Corporate Brochure

Chengdu Vistar Optoelectronics Co., Ltd.

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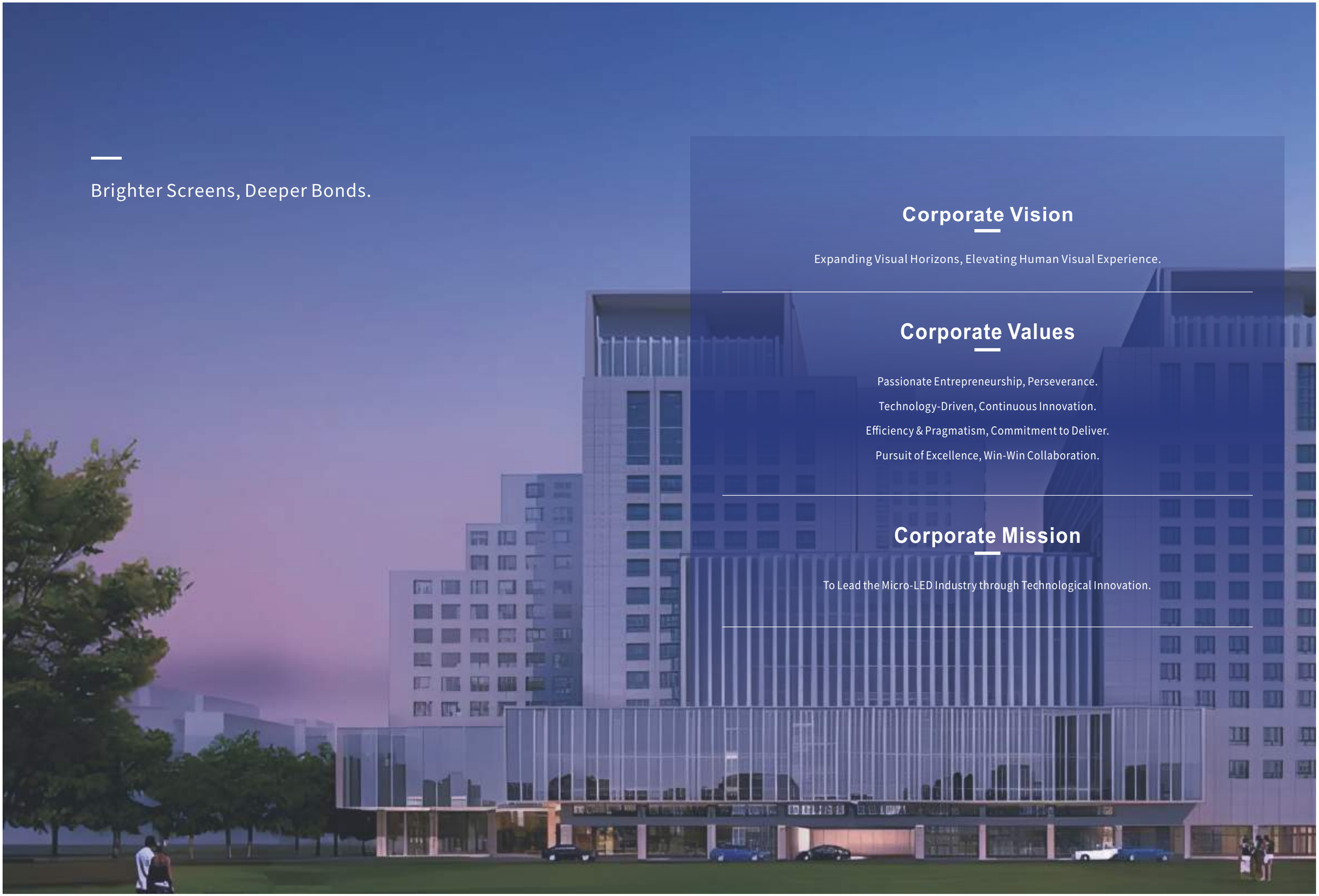
VistarMKT@vistardisplay.com

The Global Leader in TFT-based Micro-LED Technology.



Brighter Screens, Deeper Bonds.

Corporate Vision

Expanding Visual Horizons, Elevating Human Visual Experience.

Corporate Values

Passionate Entrepreneurship, Perseverance.

Technology-Driven, Continuous Innovation.

Efficiency & Pragmatism, Commitment to Deliver.

Pursuit of Excellence, Win-Win Collaboration.

Corporate Mission

To Lead the Micro-LED Industry through Technological Innovation.

CONTENTS

Clarity that goes beyond pixels.
A world that is seamlessly connected.
This compendium serves as an index to our collective wisdom and experience, guiding you to understand:
How we translate information into awe-inspiring experiences, with light and technology.
Follow the chapters ahead to explore every possibility that lights up the future.

VISTARDISPLAY

8

EIGHT YEARS OF DEEP CULTIVATION. PROGRESS IN LIGHT, NEVER CEASING.

We began by illuminating a single display, and have gone on to define boundless visual horizons. This marks not merely the passage of time, but our evolution from products to solutions, from manufacturing to true creation. Moving forward, we continue to be guided by light, connecting all things.

2025. 11

Released the world's first 270-inch 8K TFT-based Micro-LED display and the 19-inch P0.4 TFT-based Micro LED transparent display

2025.05

Led the establishment of the world's first international standard for Micro-LED array

2025.04

TFT-based Micro-LED mass production line achieved volume supplies

2024.12.19

Mainland China's first TFT-based Micro-LED mass production line achieved initial lighting

2024.09.10

First batch of mass production equipment moved in

2023.09.30

First domestic 102-inch TFT-based Micro-LED splicing display successfully lit up

2023.09.20

Construction of the world's first TFT-based Micro-LED mass production line commenced

2021.05.14

Mainland China's first TFT-based Micro-LED pilot product lit up

2021.03.01

Large-scale equipment moved in

2020.10.15

Temporary cleanroom relocation completed

2020.08.04

Vistar was founded

2017.10

Established the Micro-LED project team

PART.1
Company Profile

$ 556 M

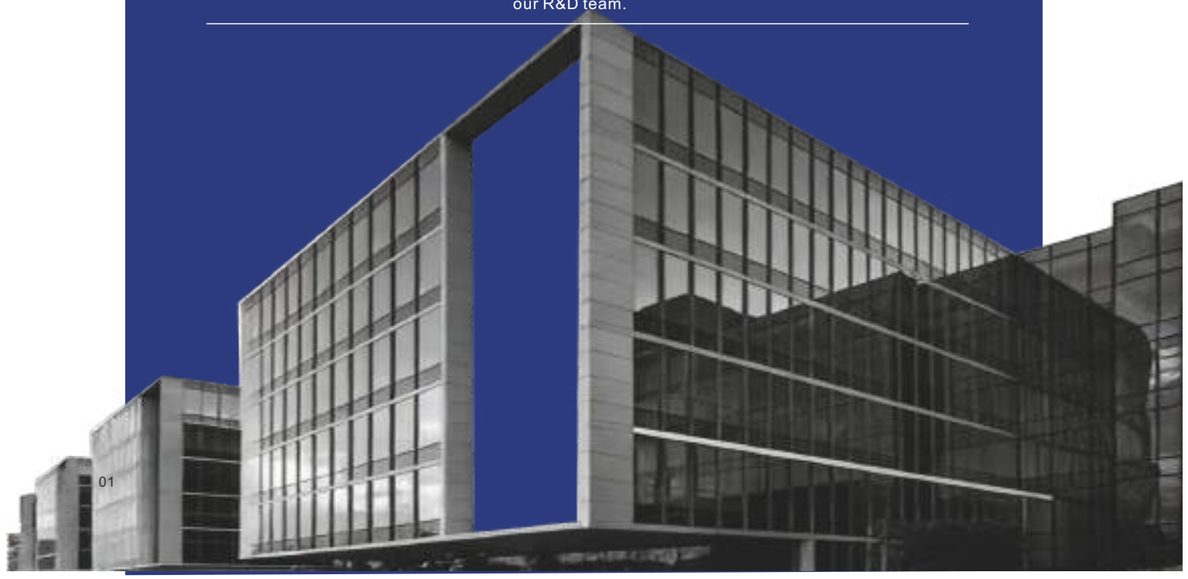
With a total investment exceeding RMB 4 billion, the company has shareholders including Chengdu High-tech Investment Group and government entities at the provincial, municipal, and district levels of Sichuan, who collectively hold a stake of over 81%.

1186

As of December 2025, the company had filed a total of 1,186 patent applications, with invention patents accounting for over 96%. Among these, 562 patents have been granted.

50%+

Master's and doctoral degree holders account for 50% of our R&D team.



Chengdu Vistar Optoelectronics Co., Ltd.. (hereinafter referred to as "Chenxian Optoelectronics") was founded on August 4, 2020. It is the first high-tech enterprise in mainland China dedicated to the R&D, production, and sales of TFT-based Micro-LED technology.

By the end of 2025, the company's total investment exceeded RMB 4 billion, with shareholders including the Chengdu High-Tech Investment Group and government entities at the provincial, municipal, and district levels of Sichuan Province, collectively holding an equity stake of over 81%.

Driven by its mission to "lead the Micro-LED industry through technological innovation," Chenxian Optoelectronics is committed to becoming a globally leading enterprise in new display technologies. The company's R&D team comprises 50% master's and doctoral degree holders. As of December 2025, it had filed a total of 1,186 patent applications, of which over 96% are invention patents, with 562 patents already granted.

Chenxian Optoelectronics achieved a significant milestone by completing mainland China's first TFT-based Micro-LED pilot line in just 10 months. It has since launched several products that were first-of-their-kind both internationally and domestically. By the end of 2024, the company illuminated mainland China's first TFT-based Micro-LED mass production line, taking the lead in achieving volume production and shipment.

The company continuously tackles critical technical challenges in the Micro-LED field and has mastered multiple core technologies, including mass transfer, driving architecture, seamless tiling, and bin mixing. As a representative of China's new display industry, Chenxian Optoelectronics leads the effort in fostering a robust industrial ecosystem, strengthening the supply chain, and promoting collaborative development. It aims to build a self-sufficient and controllable industrial chain, thereby driving the continuous growth and expansion of China's new display sector.

VSD Pilot R&D Base: The Core Engine of Technological Innovation

Located in the West District of Chengdu High-tech Zone, the VSD Pilot R&D Base serves as the technological cradle and incubator for Chenxian Optoelectronics. It operates mainland China's first Micro-LED pilot production line covering the entire process from driver backplanes to modules. Its core mission is to overcome key industrialization challenges, transforming laboratory principles into mass-producible solutions. The base brings together over 350 outstanding professionals, with master's and doctoral degree holders comprising 53% of its R&D team.

$170 M
Investment

17000 ㎡
Floor area

VSM Mass Production Base: Foundation for Industrial Scale-up

VSM Mass Production Base is a strategic move by Chenxian Optoelectronics to realize commercial value and lead industrial advancement. With a total investment of RMB 3 billion, it is located in the Optical Display Flexible Valley Industrial Park in Chengdu's High-tech West District. This facility is mainland China's first and a globally leading mass production line for TFT-based Micro-LED.

The base's foundation was laid in September 2023, and core equipment installation was completed by September 2024. It has now entered the final sprint stage towards volume production and shipment.

$424 M
Investment

35333 ㎡
Floor area

PART.2
Certifications & Capabilities

Corporate & Product Certifications

Possesses independently developed intellectual property rights.

Patent Portfolio (as of December 2025):
- Patent Applications Filed: **1,186**
- Patents Granted: **562**
- Invention Patents Ratio: **>96.4%**

Undertakes Multiple National Ministerial-Level Projects

Patent Portfolio (as of December 2025):
- Led or collaborated on several key Micro-LED technology special projects for relevant ministries and commissions.
- Jointly tackled the National Key R&D Program of the Ministry of Science and Technology.
- Successfully obtained approval for leading the development of a national standard.
- The international standard proposal led by the company has passed the New Work Item Proposal (NP) vote.
- In May 2025, the company was successfully shortlisted in the preliminary list of the first batch of key cultivation pilot platforms in the new display field by the Ministry of Industry and Information Technology

(Note: The National Standard refers to "LED Display Screens–Part 3-1: Test Methods for Optical and Photoelectric Parameters of Micro-LED Display Devices"; the International Standard Proposal refers to "Semiconductor Devices – Part 5-17: Optoelectronic Devices – Test Methods for Photoelectric Parameters of LED – Micro-LED Array Devices".)

Green & Energy Efficiency Certifications

Chenxian Optoelectronics is committed to "Green Development, Low-Carbon Smart Manufacturing." It has established a comprehensive management system, certified for energy, greenhouse gases, and carbon footprint management. The company also holds the China Environmental Label (Type II) and Full-Color LED Display Energy-Saving certifications, covering its entire process from R&D to delivery.

Utilizing efficient TFT-based Micro-LED technology, its products achieve high brightness with over 30% lower power consumption than conventional displays. This is enabled by a glass-based AM driving architecture and a precision energy control system, supporting green factory development.

Moving forward, the company will deepen efforts in carbon reduction, lifecycle management, and footprint visualization, leveraging innovation to lead the industry's green transition and become a national benchmark.

System Certifications

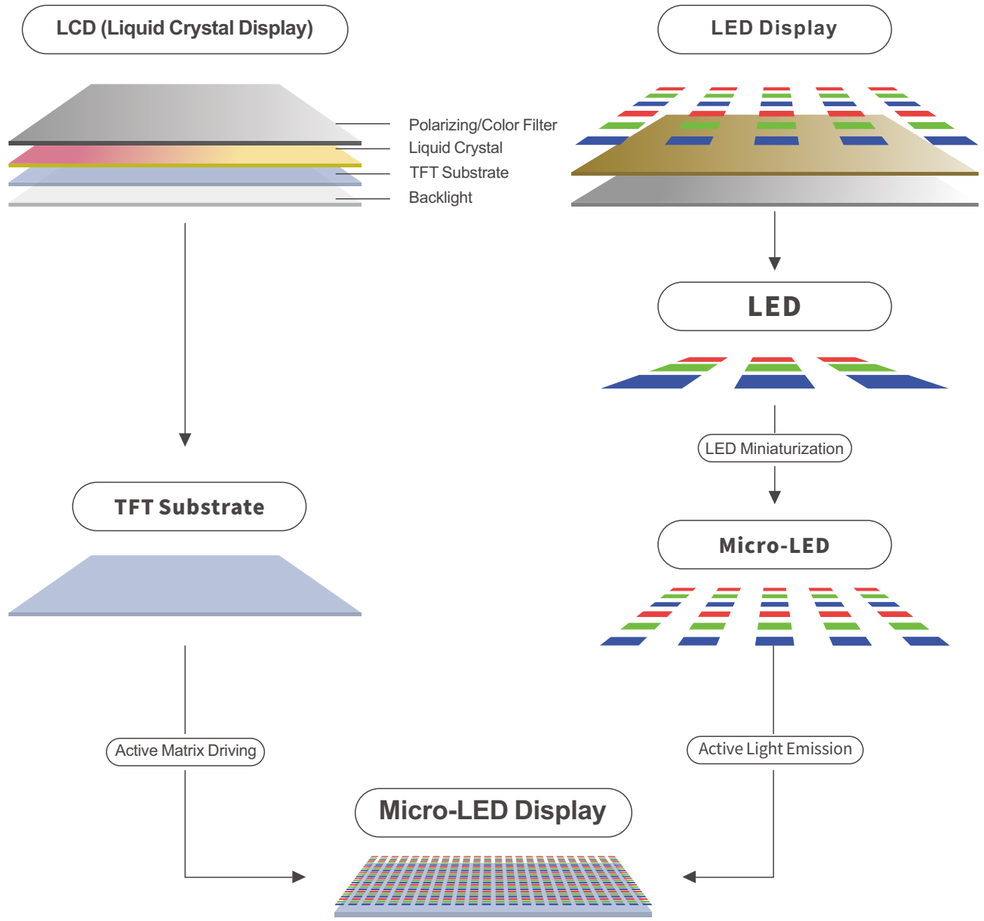
Product Certifications

PART.3
TFT-based Micro-LED

What is TFT-based Micro-LED?

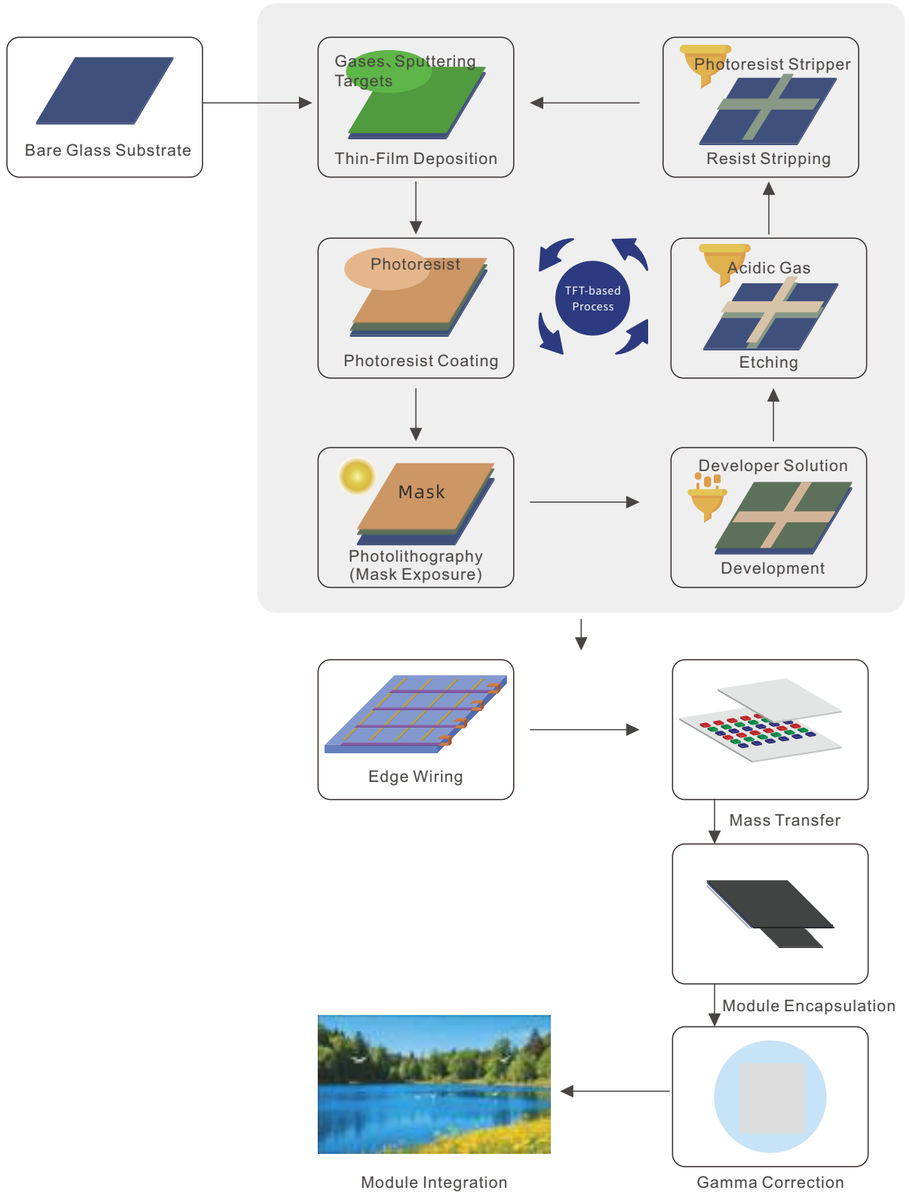
TFT-based Micro-LED is a display technology that uses a TFT glass substrate to actively and precisely drive each micron-scale LED pixel. Its active-matrix driving scheme fundamentally improves upon traditional methods, delivering极致画质 (ultra-high brightness, million-to-one contrast, wide color gamut) with uniform brightness, stability, and significantly lower power consumption.

This makes it the ideal solution for demanding high-end applications like control rooms, cinemas, and高端 retail. It represents the mainstream path for large-format Micro-LED and a new era of high-precision TFT-driven displays.

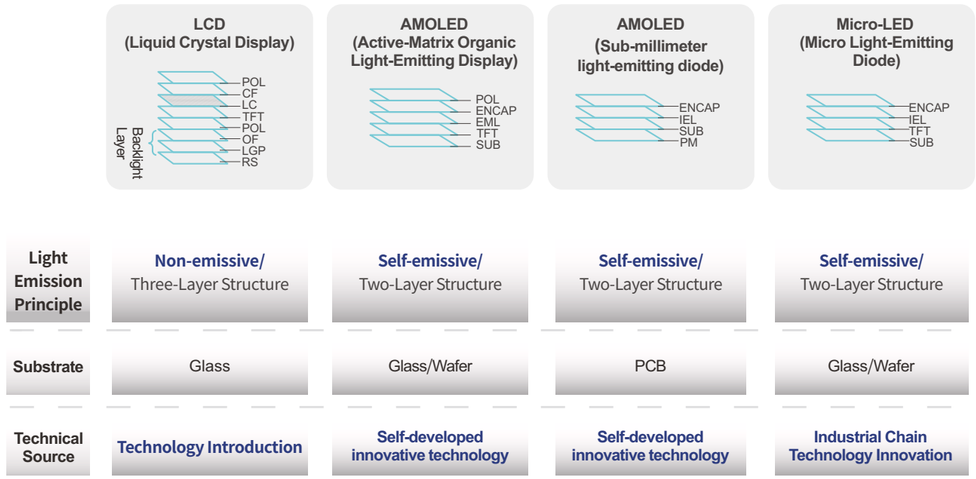


(Schematic Diagram of TFT-based Micro-LED Display)

Production Process of TFT-based Micro-LED



Display Technology Trends and Application Areas



(Display Technology Trends)

(Application Areas)

Advantages of TFT-based Micro-LED

Excellent Flatness

The TFT substrate features high surface flatness, which contributes to consistent image quality and viewing experience.

Long-term durabilitywithout deformation

Elevated temperatures can cause warping or edge lifting in PCB substrates, whereas the glass substrate's low coefficient of thermal expansion (CTE) helps minimize deformation and stress induced by thermal variation.

SWT Technology: "0" Seam Splicing

With a mere 20μm seam, TFT-based Micro-LED displays achieve truly seamless tiling, where every detail seamlessly integrates to create a visual spectacle that defies imagination.

Eliminating the "Caterpillar" Artifact

Utilizing AM driving technology, it enables independent driving and pixel-level control of each light bead, which eliminates the caterpillar effect at its source and ensures perfectly stable and complete imagery.

Enhanced Eye-friendly Performance

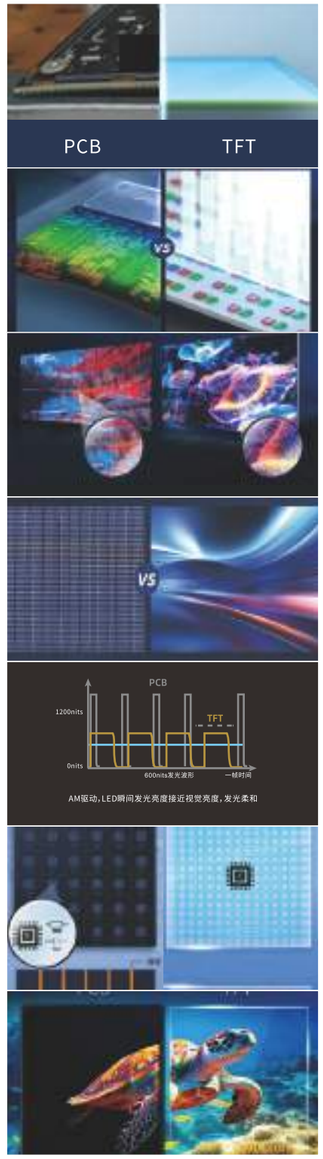
With AM driving, instantaneous brightness is kept below 1000 nits, resulting in more comfortable and eye-friendly viewing.

Reduces internal components by 90%

It reduces internal module components by over 90% with a simpler architecture, which lowers the failure rate. This ensures long-term, reliable screen operation, decreases maintenance frequency, and reduces both operational risks and maintenance costs.

Perfect Transparent Display Solution

The high aperture ratio of the TFT substrate allows light to pass through with high transmittance. Combined with the exceptionally high brightness of the Micro-LED screen, this delivers a brighter, clearer picture and enables the dual overlay display effect of image and real-world scenery.



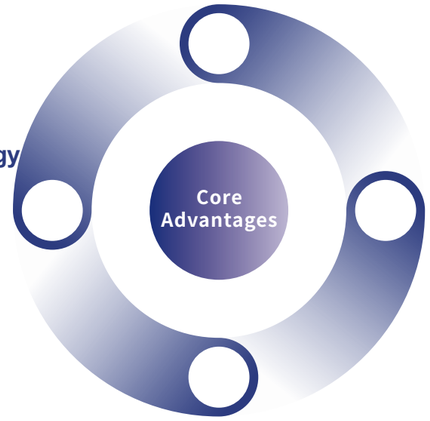
Our Core Technological Strengths

World's First Virtual Bin Mixing (VBM™) Technology

It achieves a high level of brightness and color consistency across screens, with inter-screen brightness uniformity reaching 98%.

Mass Transfer Technology

High Throughput: 10 million LEDs/hour (Equivalent to a 4K TV panel in 2.5 hours)

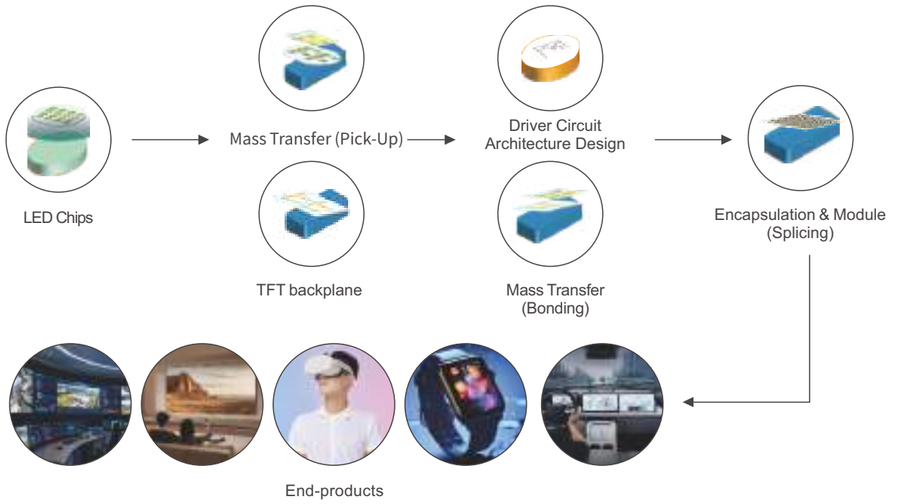


Driving Architecture Technology

China's first dedicated hybrid driver IC for TFT-based Micro-LED, resolving the "caterpillar" effect issue.

System IC Integration

Self-Controlled Excellence: Enhanced Picture Quality, Reduced Cost.

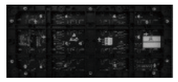


PART.4
Full Product Range

In an era of rapid advancement in visual technology, we draw on our deep insight into the interplay of light and shadow to build a comprehensive LED display product matrix for full-scenario applications. Each product embodies our unwavering commitment to exceptional image quality, reliable performance, and innovative design, dedicated to providing global clients with visual solutions ranging from standardized to highly customized.

LED Display Products

Outdoor Cabinet

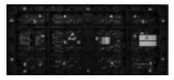


Outdoor Module

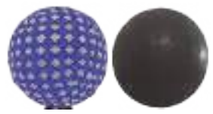
TFT-based Micro-LED

SMD

COB



Indoor Module



Sphere Display

Rental Display

Floor Tile Display

Transparent Display

Display Control System

Matrix
Hybrid Matrix/IP Matrix

Control Processor
Distributed / Centralized

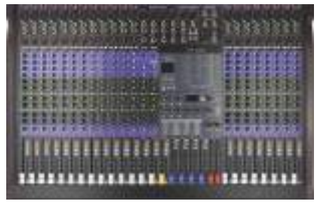
Centralized Control
/KVM Control

Display Control Platform
/O&M Platform

Audio System

Daisy-chain Conference System

Paperless Meeting



Analog/Digital Mixing Console System

TFT-based Micro-LED

Product Highlights

1	Individual Pixel Driving, No “Caterpillar” Effect.
2	Source IC is more stable.
3	AM Driving for Enhanced Eye Comfort.
4	Energy-Efficient, Low-Temperature Screen for Enhanced Comfort.
5	High-Flatness Glass Substrate
6	Long-lasting durability, deformation-free.

Key Specifications

Model	Pixel Pitch	Cabinet Size (W*H)	Cabinet Resolution	Cabinet Material	Maintenance Method	White Balance Brightness
VMA007	0.78mm	600*337.5mm	768*432	Die-cast Aluminum	Front Maintenance	600

Indoor Fine Pitch SMD

Product Highlights

1	Slim and Lightweight Design, Elegant Aesthetics, Easy Installation
2	4-in-1 Integration, Unified Design
3	Sending Card-Free Design, Simplified Architecture
4	High-Bandwidth HDMI Transmission, Simplified Cabling
5	High-Bandwidth Fiber Optic, Extended Transmission Distance

Key Specifications

Model	Pixel Pitch	Cabinet Size (W*H)	Cabinet Resolution	Cabinet Material	Maintenance Method	Maintenance Method	Communication Interface
CFB012	1.25mm	600*337.5mm	480*270	Die-cast Aluminum	Front Maintenance Rear Maintenance	600	Network / HDMI/ Fiber Optic
CFB015	1.56mm		384*216				
CFB018	1.87mm		320*180				

Outdoor All-Aluminum Cabinet

Product Highlights

1	Slim and Integrated Design
2	Active and Efficient Heat Dissipation
3	Front/Rear Maintenance
4	High Degree of Flatness
5	Arc and Corner Tiling Enabled, Facilitating 3D Display

Key Specifications

型号	CXL025	CXL030	CXL040	CXL050	CXL060	CXL067	CXL080	CXL100
Pixel Pitch	P2.5	P3.07	P4	P5	P5.9	P6.67	P8	P10
Cabinet Size (W*H) mm	960*640*95			960*960*95				
Cabinet Material	Aluminum Profile							
Maintenance Method	Front Maintenance/Rear Maintenance							

Mini-LED COB

Product Highlights

1	Flip-Chip Design, Stable and Reliable
2	3-in-1 Integrated Design, Streamlined Cabinet Interior
3	Nano-coating technology for an ultra-black background
4	Energy-Saving Cool Screen Operation
5	Comprehensive 6-Layer Protection

Key Specifications

Model	Pixel Pitch	Cabinet Size (W*H)	Cabinet Resolution	Cabinet Material	Maintenance Method	White Balance Brightness
CCA007	0.78mm	600*337.5mm	768*432	Die-cast Aluminum	Front Maintenance	600
CCA009	0.93mm		640*360			
CCA012	1.25mm		480*270			
CCA017	1.56mm		384*216			

All-in-One Meeting Machine

Product Highlights

1	16:9 Standard Aspect Ratio
2	User-Friendly Operation: One-Touch Power On/Off, Remote Control
3	Wireless Screen Mirroring
4	Control Large Display from Mobile Devices
5	Control Large Display from Mobile Devices
6	Slim and Lightweight Structure

Key Specifications

Model	Screen Size (W*H)	Screen Resolution (W*H)	Recommended Meeting Room Area
CWA135	3000*1687.5mm	1920*1080	60~100㎡
CWA163	3600*2025mm	1920*1080	100~200㎡

Smart Connected Interactive Board

Product Highlights

1	Simultaneous Display
2	Auto Recognition
3	Storage & Search
4	One-Click Note Taking
5	Light Recording & Playback
6	Dust-Free & Healthy, Eyesight Protection

Key Specifications

Model	LED Packaging	Screen Size (W*H)	Screen Resolution (W*H)
CWB135C	COB	3000*1687.5	1920*1080
CWB163C		3600*2025mm	
CWB135S	SMD+GOB	3000*1687.5	
CWB163S		3600*2025mm	

TFT-based Micro-LED Transparent Tiled Display

Product Highlights

1	Over 60% Ultra-High Transmittance
2	2*N Unlimited Tiling
3	3000 nits Ultra-High Brightness
4	170° Ultra-Wide Viewing Angle
5	25μm Micro-LED

Key Specifications

Model	Pixel Pitch	Module Size (W*H)	Cabinet Resolution	Substrate Material
VMT	P0.42	161*176mm	384*420	Glass

27" P0.7 TFT-based Micro-LED Textured Screen

Product Highlights

1	Dual-State Aesthetics：Off-screen, it presents elegant décor; powered on, it switches to an ultra-clear visual realm
2	Versatile Cladding Options：Multiple finishing textures to match and enhance different spatial styles
3	Exquisite Detail & Texture：Features a 0.7mm pixel pitch and 25μm Micro-LED chips, delivering clear texture with no granularity
4	Scenario Adaptability：Ideal for display scenarios requiring decorative quality, such as in residential spaces, hotels, and clubhouses

Key Specifications

Cabinet Size	Pixel Pitch	Pixel Density	Brightness	Resolution	Display Type
27"	P0.78	33PPI	1000nits	768*432	Micro-LED(Textured Finish)

PART.5

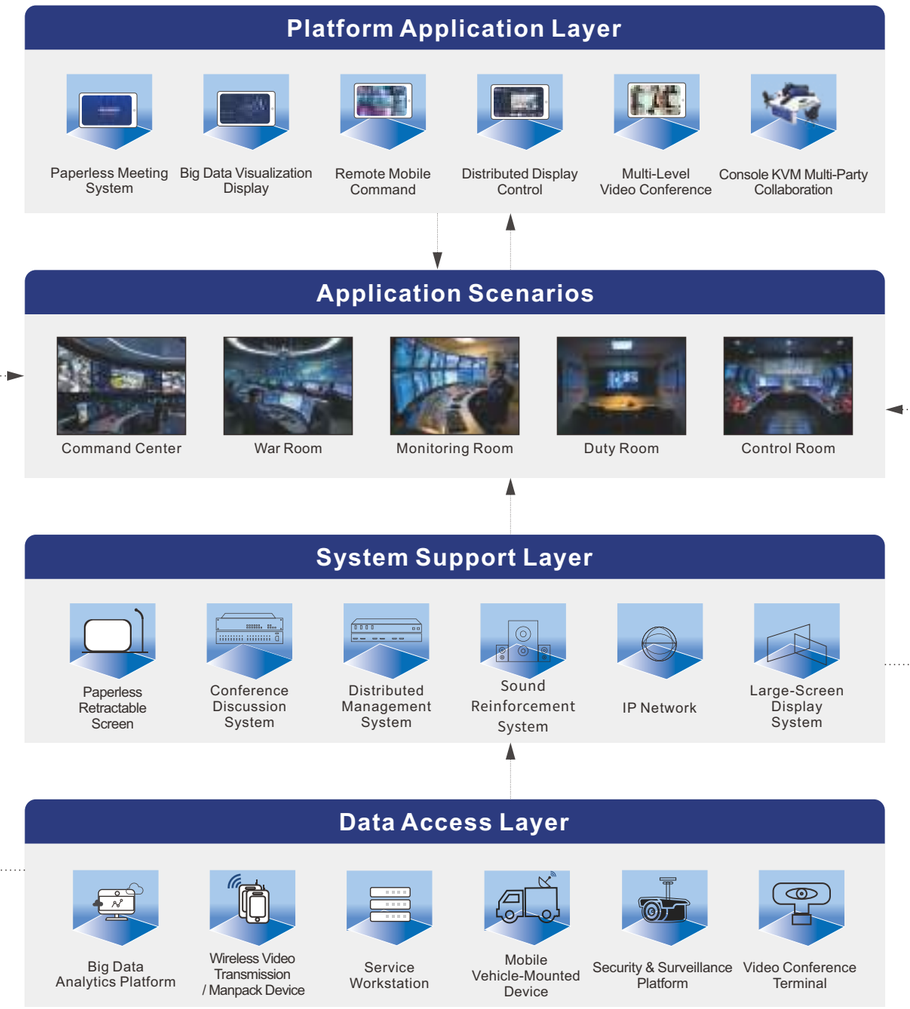
Application Scenarios & Solutions

As the core component of digital display solutions, LED screens are widely used across various fields:

- In command and dispatch centers, it clearly presents critical information, facilitating efficient decision-making.
- In meeting rooms and corporate lobbies, seamless visual presentations enhance communication and reinforce brand identity.
- In exhibition halls, immersive visuals create a captivating exhibition atmosphere.
- For outdoor advertising, its high-brightness and weather-resistant properties ensure the imagery remains vivid and striking.
- From indoor to outdoor settings, LED displays consistently deliver outstanding performance, enabling diverse applications.

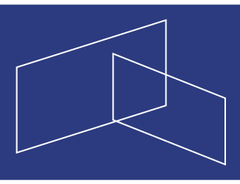
Command and Dispatch Solution Architecture

Command and Dispatch Center Audio-Visual Solutions feature high integration and robust collaboration, seamlessly integrating diverse audio-visual devices and signal sources to enable unified management and rapid dispatch. Through a high-definition visual command interface and real-time interconnectivity, they ensure the clear delivery of critical instructions, support efficient decision-making, and guarantee the precision and reliability of command operations.



Micro-LED Display System

- TFT-based Micro-LED Display



Intelligent Transmission System

- KVM Console Management System
- Distributed Management System
- Visual Collaboration
- O&M System

Digital Conference System

- Delegate Unit (with Voting)
- Conference Control Unit
- Camera Auto-Tracking

Sound Reinforcement System

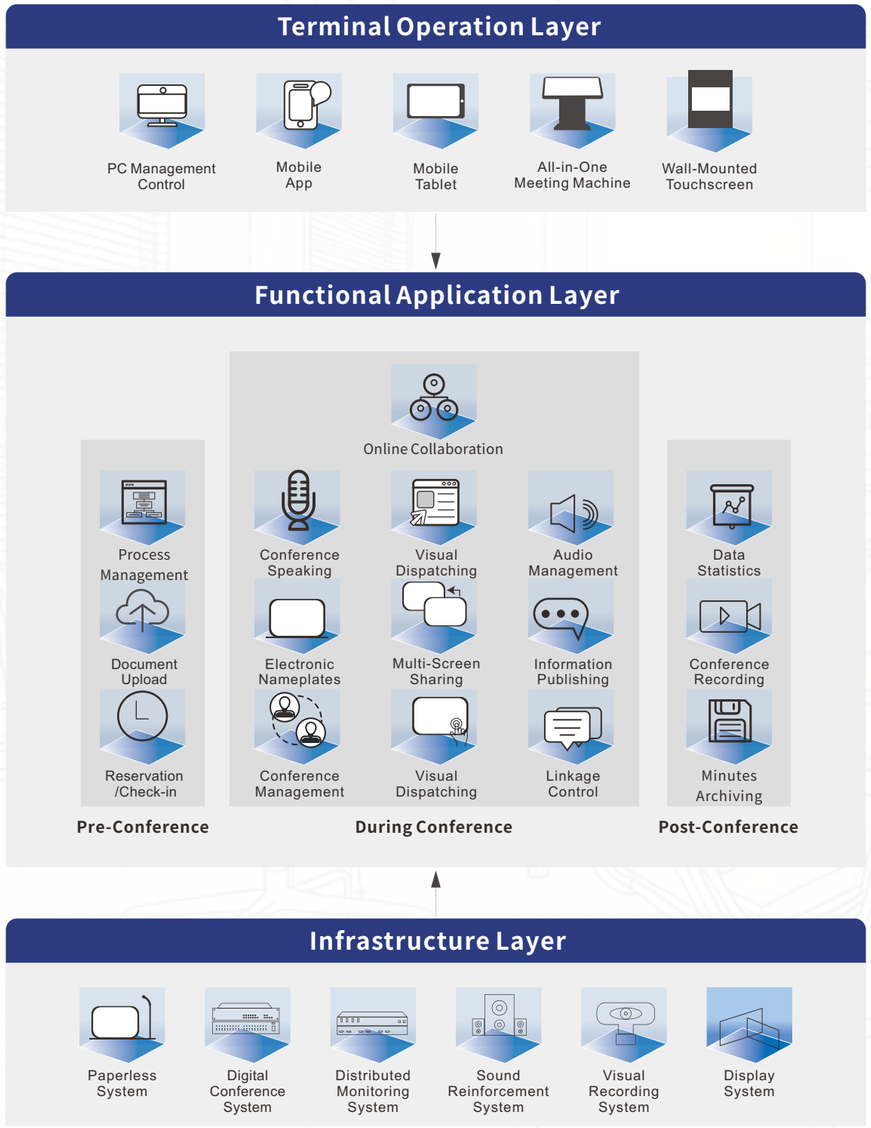
- Wireless Handheld Microphone
- Digital Speaker System, Digital Power Amplifier
- Audio Processor + Mixing Console

Conference Management System

- Paperless Meeting System
- Meeting Collaboration System
- Video Conference System

Conference Solution Architecture

As technology and times advance, the role of meeting rooms extends beyond basic conferencing. They must simplify complexity and evolve from intelligence to true wisdom, thereby fulfilling their core purpose and maximizing their value and social benefit.



Display System

- All-in-One Meeting Machine, Wireless Screen Mirroring
- Video Matrix
- Video Transmission

Sound Reinforcement System

- Speaker, Power Amplifier
- Audio Processing, Mixing Console
- Conference System, Microphone

Visual Collaboration System

- Centralized Control
- Power Management, Volume Management
- Signal Switching

Paperless System

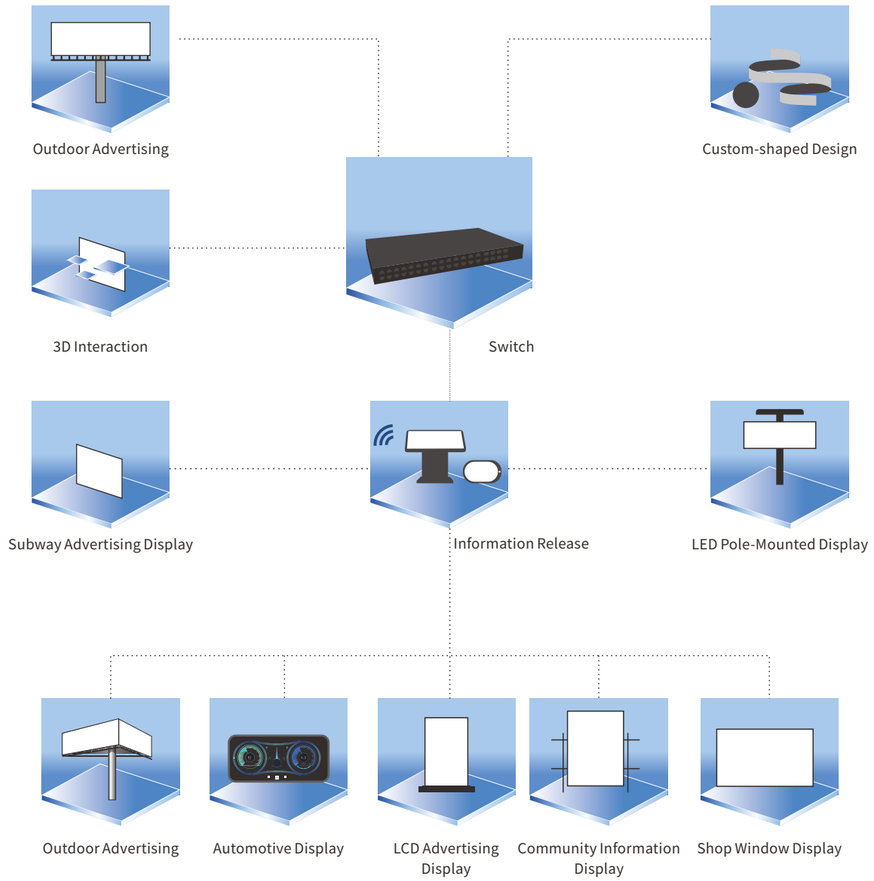
- Paperless Conference Terminal
- Electronic Nameplates
- Conference Configuration, Conference Management

Video Conference System

- Remote Meeting
- Remote Training
- Conference Recording and Playback

Outdoor Advertising System Architecture

LED displays are the core of outdoor advertising, offering high brightness and seamless tiling. They create landmark visuals through custom shapes and impressive glasses-free 3D effects. This boosts visual impact and social media reach.



Display

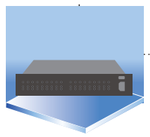
3D Interaction

Traffic Guidance

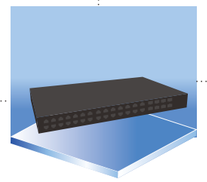
Cinema System Architecture

LED Large Screen

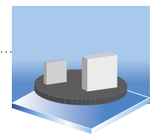
Interactive Flat Panel



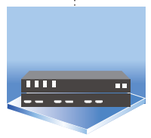
Media Player Server



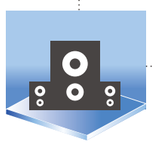
Switch



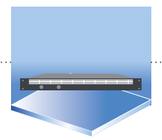
Scenario Construction



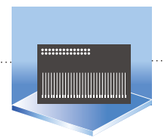
Central Control System



Audio System



Power Amplifier



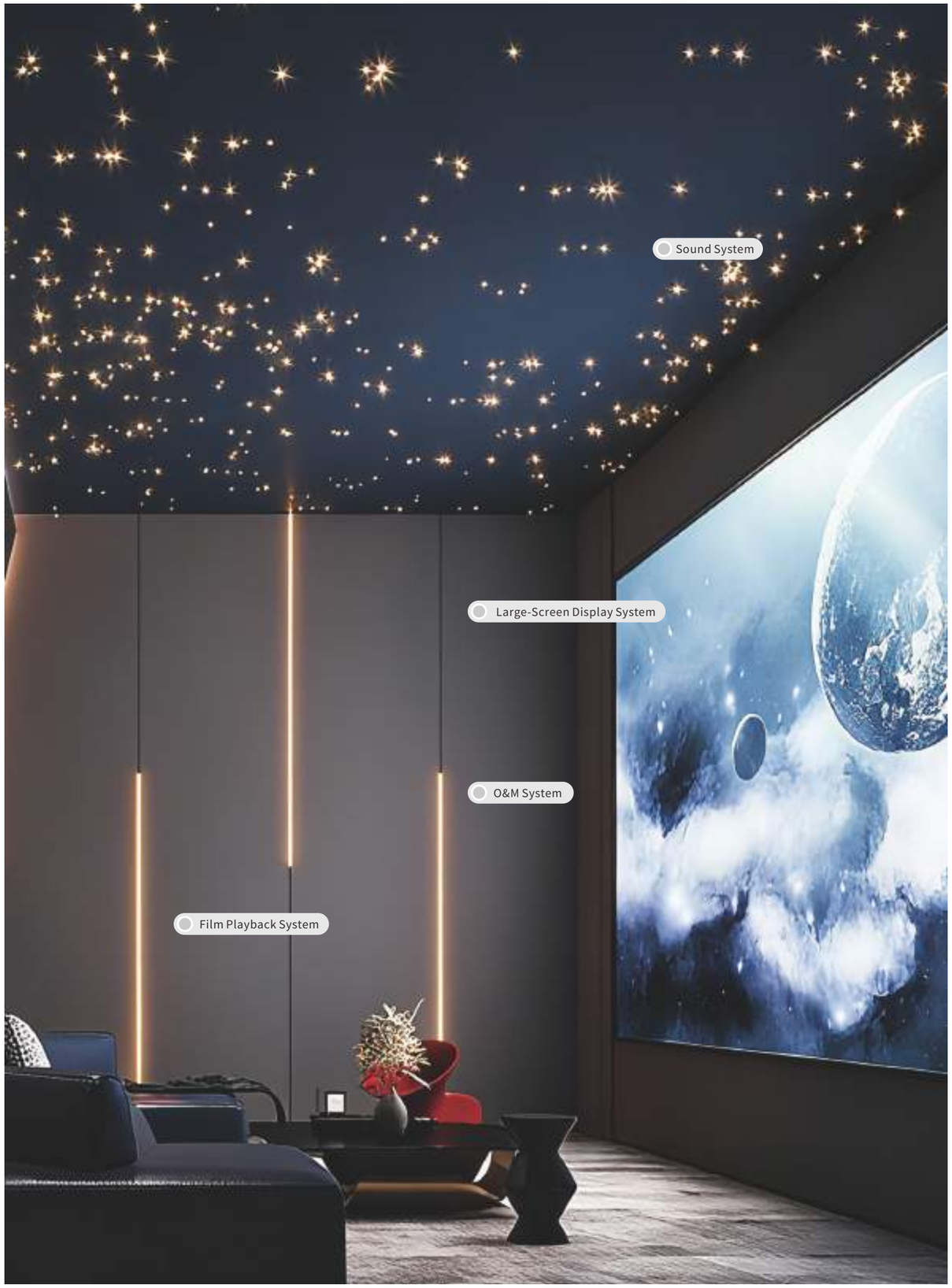
Mixing Console

Audio Processor

DCI Certification

HDR Quality

Low Brightness, High Grayscale



PART.6
Project Cases

Define Every Venue with Superior Visual Performance

In an era of information overload, how can your brand, event, or space be seen and remembered at first glance? A screen is more than an information carrier—it is a gateway to emotion and experience. We firmly believe that an outstanding LED display solution goes far beyond "clear display." It is the precision fusion of technology and aesthetics, a seamless dialogue between scene and content, and the cornerstone for empowering your commercial goals and creative vision.