfikacja aparatury umożliwiająca odtworzenie jej historii; w razie konieczności identyfikacji aparatury może zawierać kolorową ilustrację o wystarczającej rozdzielczości): / (PT) Objeto da declaração (identificação do aparelho que permita rastreá-lo; se for necessário para a identificação do aparelho, pode incluir uma imagem a cores suficientemente clara): / (RO) Obiectul declarației (identificarea aparatului permițând trasabilitatea; poate include o imagine color, suficient de clară pentru a permite, dacă acest lucru este necesar, identificarea aparatului): / (SK) Predmet vyhlásenia (identifikácia prístroja umožňujúca vysledovateľnosť. V prípade potreby môže obsahovať dostatočne jasnú farebnú fotografiu, v prípade potreby na identifikáciu prístroja): / (SL) Predmet izjave (identifikacija aparata, ki omogoča sledljivost: lahko vključuje dovolj jasno barvno sliko, kadar je to potrebno za identifikacijo aparata): / (FI) Vakuutuksen kohde (jäljitettävyyden mahdollistava laitteen tunniste; voidaan liittää riittävän terävä värikuva, jos se on tarpeen laitteen tunnistamiseksi): / (SV) Föremål för försäkran (identifiera apparaten så att den kan spåras – den kan innehålla en färgbild som är så tydlig att det vid behov går att identifiera apparaten):

5. **(EN) The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:** / (DE) Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union: / (BG) Предметът на декларацията, описан по-горе, отговаря на съответното законодателство на Съюза за хармонизация: / (ES) El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión: / (CS) Výše popsaný předmět prohlášení je ve shodě s příslušnými harmonizačními právními předpisy Unie: / (DA) Genstanden for erklæringen, som beskrevet ovenfor, er i overensstemmelse med den relevante EU-harmoniseringslovgivning: / (ET) Eelkirjeldatud deklareeritav toode on kooskõlas asjaomaste liidu ühtlustamisaktidega: / (EL) Ο στόχος της δήλωσης που περιγράφεται παραπάνω είναι σύμφωνος με τη σχετική ενωσιακή νομοθεσία εναρμόνισης: / (FR) L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable: / (HR) Predmet navedene izjave u skladu je s mjerodavnim zakonodavstvom Unije o usklađivanju: / (IT) L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione: / (LV) Iepriekš aprakstītais deklarācijas priekšmets atbilst attiecīgajam Savienības saskaņošanas tiesību aktam: / (LT) Pirmiau aprašytas deklaracijos objektas atitinka susijusius derinamuosius Sąjungos teisės aktus: / (HU) A fent ismertetett nyilatkozat tárgya megfelel a vonatkozó uniós harmonizációs jogszabálynak: / (MT) L-għan tad-dikjarazzjoni deskritt hawn fuq huwa konformi mal-leġislazzjoni ta'

armonizzazzjoni rilevanti tal-Unjoni: / (NL) Het hierboven beschreven voorwerp is in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie: / (PL) Wymieniony powyżej przedmiot niniejszej deklaracji jest zgodny z odnośnymi wymaganiami unijnego prawodawstwa harmonizacyjnego: / (PT) O objeto da declaração acima descrito está em conformidade com a legislação de harmonização da União aplicável: / (RO) Obiectul declarației descris mai sus este în conformitate cu legislația relevantă de armonizare a Uniunii: / (SK) Uvedený predmet vyhlásenia je v zhode s príslušnými harmonizačnými právnymi predpismi Únie: / (SL) Predmet navedene izjave je v skladu z ustrezno zakonodajo Unije o harmonizaciji: / (FI) Edellä kuvattu vakuutuksen kohde on asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen: / (SV) Föremålet för försäkran ovan överensstämmer med den relevanta harmoniserade unionslagstiftningen:

6. **(EN) References to the relevant harmonised standards used, including the date of the standard, or references to the other technical specifications, including the date of the specification, in relation to which conformity is declared:** / (DE) Angabe der einschlägigen harmonisierten Normen, die zugrunde gelegt wurden, einschließlich des Datums der Norm, oder Angabe anderer technischer Spezifikationen, für die die Konformität erklärt wird, einschließlich des Datums der Spezifikation: / (BG) Позоваване на използваните хармонизирани стандарти, включително датата на стандарта, или позоваване на други технически спецификации, включително датата на спецификацията, по отношение на които се декларира съответствие: / (ES) Referencias a las normas armonizadas pertinentes utilizadas, incluidas las fechas de las normas, o referencias a las otras especificaciones técnicas, incluidas las fechas de las especificaciones, respecto a las cuales se declara la conformidad: / (CS) Odkazy na příslušné harmonizované normy, které byly použity, včetně data normy, nebo na jiné technické specifikace, včetně data specifikací, na jejichž základě se shoda prohlašuje: / (DA) Referencer til de relevante anvendte harmoniserede standarder, herunder standardens dato, eller referencer til de andre tekniske specifikationer, herunder specifikationens dato, som der erklæres overensstemmelse med: / (ET) Viited kasutatud harmoneeritud standarditele (sh standardite kinnitamise kuupäev) või viited muudele tehnilistele spetsifikatsioonidele (sh tehniliste spetsifikatsioonide kinnitamise kuupäev), millele vastavust deklareeritakse: / (EL) Μνεία των σχετικών εναρμονισμένων προτύπων που χρησιμοποιήθηκαν, συμπεριλαμβανομένης της ημερομηνίας του προτύπου, ή μνεία των λοιπών τεχνικών προδιαγραφών, συμπεριλαμβανομένης της ημερομηνίας της προδιαγραφής, σε σχέση με τις οποίες δηλώνεται η συμμόρφωση: / (FR) Références des normes harmonisées pertinentes appliquées, y compris la date de celles-ci, ou des autres spécifications techniques, y compris la date de celles-ci, par rapport auxquelles la conformité est déclarée: / (HR) Upućivanja na relevantne primijenjene usklađene norme, uključujući datum norme, ili upućivanja na druge tehničke specifikacije, uključujući datum specifikacije, u vezi s kojima se izjavljuje sukladnost: / (IT) Riferimento alle pertinenti norme armonizzate utilizzate, compresa la data delle norme, o riferimenti alle altre specifiche tecniche in relazione alle quali è dichiarata la conformità, compresa la data delle specifiche: / (LV) Atsauces uz attiecīgajiem izmantotajiem standartiem, norādot standarta datumu, vai atsauces uz citām tehniskām specifikācijām, norādot specifikācijas datumu, ar kuru saistīta atbilstības deklarēšana: / (LT) Susijusių taikytų darniųjų standartų nuorodos (įskaitant standarto datą) arba kitų techninių specifikacijų, pagal kurias buvo deklaruota atitiktis, nuorodos (įskaitant specifikacijos datą): / (HU) Az alkalmazott harmonizált szabványokra való hivatkozás vagy azokra az egyéb műszaki leírásokra való hivatkozások, amelyekkel kapcsolatban megfelelőségi nyilatkozatot tettek, az adott szabvány/specifikáció kiadási dátumának megadása mellett. / (MT) Ir-referenzi għall-istandards armonizzati rilevanti li ntużaw, inkluża d-data tal-istandard, jew ir-referenzi għall-ispeċifikazzjonijiet tekniċi l-oħra, inkluża d-data tal-ispeċifikazzjoni, li b'relazzjoni għalihom tkun qed tiġi ddikjarata l- konformità: / (NL) Vermelding van de toegepaste relevante geharmoniseerde normen, met inbegrip van de datum van de norm, of van de andere technische specificaties, met inbegrip van de datum van de specificatie, waarop de conformiteitsverklaring betrekking heeft: / (PL) Odwołania do odnośnych norm zharmonizowanych, które zastosowano, wraz z datą normy, lub do innych specyfikacji technicznych, wraz z datą specyfikacji, w odniesieniu do których deklarowana jest zgodność: / (PT) Referências às normas harmonizadas aplicáveis utilizadas, incluindo a data da norma, ou às outras especificações técnicas, incluindo a data da especificação, em relação às quais é declarada a conformidade: / (RO) Trimiteri la standardele armonizate relevante folosite, inclusiv data standardului, sau trimiteri la celelalte specificații tehnice, inclusiv data specificațiilor, în legătură cu care se declară conformitatea: / (SK) Odkazy na príslušné použité harmonizované normy vrátane dátumu normy alebo odkazy na iné technické špecifikácie vrátane dátumu špecifikácie, v súvislosti s ktorými sa zhoda vyhlasuje: / (SL) Sklicevanja na uporabljene harmonizirane standarde, vključno z datumom standarda, ali sklicevanja na druge tehnične specifikacije, vključno z datumom specifikacije, v zvezi s katerimi je skladnost deklarirana: / (FI) Viittaus niihin asiaankuuluviin yhdenmukaistettuihin standardeihin, joita on käytetty, sekä kyseisten standardien hyväksymispäivä tai viittaus muihin teknisiin eritelmiin, joiden perusteella vaatimustenmukaisuusvakuutus on annettu, sekä kyseisten eritelmien hyväksymispäivä: / (SV) Hänvisningar till de relevanta harmoniserade standarder, inklusive datum för standarden, som använts eller hänvisningar till de andra tekniska specifikationer, inklusive datum för specifikationen, enligt vilka överensstämmelsen försäkras:

EU Declaration of Conformity

7. **(EN) Where applicable, the notified body (name, number) performed EU-type examination and issued the certificate:** / (DE) Gegebenenfalls: Die notifizierte Stelle ... (Name, Kennnummer) ... hat ... EU Baumusterprüfung ... und folgende Bescheinigung ausgestellt: ... / (BG) Където е приложимо, нотифицираният орган ... (наименование, номер) ... извърши ЕС изследване на типа и издаде сертификата: / (ES) Si procede, el organismo notificado ... (nombre, número) ... ha efectuado examen UE de tipo y expide el certificado: / (CS) Případně: oznámený subjekt ... (název, číslo) provedl EU přezkoušení typu a vydal certifikát: / (DA) Hvor det er relevant, det bemyndigede organ ... (navn, nummer) har foretaget EU-typeafprøvning og udstedt attesten: / (ET) Kui see on asjakohane: teavitatud asutus ... (nimi, number) teostas ELi tüübihindamine ja andis välja tõendi: / (EL) Όπου έχει εφαρμογή, ο κοινοποιημένος οργανισμός ... (ονομασία, αριθμός) πραγματοποίησε Εξέταση τύπου ΕΕ και χορήγησε το πιστοποιητικό: / (FR) Le cas échéant, l'organisme notifié ... (nom, numéro) a effectué examen UE de type et a établi le certificat: / (HR) Ako je potrebno, prijavljeno tijelo ... (naziv, broj) provelo je EU ispitivanje tipa i izdalo potvrdu: / (IT) e del caso, l'organismo notificato ... (denominazione, numero) ha effettuato esame UE del tipo e rilasciato il certificato: / (LV) Attiecīgā gadījumā paziņotā struktūra ... (nosaukums, numurs) ... ir veikusi ES tipa pārbaude un izdevusi sertifikātu: / (LT) Kai taikytina, notifikuotoji įstaiga ... (pavadinimas, numeris) atliko ES tipo tyrimas ir išdavė sertifikatą: / (HU) Amennyiben alkalmazható: a(z) ... (név, szám) bejelentett szervezet elvégezte a EU-TÍPUSVIZSGÁLAT, és a következő tanúsítványt adta ki: / (MT) Fejn applikabbli, il-korp notifikat ... (isem, numru)... wettaq eżami tat-tip tal-UE u ħareġ iċ-ċertifikat: / (NL) (Indien van toepassing) De aangemelde instantie ... (naam, nummer) ... heeft een EU-typeonderzoek uitgevoerd en het certificaat verstrekt. / (PL) W stosownych przypadkach jednostka notyfikowana ... (nazwa, numer) przeprowadziła badanie typu UE i wydała certyfikat: / (PT) Se for esse o caso, o organismo notificado: ... (nome, número) efetuou exame UE de tipo e emitiu o certificado: / (RO) După caz, organismul notificat ... (denumire, număr) a efectuat Examinarea UE de tip şi a emis certificatul: / (SK) V prípade potreby notifikovaný orgán ... (názov, číslo) ... vykonal EÚ skúška typu a vydal certifikát: / (SL) Kadar je to primerno, priglašeni organ ... (ime, številka) je izvedel EU-pregled tipa in izdal certifikat: / (FI) Tarvittaessa ilmoitettu laitos ... (nimi, numero) suoritti EU-tyyppitarkastus ja antoi todistuksen: / (SV) I tillämpliga fall: Det anmäla organet ... (namn, nummer) ... har utfört EU-typkontroll och utfärdat intyget:

8. **(EN) Where applicable, description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the EU declaration of conformity:** / (DE) Falls vorhanden — Beschreibung des Zubehörs und der Bestandteile einschließlich Software, die den bestimmungsgemäßen Betrieb der Funkanlage ermöglichen und von der EU-Konformitätserklärung erfasst werden: / (BG) Когато е приложимо, описание на принадлежностите и компонентите, включително софтуер, които позволяват на радиосъоръжението да работи по предназначение и които са обхванати от ЕС декларацията за съответствие: / (ES) Cuando proceda, descripción de los accesorios y componentes, incluido el software, que permiten que el equipo radioeléctrico funcione como estaba previsto y esté amparado por la declaración UE de conformidad: / (CS) V příslušných případech popis příslušenství a součástí, včetně softwaru, které umožňují zamýšlené fungování rádiového zařízení v souladu s EU prohlášením o shodě: / (DA) I givet fald beskrivelse af tilbehør og komponenter, herunder software, som får radioudstyret til at fungere efter hensigten og er dækket af EU-overensstemmelseserklæringen: / (ET) Vajaduse korral selliste tarvikute ja osade, samuti tarkvara kirjeldus, mis võimaldavad raadioseadet kasutada ettenähtud otstarbel ja kooskõlas ELi vastavusdeklaratsiooniga: / (EL) Όπου έχει εφαρμογή, περιγραφή των παρελκόμενων και εξαρτημάτων, συμπεριλαμβανομένου του λογισμικού, που επιτρέπουν στον ραδιοεξοπλισμό να λειτουργεί όπως προβλέπεται και που καλύπτονται από τη δήλωση συμμόρφωσης: / (FR) S'il y a lieu, description des accessoires et des éléments (y compris logiciels) qui permettent à l'équipement radioélectrique de fonctionner selon sa destination et qui sont couverts par la déclaration UE de conformité: / (HR) Prema potrebi, opis dodatne opreme i sastavnica, uključujući softver, koji omogućuju normalan rad radijske opreme koji je obuhvaćen EU izjavom o sukladnosti: / (IT) Se del caso, una descrizione degli accessori e dei componenti inclusi nella dichiarazione di conformità UE, compreso il software, che consentono all'apparecchiatura radio di funzionare come previsto: / (LV) Attiecīgā gadījumā palīgierīču un komponentu apraksts, ieskaitot programmatūras aprakstu, kas nodrošina radioiekārtas paredzēto darbību un uz ko attiecas ES atbilstības deklarācija: / (LT) Kai taikytina, pagalbinių įtaisų ir komponentų, įskaitant programinę įrangą, kurie leidžia radijo įrenginiams veikti pagal paskirtį ir yra įtraukti į ES atitikties deklaraciją, aprašas: / (HU) Adott esetben a tartozékok és alkatrészek leírása, ideértve a rádióberendezés rendeltetésszerű használatát lehetővé tévő és az EU-megfelelőségi nyilatkozat hatályába tartozó szoftvereket is: / (MT) Fejn applikabbli, deskrizzjoni tal-aċċessorji u il-komponenti, inkluż is-softwer, li jippermettu t-tagħmir tar-radju jopera kif intiż u koperti mid-dikjarazzjoni tal-konformità tal-UE: / (NL) Indien van toepassing, beschrijving van de accessoires en onderdelen, met inbegrip van software, die het mogelijk maken dat de radioapparatuur functioneert zoals bedoeld en die onder de EU-conformiteitsverklaring vallen: / (PL) W stosownych przypadkach, opis elementów dodatkowych lub komponentów, w tym oprogramowania, które umożliwiają działanie urządzenia radiowego zgodnie z przeznaczeniem i które są objęte deklaracją zgodności UE: / (PT) Se aplicável, descrição dos acessórios e/ou componentes, incluindo o software, que permitem que o equipamento de rádio funcione conforme o pretendido, abrangidos pela declaração UE de conformidade: / (RO) După caz, o descriere a accesoriilor şi componentelor, inclusiv a produselor software, care permit echipamentelor radio să funcționeze corespunzător şi care

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sunt incluse în declarația de conformitate: / (SK) V príslušných prípadoch opis príslušenstva a komponentov vrátane softvéru, ktoré umožňujú rádiovému zariadeniu fungovať v súlade so zamýšľaným účelom, a na ktoré sa vzťahuje EÚ vyhlásenie o zhode: / (SL) Po potrebi opise dodatne opreme in komponent, vključno s programsko opremo, ki zagotavljajo namensko delovanje radijske opreme in so zajeti v izjavi EU o skladnosti: / (FI) Tapauksen mukaan kuvaus lisälaitteista ja osista, myös ohjelmistoista, jotka mahdollistavat radiolaitteen käyttötarkoituksen mukaisen käytön ja jotka EU-vaatimustenmukaisuusvakuutus kattaa: / (SV) I förekommande fall en beskrivning av tillbehör och komponenter, inklusive programvara, som gör det möjligt för radioutrustningen att fungera som avsett och som täcks av en EU-försäkran om överensstämmelse:

9. **(EN) Additional information: Signed for and on behalf of: (place and date of issue): (name, function) (signature):** / (DE) Zusatzangaben: Unterzeichnet für und im Namen von: (Ort und Datum der Ausstellung): (Name, Funktion) (Unterschrift): / (BG) Допълнителна информация: Подписано за и от името на: (място и дата на издаване): (име, длъжност) (подпис): / (ES) Información adicional: Firmado en nombre de: (lugar y fecha de expedición): (nombre, cargo) (firma): / (CS) Další informace: Podepsáno za a jménem: (místo a datum vydání): (jméno, funkce) (podpis): / (DA) Supplerende oplysninger: Underskrevet for og på vegne af: (udstedelsessted og -dato): (navn, stilling) (underskrift): / (ET) Lisateave: Alla kirjutanud (kelle poolt ja nimel): (väljaandmise kuupäev ja koht): (nimi, ametinimetus) (allkiri): / (EL) Πρόσθετες πληροφορίες: Υπογραφή για λογαριασμό και εξ ονόματος: (τόπος και ημερομηνία έκδοσης): (όνομα, θέση) (υπογραφή): / (FR) Informations complémentaires: Signé par et au nom de: (date et lieu d'établissement): (nom, fonction) (signature): / (HR) Dodatne informacije: Potpisano za i u ime: (mjesto i datum izdavanja): (ime, funkcija) (potpis): / (IT) Informazioni supplementari: Firmato a nome e per conto di: (luogo e data del rilascio): (nome, funzione) (firma): / (LV) Papildu informācija: Parakstīts šādas personas vārdā: (izdošanas vieta un datums): (vārds, uzvārds, amats) (paraksts): / (LT) Papildoma informacija: Už ką ir kieno vardu pasirašyta: (išdavimo vieta ir data): (vardas ir pavardė, pareigos) (parašas): / (HU) További információk: A nyilatkozatot a nevében és megbízásából írták alá: (a kiállítás helye és dátuma): (név, beosztás) (aláírás): / (MT) Informazzjoni addizzjonali: Iffirmat għal u f'isem: (post u data tal-ħruġ): (isem, funzjoni) (firma): / (NL) Aanvullende informatie: Ondertekend voor en namens: (plaats en datum van afgifte): (naam, functie) (handtekening): / (PL) Informacje dodatkowe: Podpisano w imieniu: (miejsce i data wydania) (nazwisko, stanowisko) (podpis) / (PT) Informações complementares: Assinado por e em nome de: (local e data de emissão): (nome, cargo) (assinatura): / (RO) Informații suplimentare: Semnat pentru și în numele: (locul și data emiterii): (numele, funcția) (semnătura): / (SK) Doplňujúce informácie: Podpísané za a v mene: (miesto a dátum vydania): (meno, funkcia) (podpis): / (SL) Dodatne informacije: Podpisano za in v imenu: (kraj in datum izdaje): (ime, funkcija) (podpis): / (FI) Lisätietoja: ... puolesta allekirjoittanut (antamispaikka ja -päivämäärä): (nimi, tehtävä) (allekirjoitus): / (SV) Ytterligare information: Undertecknat för: (ort och datum) (namn, befattning) (namnteckning)

Modifications of DoC

Version	Date	Change
V1.0	07.01.2020	Initial version
V2.0	22.08.2022	New template and updated Conformity Assessment issued by CTC advanced.
V2.1		

8.4 UK Declaration of Confirmity

see following pages

Bosch Engineering

BOSCH

UK Declaration of Conformity

1. Name and address of the manufacturer or his authorised representative:

Company name:	Bosch Engineering GmbH
Postal address:	Robert-Bosch-Allee 1
Postcode / city / country:	74232 Abstatt, Germany

2. Product model/product (product, type, batch or serial number):

Apparatus model/product:	LTE65-EU
Type/batch/serial number:	

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

4. Object of the declaration (identification of apparatus allowing traceability; it may include a colour image of sufficient clarity where necessary for the identification of the apparatus):

Product model name:	LTE65-EU F02U-V02-909-01
Product description:	Telemetry Modem

5. The object of the declaration described above is in conformity with the relevant statutory requirements:

Radio Equipment Regulations 2017

6. References to the relevant designated standards used or references to the other technical specifications in relation to which conformity is declared. References must be listed with their identification number and version and, where applicable, date of issue:

Safety	EN 62368-1:2014/AC:2015/A11:2017
Health	EN 50665:2017, EN 62311:2008
EMC	Final Draft EN 301 489-1 V2.2.2, Draft EN 301 489-52 V1.1.0, EN 55032:2015
Radio spectrum	EN 301 908-1 V15.1.1; EN 301 908-2 V13.1.1, EN 301 908-13 V13.1.1

7. Where applicable, the approved body (name, number) performed Type-examination and issued the certificate:

Name: CTC advanced GmbH   4 digit approved body number: 0682
Reference number of the certificate of approved body: T818613L-02-TEC

8. Where applicable, description of accessories and components, including software, which allow the radio equipment to operate as intended and covered by the declaration of conformity:

Antenna information	Maximum gain 3 dBi

9. Additional information: Signed for and on behalf of: (place and date of issue): (name, function) (signature):

Abstatt	17.07 2022
Place of issue	Date of issue

MARTIN FROMMAIEL

Name, function, signature

Digitally signed by pki.BOSCH.DE,
L N, Ingo.Mauel
Date: 2022.09.06 08.45.34 +02'00'

Name, function, signature

UK Declaration of Conformity

Bosch Engineering

Modifications of DoC

Version	Date	Change
V1.0	05.09.2022	Initial version

8.5 US Regulatory Information

TC4NAG:

Device Uses Approved Radio: NL-SW-LTE-TC4NAG

Contains FCC ID: RI7LE910CXNF

Contains IC: 5131A-LE910CXNF

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standards. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

TC1NAG:

Device Uses Approved Radio: NL-SW-LTE-TC1NAG

Contains FCC ID: RI7LE910CXNF

Contains IC: 5131A-LE910CXNF

This device complies with Part 15 of the FCC Rules and Industry Canada licence-exempt RSS standards. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

8.6 Japan Technical Conformity Mark

The LTE65-JP contains an LTE-Modem certified for operation in Japan.

R: 007-AH0130

T: ADF 19-0023 007