

Risk Assessment according 2014/53/EU RED

1. General			
Company Name	Shenzhen DOKE Electronic Co.,Ltd		
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2. Identification of Equipment	
Model Name	BV7200
Family Model	N/A
Model Difference	N/A
Trade Mark	Blackview
Hardware Version	TE888_MAIN_PCB_V1.1
Software Version	BV7200_EEA_TE888
Firmware Version	N/A
Working Temperature	+40°C ~ -10°C

3. Technical Description	
Module/Final Application/Combined Equipment	Mobile Phone
Function of the Final Application	
Radio Technologies/ Antenna	<input checked="" type="checkbox"/> WLAN 2.4 GHz <input checked="" type="checkbox"/> b/g/n20/n40 <input type="checkbox"/> other Antenna type:PIFA <input checked="" type="checkbox"/> WLAN 5.2/5.8 GHz <input checked="" type="checkbox"/> a/n(20/40) /ac(20/40/80) <input type="checkbox"/> other, Bands <input type="checkbox"/> Antenna type:PIFA <input checked="" type="checkbox"/> BT classic Antenna type:PIFA <input checked="" type="checkbox"/> BT EDR Antenna type:PIFA <input checked="" type="checkbox"/> BT LE Antenna type:PIFA <input type="checkbox"/> Zig Bee Antenna type <input type="checkbox"/> Z Wave Antenna type Frequency <input type="checkbox"/> RFID Antenna type Frequency <input checked="" type="checkbox"/> 2G, Bands <input checked="" type="checkbox"/> GSM/GPRS/EGPRS900/1800.... Antenna type:PIFA <input checked="" type="checkbox"/> 3G, Bands <input checked="" type="checkbox"/> WCDMA/HSDPA/HSUPA B1/B8. Antenna type:PIFA <input checked="" type="checkbox"/> 4G, Bands <input checked="" type="checkbox"/> LTE B1/B3/B7/B8/B20/B28/B38/B40 Antenna type:PIFA <input type="checkbox"/> Proprietary , Frequency Channel Bandwidth RF-Power Antenna type <input type="checkbox"/> Transmitter <input type="checkbox"/> Receiver <input type="checkbox"/> Transceiver, <input checked="" type="checkbox"/> other:GPS Antenna type: PIFA; FMAntenna type: Use earphone as antenna; NFC/WPT Ant Type:Induction coil
Radio application environment	<input type="checkbox"/> Automotive, additional requirements requested to RED defined in ECE 10 Directive & OEM Requirements <input type="checkbox"/> Industry, <input checked="" type="checkbox"/> Consumer <input type="checkbox"/> Medical, additional requirements requested to RED defined in 93/42/EU <input type="checkbox"/> Airborne, additional requirements requested to RED defined in OEM Requirements <input type="checkbox"/> Ship, additional requirements requested to RED defined in OEM Requirements or 96/98/EU & 2014/90/EU <input type="checkbox"/> ARTEX 93/15/EU & 2014/28/EU <input type="checkbox"/> Other
Intended Used	Commercial used

**4. Essential requirements acc. Article 3.1a electrical safety,
Extract from CENELEC GUIDE 32 Guidelines for Safety Related Risk Assessment and Risk Reduction for Low Voltage
Equipment Edition 1, 2014-07**

Requirement	Specification/conditions	Compliance verified by
Preliminary observations	See below	Application of Annex A of Guide 32 Guidelines
Safety integration	Adequate protection for persons and property provided. Details See below	Application of this Guide, in particular application of the "3-step-method" X- Inherent design measures - Protective measures - User information
Protection against electrical hazards a) leakage current b) energy supply c) stored charges d) arcs e) electric shock f) burns	External power supply was approved Input : DC5V, 3A	-EN 62368-1:2014+A11:2017
Protection against mechanical hazards a) instability b) break-down during operation c) falling or ejected objects d) inadequate surfaces, edges or corners e) moving parts, especially where there may be variations in the rotational speed of parts f) vibration g) improper fitting of parts	Weight < 1kg, no instability hazard. 100N force to back cover, 3drops from 1m height, stress relief test at 70°C for 7h.	-EN 62368-1:2014+A11:2017 -Inherent design measures
Protection against other hazards a) Explosion b) Optical radiation c) Fire d) Temperature e) Acoustic Noise f) Biological and chemical effects g) Emissions, production and/or use of hazardous substances h) e.g. gases, liquids, dusts, mists, vapour i) Unattended operation j) Connection to and interruption from power supply k) Combination of equipment l) Implosion m) Hygiene conditions n) Ergonomics	Enclosure:V-0or better. The max.operating temperature is 40°C. battery comply with EN 62133-2, no explosion during and after testing.	-EN 62368-2:2014+A11:2017 - Inherent design measures
Functional safety and reliability a) Equipment design b) Type related hazards c) System faults	No such hazards existed	- Inherent design measures

**5. Essential requirements acc. Article 3.1a Health's,
Extract from Guidelines for Safety Related Risk Assessment and Risk Reduction for Low Voltage Equipment Edition 1,
2014-07**

Requirement	Specification/conditions	Compliance verified by
a) Hazards arising from electric, magnetic, and electromagnetic fields,	Pconducted>20mW, Ambient temperature: 20°C~24°C Relative Humidity: 30%~70% Separation distance of 5mm	EN 50360:2017; EN 50566:2017; EN 62209-1:2016; EN 62209-2:2010; EN 62479:2010; Max Simultaneous TxSARValue1.747W/kg< Limit 2 W/kg, Compliance.

6. Essential requirements acc. Article 3.1b electromagnetic compatibility as set out in Directive 2014/30/EU

Requirement	Specification/conditions	Compliance verified by
Electrostatic discharge immunity test,	The test severity level for contact discharge : ± 4 kV and for air discharge: ± 8 kV; Ambient temperature: 15 °C~35 °C; Relative humidity: 30 %~ 60 %; Atmospheric pressure: 86 kPa~ 106 kPa	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55035:2017+A11:2020 EN 61000-4-2 (Contact discharge:Level2; Air discharge: Level 3)
Radiated, radio-frequency, electromagnetic field immunity test,	Test Field Strength: 3 V/m Modulation:1kHz Sine Wave, 80%, AM Modulation Frequency Range:80 MHz –6GHz	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 61000-4-3 (Level2)
Radiated, radio-frequency, electromagnetic field immunity test,	Test Field Strength: 3 V/m Modulation:1kHz Sine Wave, 80%, AM Modulation Frequency Range:80 MHz –1GHz 1800MHz 2600MHz 3500MHz 5000MHz	EN 55035:2017+A11:2020 EN 61000-4-3 (Level2)
Electrical fast transient/burst immunity test,	Test Voltage: Power Line: 1 kV Impulse Frequency:For DC/AC ports: 5 kHz	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55035:2017+A11:2020 EN 61000-4-4(Level 2)
Surge immunity test,	Test Voltage: Power Line: up to 1 kV Phase Angle: 0 /90/180/270	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 61000-4-5 (Level2)
Surge immunity test,	Test Voltage:PowerLine: up to 1 kV Phase Angle: 90/270	EN 55035:2017+A11:2020 EN 61000-4-5 (Level2)

Immunity test to conducted disturbances induced by radio-frequency fields,	Frequency Range:0.15 MHz - 80 MHz Field Strength:3Vr.m.s. Modulation:1kHz Sine Wave, 80%, AM Modulation	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55035:2017+A11:2020 EN 61000-4-6 (Level2)
Voltage dips, short interruptions and voltage variations immunity test,	VoltageReduction: Voltage dip 0%, Duration: 10ms; Voltage dip 0%, Duration: 20ms; Voltage dip 70%, Duration: 10ms; Voltage dip 70%, Duration: 500ms; Voltage interruptions: Duration: 5000ms	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55035:2017+A11:2020 EN 61000-4-11
Conducted Emissions,	Frequency Range:0.15MHz~30MHz; Test line:AC power line	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55032:2015+A11:2020 (Class B)
Radiated Emissions,	Frequency Range:30MHz~1GHz & 1GHz~6GHz	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 55032:2015+A11:2020 (Class B)
Harmonic current emission,	N/A	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN IEC 61000-3-2:2019
Voltage fluctuations and flicker	Test items:Pst, Plt, dc, dmax, d(t)	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1 (2019-03) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.1.1 (2019-04) ETSI EN 301 489-52 V1.2.1 (2021-11) EN 61000-3-3:2013+A1:2019
Further EMC requirements see EN 61000-4-1 or specialized EMC requirements depends from the product	N/A	N/A

7. Essential requirements acc. Article 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

Requirement	Specification/conditions	Compliance verified by
Transmitter Requirements	BR+EDR TX; BLE TX; WIFI 2.4G(802.11b/g/n20/n40 TX); WIFI 5.2G/5.8G(802.11a/n20/n40/ac20/ac40/ac80 TX); GSM/GPRS/EGPRS 900/1800 TX; WCDMA/HSDPA/HSUPA B1/B8 TX; LTE B1/B3/B7/B8/B20/B40TX; NFC TX; Normal Test Conditions: Temperature:15°C - 35°C Relative Humidity:20% - 75% Supply Voltage: DC 3.85V Air Pressure:980 ... 1020 hPa; Extreme Test Conditions: Temperature:-10°C ~+40°C Supply Voltage: DC 3.4V, DC 4.2V	ETSI EN 301 511 V12.5.1 (2017-03); ETSI EN 301 908-1 V13.1.1 (2019-11); ETSI EN 301 908-2 V13.1.1 (2020-06); ETSI EN 301 908-13 V13.1.1 (2019-11); ETSI EN 300 328 V2.2.2 (2019-07); ETSI EN 301 893 V2.1.1 (2017-05); ETSI EN 300 440 V2.2.1 (2018-07); ETSI EN 300 330 V2.1.1 (2017-02);
Receiver Requirements	BR+EDR RX; BLE RX; WIFI 2.4G(802.11b/g/n20/n40 RX); WIFI 5.2G/5.8G(802.11a/n20/n40/ac20/ac40/ac80 RX); GSM/GPRS/EGPRS 900/1800 RX; WCDMA/HSDPA/HSUPARX; LTE B1/B3/B7/B8/B20/B40 RX; NFC RX FM Receiver GPS Receiver Normal Test Conditions: Temperature:15°C - 35°C Relative Humidity:20% - 75% Supply Voltage: DC 3.85V Air Pressure:980 ... 1020 hPa;	ETSI EN 301 511 V12.5.1 (2017-03); ETSI EN 301 908-1 V13.1.1 (2019-11); ETSI EN 301 908-2 V13.1.1 (2020-06); ETSI EN 301 908-13 V13.1.1 (2019-11); ETSI EN 300 328 V2.2.2 (2019-07); ETSI EN 301 893 V2.1.1 (2017-05); ETSI EN 300 440 V2.2.1 (2018-07); ETSI EN 300 330 V2.1.1 (2017-02); ETSI EN 303 413 V1.2.1 (2021-04); ETSI EN 303 345-1 V1.1.1 (2019-06); ETSI EN 303 345-3 V1.1.1 (2021-06);

Co-Location Transmitter	BR+EDR TX; BLE TX; WIFI 2.4G(802.11b/g/n20/n40 TX); WIFI 5.2G/5.8G(802.11a/n20/n40/ac20/ac40/ac80 TX); GSM/GPRS/EGPRS 900/1800 TX; WCDMA/HSDPA/HSUPA B1/B8 TX; LTE B1/B3/B7/B8/B20/B40 TX; NFC TX; Normal Test Conditions: Temperature:15°C - 35°C Relative Humidity:20% - 75% Supply Voltage: DC 3.85V Air Pressure:980 ... 1020 hPa;	ETSI EN 301 511 V12.5.1 (2017-03); ETSI EN 301 908-1 V13.1.1 (2019-11); ETSI EN 301 908-2 V13.1.1 (2020-06); ETSI EN 301 908-13 V13.1.1 (2019-11); ETSI EN 300 328 V2.2.2 (2019-07); ETSI EN 301 893 V2.1.1 (2017-05); ETSI EN 300 440 V2.2.1 (2018-07); ETSI EN 300 330 V2.1.1 (2017-02);
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Note: The compliance assessment uses harmonized standards where possible, Application of harmonized and "target to be harmonized" standards, The test suite for each product ensures compliance with the normative requirements of harmonized standards, and Notified body review of Art 3.1a, 3.1b and 3.2 compliance.

8. Essential requirements acc. Article 3.3 Radio equipment within certain categories or classes shall be so constructed that it complies with the following essential requirements:

Requirement	Specification/conditions	Compliance verified by
<p>(a) radio equipment interworks with accessories, in particular with common chargers;</p> <p>(b) radio equipment interworks via networks with other radio equipment;</p> <p>(c) radio equipment can be connected to interfaces of the appropriate type throughout the Union;</p> <p>(d) radio equipment does not harm the network or its functioning nor misuse network resources, thereby causing an unacceptable degradation of service;</p> <p>(e) radio equipment incorporates safeguards to ensure that the personal data and privacy of the user and of the subscriber are protected;</p> <p>(f) radio equipment supports certain features ensuring protection from fraud;</p> <p>(g) radio equipment supports certain features ensuring access to emergency services;</p> <p>(h) radio equipment supports certain features in order to facilitate its use by users with a disability;</p> <p>(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.</p>		<p>3.3(g) compliance (EU) 2019/320</p>

9.Safety-related security, e.g. WLAN or remote control operation devices and subsequent communication layers

Requirement	Specification/conditions	Compliance verified by
a) Protection against casual or coincidental violation;		Yes, the SW does not support wlan&rf parameters and the user cannot use it
b) Protection against intentional violation using simple means with low resources, generic skills and low motivation;		Yes, the SW does not support wlan&rf parameters and the user cannot use it
c) Protection against intentional violation using sophisticated means with moderate resources, specific skills related to the considered equipment and moderate motivation;		Yes, the SW does not support wlan&rf parameters and the user cannot use it
d) Protection against intentional violation using sophisticated means with extended resources, specific skills related to the considered equipment and high motivation.		Yes, the SW does not support wlan&rf parameters and the user cannot use it

Sign by	Date
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