

BMW Remote Software Upgrade

Vehicle features and options

This chapter describes all standard, country-specific and optional features offered with the series. It also describes features and functions that are not necessarily available in your vehicle, e.g., due to the selected options or country versions. This also applies to safety-related functions and systems. When using these functions and systems, the applicable laws and regulations must be observed.

BMW Remote Software Upgrade

Concept

Remote Software Upgrade can be used to update the software of the vehicle. Remote Software Upgrade makes new functions, functional enhancements or quality improvements available.

General information

BMW recommends performing the Remote Software Upgrade as soon as it becomes available.

The available data for Remote Software Upgrade is automatically loaded into the vehicle.

For reasons of safety, the loaded upgrade can only be installed when the vehicle is stationary. The installation is not installed until it was confirmed on the vehicle.

- ▶ The installation may take around 20 minutes.
- ▶ The installation cannot be terminated.
- ▶ The vehicle cannot be used during the installation.

- ▶ The vehicle can be exited during the installation.

Validity of the Owner's Manual

Production of the vehicle

At the time of production at the plant, the printed Owner's Manual is the most current resource.

After a software update in the vehicle

After a vehicle software update – such as, a Remote Software Upgrade – the Integrated Owner's Manual for the vehicle will contain the latest information.

Functional requirement

The use of the Remote Software Upgrade requires an active ConnectedDrive contract.

Information about the version

General information

The information about the version contains a description of the updates that are included in the Remote Software Upgrade. During the download and after the installation has been completed successfully, the information about the version can be displayed on the Control Display. The information is available in the ConnectedDrive customer portal at any time.

Logging on to the ConnectedDrive customer portal on the Internet under:
www.bmw-connecteddrive.com.

Displaying information about the version

Via iDrive:

1. "CAR"
2. "Settings"
3. "General settings"
4. "Remote Software Upgrade"
5. "Installed version:"

Safety information

Warning

Unattended children or animals in the vehicle can cause the vehicle to move and endanger themselves and traffic, for instance due to the following actions:

- ▷ Pressing the Start/Stop button.
- ▷ Releasing the parking brake.
- ▷ Opening and closing the doors or windows.
- ▷ Engaging selector lever position N.
- ▷ Using vehicle equipment.

There is a risk of accidents or injuries. Do not leave children or animals unattended in the vehicle. Take the vehicle key with you when exiting and lock the vehicle.

Search for and download of an upgrade

General information

There are various options to search for and download an upgrade:

- ▷ Automatic.
- ▷ Via iDrive.
- ▷ Via BMW Connected app.

Automatic download

The available data for Remote Software Upgrade is automatically loaded into the vehicle. The download does not require an approval.

Via iDrive

1. "CAR"
2. "Settings"
3. "General settings"
4. "Remote Software Upgrade"
5. "Search for upgrades"
6. Follow the instructions on the Control Display.

Via BMW Connected app

1. Download the available upgrade to the smartphone in the BMW Connected app.
2. Follow the instructions in the BMW Connected app.
3. Establish a simultaneous WiFi and Bluetooth connection between the smartphone and the vehicle.
The data transfer of the upgrade from the smartphone to the vehicle occurs only while driving.
4. Follow the instructions on the Control Display.

Install the upgrade immediately

General information

After successful download completion, installation is offered once the vehicle is parked. The installation can be carried out immediately following the download.

Follow the instructions on the Control Display.

After the successful completion of the upgrade, booked services, for example RTTI, will be reactivated automatically while driving.

Functional requirements

- ▷ The battery is sufficiently charged.
- ▷ The external temperature is above 14 °F/-10 °C.
- ▷ Vehicle is parked in a horizontal position.
- ▷ Hazard warning system is switched off.
- ▷ Selector lever position P is engaged.
- ▷ Engine is sufficiently cooled down.
- ▷ Automatic engine start for stationary climate control is not activated via iDrive.

Preparing the vehicle

- ▷ Park the vehicle safely away from the public road.
- ▷ Cellular network reception must be ensured so that an error message can be sent, for instance if the installation is terminated.
- ▷ Close the windows.
- ▷ Close the glass sunroof.
- ▷ Close the trunk lid.
- ▷ Remove energy consuming devices, such as a mobile phone.
- ▷ The vehicle key is in the vehicle at the start of the installation.
- ▷ Switch off the exterior lighting.

Additional vehicle related functional requirements are shown on the Control Display.

Install the upgrade later

The installation of the upgrade can be carried out at a later time.

Via iDrive:

1. "CAR"
2. "Settings"
3. "General settings"
4. "Remote Software Upgrade"
5. "Start upgrade now"

Follow the instructions on the Control Display.

Functional limitations

During the upgrade, the majority of functions is temporarily unavailable, for instance:

- ▷ Hazard warning system.
- ▷ Central locking system.
- ▷ Parking lights.
- ▷ Horn.
- ▷ Alarm system.
- ▷ Emergency Request.
- ▷ Power windows.
- ▷ Glass sunroof.
- ▷ Checking the fuel filler flap lock.

The driver's door can be locked and unlocked from the outside using the integrated key.

Malfunction

In the event of a malfunction, follow the instructions on the Control Display or in the BMW Connected app.

If the malfunction cannot be remedied, contact a dealer's service center or another qualified service center or repair shop.

BMW Roadside Assistance

Concept

Contact the BMW Group Roadside Assistance if assistance is needed in the event of a breakdown.

General information

In the event of a breakdown, data on the vehicle's condition is transmitted to the BMW Roadside Assistance.

There are various ways of contacting BMW Roadside Assistance.

- ▷ Via a Check Control message.
Supplementary SMS text messages, refer to page 147.
- ▷ Calling with a mobile phone.
- ▷ Via the BMW Connected app.

Functional requirements

- ▷ Active ConnectedDrive contract, equipment with intelligent emergency call or BMW ConnectedDrive services.
- ▷ Cellular network reception.
- ▷ Standby state is switched on.

Starting manually

If the vehicle is equipped with Teleservices, support is offered through Teleservice Diagnosis.

Via iDrive:

1. "APPS"
2. "Installed apps"
3. "BMW Assist"
4. If necessary, "BMW Roadside Assistance"
A voice connection is established.

Teleservice Diagnosis

Teleservice Diagnosis enables the wireless transmission of detailed vehicle data that is important for vehicle diagnosis. This data is trans-

mitted automatically. It may be necessary to approve this on the Control Display.

Teleservice Help

Depending on the country, Teleservice Help enables an in-depth diagnosis of the vehicle by BMW Roadside Assistance via wireless transmission.

You can launch Teleservice Help by requesting it through BMW Roadside Assistance.

1. Park the vehicle in a safe place.
2. Set the parking brake.
3. Control Display is switched on.
4. Confirm Teleservice Help.

BMW Accident Assistance

Concept

BMW Group Accident Assistance can be contacted if assistance is needed in the event of an accident.

General information

If the vehicle sensors detect a minor to moderately severe accident, which did not trigger any airbags, a Check Control message appears on the instrument cluster. In addition, a text message appears on the Control Display.

When BMW Accident Assistance is activated, data on the vehicle's condition is sent to BMW.

Functional requirements

- ▷ Active ConnectedDrive contract, equipment with intelligent emergency call or BMW ConnectedDrive services.
- ▷ Cellular network reception.
- ▷ Standby state is switched on.

Starting BMW Accident Assistance

If an accident is detected automatically

A text message relating to BMW Accident Assistance appears on the Control Display.

The connection can be established directly:
"Call BMW Accident Assistance"

The Check Control message for BMW Accident Assistance can also be called up from the stored Check Control messages for a certain length of time.

Additional information:

Check Control, refer to page 146.

Starting manually

BMW Accident Assistance can also be contacted independently of the automatic accident detection function.

Via iDrive:

1. "APPS"
2. "Installed apps"
3. "BMW Assist"
4. "BMW Accident Assistance"

Follow the displays on the Control Display. A voice connection is established.

Emergency Request

Intelligent emergency call

Concept

In case of an emergency, an Emergency Request can be triggered automatically by the system or manually.

General information

Only press the SOS button in an emergency.

The Intelligent Assist system establishes a connection with the BMW Response Center.

For technical reasons, the Emergency Request cannot be guaranteed under unfavorable conditions.

Overview



 SOS button.

Functional requirements

- ▷ Standby state is switched on.
- ▷ The Assist system is functional.
- ▷ If the vehicle is equipped with intelligent emergency call: the SIM card integrated in the vehicle has been activated.

Automatic triggering

Under certain conditions, for instance if the airbags trigger, an Emergency Request is automatically initiated immediately after an accident of corresponding severity. Automatic Collision Notification is not affected by pressing the SOS button.

Manual triggering

1. Tap the cover.
 2. Press and hold the SOS button until the LED in the area of the button illuminates green.
- ▷ The LED is illuminated green when an Emergency Request has been initiated.

If a cancel prompt appears on the Control Display, the Emergency Request can be aborted.

If the situation allows, wait in your vehicle until the voice connection has been established.

- ▶ The LED flashes green when a connection to the BMW Response Center has been established.

The BMW Response Center then makes contact with the occupants of the vehicle and initiates further steps to help.

Even if you are unable to respond, the BMW Response Center can take further steps to help you under certain circumstances.

For this purpose, data that serves to determine the necessary rescue measures, for instance the current position of the vehicle when it can be determined, is transmitted to the BMW Response Center.

Even if the BMW Response Center is no longer heard through the loudspeakers, the BMW Response Center may still be able to hear the occupants of the vehicle.

The BMW Response Center ends the Emergency Request.

Jump-starting

General information

If the battery is discharged, the engine can be started using the battery of another vehicle and two jumper cables. Only use jumper cables with fully insulated clamp handles.

Safety information

⚠ DANGER

Contact with live components can lead to an electric shock. There is a risk of injuries or danger to life. Do not touch any components that are under voltage.

⚠ Warning

If the jumper cables are connected in the incorrect order, sparking may occur. There is a risk of injury. Pay attention to the correct order during connection.

⚠ NOTICE

In the case of body contact between the two vehicles, a short circuit can occur during jump-starting. There is a risk of damage to property. Make sure that no body contact occurs.

Preparation

1. Check whether the battery of the other vehicle has a voltage of 12 volts. The voltage information can be found on the battery.
2. Switch off the engine of the assisting vehicle.
3. Switch off any electronic systems/power consumers in both vehicles.

Starting aid terminals



The starting aid terminal in the engine compartment acts as the battery's positive terminal.

Open the cover of the starting aid terminal.

Services and applications

Vehicle features and options

This chapter describes all standard, country-specific and optional features offered with the series. It also describes features and functions that are not necessarily available in your vehicle, e.g., due to the selected options or country versions. This also applies to safety-related functions and systems. When using these functions and systems, the applicable laws and regulations must be observed.

Overview

General information

The Teleservices, intelligent emergency call or ConnectedDrive Services features are required to use the services and applications described here.

The content and scope of the services that are available may vary by country. Therefore, it is possible that some of the services and applications described in the Owner's Manual may not be offered, or not yet be offered, in the vehicle's country of registration.

Services and applications may be provided in the following ways:

- ▶ In the scope of the vehicle order; e.g., as special equipment.
- ▶ Via the BMW ConnectedDrive customer portal on the Internet.
- ▶ Via iDrive on the Control Display of the vehicle in the ConnectedDrive Store.

Details on the content and scope of ConnectedDrive can be obtained from www.bmw-connecteddrive.com or your service center.

Safety information

Warning

Operating the integrated information systems and communication devices while driving can distract from traffic. It is possible to lose control of the vehicle. There is a risk of accident. Only use the systems or devices when the traffic situation allows. As warranted, stop and use the systems and devices while the vehicle is stationary.

BMW Teleservices

Concept

Teleservices are services that help to maintain vehicle mobility.

General information

The offering depends on the equipment version of the vehicle and the country-specific variant.

For further information on the available services, the vehicle manufacturer recommends contacting a service center or the hotline/customer support.

Teleservices can comprise the following services:

- ▶ Service Request.
- ▶ Teleservice Report.
- ▶ Teleservice Battery Guard.
- ▶ Your dealer's service center.
- ▶ Roadside Assistance.
- ▶ BMW Accident Assistance.

Requirements

- ▷ Active ConnectedDrive contract, equipment with intelligent emergency call or BMW ConnectedDrive services.
- ▷ Cellular network reception.
- ▷ Standby state is switched on.
- ▷ The corresponding consent for the transmission of the data was selected and given in the Data Protection menu.

Service Request

Automatic Service Request

The Teleservice data on the vehicle's service notifications is sent automatically to the service center by BMW prior to the service deadline. If feasible, the service center will contact the customer about arranging a service appointment.

This way, the dealer's service center can plan the necessary work in advance. This shortens the duration of the service appointment.

Manual Service Request

Concept

Using a manually initiated Service Request, data on the vehicle's service notifications is directly sent by BMW to the service center. If feasible, the service center will contact the customer about arranging a service appointment.

General information

A Service Request can be started via a Check Control message.

Additional information:

Supplementary SMS text messages, see Owner's Manual for the vehicle.

Starting a Service Request

1. "APPS"
2. "Installed apps"

3. "Your service center"
4. "Service request"

Teleservice Report

Concept

Transmits technical data that is evaluated for the ongoing development of BMW products from the vehicle to BMW in regular intervals, if needed.

General information

The Teleservice Report is free of charge and is activated in vehicles that meet the following requirements:

- ▷ Certain technical requirements are met.
- ▷ Active BMW ConnectedDrive contract.
- ▷ Equipment version with intelligent emergency call or ConnectedDrive services.

Neither personal data nor position data is transmitted.

Teleservice Battery Guard

Concept

If the battery charge state falls below certain values, BMW will inform the customer or Service Center directly as warranted or the next time the vehicle is started.

General information

If warranted and feasible, the dealer's service center will contact the customer about arranging a service appointment.

The Battery Guard Teleservice is available on a country-specific basis and under the following conditions:

- ▷ Certain technical requirements are met.
- ▷ Active BMW ConnectedDrive contract.
- ▷ Equipment version with intelligent emergency call or ConnectedDrive services.

- ▷ To receive information from the Battery Guard Teleservice, your contact data must be stored in the ConnectedDrive portal.

Your dealer's service center

Concept

The preset service center is displayed. It is possible to contact the service center.

Functional pre-requisites

The following conditions must be met to enable use:

- ▷ The user has registered using ConnectedDrive access data.
- ▷ The vehicle is assigned to the account in the ConnectedDrive customer portal.




Displaying service centers

The service center that is currently assigned to the vehicle is displayed as a contact in the vehicle.

1. "APPS"
2. "Installed apps"
3. "Your service center"

The assigned service center is displayed along with all its contact information.

Depending on the vehicle equipment, the following functions are available in the contact:


- ▷  "Start guidance"
- ▷  Call the service center.
- ▷  "Compose email"

Updating BMW services

Concept

Starts the manual update of all services available in the vehicle.

Updating services

1. "APPS"
2. "Installed apps"
3.  Press the button.
4. "Update apps and services"

Hotline/Customer Support

Concept

Contact the hotline/customer support for information on all aspects of your vehicle.

Calling the Hotline/Customer Support

1. "APPS"
2. "Installed apps"
3. "BMW Assist"
4. If necessary, "BMW Customer Relations"

The number of the hotline/customer support is displayed and a voice connection is established. If a voice connection is not established, dial the number manually.

ConnectedDrive Services

Functional requirements

- ▷ Subscription to the optional Convenience Plan.
- ▷ Cellular network reception must be available.
- ▷ The date setting on the Control Display is current.

ConnectedDrive Store

Concept

In vehicles with specific technical requirements, various services can be booked later.

General information

The range of services offered depends on the country.

Ordering services

1. "APPS"
2. "BMW Store"

An overview of the services present in the vehicle and those to be ordered later is displayed.
3. "All services"

An overview of the services present in the vehicle and those to be ordered later is displayed.
4. To purchase a service, select the desired service and follow the instructions on the Control Display.

BMW messages

Concept

Messages from BMW are displayed, e.g., from My Info or BMW Info, or as information from the vehicle manufacturer.

General information

Messages may originate from a range of different sources.

- ▶ My Info: these messages originate from the ConnectedDrive customer portal or are sent from selected centers.
- ▶ BMW Info: these messages are sent by selected service centers.
- ▶ Messages from the vehicle manufacturer.
- ▶ Messages from the Concierge service.



Displaying BMW messages

1. "APPS"
2. "BMW messages"

The most recent BMW messages are displayed.

Status

A symbol identifies the message status.

Sym- bol	Meaning
	Read BMW message.
	Unread BMW message.

Filtering message list by status

1. "Filter"
2. Select the desired setting.

Filtering message list by message type

1. "All message types"
2. Select the desired setting.

Deleting a message


1. Highlight the message if required.
2.  Press the button.
3. Delete highlighted message: "Delete message"
Delete all messages: "Delete all messages"

It is not possible to delete all types of messages: for example, messages from the vehicle manufacturer and Check Control messages cannot be deleted.

Check Control messages or messages from the vehicle manufacturer are displayed as long as they are relevant.

Additional functions

Depending on the equipment and the type of message, the following functions are available for a selected message:

- ▶  Select the location to start destination guidance.
- ▶ Select phone number to make a call.

Vehicle apps

Concept

BMW ConnectedDrive Services offer the option to display information regarding the weather or sports, for example, on the Control Display using apps and other functions.

Display BMW ConnectedDrive Service apps

1. "Apps"
2. "Installed apps"
3. "All services"
4. Select desired app.
5. "Further product details"
If necessary, view details.

Messages

1. "APPS"
2. "BMW messages"
The most recent BMW messages are displayed.

Registering

To display personal data such as e-mails, it is necessary to log on.

This function is country-specific.

1. "CAR"
2. "Driver profiles"
3. "User name:"
Enter the ConnectedDrive user name.
4. "Password:"
Enter the ConnectedDrive password.
5. "Enter access data"

Registering automatically

The "Automatic pairing" function can be deactivated in the ConnectedDrive customer portal on the Internet. A change may be required in the ConnectedDrive Customer Portal under Pass-

word protection in the vehicle in the Control menu item.

Registration is performed automatically when the vehicle app is opened. Automatic pairing can be carried out with the personal driver profile.

Additional information:

Driver profiles, see Owner's Manual for the vehicle.

Switch users

1. "CAR"
2. "Settings"
3. "Driver profiles"
4.  Press the button.
5. "Change driver profile"
6. Select another user account.
7. "OK"

Concierge service

Concept

The Concierge service offers information on events, gas stations or hotels, and provides phone numbers and addresses. A voice connection to the Concierge service is established for this purpose. Many hotels can be booked directly by the BMW Concierge service. The Concierge service is part of the optional BMW Response Center Plan.

Starting Concierge service

1. "COM"
2. "BMW Assist"
3. "Concierge"

A voice connection to the Concierge service is established.

Remote Services

Concept

Remote Services enable some vehicle functions to be controlled remotely via the BMW Connected app. The app can be used to lock and unlock the vehicle, for instance.

Other functions may be available, depending on the vehicle.

General information

The vehicle is controlled via the BMW Connected app, which you can obtain from the Apple App Store for iOS and from the Google Play Store for Android.

Remote Services must first be activated in the ConnectedDrive customer portal or in the BMW Connected app before they can be used. An active BMW ConnectedDrive contract is required.

Alternatively, remote control of certain functions can also be requested via the BMW ConnectedDrive Call Center.

The Owner's Manual for the BMW Connected App can be called up in the ConnectedDrive customer portal or at www.bmw.com.

Apple CarPlay preparation

Concept

CarPlay allows certain functions of a compatible Apple iPhone to be used via Siri voice operation and iDrive.

General information

Depending on the country-specific version, CarPlay may not be available. Contact a dealer's service center or another qualified service center or repair shop for more detailed information.

The iPhone provides CarPlay and any associated apps. The scope and content depend on the de-

vice manufacturer and can vary depending on the country-specific version.

The following restrictions apply to an iPhone connected via CarPlay:

- ▷ Not every app installed on the iPhone can be used via CarPlay.
- ▷ Calling is only possible via CarPlay.
- ▷ The iPhone cannot be paired as additional phone.
- ▷ The phone book entries are not transferred into the vehicle.
- ▷ Only one additional phone can be connected with the vehicle.
- ▷ Using CarPlay can incur mobile telephony costs. These costs are not a part of the optional vehicle feature.

Functional requirements

The iPhone is connected to the vehicle.

Additional information:

Apple CarPlay preparation, see Owner's Manual for the vehicle.

Selecting CarPlay


CarPlay can be selected via the following menus:

- ▷ "Apple CarPlay"
The CarPlay menu is displayed.
- ▷ "Media/Radio"
"Apple CarPlay"
The iPhone music app opens.
- ▷ "Enter destination"
"Maps in CarPlay"
The iPhone navigation app opens.
- ▷ "Communication"
"Phone in CarPlay"
The iPhone phone app opens.

Using CarPlay

CarPlay can be used via iDrive and voice operation.

Via voice operation:

1. Press and hold the  button on the steering wheel, until the Siri Voice command response is activated on the iPhone.
2. Say the commands familiar from the iPhone.



Switching CarPlay off/on

To use the iPhone without CarPlay, CarPlay must be switched off.

1. "COM"
2. "Mobile devices"
3. Select the iPhone with CarPlay function.
4. "Connection mode"
5. > "BMW iDrive"
 - Select the entry to switch CarPlay off. The iPhone remains connected as a smartphone.
 - > "Apple CarPlay"
 - Select the entry to switch CarPlay on.

Exiting CarPlay

The following options are available for exiting CarPlay without switching CarPlay off:

- > Move the Controller to the left at a corresponding number of time.
- >  Press the button on the Controller.
- > Select the BMW symbol in the CarPlay main menu.
- >  Press the button on the Controller when the CarPlay main menu is displayed.

CarPlay Navigation

The destination of a CarPlay navigation can be transferred to the BMW navigation. This requires that the destination guidance in CarPlay has not been started.

The navigation destination cannot be transferred back to CarPlay.

BMW Connected app

Concept

The Connected app provides mobility-based services and applications.

General information

You can find information on installing the Connected app and on its content, plus information on the ConnectedDrive customer portal, at www.bmw-connecteddrive.com.

The Connected app must be installed on the smartphone you wish to use. The installation process depends on the smartphone.

To use all the features of the Connected app, you will need to register when you start it up; you only need to do this once. The registration process creates a personal ConnectedDrive account for you in the ConnectedDrive customer portal. If you already have a ConnectedDrive account, you can use its login details in the Connected app.

A unique assignment of the app to the vehicle requires the input of the vehicle identification number.

Some functions enable communication with the vehicle without the need for you to be inside or at the vehicle. These functions can be executed via the Connected app or the ConnectedDrive account.

The vehicle needs to be linked to the ConnectedDrive account in order to use the functions; you only need to do this once. You can link the vehicle via the ConnectedDrive account in the ConnectedDrive Customer Portal or via the app. Confirmation in the vehicle using iDrive is also required.

1. Input for the User manual for variants B393

Declaration of Conformity (DoC in short form)

All language versions of the EU



European Union: Declaration of Conformity

Hereby, Harman Becker Automotive Systems GmbH declares that the radio equipment type WAVE-11-HIGH-R1 complies with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet Address: <http://www.harman.com/compliance>

GSM EGSM900 Class 4 (+33dBm ±2dB)
GSM GSM1800 Class 1 (+30dBm ±2dB)
GSM GSM 900 8-PSK Class E2 (+27dBm ± 3dB)
GSM GSM 1800 8-PSK Class E2 (+26dBm +3 /-4dB)
UMTS B1 (2100MHz) Class 3 (+24 dBm + 1/- 3 dB)
UMTS B8 (900MHz) Class 3 (+24 dBm + 1/- 3 dB)
LTE FDD B1 (2100MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B3 (1800MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B5 (850MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B7 (2600MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B8 (900MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B20 (800MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B28 (700MHz) Class 3 (+23 dBm±2 dB)
LTE FDD B32 (1500MHz) Class 3 (+23 dBm±2 dB)
LTE TDD B38 (2600MHz) Class 3 (+23 dBm±2 dB)
LTE TDD B40 (2300MHz) Class 3 (+23 dBm±2 dB)
5G n1 (2100MHz) Class 3 (+23 dBm±2 dB)
5G n3 (1800MHz) Class 3 (+23 dBm±2 dB)
5G n5 (850MHz) Class 3 (+23 dBm±2 dB)
5G n7 (2600MHz) Class 3 (+23 dBm±2 dB)
5G n8 (900MHz) Class 3 (+23 dBm±2 dB)
5G n20 800(MHz) Class 3 (+23 dBm±2 dB)
5G n28 (700MHz) Class 3 (+23 dBm±2 dB)
5G n38 (2600MHz) Class 3 (+23 dBm±2 dB)
5G n77 (3700MHz) Class 3 (+23 dBm+2/-3 dB)
5G n78 (3500MHz) Class 3 (+23 dBm+2/-3 dB)

Manufacturer and Address

Harman Becker Automotive Systems GmbH
Becker-Goering-Strasse 16
76307 Karlsbad, Germany

English:

Hereby, Harman Becker Automotive Systems GmbH declares that the radio equipment type **WAVE-11-HIGH-R1** is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet Address: <http://www.harman.com/compliance>

Bulgarian:

С настоящото Harman Becker Automotive Systems GmbH декларира, че този тип радиосъоръжение **WAVE11-HIGH-R1** е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: <http://www.harman.com/compliance>

Spanish:

Por la presente, Harman Becker Automotive Systems GmbH declara que el tipo de equipo radioeléctrico **WAVE11-HIGH-R1** es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: <http://www.harman.com/compliance>

Czech:

Tímto Harman Becker Automotive Systems GmbH prohlašuje, že typ rádiového zařízení **WAVE-11-HIGH-R1** je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese:

<http://www.harman.com/compliance>

Danish:

Hermed erklærer Harman Becker Automotive Systems GmbH, at radioudstyrstypen **WAVE-11-HIGH-R1** er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: <http://www.harman.com/compliance>

German:

Hiermit erklärt Harman Becker Automotive Systems GmbH, dass das Gerät mit Funkfunktion **WAVE-11-HIGH-R1** der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <http://www.harman.com/compliance>

Estonian:

Käesolevaga deklareerib Harman Becker Automotive Systems GmbH, et käesolev raadioseadme tüüp **WAVE-11HIGH-R1** vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: <http://www.harman.com/compliance>

Greek:

Με την παρούσα ο/η Harman Becker Automotive Systems GmbH, δηλώνει ότι ο ραδιοεξοπλισμός **WAVE-11HIGH-R1** πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: <http://www.harman.com/compliance>

French:

Le soussigné, Harman Becker Automotive Systems GmbH, déclare que l'équipement radioélectrique du type **WAVE-11-HIGH-R1** est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: <http://www.harman.com/compliance>

Specific requirement for France: From 1 July 2020, according to "Decree No. 2019-1186 relating to the display of the Specific Absorption Rate of radio equipment" (NOR: SSAP1834791D), the specific absorption rate value (SAR) for any radio equipment with an output greater than 20 mW and which is likely to be used in a reasonably foreseeable manner near the head or at a distance of less than or equal to 20 cm from the human body shall be provided in a legible, intelligible and visible manner in the user manual. This requirement is currently applicable only to mobile phone devices, according to "Decree No. 2010-1207 relating to the display of the Specific Absorption Rate of radio terminal equipment (NOR: SASP1011528D).

Croatian:

Harman Becker Automotive Systems GmbH ovime izjavljuje da je radijska oprema tipa **WAVE-11-HIGH-R1** u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: <http://www.harman.com/compliance>

Italian:

Il fabbricante, Harman Becker Automotive Systems GmbH, dichiara che il tipo di apparecchiatura radio **WAVE11-HIGH-R1** è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: <http://www.harman.com/compliance>

Latvian:

Ar šo Harman Becker Automotive Systems GmbH deklarē, ka radioiekārta **WAVE-11-HIGH-R1** atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē:

<http://www.harman.com/compliance>

Lithuanian:

Aš, Harman Becker Automotive Systems GmbH, patvirtinu, kad radijo įrenginių tipas **WAVE-11-HIGH-R1** atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu:

<http://www.harman.com/compliance>

Hungarian:

Harman Becker Automotive Systems GmbH igazolja, hogy a **WAVE-11-HIGH-R1** típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: 2014.5.22. L 153/104 Az Európai Unió Hivatalos Lapja HU: <http://www.harman.com/compliance>

Maltese:

B'dan, Harman Becker Automotive Systems GmbH, niddikjara li dan it-tip ta' tagħmir tar-radju **WAVE-11-HIGH-R1** huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: <http://www.harman.com/compliance>

Dutch:

Hierbij verklaar ik, Harman Becker Automotive Systems GmbH, dat het type radioapparatuur **WAVE-11-HIGH-R1** conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: <http://www.harman.com/compliance>

Polish:

Harman Becker Automotive Systems GmbH niniejszym oświadcza, że typ urządzenia radiowego **WAVE-11-HIGH-R1** jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: <http://www.harman.com/compliance>

Portuguese:

O(a) abaixo assinado(a) Harman Becker Automotive Systems GmbH declara que o presente tipo de equipamento de rádio **WAVE-11-HIGH-R1** está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: <http://www.harman.com/compliance>

Romanian:

Prin prezenta, Harman Becker Automotive Systems GmbH declară că tipul de echipamente radio **WAVE-11-HIGH-R1** este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: <http://www.harman.com/compliance>

Slovak:

Harman Becker Automotive Systems GmbH týmto vyhlasuje, že rádiové zariadenie typu **WAVE-11-HIGH-R1** je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese:

<http://www.harman.com/compliance>

Slovenian:

Harman Becker Automotive Systems GmbH potrjuje, da je tip radijske opreme **WAVE-11-HIGH-R1** skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu:

<http://www.harman.com/compliance>

Finnish:

Harman Becker Automotive Systems GmbH vakuuttaa, että radiolaitetyyppi **WAVE-11-HIGH-R1** on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <http://www.harman.com/compliance>

Swedish:

Härmed försäkrar Harman Becker Automotive Systems GmbH att denna typ av radioutrustning **WAVE-11-HIGH-R1** överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: <http://www.harman.com/compliance>

Turkish:

Harman Becker Automotive Systems GmbH işbu, radyo işlevli **WAVE-11-HIGH-R1** cihazı 2014/53/AB-Direktifi ile uyumlu olduğunu beyan eder. AB-uygunluk beyanının tam metnisi aşağıdaki İnternet adresinde mevcuttur: <http://www.harman.com/compliance>

Target market Kyrgyzstan - Kazakhstan - Belarus - Eurasian Economic Union - Russian Federation

1. Тип оборудования: телематическая система.
2. Модель, торговая марка: WAVE-11-HIGH-R1.
3. Номиналы (напряжение): 12 В постоянного тока
4. Производитель (название, местонахождение и контактная информация): Harman Becker Automotive Systems GmbH, Becker-Goering –Str.16 D-76307, Карлсбад, Германия
5. Страна происхождения: Венгрия.
6. Сфера использования: Телематическая система для использования в автомобилях со следующими функциями: GSM, UMTS, LTE, 5G и GNSS.
7. Подробная спецификация: он предоставляет различные телематические услуги и является интерфейсом между различными ECE автомобилями BMW и общественной сетью. Следовательно, вы можете подключить головное устройство либо через Ethernet с WAVE Box, либо через GSM / UMTS / LTE / 5G, оно обеспечивает доступ к общедоступной сети.
12. Дата изготовления (месяц и год) или место, где ее можно найти: как показано на этикетке продукта.
13. Знак EAC (см. Требования к маркировке)
14. Руководство пользователя должно быть составлено на русском языке и на официальном языке соответствующего государства-члена, если это требуется законодательством государства-члена.
15. Знак соответствия должен быть нанесен на устройство и на руководство пользователя.



GSM EGSM900 Class 4 (+33dBm ±2dB)

GSM GSM1800 Class 1 (+30dBm ±2dB)

GSM GSM 900 8-PSK Class E2 (+27dBm ± 3dB)

GSM GSM 1800 8-PSK Class E2 (+26dBm +3 /-4dB)

UMTS B1 (2100MHz) Class 3 (+24 dBm + 1/- 3 dB)

UMTS B8 (900MHz) Class 3 (+24 dBm + 1/- 3 dB)

LTE FDD B1 (2100MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B3 (1800MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B5 (850MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B7 (2600MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B8 (900MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B20 (800MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B28 (700MHz) Class 3 (+23 dBm±2 dB)

LTE FDD B32 (1500MHz) Class 3 (+23 dBm±2 dB)

LTE TDD B38 (2600MHz) Class 3 (+23 dBm±2 dB)

LTE TDD B40 (2300MHz) Class 3 (+23 dBm±2 dB)

5G n1 (2100MHz) Class 3 (+23 dBm±2 dB)

5G n3 (1800MHz) Class 3 (+23 dBm±2 dB)

5G n5 (850MHz) Class 3 (+23 dBm±2 dB)

5G n7 (2600MHz) Class 3 (+23 dBm±2 dB)

5G n8 (900MHz) Class 3 (+23 dBm±2 dB)

5G n20 800(MHz) Class 3 (+23 dBm±2 dB)

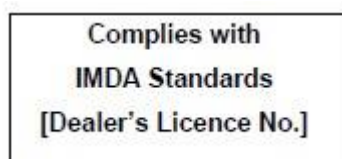
5G n28 (700MHz) Class 3 (+23 dBm±2 dB)

5G n38 (2600MHz) Class 3 (+23 dBm±2 dB)

5G n77 (3700MHz) Class 3 (+23 dBm+2/-3 dB)

5G n78 (3500MHz) Class 3 (+23 dBm+2/-3 dB)

Target market Singapore



Overview of technical radio values (ECE variant)

GSM	EGSM900 Class 4	(+33dBm ±2dB)
GSM	GSM1800 Class 1	(+30dBm ±2dB)
GSM	GSM 900 8-PSK Class E2	(+27dBm ± 3dB)
GSM	GSM 1800 8-PSK Class E2	(+26dBm +3 /-4dB)
UMTS	B1 (2100MHz) Class 3	(+24 dBm + 1/- 3 dB)
UMTS	B8 (900MHz) Class 3	(+24 dBm + 1/- 3 dB)
LTE	FDD B1 (2100MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B3 (1800MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B7 (2600MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B8 (900MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B20 (800MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B28 (700MHz) Class 3	(+23 dBm±2 dB)
LTE	FDD B32 (1500MHz) Class 3	(+23 dBm±2 dB)
LTE	TDD B38 (2600MHz) Class 3	(+23 dBm±2 dB)
LTE	TDD B40 (2300MHz) Class 3	(+23 dBm±2 dB)
5G	n1 (2100MHz) Class 3	(+23 dBm±2 dB)
5G	n3 (1800MHz) Class 3	(+23 dBm±2 dB)
5G	n5 (850MHz) Class 3	(+23 dBm±2 dB)
5G	n7 (2600MHz) Class 3	(+23 dBm±2 dB)
5G	n8 (900MHz) Class 3	(+23 dBm±2 dB)
5G	n28 (700MHz) Class 3	(+23 dBm±2 dB)
5G	n38 (2600MHz) Class 3	(+23 dBm±2 dB)
5G	n77 (3700MHz) Class 3	(+23 dBm+2/-3 dB)
5G	n78 (3500MHz) Class 3	(+23 dBm+2/-3 dB)

Manufacturer

Harman Becker Automotive Systems GmbH

Becker-Goering-Strasse 16

76307 Karlsbad,

Germany

Annex to the User Manual

Overview of the technical radio values for all the **WAVE-11-HIGH-R1** variants per country

NAD module frequencies

Region	Bands
NA	LTE FDD: B2,B4,B5,B7,B10,B12,B13,B17,B25,B26,B29(Rx),B30(Rx),B66,B71 LTE TDD: B41 WCDM A/HSPA+: B2,B4,B5 GSM/GPRS/EDGE: 850MHz,1900MHz 5G: n2,n5,n7,n25,n41,n66, n71
ECE	LTE FDD: B1,B3, B5 ,B7,B8,B20,B28,B32(Rx) LTE TDD: B38,B40 WCDM A/HSPA+: B1,B8 GSM/GPRS/EDGE: 900MHz,1800MHz 5G: n1,n3,n5,n7,n8,n20, n28,n38,n77(n78)
CHN	LTE FDD: B1,B3,B5,B7,B8 LTE TDD: B34,B38,B39,B40,B41 WCDM A/HSPA+: B1,B3,B5,B8 GSM/GPRS/EDGE: 900MHz,1800MHz 5G: n1, n3, n7,n8, n28,n41,n77(n78)
Global	LTE FDD: B1,B2,B3,B4,B5,B7,B8,B9,B10,B12,B13,B17,B18,B19,B20,B21,B25,B26,B28,B29(Rx), B30(Rx),B32(Rx),B66,B71 LTE TDD: B34,B38,B39,B40,B41,B42 WCDMA/HSPA+: B1,B2,B3,B4,B5,B8,B19 GSM/GPRS/EDGE: 850MHz,900MHz,1800MHz,1900MHz 5G: n1,n2,n3,n5,n7,n8, n20,n25,n28,n38,n41,n66,n71,n77(n78)

Operating Frequency

Operating Band	Tx	Rx
GSM 850	824-849 MHz	869-894 MHz
GSM 900	880–915 MHz	925–960 MHz
GSM 1800	1710–1785 MHz	1805–1880 MHz
GSM 1900	1850-1910 MHz	1930-1990 MHz
UMTS Band 1	1920–1980 MHz	2110–2170 MHz
UMTS Band 2	1850–1910 MHz	1930–1990 MHz
UMTS Band 3	1710–1785 MHz	1805–1880 MHz
UMTS Band 4	1710–1755 MHz	2110–2155 MHz
UMTS Band 5	824–849 MHz	869–894 MHz
UMTS Band 8	880–915 MHz	925–960 MHz
UMTS Band 19	830–845 MHz	875–890 MHz
LTE Band 1	1920–1980 MHz	2110–2170 MHz
LTE Band 2	1850–1910 MHz	1930–1990 MHz
LTE Band 3	1710–1785 MHz	1805–1880 MHz
LTE Band 4	1710–1755 MHz	2110–2155 MHz

LTE Band 5	824–849 MHz	869–894 MHz
LTE Band 7	2500–2570 MHz	2620–2690 MHz
LTE Band 8	880–915 MHz	925–960 MHz
LTE Band 9	1749.9–1784.9 MHz	1844.9–1879.9 MHz
LTE Band 10	1710–1770 MHz	2110–2170 MHz
LTE Band 12	699–716 MHz	729–746 MHz
LTE Band 13	777–787 MHz	746–756 MHz
LTE Band 17	704–716 MHz	734–746 MHz
LTE Band 18	815–830 MHz	860–875 MHz
LTE Band 19	830–845 MHz	875–890 MHz
LTE Band 20	832–862 MHz	791–821 MHz
LTE Band 21	1447.9–1462.9 MHz	1495.9–1510.9 MHz
LTE Band 25	1850–1915 MHz	1930–1995 MHz
LTE Band 26	814–849 MHz	859–894 MHz
LTE Band 28	703–748 MHz	758–803 MHz
LTE Band 29	Downlink only	717–728 MHz
LTE Band 30	Downlink only	2350–2360 MHz
LTE Band 32	Downlink only	1452–1496 MHz
LTE Band 66	1710–1780 MHz	2110–2200 MHz
LTE Band 71	663–698 MHz	617–652 MHz
LTE Band 34	2010–2025MHz	2010–2025MHz
LTE Band 38	2570-2620 MHz	2570-2620 MHz
LTE Band 39	1880–1920 MHz	1880–1920 MHz
LTE Band 40	2300–2400 MHz	2300–2400 MHz
LTE Band 41	2496–2690 MHz	2496–2690 MHz
LTE Band 42	3400–3600 MHz	3400–3600 MHz
5G n1	1920 ~ 1980 MHz	2110 ~ 2170 MHz
5G n2	1850 ~ 1910 MHz	1930 ~ 1990 MHz
5G n3	1710 ~ 1785 MHz	1805 ~ 1880 MHz
5G n5	824 ~ 849 MHz	869 ~ 894 MHz
5G n7	2500 ~ 2570 MHz	2620 ~ 2690 MHz
5G n8	880 ~ 915 MHz	925 ~ 960 MHz
5G n20	832~862 MHz	791 ~ 821 MHz
5G n25	1850~1915 MHz	1930~1995 MHz
5G n28	703 ~ 748 MHz	758 ~ 803 MHz
5G n38	2570 ~ 2620 MHz	2570 ~ 2620 MHz
5G n41	2496 - 2690 MHz	2496 - 2690 MHz
5G n66	1710 - 1780 MHz	2110 - 2200 MHz
5G n71	663-698 MHz	617-652 MHz
5G n77	3300-4200 MHz	3300-4200 MHz

5G n78	3300-3800 MHz	3300-3800 MHz
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Power Class and Data Services

Feature	Description
Data Services	5G sub-6GHz (DL 1.8Gbps, UL 300Mbps) LTE Cat19 (DL 1.8 Gbps, UL 200Mbps) DC-HSPA+: 42 Mbps/5.76 Mbps HSPA+: 21 Mbps/5.76 Mbps EDGE: DL:236.8 kbps/UL: 236.8 kbps (Multi-slot Class 12) GPRS: DL: 85.6 kbps/UL: 85.6 kbps (Multi-slot Class 12) GSM: 9.6 kbps/14.4 kbps
LTE Output power (according to Release 8)	Class 3 (+23 dBm± 2 dB) for FDD LTE Band 1 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 2 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 3 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 4 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 5 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 7 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 8 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 9 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 10 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 12 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 13 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 17 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 18 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 19 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 20 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 21 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 25 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 26 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 28 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 34 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 66 Class 3 (+23 dBm± 2 dB) for FDD LTE Band 71 Class 3 (+23 dBm± 2 dB) for TDD LTE Band 34 Class 3 (+23 dBm± 2 dB) for TDD LTE Band 38 Class 3 (+23 dBm± 2 dB) for TDD LTE Band 39 Class 3 (+23 dBm± 2 dB) for TDD LTE Band 40 Class 3 (+23 dBm± 2 dB) for TDD LTE Band 41
GSM and UMTS Output power (according to Release 99)	Class 4 (+33 dBm± 2 dB) for EGSM 900 Class 1 (+30 dBm± 2 dB) for GSM 1800 Class E2 (+27 dBm± 3 dB) for GSM 900 8-PSK Class E2 (+26 dBm + 3/ 4 dB) for GSM 1800 8-PSK Class 3 (+24 dBm + 1/ 3 dB) for UMTS 2100, WCDMA Band 1 Class 3 (+24 dBm + 1/ 3 dB) for UMTS 900, WCDMA Band 8
5G	Class 3 (+23 dBm± 2 dB) for n1 Class 3 (+23 dBm± 2 dB) for n2 Class 3 (+23 dBm± 2 dB) for n3 Class 3 (+23 dBm± 2 dB) for n5 Class 3 (+23 dBm± 2 dB) for n7 Class 3 (+23 dBm± 2 dB) for n8 Class 3 (+23 dBm± 2 dB) for n20 Class 3 (+23 dBm± 2 dB) for n25 Class 3 (+23 dBm+2/-2.5 dB) for n28 Class 3 (+23 dBm± 2 dB) for n38 Class 3 (+23 dBm± 2 dB) for n41 Class 3 (+23 dBm± 2 dB) for n66 Class 3 (+23 dBm+2/-2.5 dB) for n71 Class 3 (+23 dBm+2/-3 dB) for n77 Class 3 (+23 dBm+2/-3 dB) for n78

Note:

5G Data service values may vary depending on the combination of support bands and CA. The data service values shown in the table are the maximum data service values supported by the S5123 IC.

1) 5G NR Feature A.

Waveform

- DL : CP-OFDM only
- UL : CP-OFDM and DFT-OFDM

B. Modulation

- QPSK, 16QAM, 64QAM, 256QAM

C. Carrier aggregation

- DL max 4CC 180MHz(4Rx) for sub6G
- UL max 4CC 300MHz for sub6G

2) LTE Feature A.

FDD/TDD mode

B. Variable bandwidth(BW)

- 1.4, 2, 5, 10, 15, 20 MHz

C. Modulation

- QPSK, 16QAM, 64QAM, 256QAM.

2. Input for the User manual for variants B392

Target market Canada

Model: WAVE-11-HIGH-R1

Contains IC: 6434A- SAN9000 Contains

IC: 6434A- SAN9001

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Target market USA

Federal Communications Commission

(FCC) Compliance Statement – United States

Contains FCC ID: T8GSAN9000

Contains FCC ID: T8GSAN9001

This device complies with Part 15 of the FCC Rules.

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.

Caution: Changes or modifications not expressly approved by the party, responsible for compliance, could void the user's authority to operate the equipment.

3. Input for the User manual for variants B394

Target market China

注意：表格中的值必须填写适当的值-进行中

(Attention: The values in the table must be filled with appropriate values-**work in progress**)

中國某些有害物質限制（中國 RoHS） B394

Part name	Toxic and hazardous substances and elements					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Housing, Cover, Battery Cover	-	0	0	0	0	0
Connectors	0	0	0	0	0	0
PCB ASY	-	0	0	0	0	0
Battery	-	0	0	0	0	0



4. Input for the User manual for variants B395

Target market Brazil

Target market Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones:

- (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y
- (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Target market Taiwan

插在標籤上：

設備名稱：Telematic control unit

模型：WAVE-11-HIGH-R1

輸：DC 12V

品牌：BMW

生產國：匈牙利製造年份/編號：如圖所示

製造商：HARMAN BECKER AUTOMOTIVE SYSTEMS GmbH

包含在用戶手冊中：

1. 設備名稱：Telematic control unit
2. 模型：WAVE-11-HIGH-R1
3. 品牌：BMW

4. 電壓和工作溫度：DC 12V, -20 °C /+55 °C

減少電磁波影響，請妥適使用

表格中的值必須填入適當的值-進行中的工作

設備名稱：WAVE-11-HIGH-R1, Equipment name		型號（型式）：B395 Type designation (Type)				
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁶⁺)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
Housing, Cover, Battery Cover	-	○	○	○	○	○
Battery	○	○	○	○	○	○
Connectors	-	○	○	○	○	○
PCB ASY	-	○	○	○	○	○
<p>備考 1. “超出 0.1 wt %” 及 “超出 0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。 Note 1: “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.</p> <p>備考 2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</p> <p>備考 3. “-” 係指該項限用物質為排除項目。 Note 3: The “-” indicates that the restricted substance corresponds to the exemption.</p>						

注意：表格中的值必须填写适当的值-进行中

(Attention: The values in the table must be filled with appropriate values-work in progress)

Target market Thailand



'เครื่องโทรคมนาคมและอุปกรณ์นี้ หมายความว่า สอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.'
เครื่องวิทยุคมนาคมนิมิตร์ ระดับการแผ่คลื่นแม่เหล็กไฟฟ้า สอดคล้อง
ตามมาตรฐานความปลอดภัยต่อสุขภาพของมนุษย์ ย้ำกการใช้เครื่องวิทยุคมนาคมที่คณะกรรมการก
การโทรคมนาคมแห่งชาติประกาศกำหนด'

นอกจากนี้ต้องมตราประทับต่อไปนี้ในคู่มือผู้ใช้:



License-exempt radio equipment

Target market South Korea

해당 무선 설비는 운용 중 전파혼신 가능성이 있음