

Drive for better vision



Himax

源奇科技股份有限公司
Liqxtal Technology Inc.

A Subsidiary of Himax Technologies, Inc.

Liqxtal Technology Inc.
源奇科技股份有限公司

Himax Help Shaping the Way People See the World

2000s

Large Sized Displays



TV



Monitor



Notebook

2010s

Small and Medium-Sized Display



Smartphone



Tablet



Automotive

2015 and Beyond ...

AIoT, 3D Sensing & Metaverse



Metaverse



3D Sensing



Ultralow Power AI Sensing

Drive for Better Vision

- World leading visual imaging processing fabless semiconductor provider
- Global market leader in TDDI, DDIC and Tcon for TFT-LCD display
- Growth momentum in CMOS image sensors, OLED ICs, EPD ICs, power management IC and ASIC solution
- Pioneer and leader in Ultralow Power AI Sensing, LCoS Microdisplay, WLO, 3D Sensing, AoS Sensor and LC Lens



HQ – Tainan, Taiwan
8 RD Centers WW
26 Offices WW
Taiwan, China, Japan,
Korea, Germany, U.S.



Founded 2001
NASDAQ : HIMX
(March 2006 Listed)



300+ Customers WW
Taiwan, China, Japan,
Korea, U.S, Europe



2,200 Employees
90% Engineers
2,609 Patents
370 Pat. Pend.
(as of 2025/6/30)

Liqxtal Technology Inc.



Company Background

- Founded in 2011
- Join Himax in 2015
- Headquarter: Tainan, Taiwan



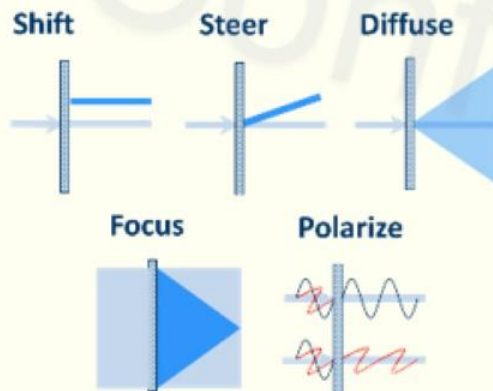
Optics Innovation Driven

- Design Centric Company



Technology Focus

- Tunable Liquid Crystal Tech.
- Custom Image Processing Solutions

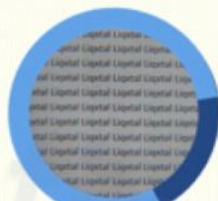


Application Focus

- Vision: AR/VR/MR/Ophthalmic
- Sensor: 3D sensing/Ambient light sensor
- Driver: Niche/ Customized Display Solution



Liqxtal® Graph



Moving Lens



Liqxtal® Dim Series



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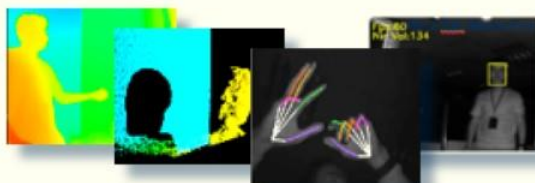
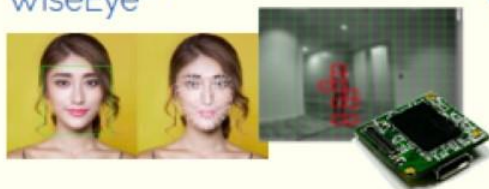
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Company Strength

Full range resources from Himax of advanced display, imaging, and sensing solutions



WiseEye™



**Himax
IC / Sensor
Resource**

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**Optomechanics
Design &
Integration**

**CLASS 100 FAB
Production**



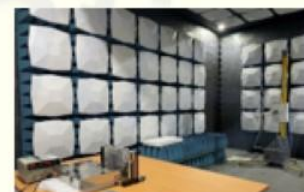
Advanced Measurement
& Inspection Capabilities

**Display &
Image Optics**

**Biometric &
Sensing Solution**

**Vision Systems
for Drone**

**Customized
Endoscope**



- RA/ESD LAB Verification
- ISO9001
- ISO13485 (Planned '25)



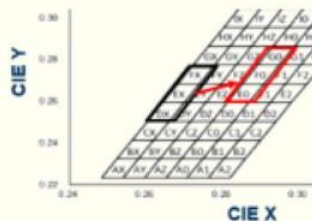
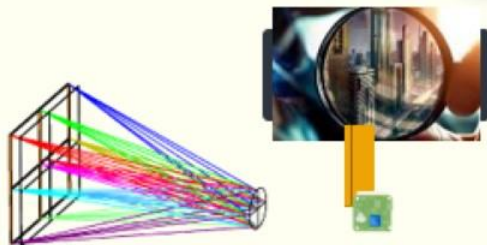
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Medical Display ODM Capabilities

Design

- ❖ Customized solution for niche demand
- ❖ Integration Driving (Arm, FPGA) & Display Solution



Manufacturing

- ❖ Class 100 Clean Room Production
- ❖ Advanced Measurement Equipment:
 1. **Precise Imaging Colorimeters** for spatial luminance/chromaticity analysis.
 2. **Non-contact 3D Metrology** for ultra-precision component measurement
 3. **CMM** for automated 3 dimensional and shape verification.



Quality

- ❖ Reliability/ESD LAB Verification
- ❖ ISO9001, ISO13485 (Planned 'Y25)



Capabilities

- Skilled management of complex supply chain / key parts vendor roadmaps alignment
- Leading Edge innovation connection among academic and industry leaders.
- Strategic partner with Industry key leaders of AR/VR Display, Applications required special custom made i.e. Medical
- **Corporate Group Resources**
Display Image IC Design
Supply Chain & Customer Network
Class 100 cleanroom production



RA /ESD LAB Verification



Quality Control System :

RoHS, ISO 9001,
ISO13485(planned Y'25)
SPC Performance monitoring

Operation Excellence

Immediate R&D issue support
ERP managing for data traceability

Design Engineering :

ASIC Driving System
Optics Display & Module

Technology :

Pixelated dimmer
Liquid Crystal Lens
Liqxtal™ Graph

Liqxtal® Pro-Eye – The Most Comfortable AI-Enhanced Virtual Display

Display &
Image Optics

Liqxtal® Pro-Eye



 **Himax** WiseEye™

Time	x	y	width	height
2024-12-17-11-39-05	295	331	125	128
2024-12-17-11-39-05	294	330	125	132
2024-12-17-11-39-06	296	328	125	132
2024-12-17-11-39-06	270	257	141	182
2024-12-17-11-39-06	260	238	142	189

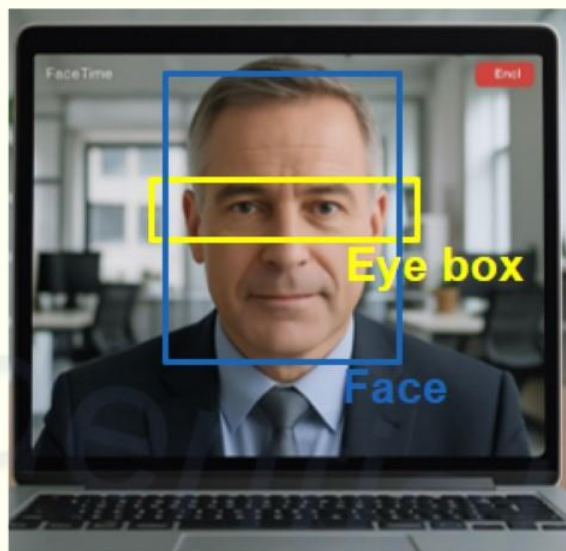
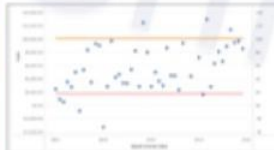
Pro-Eye Usage Report

5.4 hr
Average Screen Time/Day

90%
Best Fit Distance VR Rate

Every 51 min
Break Frequency

60%
Active Vision Time



User Report generated by Himax's WiseEye™ Module
- Facial and Eye detection and tracking to monitoring
Sitting Posture, Eye Gaze level, blink frequency....



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Market Outreach

展會 講座

IRB

EE TIMES
前瞻技術大會

★
產品上市

國原院
專題講座

液晶研討會

數位永續未來講座

CES

Embedded
World

國際健康醫療展

高齡醫療博覽會

國際航太展

醫療科技展

2025 年

1 月

2 月

3 月

4 月

五月

6 月

7 月

8 月

9 月

10 月

11 月

12 月

GlobeNewswire

Himax and Lixtal Technology Unveil Revolutionary Liquid Crystal Optical Technologies to be Showcased at CES 2025

A series of cutting-edge, patented products, including Lixtal® Graph, Lixtal® Dio and Lixtal® Pro-Eye, all featuring advanced tunable liquid crystal-based...



Newsline

<https://www.newsline.com.au/articles/...>

Himax Technologies to Showcase Innovative AIO T and ...

2025年3月3日 — Himax and Lixtal invite all interested parties to visit our embedded world 2025 exhibition booth at Hall 4, Stand 4-503, located at

• Himax's collaboration with Lixtal to introduce cutting-edge LC-based optical technologies positions the company favorably in the smart displays and wearable tech market.

GlobeNewswire

<https://www.globenewswire.com/...>

Himax Subsidiary Lixtal Technology Pro-Eye Vision Care

2025年6月29日 — Lixtal Pro-Eye employs patented electrically tunable liquid crystal technology to break beyond the typical 20 to 24-inch viewing distance of conventional



Seminar/ Workshop

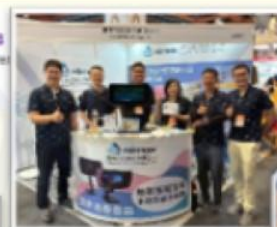


Academia
Cooperation



Product Acknowledgement

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Crowd
Experience



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Liqxtal Drone Camera Solution



First Person View



EO/LWIR



Gimbal System^{new}

Multispectral



Compact Form Factor
Compatible with
drones of all sizes

Liqxtal Drone Camera Systems

	IR Camera	EO Camera
Resolution	640x512	1920x1080 48Mp ^{new}
FOV(H)	40° or 60°	Wide:65±5deg Tele:15±1deg
Optical Zoom	-	20.8x
Digital Zoom	-	2x

Gimbal parameters

Number of axes	Mechanical three axes
Controllable angle	Pitch: +30°to-90° Roll: +45°to-45° Yaw: +120°to-120°
Maximum control speed	180°/ S
Angle jitter	±0.001°
Interface	UART 、 USB



Gimbal Camera



EO/LWIR



Low Light Image Processing



Night Vision Monocular

Feature

- 0.02lux (future: 0.01lux) @ 30FPS
- 1280 x 1024 (SXGA)

Customized Endoscope Solution



FPC/ PCB Diagram Design



WIFI Transmission



Precision Optical Lens
Alignment and Packaging



Sophisticated Mechanical
Assembly for high IP



Image Signal
Processor



Endoscopic AI Thermal
Imaging Detection



Endoscopic AI Image Analysis

Endoscope Key Technology

AI Alorton Integration

3D Vision Processor



3D ISP + NPU

(Arm Cortex-M55 & Ethos-U55)



3D Decoder



- RGB ISP
- MIPI-CSI + USB3.2 Gen1





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