IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

1 Report and Results of Examination (May be provided to Manufacturer and under special request to the Commission, Member States, and MIC)

2 The Strategy Used To Demonstrate Compliance (Rationale)

The strategy used to demonstrate the compliance of the product with the essential protection requirements, consisted of full product testing:

1. For Article 3.1(a) LVD compliance (Directive 2014/35/EU) – Based on Clause 2.n below
2. For Article 3.1(a) EMF (SAR or MPE) compliance (Directive 2014/35/EU) – Based on Clause 2.n below
3. For Article 3.1(b) EMC compliance (Directive 2014/30/EU) – Based on Clause 2.n below
4. For Article 3.2 Radio performance compliance – Based on Clause 2.n below

Note 1: Standards that are listed as having a "**Date of cessation of presumption of conformity of the superseded standard"** in the current OJ listing should be detailed in the "Remarks, Restrictions and Observations" Annex of the attached evaluation.

2.1 Application of Harmonized Standards

Where the testing has been performed to Harmonised Standards there is a presumption of conformity under the Directive.

2.2 Application of later versions of Harmonized Standards including Drafts

Where the testing has been performed to a version of the standard (or draft) of a Harmonised Standard(s), provided the Standard has the same or tougher requirements to the Harmonised version of the Standard, then in the evaluation of RFI there is still a presumption of conformity under the Directive.

2.3 Application of superseded Standards

The Standard used must be compared, for each parameter under consideration, against the current Harmonised version of the Standard. If the requirements of the harmonised Standard are fully met, then there is an assumption of presumption of conformity based on the fact that the requirements of the Harmonised Standard have hence been met. Where this cannot be supported then use 2.4 below.

2.4 Application of an Essential test suite or other Client supplied justification

Where the testing has not been performed to Harmonised standards there is a requirement to provide a justification. Please reference a Notified Body document referring to an essential test suite (also known as a test plan) or other client supplied justification.

Reference to a NB essential test suite or client supplied justification for compliance	Accepted / rejected	Comments
All technical documents submitted for NB evaluation.	✓	No additional comments

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3 General Documentation

The following general documents are required prior to review	Compliant	Comments
If application is submitted by an Agent:		
Agent Authorization / Power of Attorney	✓	UL Japan
Attestation describing intent of the application (what is to be evaluated by the NB)	✓	-

4 The Evaluation Of The Technical Documentation (TD)

The Radio Equipment Directive specifies mandatory requirements for a technical documentation and for the application to a Notified body.

4.1 Application Requirements

The application to a Notified Body for a technical evaluation must	Compliant	Comments
Be in writing / electronic format:	✓	Electronically
Be accompanied by attestation that the TD has been submitted only to UL Japan : [*Confirm on EU database that the device is not listed by another NB as having been denied / refused]*	✓	Single NB – refer to on-line application form for attestation. *NB need not to upload this application even to use non-harmonized standards as any related standards aren't harmonized. NB confirmed applicable standards were suitable.*
The manufacturer shall draw up a written EU declaration of conformity for the apparatus model and keep it together with the technical documentation at the disposal of the national authorities for 10 years after the apparatus has been placed on the market.	✓	Inform this requirement separately
If the device falls under the items below the Directive does not apply and the application is to be denied. *Radio equipment used by radio amateurs within the meaning of Article 1, definition 56, of the International Telecommunications Union (ITU) Radio Regulations, unless the equipment is made available on the market The following are considered NOT on the market (a) radio kits for assembly and use by radio amateurs; (b) radio equipment modified by and for the use of radio amateurs; (c) equipment constructed by individual radio amateurs for experimental and scientific purposes related to amateur radio. *Marine equipment falling within the scope of Council Directive 96/98/EC	N/A	Can apply RE directive fully.

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*Airborne products, parts and appliances falling within the scope of Article 3 of Regulation (EC) No 216/2008 of the *European Parliament and of the Council *Custom-built evaluation kits destined for professionals to be used solely at research and development facilities for such purposes		

4.2 Content Requirements

The Technical Documentation must:	**Compliant**	**Comments**
General description of apparatus to which it relates including hardware and software version as appropriate:	✓	In TD
Unique Product Identifier	✓	In TD
Contain information about the design, manufacture and operation thereof:	✓	In TD
Set out the procedures used to ensure the conformity of the apparatus with the protection requirements:	✓	No critical issue observed
Be in material or electronic form:	✓	Electronic
Be in English:	✓	It would be acceptable for Japanese
Give the name and address of the responsible person or, where that person is not the manufacturer, of the manufacturer:	✓	In TD Authorized representative stays in EU.
Contain a list of harmonized standards applied in full or in part the references of which have been published in the *Official Journal of the European Union* or international or national standards. Where those harmonized standards or international or national standards have not been applied, descriptions of the solutions adopted to meet the safety objectives of LVD (Directive 2014/35/EU), EMF (Directive 2014/35/EU), and the Essential Requirements of EMC (Directive 2014/30/EU).	✓	Review only Radio aspects for 3.2. Manufacturer should confirm again after all standards harmonized
Contain such information as is sufficient to enable the enforcement authority to identify the apparatus to which it relates and ascertain whether the apparatus conforms with the essential requirements:	✓	In TD
Contain photographs or illustrations showing external features, marking and internal layout	✓	In TD
versions of software or firmware affecting compliance with essential requirements	✓	Not mentioned but conventionally accepted
conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits and other relevant similar elements	✓	Sufficient
Block diagram:	✓	In TD

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<table>
<tr><td>Contain descriptions and explanations necessary for the understanding of the drawings, schematics, performance specification and operation of the product: (Operational Description)</td><td>✓</td><td>In TD</td></tr>
<tr><td>Contains a sample of the Declaration of Conformity, which must reference the Article(s) detailed by this TD, specifications (by version or date) or codes of practice applied by the manufacturer:</td><td>✓</td><td>In TD</td></tr>
<tr><td>Contain test reports or other results for Article 3.2 Radio Spectrum:</td><td>✓</td><td>In TD</td></tr>
<tr><td>Contain results of design calculations made, examinations carried out, etc.</td><td>✓</td><td>In TD</td></tr>
<tr><td>Contain test reports or other results for Article 3.1(a) LVD (Directive 2014/35/EU):</td><td>N/A</td><td>-</td></tr>
<tr><td>Contain test reports or other results for Article 3.1(a) EMF (Directive 2014/35/EU):</td><td>N/A</td><td>-</td></tr>
<tr><td>Contain test reports or other results for Article 3.1(b) EMC (Directive 2014/30/EU):</td><td>N/A</td><td>-</td></tr>
<tr><td>Contains attestation that manufacturer shall keep the technical documentation and the EU declaration of conformity for 10 years after the radio equipment has been placed on the market (Article 10(4)).</td><td>✓</td><td>Inform this requirement separately</td></tr>
<tr><td>Manufacturer shall indicate on the radio equipment their name, registered trade name or registered trade mark and the postal address at which they can be contacted
<table>
<tr><td></td><td>CE Marking</td><td>Manufacturer’s address</td><td>Authorized representative address</td><td>Importer’s address</td></tr>
<tr><td>Label</td><td>✓</td><td>N/A</td><td>✓</td><td>(✓)</td></tr>
<tr><td>Package</td><td>N/A</td><td>N/A</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Manual</td><td>✓</td><td>✓</td><td>✓</td><td>(✓)</td></tr>
</table>
1) CE Marking must be on label and package
2) Manufactures address must be on one of them at least
3) If Authorized representative used, it may be on behalf of the manufacturer.
4) If Manufacturer doesn’t stay in EU, importer’s address must be required.</td><td>✓</td><td>Confirmed by the manual for the manufacturer’s postal address.
Confirmed by the label / manual for the Authorized representative postal address.
This device will be installed on the car.(Skip Package information)
Manufacturer asks the description manufacturer’s and importer’s information on the car manual.</td></tr>
<tr><td>Is an authorized representative used</td><td>Yes</td><td>Authorized representative stays in EU.</td></tr>
<tr><td>If yes – manufacturer must provide, in writing, authorization.</td><td>✓</td><td>Confirmed by DoC</td></tr>
<tr><td>The Manufacturer’s Declaration of Conformity must:</td><td></td><td></td></tr>
<tr><td>Contain the Apparatus Model/Product (Product, Type, Batch, or Serial Number)</td><td>✓</td><td>No serial and batch but conventionally</td></tr>
</table>

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

		accepted
Contain the Name and Address of the manufacturer or his authorized representative	✓	Confirmed
Contain the Statement that "this declaration of conformity is issued under the sole responsibility of the manufacturer"	✓	Confirmed
Contain the Object of Declaration (identification of apparatus allowing traceability; it may include a colour image of sufficient clarity where necessary for the identification of the apparatus.)	✓	Some item missing now, but conventionally accepted
The Object of Declaration described above is in conformity with the relevant Union harmonised legislation (DoC must list Directive 2014/53/EU and can include any other legislation.)	✓	Confirmed This DoC includes other directive (RoHS)
References to harmonised standards used, including the date of the standard, or references to the other technical specifications, including the date of specifications, in relation to which conformity is declared.	✓	Applicable standards only
The Notified Body (Name, Number) who issued the Type Examination Certificate shall **not** appear on the certificate or label following the CE mark (Article 20, only allows NB number for Annex IV).	✓	Inform this requirement separately
Additional Information: Signed for and on behalf of: Place and Date of DoC: Signatory Name, Function, Signature	✓	NB number required on DoC. Some item missing now, but conventionally accepted
Shortened Manufacturer's Declaration of Conformity (if used) must:		
State: Hereby, [Name of manufacturer] declares that the radio equipment type [designation of type of radio equipment] is in compliance with Directive 2014/53/EU.	✓	Confirmed
Identify where the full text of the DoC is available and provide internet address.	✓	In manual
Overall Assessment:	✓	Confirmed

4.3 A Review Of The Technical Description Of The Apparatus

Basic direct function:	in TD Yes
Modes of operation:	in TD Yes
Ways to configure:	in TD Yes
Physical characteristics:	in TD Yes

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

Electrical characteristics:	in TD Yes
Operating environment:	in TD Yes
RED Art 3.1 - Radio equipment shall be constructed so as to ensure:	
a) the protection of health and safety of persons and of domestic animals and the protection of property, including the objectives with respect to safety requirements set out in Directive 2014/35/EU, but with no voltage limit applying;	N/A (Confirmed listed standards on DoC)
b) an adequate level of electromagnetic compatibility as set out in Directive 2014/30/EU.	N/A (Confirmed listed standards on DoC)
RED Art 3.2 - Radio equipment shall be so constructed that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.	✓
RED Art 3.3 - Radio equipment within certain categories or classes shall be so constructed that it complies with the following essential requirements:	
(a) radio equipment interworks with accessories, in particular with common chargers;	N/A
(b) radio equipment interworks via networks with other radio equipment;	N/A
(c) radio equipment can be connected to interfaces of the appropriate type throughout the Union;	N/A
(d) radio equipment does not harm the network or its functioning nor misuse network resources, thereby causing an unacceptable degradation of service;	N/A
e) radio equipment incorporates safeguards to ensure that the personal data and privacy of the user and of the subscriber are protected;	N/A
(f) radio equipment supports certain features ensuring protection from fraud;	N/A
(g) radio equipment supports certain features ensuring access to emergency services;	N/A
(h) radio equipment supports certain features in order to facilitate its use by users with a disability;	N/A
(i)radio equipment supports certain features in order to ensure that software can only be loaded into the radio equipment where the compliance of the combination of the radio equipment and software has been demonstrated;	N/A
Article 10(2) - Confirmed that radio equipment shall be so constructed that it can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum. Manufacture must supply an explanation of the compliance with the requirement in Article 10(2). Does device use harmonized Frequency bands (Article 8). Check is done through EFIS (Clause 24) (http://www.efis.dk/)	✓ Class1 and receiver

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4.4 A Miscellaneous Required Items

Manufacture must supply an explanation of the compliance with the requirement in Article 10(10). In cases of restrictions on putting into service or of requirements for authorisation of use, information available on the packaging shall allow the identification of the Member States or the geographical area within a Member State where restrictions on putting into service or requirements for authorisation of use exist. Such information shall be completed in the instructions accompanying the radio equipment.	✓ Class1 and receiver

4.5 Review of strategy used to demonstrate the compliance of the product, including Test Reports

4.5.1 Review of Client Strategy (Rationale)

4.5.1.1 The Client Strategy (Rationale) shall be reviewed. Where the Strategy refers to Product Specific Harmonised Standards there is a presumption of conformity unless the product is used in a non - typical way or environment. (an example would be controlling equipment where there is a danger to life if it fails unsafe).

Is the Client Strategy (Rationale) in Section 2 sufficient to show that the product described in their TD, and any described variants, should meet the essential requirements of the RED directive, subject to the detailed supporting information.	<Statement Entered Here> This is acceptable by the technical documentation including the risk assessment.

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

4.5.2 Article 3.1(a) LVD - system level -> No assessment

Test report number:	
Test laboratory name:	
Accreditation:	ISO/IEC 17025: 2005
EUT Model no:	
Serial No (if available):	
Review of Results	
CB Scheme certificate and report:	
Methods referenced:	
Measurement Uncertainties stated:	
If lab is not ISO 17025 accredited, competency is validates by CV of test engineer(s).	
Equipment calibrated:	
Correct tests applied:	
Correct performance criteria, limits and levels applied:	
Tests Passed/Failed:	
Comments (if applicable)	
Article 3.1(a) LVD requirement met	

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

4.5.3 Article 3.1(a) EMF (SAR or MPE) -> No assessment

Note – delete whichever table (measurement versus calculation) is not applicable

Measurement	
Test report number:	
Test laboratory name:	
Accreditation:	ISO/IEC 17025: 2005
EUT Model no:	
Serial No (if available):	
Review of Results	
Methods referenced:	If 17025 accredited N/A
Measurement Uncertainties stated:	If 17025 accredited N/A
Test Engineer(s) CV validated:	If 17025 accredited N/A
Equipment calibrated:	
Correct tests applied:	
Correct performance criteria, limits and levels applied:	
Tests Passed/Failed:	
Comments (if applicable)	
Article 3.1(a) EMF (SAR or MPE) requirement met	

Calculation	
Test report number:	
Test laboratory name:	
Accreditation:	ISO/IEC 17025: 2005
EUT Model no:	
Serial No (if available):	
Review of Results	
Methods referenced:	If 17025 accredited N/A
RF Power as manufacturers documentation	If 17025 accredited N/A
Test Engineer(s) CV validated:	If 17025 accredited N/A
Antenna Gain stated	
Correct tests applied:	
Correct performance criteria, limits and levels applied:	
Tests Passed/Failed:	
Comments (if applicable)	
Article 3.1(a) EMF (SAR or MPE) requirement met	

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4.5.4 Article 3.1(b) EMC -> No assessment

Test report number:	
Test laboratory name:	
Accreditation:	ISO/IEC 17025: 2005
EUT Model no:	
Serial No (if available):	
Review of Results	
Methods referenced:	If 17025 accredited N/A
Measurement Uncertainties stated:	If 17025 accredited N/A
Test Engineer(s) CV validated:	If 17025 accredited N/A
Equipment calibrated:	
Correct tests applied:	
Correct performance criteria, limits and levels applied:	
Tests Passed/Failed:	
Comments (if applicable)	
Article 3.1(b) EMC requirement met	

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4.5.5 Article 3.2 RF Spectrum – by technology

Technology: 2.4 GHz wideband transmitter system	
Test report number:	12685233S-A-R1
Test laboratory name:	UL Japan, Inc.
Accreditation:	ISO/IEC 17025: 2005
EUT model no:	DNX5190DABS
Serial No (if available):	PE-X0001, PE-X0010
Review of Results	
Methods referenced:	EN 300 328 V2.1.1
Measurement Uncertainties stated:	Confirmed
Test Engineer(s) CV validated:	Performed by senior engineer
Equipment calibrated:	Confirmed
Correct tests applied:	Confirmed
Extremes of voltage and temperature applied correctly:	-10 deg.C to +60 deg.C (Defined by Manufacturer) Vnom DC 12.0 V only
Correct performance criteria, limits and levels applied:	Receiver Category 2 (Bluetooth: Non-adaptive equipment with a Medium Utilization (MU) factor greater than 1 % and less than or equal to 10 % or adaptive equipment with a maximum RF output power of 10 dBm e.i.r.p.)
Tests Passed/Failed:	Passed
Comments (if applicable)	NB confirmed the applicability of the other model's test report
Article 3.2 RF Spectrum requirement met	Confirmed

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

4.5.6 Article 3.2 RF Spectrum – by technology

Technology: Receiver (AM, FM, DAB and etc.)	
Test report number:	12688559Y-A
Test laboratory name:	UL Japan, Inc.
Accreditation:	ISO/IEC 17025: 2005
EUT model no:	DNX5190DABS
Serial No (if available):	PE-X0012
Review of Results	
Methods referenced:	Draft EN 303 345 V1.1.1 Final Draft EN 303 345 V1.1.7
Measurement Uncertainties stated:	Confirmed, especially standard's conducted measurements uncertainly (Below 1 dB)
Test Engineer(s) CV validated:	Confirmed to be handled by senior engineer
Equipment calibrated:	Confirmed
Correct tests applied:	Confirmed
Extremes of voltage and temperature applied correctly:	Not required
Correct performance criteria, limits and levels applied:	Confirmed to apply each requirement for AM, FM and DAB receiver
Tests Passed/Failed:	Passed
Comments (if applicable)	NB confirmed the applicability of the other model's test report
Article 3.2 RF Spectrum requirement met	Confirmed

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

4.5.7 Article 3.2 RF Spectrum – by technology

Technology: Receiver (GPS)	
Test report number:	12685233S-C-R1
Test laboratory name:	UL Japan, Inc.
Accreditation:	ISO/IEC 17025: 2005
EUT model no:	DNX5190DABS
Serial No (if available):	PE-X0010
Review of Results	
Methods referenced:	EN 303 413 V1.1.1
Measurement Uncertainties stated:	Confirmed
Test Engineer(s) CV validated:	Performed by senior engineer
Equipment calibrated:	Confirmed
Correct tests applied:	Confirmed
Extremes of voltage and temperature applied correctly:	Not applicable
Correct performance criteria, limits and levels applied:	Confirmed to apply each requirement for GPS and SBAS (EGNOS).
Tests Passed/Failed:	Passed
Comments (if applicable)	NB confirmed the applicability of the other model's test report NB confirmed the applicability of EN 303 413 V1.1.1.
Article 3.2 RF Spectrum requirement met	Confirmed

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

4.5.8 User Instruction review

User manual title and date:	✓
Does the user instruction document adequately describe the use and any limitations of use.	✓ (no critical limitation)
Instructions shall include the information required to use radio equipment in accordance with its intended use. Such information shall include, where applicable, a description of accessories and components, including software, which allow the radio equipment to operate as intended. Such instructions and safety information, as well as any labelling, shall be clear, understandable and intelligible. Note: instructions and safety information shall be in a language which can be easily understood by consumers and other end-users, as determined by the Member State concerned.	✓ (sufficient)
The following information shall also be included in the case of radio equipment intentionally emitting radio waves: (a) frequency band(s) in which the radio equipment operates; (b) maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates.	✓ (confirmed)
In cases of restrictions on putting into service or of requirements for authorisation of use, information available on the packaging shall allow the identification of the Member States or the geographical area within a Member State where restrictions on putting into service or requirements for authorisation of use exist. Such information shall be completed in the instructions accompanying the radio equipment.	✓ (no critical limitation)

4.6 Review of Phenomena Required But Not Tested

N/A

4.7 Review of Product Variants

Confirmed (No variant models)

4.8 Review of Client Strategy [for the intended use and operating environment]

No concern, sufficient

Note 1: State if the strategy is believed to be sufficient to show compliance for the intended use and operating environment.

IMPORTANT: Except as Mentioned in Item 1, this report should not be released without agreement from the manufacturer.

5 Notified Body Compliance Examination

A notified body examination certificate with attached annexes should be sent to the client as an indicator of compliance or non-compliance.

6 Refusal Information:

In the case where an application for NB review concludes in a negative result and a refusal is to be issued the following shall be sent to the applicant in the form of a written response (can be via E-mail):

> We have completed our review of the [N/A], model [N/A] under UL Japan assessment number [N/A] and have concluded that the device does not meet the essential requirements of the Radio Equipment Directive 2014/53/EU. The following are the reason that we have come to this conclusion:
>
> a. Reason N/A
>
> For these reasons we have not issued an EU-type examination certificate and this refusal will be entered in the EU NB Database which will notify other Notified Bodies of the results of this assessment.

7 Checked by:

UL Japan only – refer to database for reviewer (Mitsuru Fujimura) and certifier names (Tetsuya Hashimoto). If this document is submitted from reviewer, it will be deemed the recommendation of certification to certifier.

TEMPLATE REVISION HISTORY（UL JAPAN INTERNAL USE ONLY）	
1A November 15, 2016	Initial issue by Tetsuya Hashimoto Approved: Masahito Hashizume
1B February 23, 2017 T.H/M.H	Modified template verbiage in remarks section for devices with usage restrictions and referencing article 10(10).
1C May 27, 2017 T.H/M.H	Modify and confirm by Tetsuya Hashimoto Clarification of essential requirements
1D December 1, 2017	Modify and confirm by Tetsuya Hashimoto Clarification for definition of Class 2 equipment
1E August 23, 2018	Modify and confirm by Tetsuya Hashimoto Delete and consolidate revision history of certificate
1F December 20,2018	Change expiration date from three years to five years