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Automotive XR (VR/AR/MR) Industry Report, 2024

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XR is integrated with IVI and smartphones to create multi-terminal integration experience.

Automotive XR (Extended Reality) is an innovative technology that integrates VR (Virtual Reality), AR (Augmented Reality) and MR (Mixed Reality) technologies into vehicle systems. It can bring drivers and passengers richer and more intuitive information interaction experiences. It is an important embodiment of differentiation between intelligent cockpits of the future.

XR is integrated with IVI and smartphones to create multi-terminal integration experience.

In March 2023, Rokid and Li Auto announced Rokid Max, their cooperative AR glasses which support L series models. Li Auto's IVI APP can be projected onto VR glasses for viewing, gaming, online office, etc. In addition, it allows handheld game consoles to be projected onto the center console screen and then to the glasses, so that users can control IVI and play games through gesture interaction.

Rokid and Li Auto Jointly Released Rokid Max + Intelligent Cockpit

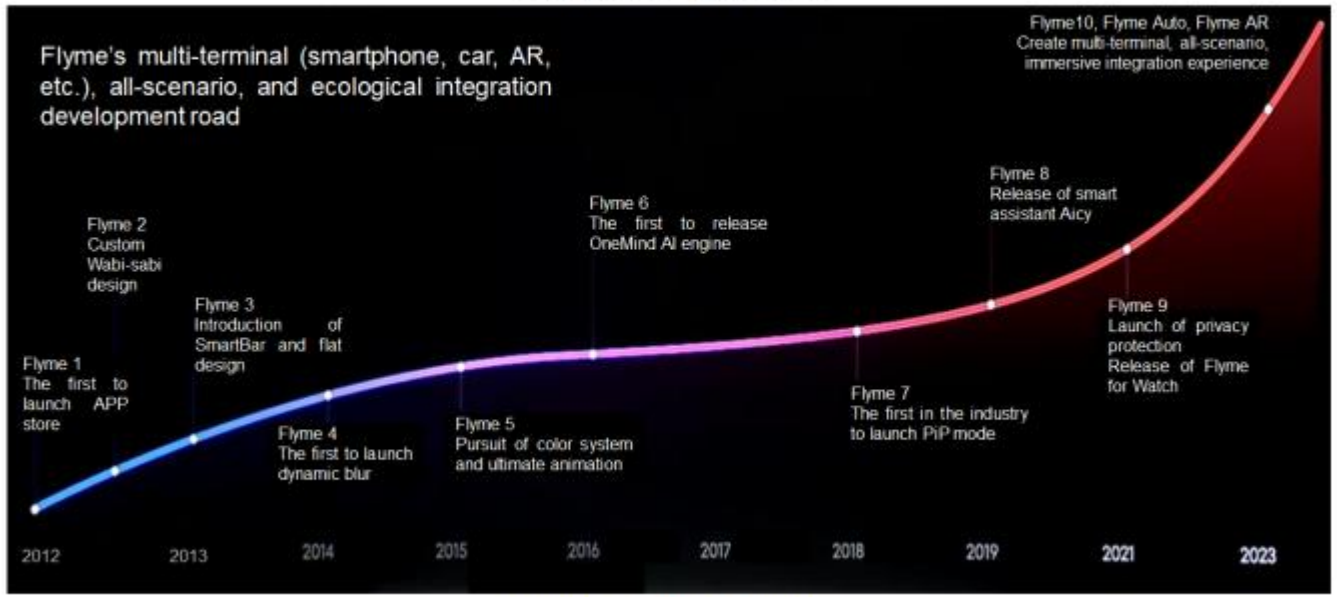
Source: Li Auto

Xingji Meizu released MYVU intelligent AR glasses based on Flyme AR OS

In November 2023, Xingji Meizu released MYVU intelligent AR glasses based on Flyme AR OS. The integration with Meizu smartphones via Flyme Link (a smartphone-IVI integration solution) not only allows for circulation of phone calls, music, videos, navigation, important application notifications and more to the AR glasses, but also makes it share computing power and network with the smartphone, thereby reducing the power consumption of the glasses and enabling a long cruising range. In the future, MYVU AR glasses will be integrated with cars and smartphones to create multi-terminal integration experience through seamless flow of applications and data.

Therefore, at the “Meizu Flyme Ecosystem Launch”, Xingji Meizu upgraded the operating system Flyme to FlymeOS. Composed of Flyme 10 (smartphone OS), Flyme Auto (Meizu IVI system), and Flyme AR (AR glasses OS), FlymeOS covers three major areas: smartphone, XR and intelligent vehicle. FlymeOS features "Internet of Everything, Boundless and Infinite", and becomes the base for connecting all terminals.

Xingji Meizu Lays out XR, and Multi-terminal (Smartphone + Smart Car) Integration



Source: Xingji Meizu

AI+AR to enhance voice interaction experience

At CES 2024, Rayneo unveiled Rayneo X2 Lite, a stereo full-color MicroLED optical waveguide AR glasses that introduce Rayneo AI (released in December 2023), a foundation model voice assistant. With Rayneo AI, Rayneo X2 Lite enables multiple capabilities including multi-round natural language conversations, trip planning, easy encyclopedic Q&A and brainstorming, and supports AI-assisted translation, 3D spatial navigation, and first-person perspective video creation. In March 2024, Rayneo Technology closed a new funding round and raised RMB100 million which will be used to develop and spawn next-generation AR glasses and expedite the construction of the AI+AR glasses ecosystem.

Xingji Meizu is also laying out AI+AR. In November 2023, Xingji Meizu released two MYVU series AR glasses, connected to the Flyme AI foundation model. Based on AI, AI assistant can be awakened in real time to provide travel tips, study plans, business analysis, and other daily life and work collaboration. At the same time, AR glasses can realize scenario functions such as teleprompter, real-time translation (in Chinese and English), and cycling navigation.

Xingji Meizu MYVU Series AR Glasses Connected to Flyme AI Foundation Model

Source: Xingji Meizu

Automotive XR scenarios expand from entertainment to driving assistance and vehicle control.

Currently, XR mainly caters to users' needs for cockpit entertainment, for example, viewing and gaming. Moreover suppliers are also exploring other application scenarios such as driving assistance and vehicle control.

At CES 2024, BMW and XREAL together demonstrated XREAL Air 2 AR glasses, a device which integrates vehicle information, infotainment, vehicle electronic and electrical information, BMW cloud information and other data. Wearing the glasses, users can see how navigation instructions, hazard warnings, entertainment content, information on charging stations and supporting visualizations in parking situations are embedded perfectly into the real-world environment by the "XREAL Air 2".

BMW Enhances Driving Experience with AR Glasses

Source: BMW

Audi presented activesphere, a concept car which is equipped with four AR headsets

At CES 2023, Audi presented activesphere, a concept car which is equipped with four AR headsets. Wearing Magic Leap 2 AR glasses, the driver can view trip data, road conditions, location and navigation information in real time the MR visual interface with a 70° FOV; the passengers can control air conditioning temperature, airflow, and audio system next to their seats via gestures.

Furthermore, AR technology can be available beyond the cockpit. In off-road scenarios, the topographic map can be projected into the surroundings; in commuting, traffic information, routes and safety warnings can be projected in layers into the driver's view.

Audi activesphere Concept Car Introduces AR Technology

Source: Audi

Table of Content (1)

1 Overview and Market Trends of Automotive XR
1.1 Definition of Automotive XR (VR/AR/MR)
1.2 Comparison between Automotive XR Technologies
1.3 Main Application Scenarios of Automotive XR - Corporate-grade
1.4 Main Application Scenarios of Automotive XR - Consumer-grade
1.5 Advantages and Disadvantages of AR Glasses in Cars
1.5.1 Challenges in Adaptation of Existing VR Technologies to In-vehicle Scenarios

1.6 Automotive XR Business Models

1.7 XR Industry Chain
1.7.1 XR Industry Chain Companies
1.7.2 Comparison between Main VR Optical Solutions
1.7.3 Development Direction of VR Optical Solutions
1.7.4 Main VR Display Technologies
1.7.5 Comparison between Main AR Optical Solutions
1.7.6 Development Direction of AR Optical Solutions
1.7.7 Main AR Display Technologies
1.7.8 XR See-through Technology Route
1.7.8.1 VST (Video See-through) Application Cases
1.7.8.2 OST (Optical See-through) Application Cases

1.8 Development Trends of Automotive XR
1.8.1 Trend 1
1.8.2 Trend 2
1.8.3 Trend 3
1.8.3.1 Cases

2 Major Automotive XR Device and Software Solution Suppliers
2.1 Summary of Major Automotive XR Device and Solution Suppliers
2.1.1 Summary of Iteration Directions of Main Automotive XR Products

2.2 Rokid
2.2.1 Profile and Financing History
2.2.2 Latest Consumer-grade AR Glasses: Rokid Max
2.2.3 Rokid AR Space Operating System
2.2.4 Rokid AR Software Ecosystem Cooperation
2.2.5 Rokid AR In-vehicle Scenario Cooperation Layout

2.3 Meta
2.3.1 Profile
2.3.2 Latest VR Device: Quest 3

2.4 Rayneo Technology
2.4.1 Profile
2.4.2 AR Glasses: Rayneo X2
2.4.3 AR Glasses: Rayneo X2 Lite
2.4.4 AR Glasses: Rayneo Air 2

2.5 Xingji Meizu
2.5.1 "Smartphone + XR + Intelligent Vehicle" Strategic Map
2.5.2 Building Multi-terminal (Smartphone, Car, AR, etc.) Ecosystem Integration
2.5.3 Comparison between MYVU Series AR Glasses
2.5.4 MYVU Series AR Glasses: Xingji Meizu MYVU Discovery Edition
2.5.5 AR Glasses Highlight 1
2.5.6 AR Glasses Highlight 2
2.5.7 AR Glasses Highlight 3
2.5.8 Latest Upgrade of AR Glasses OS

Table of Content (2)

2.6 XREAL
2.6.1 Profile and Financing History
2.6.2 Latest In-vehicle AR Glasses: XREAL Air 2
2.6.3 Iteration of AR Glasses Software Algorithms and Optical Engines
2.6.4 Automotive XR Cooperation Dynamics

2.7 Holoride
2.7.1 Profile
2.7.2 Eco-Architecture Map
2.7.3 Latest Automotive XR Hardware Solutions
2.7.4 Latest Automotive XR Software Solutions
2.7.5 Automotive XR Cooperation Dynamics

2.8 ELEJO
2.8.1 Profile and Key Automotive XR Technologies
2.8.2 Automotive XR Intelligent Cockpit ELEJO Technology Architecture
2.8.3 Automotive XR Intelligent Cockpit ELEJO Algorithm & Engine
2.8.4 Automotive XR Eco-Cooperation and Business Model

2.9 CATARC
2.9.1 Intelligent Automotive XR Technology Application Solution
2.9.2 Intelligent Automotive XR Virtual Simulation Experiment Platform
2.9.3 Intelligent Automotive XR Virtual Simulation Verification Software System

2.10 MOTREX: In-cabin XR BOX

3 AR/XR Layout of OEMs

3.1 Comparison of Cockpit XR Technology Layout between OEMs
3.1.1 Comparison of Automotive VR Headset Parameters between OEMs
3.1.2 Comparison of Automotive AR Glasses Parameters between OEMs
3.1.3 Optical and Display Solutions of AR Glasses for In-car Applications

3.2 BMW
3.2.1 Automotive XR Layout (1)
3.2.2 Automotive XR Layout (2)

3.3 Ford
3.3.1 Automotive XR Layout (1)
3.3.2 Automotive XR Layout (2)

3.4 Audi
3.4.1 Automotive XR Layout (1)
3.4.2 Automotive XR Layout (2)

3.5 Porsche Automotive XR Layout

3.6 Li Auto
3.6.1 Automotive XR Layout
3.6.2 Features of Rayneo Air AR Glasses
3.6.3 Features of Latest Rokid Max AR Glasses

3.7 NIO
3.7.1 AR Glasses
3.7.2 VR Headset

3.8 Skyworth
3.8.1 Launched Sleep-aid VR Headset Together with Skyworth XR

Table of Content (3)

3.8.2 VR Headset Series Comparison
3.8.3 Main Features of VR Headset
3.8.4 VR Headset Software Algorithm
3.8.5 VR Headset Software Platform SkyOS

3.9 BYD
3.10 Chery's Automotive XR Layout
3.11 GAC's Automotive XR Layout

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