

Risk Assessment according 2014/53/EU RED

1. General			
Company Name	Shenzhen DOKE Electronic Co.,Ltd.		
Address	801, Building3, 7th Industrial Zone, Yulv Community, Yutang Road, Guangming District, Shenzhen, China		
Person, responsible	zhang.liuwei / Manager	Person, technical	zhang.liuwei / Manager
Phone	0755-27850209	Phone	0755-27850209
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2. Identification of Equipment	
Model Name	BV7100
Family Model	N/A
Model Difference	N/A
Trade Mark	Blackview
Hardware Version	M800_MBA2_BOM3
Software Version	BV7100_EEA_M800
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 5.2GHz/5.8GHz <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/B40 Antenna type:PIFA <input type="checkbox"/> 5G,Bands <input type="checkbox"/> EN-DC B1+n78/ B3+N78/ B8+N78, NR FDD N1/ N3 / N28, NR TDD N38/ N77 / N78 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; NFC Antenna type: Induction coil FM Antenna type: Use earphoneas antenna;
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-0 or 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% Head&Body Separation distance of 5mm DAS Separation distance of 0mm	EN 50360:2017; EN 50566:2017; EN 62209-1:2016; EN 62209-2:2010; EN 62479:2010; Max Simultaneous Max Simultaneous Tx Head SAR Value 0.701W/kg < Limit 2 W/kg, Compliance. Max Simultaneous Tx Body SAR Value 1.132W/kg < Limit 2 W/kg, Compliance. Max Simultaneous Tx DAS SAR Value 2.622W/kg < Limit 4W/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) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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	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 61000-4-3 (Level2) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.

<p>Electrical fast transient/burst immunity test,</p>	<p>Test Voltage: Power Line: 1 kV Impulse Frequency: For DC/AC ports: 5 kHz</p>	<p>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) Note: The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.</p>
<p>Surge immunity test,</p>	<p>Test Voltage: Power Line: up to 1 kV Phase Angle: 0 /90/180/270</p>	<p>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) Note: The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.</p>
<p>Surge immunity test,</p>	<p>Test Voltage: Power Line: up to 1 kV Phase Angle: 90/270</p>	<p>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 61000-4-5 (Level2) Note: The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.</p>

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) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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 Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.

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) Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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 61000-3-2 Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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 Note:The compliance assessment uses harmonized standards where possible, Application of harmonised and “target to be harmonised” 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.
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(802.11a/n20/n40) TX; WIFI 5.8G(802.11a/n20/n40) TX; GSM/GPRS/EGPRS 900/1800 TX; WCDMA/HSDPA/HSUPA B1/B8 TX; LTE B1/B3/B7/B8/B20/B40 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(802.11a/n20/n40) RX; WIFI 5.8G(802.11a/n20/n40) RX; GSM/GPRS/EGPRS 900/1800 RX; WCDMA/HSDPA/HSUPA B1/B8 RX; 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: DC3.85V 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 303 345-1 V1.1.1 (2019-06); ETSI EN 303 345-3 V1.1.1 (2021-06); ETSI EN 303 413 V1.1.1 (2017-06); 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);

Co-Location Transmitter	BR+EDR TX; BLE TX; WIFI 2.4G(802.11b/g/n20/n40 TX); WIFI 5.2G(802.11a/n20/n40) TX; WIFI 5.8G(802.11a/n20/n40) 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: DC3.85V 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 300 330 V2.1.1 (2017-02); ETSI EN 300 440 V2.2.1 (2018-07);
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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:

Article/ Regulation	Content	Risk Assessment
3.3(a)/ 6A(2)(a)	radio equipment interworks with accessories, in particular with common chargers;	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if needed.
3.3(b)/ 6A(2)(b)	radio equipment interworks via networks with other radio equipment;	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(c)/ 6A(2)(c)	radio equipment can be connected to interfaces of the appropriate type throughout the Union	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(d)/ 6A(2)(d)	radio equipment does not harm the network or its functioning nor misuse network resources, thereby causing an unacceptable degradation of service	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(e)/ 6A(2)(e)	radio equipment incorporates safeguards to ensure that the personal data and privacy of the user and of the subscriber are protected;	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(f)/ 6A(2)(f)	radio equipment supports certain features ensuring protection from fraud;	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(g)/ 6A(2)(g)	radio equipment supports certain features ensuring access to emergency services;	It complies with Delegated Regulations EU 2019/320

3.3(h)/ 6A(2)(h)	radio equipment supports certain features in order to facilitate its use by users with a disability;	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need
3.3(i)/ 6A(2)(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.	Not applicable, no delegated act is adopted. When the act delegated, we will reevaluate it asap if need

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
<i>zhang.liuwei</i>	2022-09-02