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› MekedeTech DUDUAUTO DUDU7 Car Multimedia Head Unit User Manual for Toyota Highlander 3 XU50 (2013-2018)

MekedeTech DUDU7

MekedeTech DUDUAUTO DUDU7 Car Multimedia Head Unit User Manual

Model: DUDU7-12-512-10.36

1. PRODUCT OVERVIEW

The MekedeTech DUDUAUTO DUDU7 is an advanced 10.36-inch 2K (2000x1200) IPS touch screen car radio stereo designed as a direct replacement and upgrade for the Toyota Highlander 3 XU50 models from 2013 to 2018. Running on Android 13, this intelligent navigation head unit features a powerful 8-core UIS7870 processor, ample memory (12GB RAM, 512GB ROM), and supports both wired and wireless CarPlay and Android Auto. It integrates seamlessly into your vehicle's dashboard, enhancing your driving experience with superior navigation, entertainment, and connectivity.

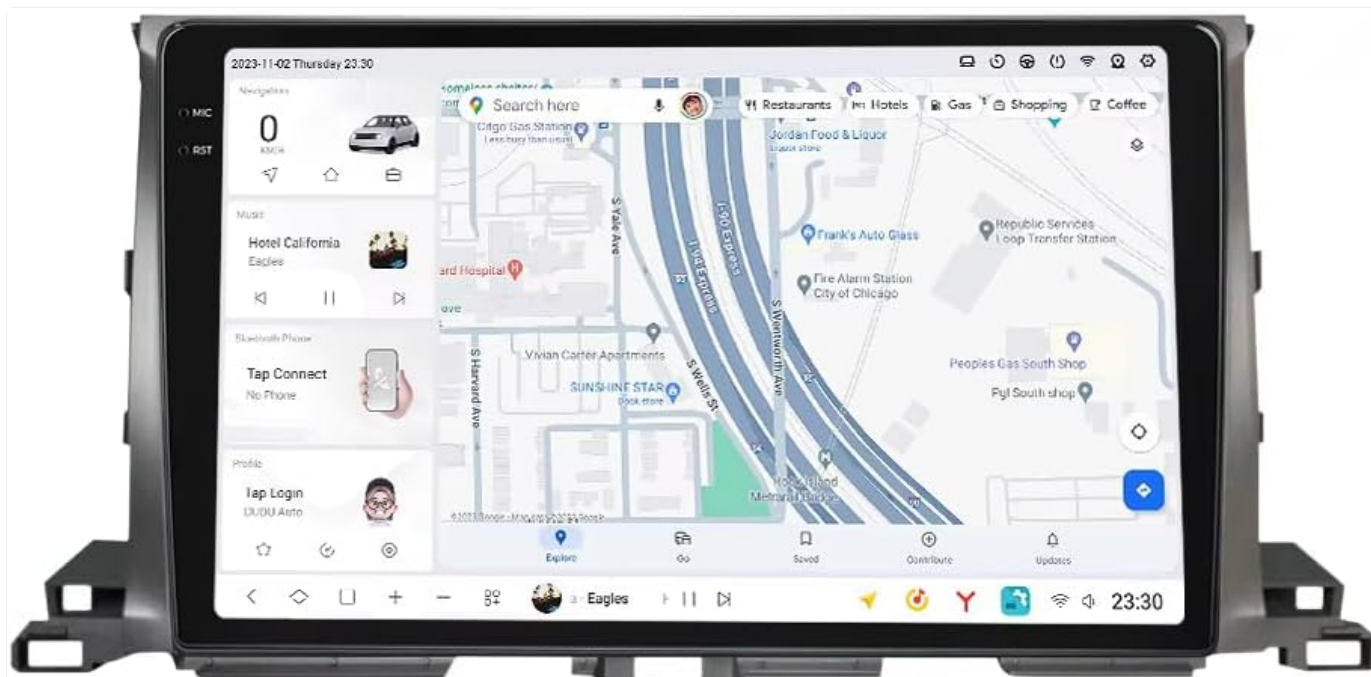


Figure 1.1: The MekedeTech DUDUAUTO DUDU7 head unit displaying its user interface with navigation and media playback.

2. PACKAGE CONTENTS

Upon unboxing, please verify that all the following components are included in your package:

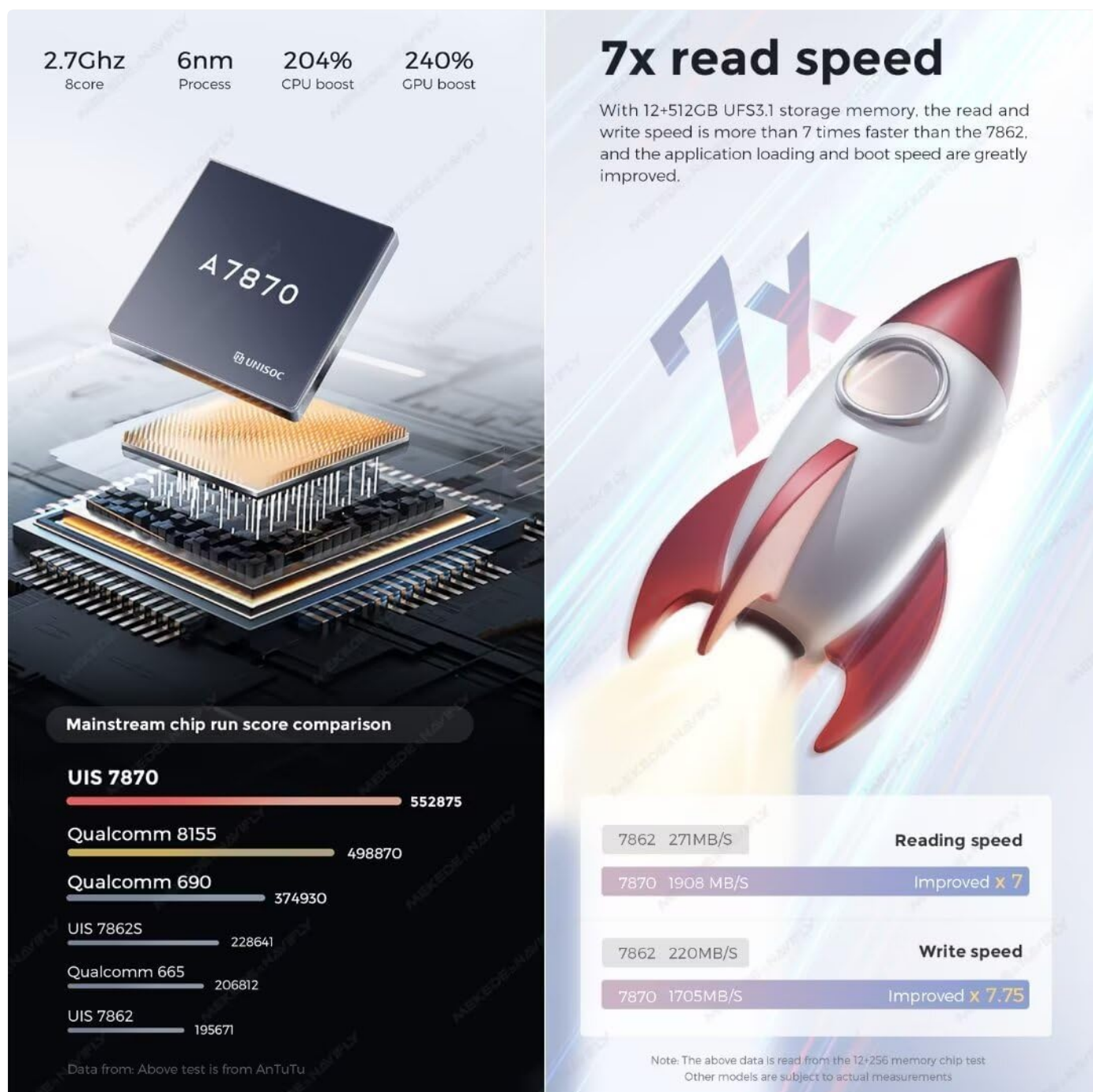


Figure 2.1: Visual representation of the standard package contents.

- Main Head Unit (Machine)
- Power Cable (Type A without CANBUS or Type B with CANBUS, depending on vehicle configuration)
- External Microphone (MIC)
- RCA Cable Set
- Reversing Camera Input Cable
- USB Plugs (x3)
- Fakra 4G Antenna
- Fakra GPS Antenna (for DUDU7 only)

3. SPECIFICATIONS

Detailed technical specifications of the DUDUAUTO DUDU7 head unit:

Feature	Specification
Operation System	Android 13
CPU	8 Core UIS7870 Customized version A76 2.7Ghz 6nm processor
Memory Type	UFS 3.1 (Read data 1700M+)
RAM / ROM	12GB RAM / 512GB ROM
Display	10.36 inch 2K (2000x1200) IPS Touch Screen
GPS	Dual Band 6 mode L1 L5 B1 B2a E1 E5a
Microphone	Digital Noise Cancellation Microphone
USB Ports	USB 3.2 GEN1*1 (TYPE-C), USB 2.0*3
Power Amplifier	TDA7808 Digital AB type
DSP	AKM7739 Velvet Audio Technology
Bluetooth Chip	Qualcomm 3031 (Supports aptx HD protocol, BT5.0)
Audio Output	Optical + Coaxial, RCA 5.1 Channel Outputs
WiFi Type	802.11a/b/g/n/ac (Support 5G WIFI)
Radio IC	TDA7708
Work Voltage	9V~16V
CarPlay / Android Auto	Support Wired and Wireless
360 Panorama	Support (requires additional 360 chip and payment)

4. SETUP AND INSTALLATION

The DUDUAUTO DUDU7 head unit is designed for a plug-and-play installation in Toyota Highlander 3 XU50 models (2013-2018). Professional installation is recommended to ensure proper wiring and functionality.

4.1 Pre-Installation Check

- Ensure your vehicle is compatible with the DUDU7 model (Toyota Highlander 3 XU50, 2013-2018).
- If your car is equipped with a Harmon Sound System, an additional power cable with CANBUS is required to ensure audio functionality. Please search for ASIN B0CTJRJVMQ for the necessary cable.
- Disconnect the vehicle's battery before beginning installation to prevent electrical damage.

4.2 Installation Steps (General)

1. Carefully remove the existing factory radio/head unit from your dashboard. Refer to your vehicle's service manual for specific trim panel removal instructions.
2. Connect the appropriate power cable (Type A or Type B with CANBUS) to the DUDU7 head unit and the vehicle's wiring harness.
3. Connect the RCA cables, USB plugs, Fakra 4G antenna, and Fakra GPS antenna to their respective ports on the DUDU7 unit. Ensure all connections are secure.
4. Carefully slide the DUDU7 head unit into the dashboard opening, ensuring no wires are pinched.
5. Secure the head unit in place using the provided mounting hardware.

6. Reinstall any removed trim panels.
7. Reconnect the vehicle's battery.
8. Power on the unit and perform initial setup and testing.

Package Contents



Machine



Type A without canbus



Type B with canbus



MIC



RCA Cable



Reversing camera



USB Plug x3



Fakra 4G Antenna



Fakra GPS Antenna
(For DUDU7 only)



Fakra GPS Antenna
(For DUDU6 only)

Figure 4.1: Comparison of the Toyota Highlander dashboard before and after the installation of the MekedeTech DUDUAUTO DUDU7 head unit.

5. OPERATING INSTRUCTIONS

The DUDUAUTO DUDU7 operates on Android 13, providing a familiar and intuitive user experience similar to a tablet. The DUDU OS 3.0 offers a customized dynamic wallpaper and user interface.

How DUDUAUTO is different ?



DUDUAUTO 7870 Customized

Solutions

Other brands on the market 7870 public version

Systems

DUDUAUTO OS3.0
Customise the software to your needs
Give you differentiated product barriers

Public version of the system
The same old thing all the time and No difference.
Doesn't give you a competitive edge

GPS Position

Dual-band, six-mode
L1 L5 B1 B2A E1 E5A
GPS/BeiDou/GLONASS/Galileo/
quasi-Zenith/capable of lane-level navigation and positioning

single-frequency, three-mode
L1 B1 E1
GPS/Beidou/Galileo

Microphones

Digital Noise Cancelling Microphone.
You can still hear it at 120 high speed

capacitive MIC

Power amplifier

TDA7808
2022year chip
Digitally Enhanced Class AB Amplifiers for Cleaner Sound

TDA7850 / 7851
2007year chip
Bottom noise is amplified

DSP

AKM7739
Audio pass-through
near-source output

32107 / AKM7738
Unable to sound through

Op Amp
(Operation Amplifier)

5532*3 Enhanced audio signal
Low level RCA output for better signal

none

Filter Capacitor

10000μF

6800μF

BT chip

Qualcomm 3031
Supports APTX HD protocol
Better BT sound quality

REAL TEK8761
Common SBC Protocol

Peripheral equipment

Access to the underlying SDK for peripherals.
Deep integration into the system display.

Unable to deep-dock peripherals

Figure 5.1: Overview of the DUDU OS 3.0 interface and options for custom dynamic wallpapers, including day and night modes.

5.1 Basic Operation

- **Power On/Off:** Press and hold the power button (if available) or turn on your vehicle's ignition.
- **Touch Screen:** Navigate the interface by tapping, swiping, and pinching on the 10.36-inch IPS touch screen.
- **Volume Control:** Adjust volume using the on-screen controls or steering wheel controls (if supported and configured).
- **Home Screen:** Access frequently used apps and widgets from the customizable home screen.

5.2 Wireless/Wired CarPlay and Android Auto

The unit supports both wireless and wired connections for Apple CarPlay and Android Auto, allowing seamless integration of your smartphone's features.

- **Wireless Connection:** Enable Bluetooth and Wi-Fi on your smartphone. On the head unit, open the CarPlay/Android Auto app and follow the on-screen prompts to pair your device.
- **Wired Connection:** Connect your smartphone to one of the unit's USB ports using a compatible USB cable. The system should automatically launch CarPlay or Android Auto.
- Once connected, you can access navigation, make calls, send/receive messages, and play music directly from your phone's interface displayed on the head unit.

5.3 Bluetooth Connectivity

Equipped with a Qualcomm 3031 Bluetooth 5.0 chip, the unit offers stable and high-quality audio streaming and hands-free calling.

- **Pairing:** Go to the Bluetooth settings on the head unit, enable Bluetooth, and search for available devices. Select your phone from the list and confirm the pairing code.
- **Hands-Free Calling:** Once paired, you can make and receive calls directly through the head unit, utilizing the built-in Digital Noise Cancellation Microphone for clear voice transmission.
- **Audio Streaming:** Stream music and other audio from your paired device to the head unit's speakers.

5.4 GPS Navigation

The dual-band GPS (L1+L5) provides enhanced positioning speed and accuracy for reliable navigation.

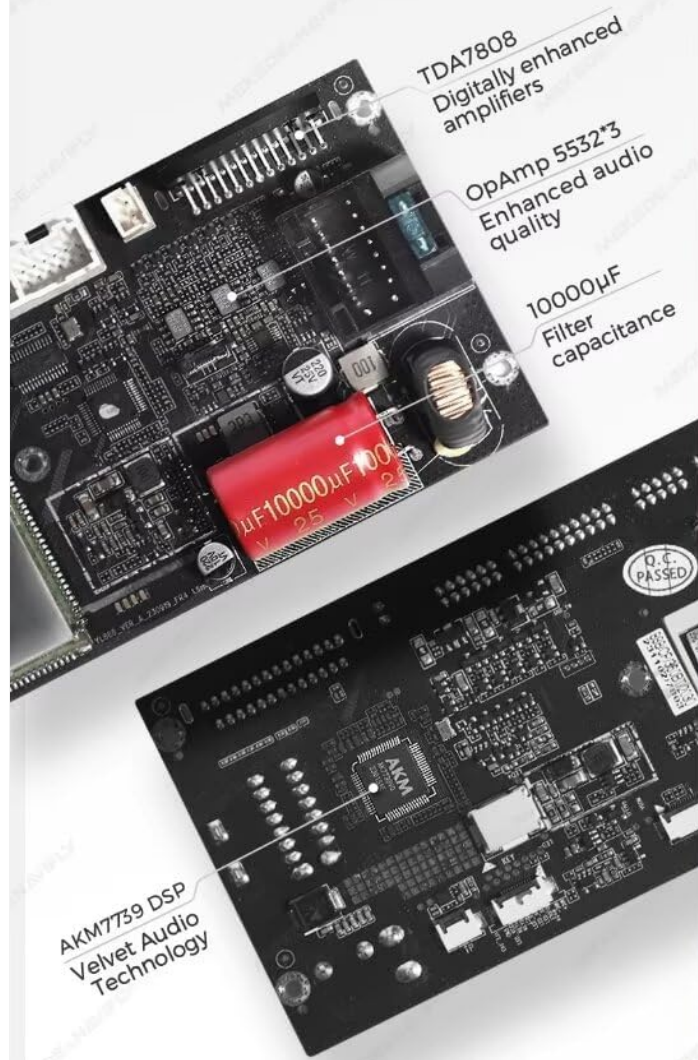
- **Map Applications:** Use pre-installed navigation apps or download your preferred map applications from the Google Play Store.
- **Route Planning:** Enter your destination and follow the on-screen directions and voice prompts.
- **Accuracy:** The L1+L5 joint positioning supports lane-level navigation accuracy.

Choosing reputation audio chip

in an industry-wide

AKM7739 DSP Velvet Audio Technology

Support "VELVET SOUND" +DTS5.1 panoramic sound+ sound correction system, reproduces a natural, comfortable, sense of presence acoustic experience.



VELVET SOUND



VELVET SOUND - AKM advanced audio processing technology, based on the original sound reproduction product concept, explores the limits of audio technology, and presents all sound details without reservation, creating a "like, Immersive" sound world.

Figure 5.2: Illustration of the Dual Band GPS L1+L5 for improved positioning and the Digital Noise Cancelling Microphone for clear voice.

6. KEY FEATURES AND TECHNOLOGIES

6.1 High-Performance Processor and Memory

The DUDU7 is powered by an 8-core UIS7870 customized version A76 2.7Ghz 6nm processor, offering superior performance compared to previous generations. Coupled with UFS 3.1 memory, it provides significantly faster read/write speeds, leading to quicker boot times and application loading.

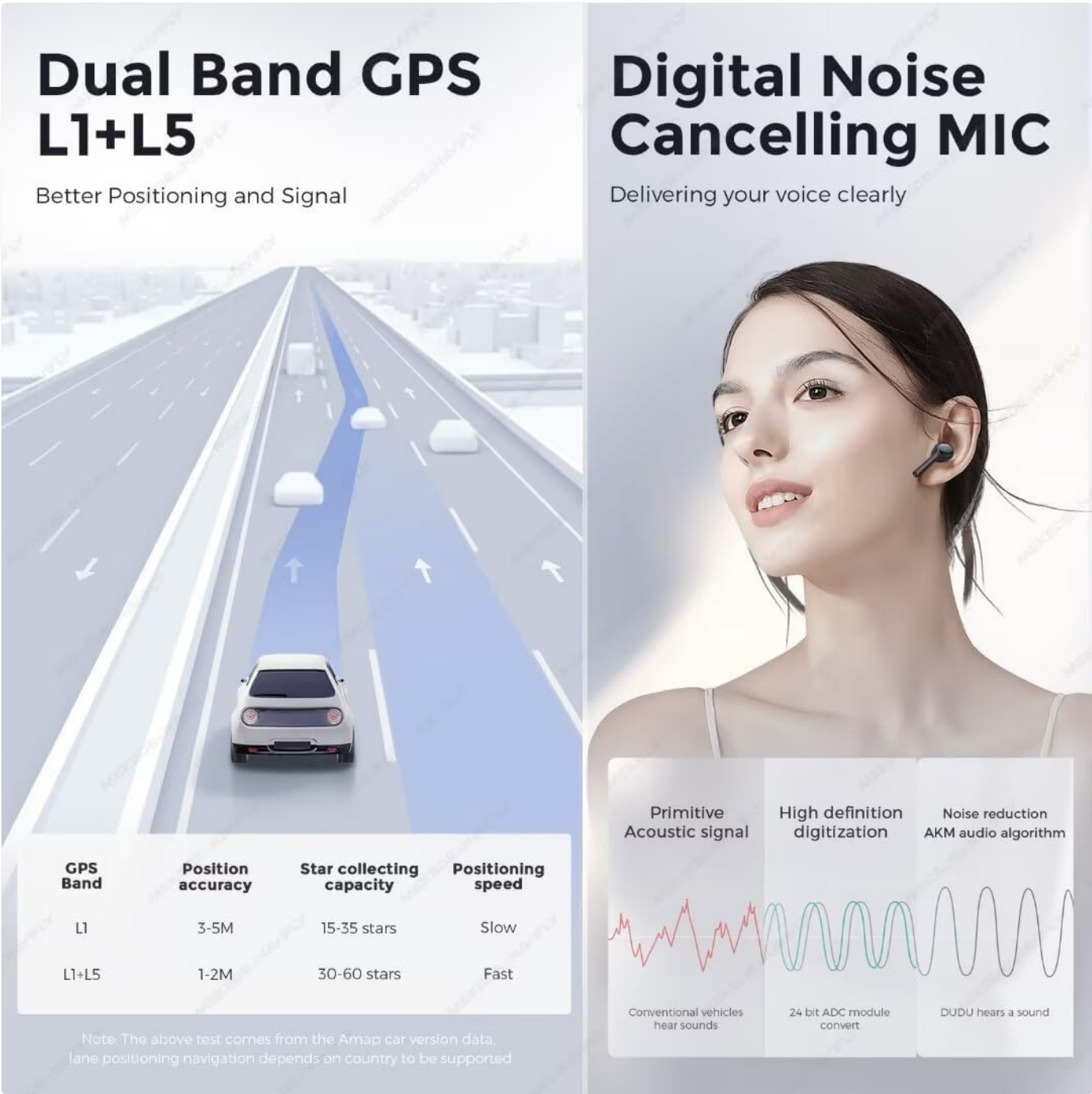


Figure 6.1: Details on the UIS 7870 processor and a comparison illustrating 7x faster read speeds with UFS 3.1 memory.

6.2 AKM7739 DSP Velvet Audio Technology

Experience enhanced audio quality with the integrated AKM7739 DSP (Digital Signal Processor) featuring Velvet Audio Technology. This technology supports "VELVET SOUND" and DTS 5.1 panoramic sound, providing a natural, comfortable, and immersive acoustic experience.

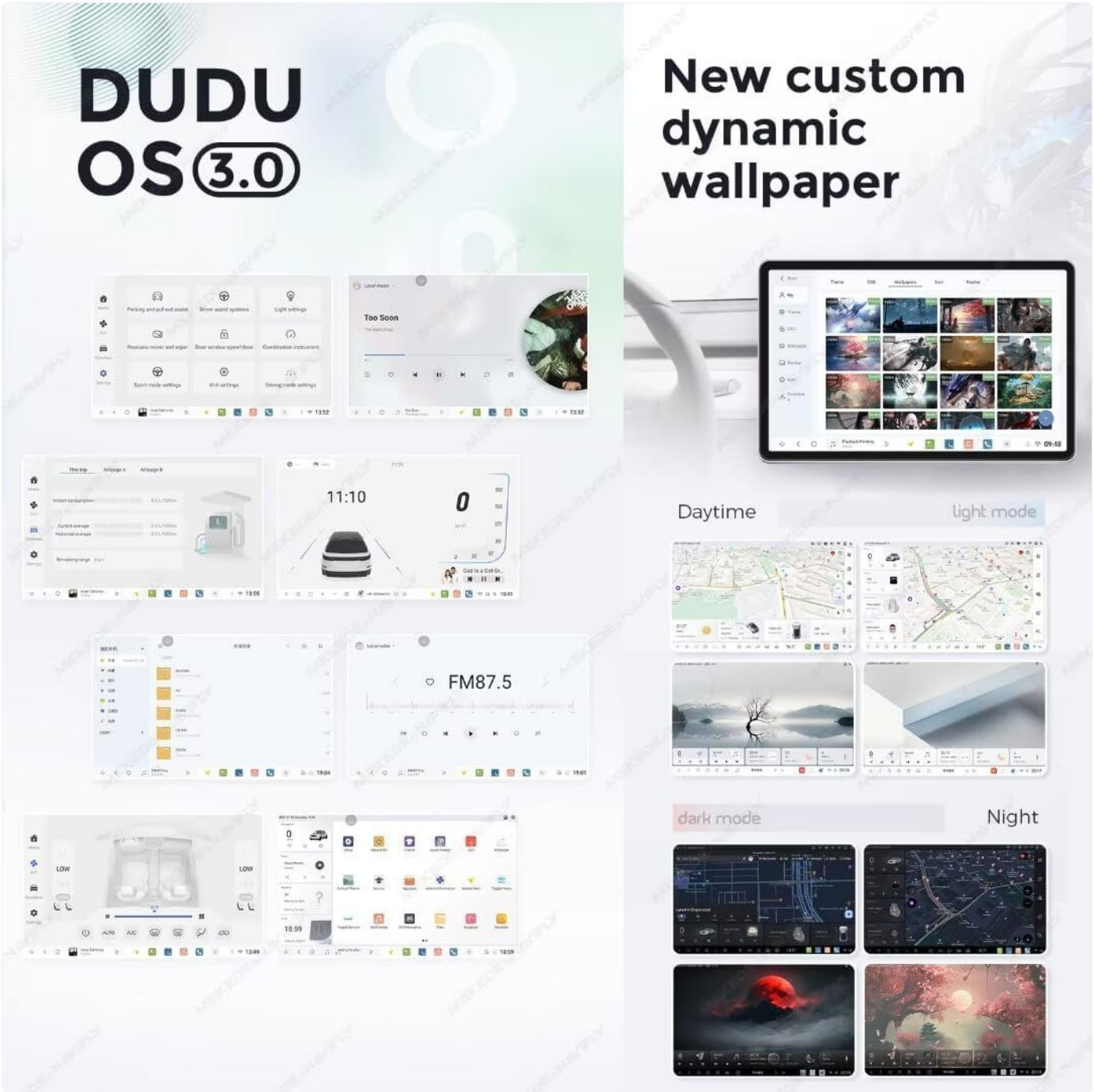


Figure 6.2: Illustration of the AKM7739 DSP chip and its Velvet Audio Technology for superior sound.

6.3 Digital Noise Cancelling Microphone

The built-in digital noise cancelling microphone utilizes an audio noise reduction algorithm to effectively reduce ambient noise, ensuring clear voice transmission even in noisy environments or at high speeds (up to 120 mph).

6.4 Comparison with Other Models/Brands

The DUDUAUTO DUDU7 distinguishes itself through several key hardware and software optimizations compared to other market offerings and even previous DUDU models.

	DUDU6			DUDU7			
RAM/ROM	6+64	8+128	8+256	6+64	8+128	12+256	12+512

CPU	8-Core UIS7862S Customized verison A55 2.0Ghz 12nm process	8-Core UIS7870 Customized verison A76 2.7Ghz 6nm process
Memory type	emmc 5.1	UFS 3.1 Read data 1700M+
GPS	3 mode L1 B1 E1	Dual Band 6 mode L1 L5 B1 B2a E1 E5a
MIC	Condenser MIC	Digital noise cancelling MIC
USB interface	USB 2.0*3	Type-C USB 3.2 Gan1*1 USB 2.0*3
Power amplifier	TDA7850	TDA7808 Digital enhanced Class AB power amplifier
DSP	AKM7738	AKM7739 Velvet audio technology
Amp	2582*3	5532*3 Enhanced audio signal
Android version	Android 10 API=29	Android 13 API=33
car machine system	DUDU OS3.0	
Audio output	Fiber + coaxial RCA5.1 channel output	
BT chip	BT5.0 Qualcomm 3031 supports the aptx HD protocol	
Filter capacitance	10000μF	
Screen	9.5" / 10.36" / 11.5" : 2K 2000*1200 13" : 1920*1200 12.3" : 1920*720	
CP/AA	Support wired + wireless Car-play / Android AUTO	
Network	4G Lte external card slot + 5G WIFI	
Radio	TDA7708	
Voice Control (optional)	This feature requires the purchase of voice control software	
Supporting accessories (optional)	360° panoramic camera, DVR, front + rear view camera, TPMS, BT SWC, atmosphere light HUD head-up display, rear window LED screen, rear entertainment screen, thermometer, etc Note: Accessories are not included and are purchased separately.	

Figure 6.3: A detailed comparison highlighting the unique advantages of DUDUAUTO's customized solutions in terms of system, GPS, microphone, power amplifier, DSP, Op Amp, filter capacitance, BT chip, and peripheral equipment.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

- **No Power:** Check all power connections. Ensure the vehicle's battery is connected and charged. Verify the fuse for the head unit.
- **No Sound:** Confirm all audio cables are securely connected. If your vehicle has a Harmon Sound System, ensure you are using the correct CANBUS power cable (ASIN B0CTJRJVMQ). Check volume levels on both the head unit and any connected devices.
- **Touch Screen Unresponsive:** Try restarting the unit by turning the vehicle ignition off and on. If the issue persists, a factory reset might be necessary (refer to system settings).
- **GPS Signal Loss:** Ensure the GPS antenna is properly installed and has a clear line of sight to the sky. Check for any obstructions.
- **Bluetooth Pairing Issues:** Ensure Bluetooth is enabled on both the head unit and your phone. Delete previous pairings and try reconnecting.
- **CarPlay/Android Auto Not Connecting:** Verify your phone's software is up to date. Try both wired and wireless connections. Ensure the CarPlay/Android Auto app on the head unit is active.

For persistent issues, please contact MekedeTech customer support.

8. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your DUDUAUTO DUDU7 head unit.

- **Screen Cleaning:** Use a soft, lint-free cloth specifically designed for electronics to clean the touch screen. Do not use abrasive cleaners or solvents.
- **Software Updates:** Periodically check for system software updates through the unit's settings to ensure you have the latest features and bug fixes.
- **Environmental Conditions:** Avoid exposing the unit to extreme temperatures, direct sunlight for prolonged periods, or excessive moisture.
- **Cable Management:** Ensure all cables are neatly routed and secured to prevent damage from vibration or accidental pulling.

9. WARRANTY AND SUPPORT

MekedeTech products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official MekedeTech website.

9.1 Customer Support

If you encounter any issues not covered in this manual or require further assistance, please contact MekedeTech customer support. Have your product model number (DUDU7-12-512-10.36) and purchase details ready when contacting support.

- **Online Resources:** Visit the [MekedeTech Store on Amazon](#) for product information and potential FAQs.
- **Contact Information:** Refer to the packaging or official website for the most current customer service contact details.

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

<https://manuals.plus/asin/B0DKF33Q2F>

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