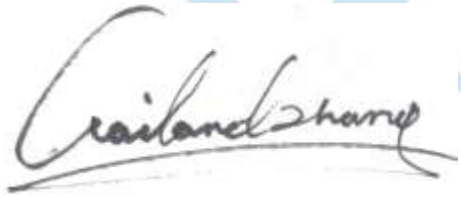
Notified Body
EU Type Examination Certificate

Manufacturer company name:	Harman Automotive Electronic Systems (Suzhou)Co.,Ltd.
Manufacturer address:	No.125, Fangzhou Road, SIP,Suzhou, Jiangsu Province,China 215024
Description of the radio equipment:	Infotainment headunit
Trade name/brand name:	Harman
Model/type indication:	CTR, F002, F012
Software version:	R2
Hardware version:	D
Frequency bands of operation:	2402 MHz to 2480 MHz 2412 MHz to 2472 MHz 5180 MHz to 5320 MHz 5500 MHz to 5700 MHz 5745 MHz to 5825 MHz
TD reference:	CTR
ACB project number:	ATCB022732
Certificate number:	ATCB022732, issue 1

ACB, Inc. is designated as a Notified Body under the
U.S.-EU Mutual Recognition Agreement for Radio Equipment Directive 2014/53/EU

ACB, Inc.
Notified Body Number 1588
6731 Whittier Avenue, Suite C110
McLean, VA 22101, USA

In the opinion of ACB, Inc., the examination of the technical documentation as drawn up by the manufacturer demonstrates that the essential requirements of Article 3.1a, Article 3.1b and Article 3.2, of Radio Equipment Directive 2014/53/EU have been met. The conformity assessment on the radio equipment listed above and as described in Annex 1 to this EU-type examination certificate has been carried out in accordance with Annex III, Module B, of Radio Equipment Directive 2014/53/EU. This EU-type examination certificate relates only to the documents as provided to ACB, Inc. A list of documentation forming the basis for the EU-type examination is provided in Annex 2 to this EU-type examination certificate.



Notified Body: Wailand Zhang

31 May 2018
Date

The radio equipment as described and documented in the technical documentation as drawn up by the manufacturer is a car audio playing system.
It supports IEEE 802.11b/g/n (HT20 & HT40) Wireless LAN technology in the 2.4 GHz band.
It supports IEEE 802.11a/n (HT20 & HT40) Wireless LAN technology in the 5 GHz band.
It supports Bluetooth Wireless PAN technology in the 2.4 GHz band with EDR.
It supports a GPS Receiver in the 1.5 GHz band.
It supports FM Broadcast reception in the 87.5 MHz to 108 MHz band.
It supports DAB Broadcast reception in the 174 MHz to 240 MHz band.
It supports AM Broadcast reception in the 526.5 kHz to 1606.5 kHz band.

Details of operation:

Description of service:	IEEE 802.11b/g/n WLAN
Transmit frequency:	2412 MHz to 2472 MHz, 2422 MHz to 2462 MHz (HT40)
Receive frequency:	2412 MHz to 2472 MHz, 2422 MHz to 2462 MHz (HT40)
Modulation:	DSSS, OFDM
Transmit power:	17.5 dBm, e.i.r.p.

Description of service:	IEEE 802.11a/n WLAN
Transmit frequency:	5180 MHz to 5320 MHz, 5190 MHz to 5310 MHz (HT40)
Receive frequency:	5180 MHz to 5320 MHz, 5190 MHz to 5310 MHz (HT40)
Modulation:	OFDM
Transmit power:	1.5 dBm, e.i.r.p.

Description of service:	IEEE 802.11a/n WLAN
Transmit frequency:	5500 MHz to 5700 MHz, 5510 MHz to 5670 MHz (HT40)
Receive frequency:	5500 MHz to 5700 MHz, 5510 MHz to 5670 MHz (HT40)
Modulation:	OFDM
Transmit power:	7.8 dBm, e.i.r.p.

Description of service:	IEEE 802.11a/n WLAN
Transmit frequency:	5745 MHz to 5825 MHz, 5755 MHz to 5795 MHz (HT40)
Receive frequency:	5745 MHz to 5825 MHz, 5755 MHz to 5795 MHz (HT40)
Modulation:	OFDM
Transmit power:	4.85 dBm, e.i.r.p.

Description of service:	Bluetooth Basic Rate + EDR
Transmit frequency:	2402 MHz to 2480 MHz
Receive frequency:	2402 MHz to 2480 MHz
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Transmit power:	0.6 dBm, e.i.r.p.

Description of service:	GPS Receiver
Transmit frequency:	None
Receive frequency:	1575.42 MHz
Description of service:	FM Broadcast Receiver
Transmit frequency:	None
Receive frequency:	87.5 MHz to 108 MHz
Description of service:	DAB Broadcast Receiver
Transmit frequency:	None
Receive frequency:	174 MHz to 240 MHz
Description of service:	AM Broadcast Receiver
Transmit frequency:	None
Receive frequency:	526.5 kHz to 1606.5 kHz

Annex 2 to EU-type examination certificate for Radio Equipment Directive 2014/53/EU
Date of issue: 31 May 2018 TD reference: CTR
ACB project number/certificate number: ATCB022732, issue 1

1 Test report:

	Report number:	Dated:
EMC	E201711140851-6	12 February 2018
EMC	E201711140851-7	26 April 2018
Radio	E201711140851-1	20 March 2018
Radio	E201711140851-2	20 March 2018
Radio	E201711140851-3	25 March 2018
Radio	E201711140851-4	25 March 2018
Radio	E201711140851-5	20 March 2018
Radio	E201711140851-8	03 April 2018
Radio	E201711140851-9	26 April 2018
RF safety	E201711140851-10	02 April 2018
Product safety	S20171127705801-M1	30 January 2018

2 Technical documentation provided:

Block diagram	Circuit diagram/schematics	External photographs
Internal photographs	Label drawing/location	Operational description
Parts list/bill of materials	PCB layout	Assembly diagram
Test reports	Test setup photographs	User manual
EU declaration of conformity	Risk assessment	

Referenced TD: CTR (ATCB022530)

3 Standards used to demonstrate conformity with the essential requirements of Radio Equipment Directive 2014/53/EU:

Radio Spectrum (Article 3.2):	EN 300 328 V2.1.1	EN 301 893 V2.1.1
	EN 303 413 V1.1.1	EN 303 345 V1.1.7
	EN 300 440 V2.2.0	
EMC (Article 3.1b):	EN 301 489-1 V2.2.0	EN 301 489-3 V2.1.1
	EN 301 489-17 V3.2.0	EN 301 489-19 V2.1.0
	EN 55032: 2015	EN 55035: 2017
RF safety (Article 3.1a):	EN 62311: 2018	
Product safety (Article 3.1a):	EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013	

4 Additional information:

This is a Class 2 device.

Radio Equipment Directive 2014/53/EU, Article 10.4: Manufacturers shall keep the technical documentation and the EU declaration of conformity for 10 years after the radio equipment has been placed on the market.

Radio Equipment Directive 2014/53/EU, Article 10.6: Manufacturers shall ensure that radio equipment which they have placed on the market bears a type, batch or serial number or other element allowing its identification, or, where the size or nature of the radio equipment does not allow it, that the required information is provided on the packaging, or in a document accompanying the radio equipment.

Radio Equipment Directive 2014/53/EU, Article 10.7: Manufacturers 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 or, where the size or nature of radio equipment does not allow it, on its packaging, or in a document accompanying the radio equipment. The address shall indicate a single point at which the manufacturer can be contacted. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

Radio Equipment Directive 2014/53/EU, Article 10.8: Manufacturers shall ensure that the radio equipment is accompanied by instructions and safety information in a language which can be easily understood by consumers and other end-users, as determined by the Member State concerned. 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.

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.

Radio Equipment Directive 2014/53/EU, Article 10.9: Manufacturers shall ensure that each item of radio equipment is accompanied by a copy of the EU declaration of conformity or by a simplified EU declaration of conformity. Where a simplified EU declaration of conformity is provided, it shall contain the exact internet address where the full text of the EU declaration of conformity can be obtained.

Radio Equipment Directive 2014/53/EU, Article 10.10: In cases of restrictions on putting into service or of requirements for authorization 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 authorization of use exist. Such information shall be completed in the instructions accompanying the radio equipment.

Radio Equipment Directive 2014/53/EU, Article 19.2: On account of the nature of radio equipment, the height of the CE marking affixed to radio equipment may be lower than 5 mm, provided that it remains visible and legible.

Radio Equipment Directive 2014/53/EU, Article 20.1: The CE marking shall be affixed visibly, legibly and indelibly to the radio equipment or to its data plate, unless that is not possible or not warranted on account of the nature of radio equipment. The CE marking shall also be affixed visibly and legibly to the packaging.

Radio Equipment Directive 2014/53/EU, Annex III, Module B.7: The manufacturer shall inform the notified body that holds the technical documentation relating to the EU-type examination certificate of all modifications to the approved type that may affect the conformity of the radio equipment with the essential requirements of this Directive or the conditions for validity of that certificate. Such modifications shall require additional approval in the form of an addition to the original EU-type examination certificate.

This review includes draft standards, deviations from the standards and technical justification for compliance.

In accordance with Notified Body guidance; if there are no changes, a Notified Body EU type examination certificate has a validity of 10 years from the date of issue.

5 Contact information:

For contact with ACB or questions regarding this EU-type examination certificate:

Web: www.acbcert.com http://acbcert.com/contact Tel.: (+1) 703 847 4700