

# LEAPMOTOR OS HMI DESIGN

Immersive 3D Intelligent Cockpit System





# An Innovative

This system, utilizing an 'environment fusion' mode, transcends the limitations of traditional two-dimensional UIs by integrating driving and control. It collects external data via radar point clouds and renders vehicle scenarios in 3D, allowing users to truly perceive their environmental space. While driving, it automatically switches to intelligent driving mode, displaying ADAS environmental perception information and navigation assistance. In the vehicle's 3D space, it offers a unique blend of aesthetics and practicality. Users can intuitively perform operations such as 'one-touch vehicle lock, trunk access, suspension adjustment, and dynamic demonstrations of front and rear headlights.' A seamless, continuous 3D scene camera movement smoothly conveys control and functional information. This differentiated, immersive interactive experience redefines the human-machine relationship within the intelligent cockpit.

ADAS environmental perception information and navigation assistance



(P) Parking status



(D) Driving status





Intelligent adjustment

Car refrigerator  
Temperature -1°C

Cooling Heating

Zero-layer operation

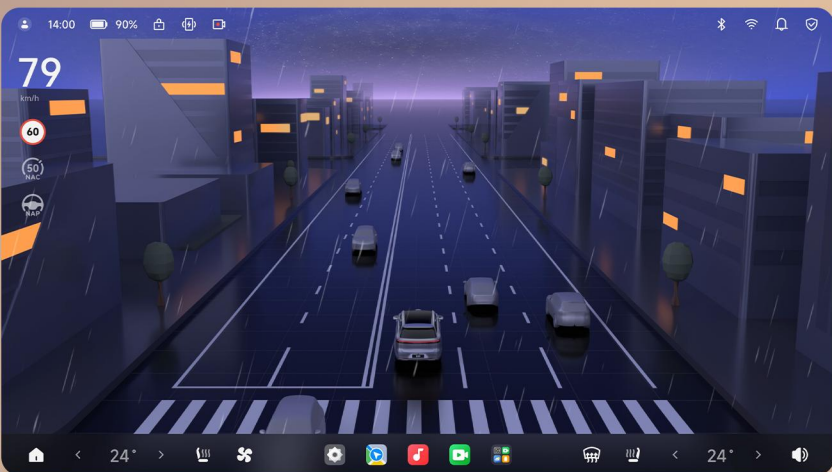
24° Automatic Synchronize Avoid People Face People  
5

## Scenario-Based Aesthetics and a Diverse Interface Language

The interface is centered around themed environments such as geometric spaces, snow-capped mountain landscapes, architectural forms, and musical atmospheres to create a multi-dimensional, immersive ambiance. Users can switch themes based on their preference or the driving scenario. The interface hierarchy emphasizes "zero-layer operation," allowing for quick adjustments to air conditioning, seats, and vehicle-to-home connectivity through long-presses and swipes on the bottom bar or via card-style shortcuts. Under the musical rhythm theme, the rendering engine drives spectrum pulsations that synchronize with ambient lighting, injecting dynamic artistic beauty into the vehicle's interior. The overall visual language balances a sense of technology with a humanistic atmosphere, presenting a fluid and immersive digital aesthetic.




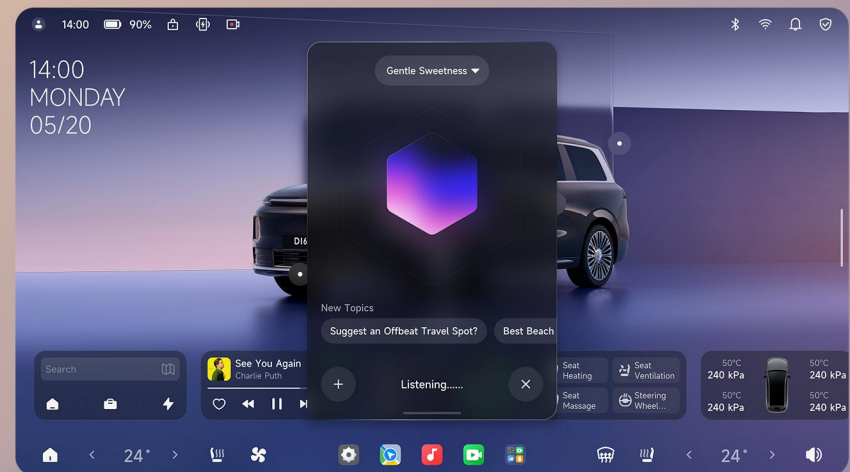
 Real-time rendering



 Multi-modal recognition for features



 Chatting companionship



## Full-Scenario Intelligence

The system covers an end-to-end functional experience, from driving and parking to energy management. During driving, the ADAS environmental perception renders the surrounding environment in real-time, complementing features like automated parking, route memory, blind-spot monitoring, and highway navigation pilot to enhance driving safety. On the interaction level, users can achieve seamless services through voice commands, a large AI model, and multi-modal recognition for features such as rear-passenger care, a smart rest mode, and intelligent headlight control. The desktop card design and bottom-bar shortcuts enable "zero-layer direct access," significantly reducing operational complexity and the learning curve.


# AI-Driven Vehicle-Home Ecosystem Connectivity

The core concept is to build an intelligent cockpit that aligns more closely with users' lifestyles through a large AI model and immersive UI scenes. Users can personalize their driving style, interface themes, and interaction preferences, while the system intelligently recommends matching scenes based on driving habits and behavioral data. The in-vehicle system connects with smart home devices and mobile equipment, allowing one-touch control of home appliances, audio-visual systems, refrigerators, and aroma diffusers. This truly realizes an intelligent ecosystem where the "vehicle becomes an extension of life." Automatic Bluetooth and account pairing mechanisms ensure a seamless transition for entertainment and social experiences, completely dissolving the boundary between the car and home.

## Personalized definition

Hello, Jackson Feng

Account settings and personal preference mangement




## Vehicle becomes an extension of life

Vacuum cleaner 90% Online

Living room

Clean


Retur...



Fragrance

Yuyang Fragrance

On/Off



14:00 90%    

14:00 MONDAY 05/20



Search 

 See You Again  
Charlie Puth

12.5 kwh/100km  
1:48 hr:min  
224 km

90%  
Charge

 Seat Heating

 Seat Ventilation

 Seat Massage

 Steering Wheel...

50°C  
240 kPa

50°C  
240 kPa

50°C  
240 kPa

24°  

24° 





# Green Management and Low-Carbon Mobility

The system not only innovates in interaction but also proposes solutions for energy sustainability. The vehicle status page provides real-time monitoring of energy consumption and recovery, helping users optimize their driving style to save energy and reduce emissions. The charging and discharging modes not only extend the vehicle's range but also support powering external appliances (V2L), meeting the needs of outdoor camping and emergency situations while promoting the safe application of green and clean energy. Through intelligent energy management and recovery mechanisms, this system helps achieve the vision of low-carbon, environmentally friendly mobility.