

User Guidance for DiLink 3.0F

Product name: DiLink

Model Name: DiLink 3.0F

Manufacturer: BYD Auto Industry Company Limited

1. Basic Specification

Chipset: Qualcomm SM6125

Operating system: Android 10

Supply: 12V rated voltage, 9V-16V input supply.

Operating Temperature: -30°to 70°Celsius

2. Function

Image Center

- Camera
- Photo album
- Driving recorder
- Panoramic image

Multimedia Center

- Music player
- Video player
- Karaoke

System control

- Air conditioning control

- volume control

Connection

- BT 5.0
- WIFI 2.4G/5G 802.11a/g/b/n/ac
- 2G/3G/4G

GNSS

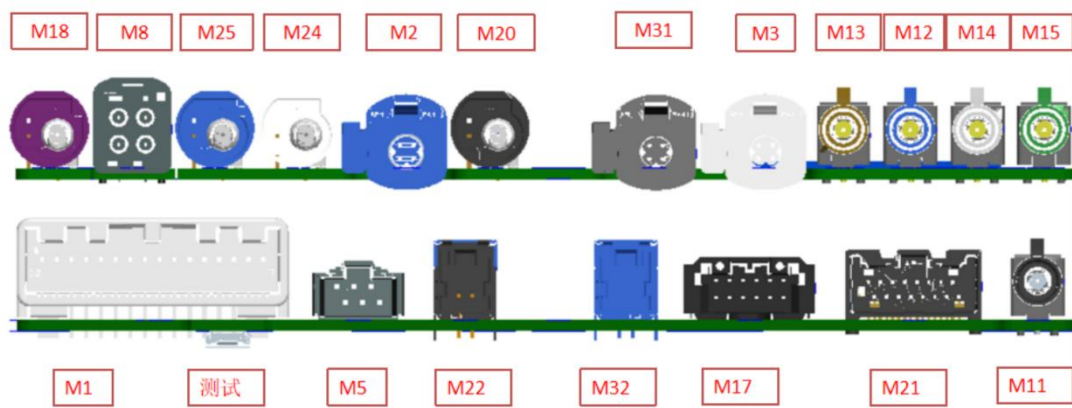
- GPS
- GLNASS
- GALILEO

Others

- Intelligent voice
- Tire pressure monitoring
- Bluetooth phone
- IVI Internet of vehicle
- Application Market

3. Connector

The following table shows the headunit connectors with signal information and description



M1 Main Connector/Power

M21 Void

M2 LCD

M22 Void

M3 USB Assembly

M24 In-vehicle Camera

M5 Microphone

M25 Driving Recorder

M8 Panoramic Camera

M31 SIM

M11 FM Antenna

M32 DAB

M12 GNSS Antenna

Text USB(Debug)

M13 BT/Wi-Fi Antenna

M14 GSM/WCDMA/LTE

Antenna

M15 GSM/WCDMA/LTE

Antenna

M17 AUX&A2B

M18 DMS Camera

M20 Instrumentation

Interface

4. Interface connection

The DiLink3.0F host is the on-board terminal of the export vehicle, The vehicle start host automatically starts to work.

M1 is the power line interface of the DiLink3.0f host;

M2 is connected with the pad of the locomotive and is the interface of the pad power line;

M3 is connected with USB assembly through USB harness;

M5 is connected with the microphone in the front compartment of the vehicle through the microphone harness in the front compartment of the vehicle;

M8 is a camera interface;

M11 is connected to the shark fin of the vehicle;

M12 is connected to the shark fin of the vehicle;

M13 is connected to the built-in antenna box;

M14/15 are 4G auxiliary and 4G main lines respectively, which are connected to the built-in antenna box;

M17 is connected to the power amplifier box;

M18 is the vehicle DMS camera;

M20 is connected to the vehicle instrument panel;

M21 is the microphone interface in the rear compartment of the vehicle, which is connected to the microphone in the rear compartment through the microphone harness;

M22 is the interface of vehicle karaoke system, which is not applicable overseas

at present, and it is a reserved interface;

M24 is a camera interface, which is generally not applicable;

M25 is a camera interface, which is generally not applicable;

M31 is connected with SIM assembly through SIM harness;

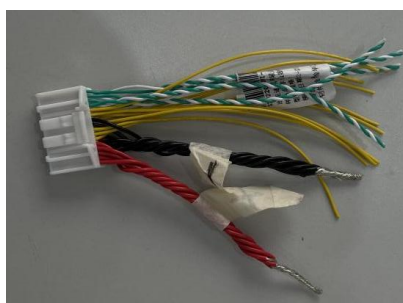
M32 is connected with DAB through DAB harness and finally connected to vehicle shark fin;

Text USB interface is an interface for testing, which is not applicable to the actual vehicle.

For the RF part of the host, connect M1, M11, M12, M13, M14, M15 and M32 interfaces for testing, as shown in the following figure.



M1 interface host power line, the harness can be modified according to requirements, in which red and black lines are mainly used, red is connected to the positive pole, black is connected to the negative pole, and other lines are can lines, which do not need to be connected.



5. General Information

Temperature ranges

Component	T_{uL}	T_{uB}	T_{oB}	T_{oL}	T_R
Head unit	-40°C	-30°C	+70°C	+85°C	+23°C

T_{oL}	Maximum storage temperature
T_R	Room temperature
T_{uL}	Minimum storage temperature
T_{oB}	Maximum operating temperature for components with overload protection/low-temperature protection
T_{uB}	Minimum operating temperature for components with overload protection/over-temperature protection

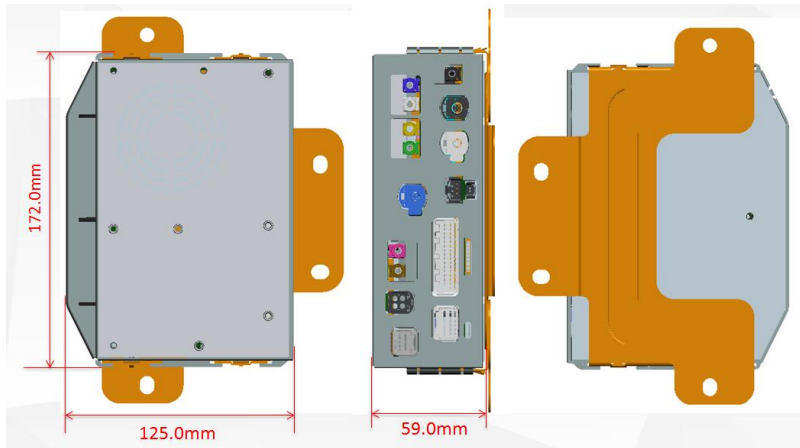
Voltage ranges

Component	U_{Bmin}	$U_{B,max}$	U_B	Spec
Head unit	+9.0V	+16V	+12V	For functions that must retain their performance.

U_{Bmin}	Lower operating voltage limit
U_B	Nominal Operating voltage
U_{Bmax}	Upper operating voltage limit

6. Installation

Space size requirements

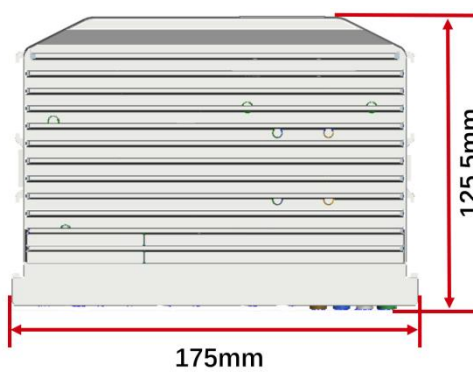


7. Pictures head unit

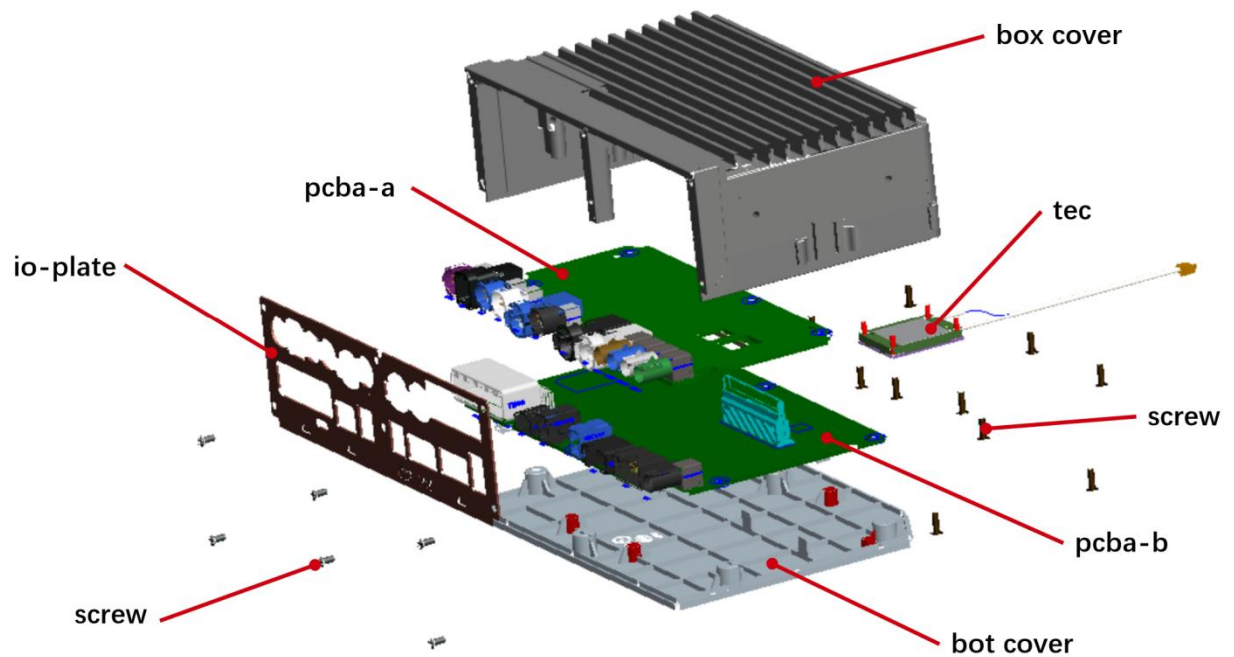
The following picture shows the explosions view of the headunit.

Dimension

Package size:



Explosion View



8. Regulation information:

Hereby, BYD Auto Industry Company Limited declare that the radio equipment type DiLink has the following operating frequency range.

Operating Frequency Range	The maximum RF Output Power
FDD-LTE Band 2/4/5/7/12(17)/13	FDD-LTE Band 2: 23.0 dBm±2dB
	FDD-LTE Band 4: 23.0 dBm±2dB
	FDD-LTE Band 5: 23.0 dBm±2dB
	FDD-LTE Band 7: 23.0 dBm±2dB
	FDD-LTE Band 12(17): 23.0 dBm±2dB

	FDD-LTE Band 13: 23.0 dBm±2dB
TDD-LTE Band 38/41	TDD-LTE Band 38: 23.7 dBm±2dB TDD-LTE Band 41: 23.0 dBm±2dB
WCDMA Band 2/4/5	Band 2: 23.0 dBm±2dB Band 4: 23.0 dBm±2dB Band 5: 23.0 dBm±2dB
GSM 850/1900 MHz	GSM 850: 32.5dBm±3dB GSM 1900: 29.3 dBm±3dB
Bluetooth 2402 - 2480 MHz	7 dBm±3dB
WiFi 2412 - 2462 MHz	15 dBm±3dB
5.170 GHz ~ 5.250GHz 5.250 GHz ~ 5.350GHz 5470MHz-5725MHz	14dBm±3dB 14dBm±3dB 14 dBm±3dB
5725MHz-5835MHz	14 dBm±3dB
GPS 1575.42 MHz±1.023 MHz	/
FM 87.5MHz-108MHz	/
AM 522KHz-1620KHz	/
DAB 174MHz-240MHz	/

For FCC&IC, 5.2G is used for indoors only.



FCC Statement

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

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help important announcement

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IC Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) This device may not cause interference. (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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; 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with Industry Canada radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme à l'exposition aux rayonnements Industry Canada limites établies pour un environnement non contrôlé.

Radiation Exposure Statement

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

The user manual for LE-LAN devices shall contain instructions related to the restrictions mentioned in the above sections, namely that:

- ii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- iii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate; and
- iv. where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.r.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

- ii. pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5 250 à 5 350 MHz et de 5 470 à 5 725 MHz doit être conforme à la limite de la p.i.r.e.;
- iii. pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5 725 à 5 850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas;
- iv. lorsqu'il y a lieu, les types d'antennes (s'il y en a plusieurs), les numéros de modèle de l'antenne et les pires angles d'inclinaison nécessaires pour rester conforme à l'exigence de la p.i.r.e. applicable au masque d'élévation, énoncée à la section 6.2.2.3, doivent être clairement indiqués.