COMPANY PROFILE

GLOBAL VISION SOLUTION PROVIDER Hanwha Vision



Hanwha Group

Hanwha will continue to embrace bold challenges for a sustainable tomorrow.

Founded in 1952, Hanwha continues to grow by quickly anticipating and responding to rapidly changing business environments with a balanced business portfolio that includes aerospace, energy & materials, finance and retail & services. As of 2024, we are the seventh largest business enterprise in South Korea and recognized among the world's top 500 companies by a prestigious global publication, as well as one of the 100 most influential companies by renowned international media.

Hanwha has become a global leader in a number of industries due to its culture of innovation, focused on breakthrough technologies, and sound financial structures.

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BUSINESS SECTORS



Aerospace & Mechatronics

Clea

Clean Energy & Ocean Solutions



Retail & Services

61.3^{USD} Billions

Sales

Domestic affiliates As of end of 2023 Business Enterprise in South Korea Total asset basis,

TOP 7

Global Networks

As of end of 2023

as of end of 2023

Years of History Founded in 1952

72





BUSINESS HIGHLIGHT

- Hanwha Group Acquires Philly Shipyard, First Korean Company to Enter
 U.S. Shipbuilding Industry
- Hanwha Ocean Secures Second U.S. Navy MRO Contract, Establishing a New Milestone in the Korea–U.S. Maritime Defense Alliance
- Hanwha Engine Launched, Completing Total Shipbuilding Solutions.
 Hanwha Group Provides Comprehensive Solutions from Engine Manufacturing to Shipbuilding
- Hanwha Aerospace Expands Global Defense Presence
 \$1.6B contract to supply 72 Chunmoo rocket artillery units to Poland
 Nearly \$1B K9, K10 deal with Romania
- Hanwha Qcells Announces Expansion of Strategic Alliance with Microsoft
 in Solar Energy
- Hanwha Financial Subsidiaries Expand Global Presence through
 Strategic Acquisitions
- Hanwha Life Acquisition of U.S. Financial Services Firm Velocity Clearing
- Hanwha Investment & Securities Acquisition of Indonesian Securities Firm Ciptadana

* Source: Hanwha Newsroom

AEROSPACE & MECHATRONICS

For the future of Earth and space

Having achieved growth through continuous innovation, Hanwha aims to become a solutions provider creating sustainable infrastructures on Earth and in space by leaning into our proprietary technologies in the aerospace, ocean, and advanced defense sectors. We are building a value chain for the space industry by developing core technologies for future businesses, such as space launch vehicles, satellites, space resource exploration, advanced Earth observation solutions, and satellite-based communications. In addition, we are advancing the future of the eco-friendly maritime industry by accelerating smart ship solutions and developing carbon-emission-free gas carriers. We are also creating an industrial ecosystem that makes daily lives safer and more enriched by offering integrated solutions for the future, including intelligent AI camera and analysis technology, AIoT platform convergent technology, and blockchain security. Our advanced technologies for the defense industry are being recognized for their global competitiveness.



Nuri

On June 21, 2022, **Hanwha** succeeded in sending the Korean launch vehicle, Nuri into space. Nuri is a space launch vehicle with 100% Korean technology in all processes, including design, production, and testing. **Hanwha**'s involvement in the project included core parts supplied and developed by **Hanwha** and liquid rocket engines developed by **Hanwha Aerospace**, the only aerospace engine company in Korea. The medium heavy engine technology of 75-ton is currently possessed by only seven countries in the world: Russia, the United States, France, Japan, China, India, and Korea.

Danuri

In August 2022, Korea's first lunar orbiter, Danuri, was launched. Danuri is an unmanned prober that flies at an altitude of 100km on the moon and performs lunar observation missions. **Hanuha**'smonopropellant propulsion system was used for Danuri to stably enter and settle in the lunar orbit. The high-resolution camera LUTI, of which **Hanuha Systems** participated in the development, creates a map for the lunar lander to land on and takes optical zoom pictures of the area where resources can exist on the moon. The successful launch of Danuri allowed Korea to be listed as the 7th lunar exploration country.

CLEAN ENERGY & OCEAN SOLUTIONS

An integrated solutions partner for the energy transition

To help sustain Earth's resources, **Hanuha** is driving the global energy transition forward, seeking the most environmentally friendly ways to produce and use energy and materials. We have a diversified portfolio that includes solar, hydrogen, ammonia, wind power, and LNG as well as advanced technological solutions, such as virtual power plants (VPPs) and AI-based energy management systems. By capitalizing on our offerings, we are growing the clean energy industry while driving change in the global energy transition. In addition to supplying clean energy through our eco-friendly solar supply chain, we will also strengthen energy technologies and product capabilities, such as energy storage systems (ESS) and energy management systems (EMS). Meanwhile, we will contribute to establishing a circular economy and achieving carbon neutrality by researching and developing eco- friendly, high valueadded materials.



Solar energy

Hanuha Solutions' Qcells Division (Qcells) has established itself as a comprehensive renewable energy solutions provider, spanning from the production of solar cells, modules, and supporting materials to the development, construction, and operation of power plants, as well as provision of power retail and solar financing services. We continue to maintain the number one market share in both residential and commercial solar modules in the U.S., and we launched full-scale module production at our Solar Hub, North America's first and largest integrated solar manufacturing facility, in 2024.

Hydrogen energy

Hanuha is committed to developing green technologies. We are aggressively investing in green hydrogen as a clean energy source that can significantly help realize global carbon neutrality. By innovating comprehensive value chains, we are expanding into the hydrogen economy, from production and storage to delivery and utilization, including water electrolysis technology and more. With an optimal energy generation solution designed to support a carbon-neutral society, we are tapping into green hydrogen energy's outstanding potential.

Ocean solutions

Hanuha Dcean is contributing to the global economy and supporting exports worldwide through shipbuilding, as 90% of the world's trade volume is transported via ships. We are also playing a central role in supplying energy and participating in maritime energy production, storage, and transportation. Hanuha Ocean will continue to develop sustainable and innovative digital technologies beyond decarbonization in pursuit of achieving net-zero carbon emissions. We aim to lead the global shipbuilding market by proactively ensuring strengthened environmental regulations are met through a diverse portfolio of eco-friendly products and technologies, such as our world-class LNG and ammonia carriers, various offshore plants, green ship solutions, and low-carbon solutions like onboard carbon capture and storage (OCCS) technology and rotor sails.

FINANCE

A financial partner that adds value to your life

Hanuha generates sustainable prosperity and growth for our customers and society by offering digital financial solutions optimized for diverse lifestyles. We are evolving into a globally integrated financial group by expanding our business in Southeast Asia and the U.S. Hanuha enhances the quality of our customer's lives through personalized solutions tailored to each stage of life. To this end, we will lead financial innovation by optimizing diverse financial services such as insurance, securities, and asset management, exploring new growth engines, and developing and operating innovative digital platforms.

Global business

Hanwha's financial business is accelerating its expansion across the U.S. and Asian markets, including Vietnam, China, Indonesia, and Singapore. In May 2024, Hanwha Life finalized a partial acquisition agreement with Indonesia's Nobu Bank, becoming South Korea's first insurance company to enter the overseas banking sector. Before this, Hanwha Life and Hanwha General Insurance acquired Lippo General Insurance in March 2023, and in June of the same year, Hanwha Investment & Securities and Hanwha Asset Management jointly signed an underwriting agreement with Ciptadana Securities and Asset Management.

Hanwha's financial affiliates are actively pursuing global expansion through the launch of Hanwha Investment & Securities' subsidiaries in Singapore and Vietnam and Hanwha Asset Management's overseas business hubs in the U.S. and Singapore.



RETAIL & SERVICES

Creating premium lifestyle experiences

With robust online and offline platforms in retail and services, **Hanuha** brings to life the dreams and desired lifestyle of our customers. By leveraging our experience in city planning and managing public projects while ensuring profitability and streamlined operations, we plan to expand our large-scale mixed-use development projects that transform urban landscapes. Our differentiated construction, retail, and services portfolio includes premium lifestyle department stores, luxury boutique hotels, high-end resorts, and commercial complexes that connect urban life and culture while enriching the lives of our customers.

We will further strengthen the competitiveness of our existing businesses while actively promoting the development of new content. This will allow us to make strides as a lifestyle platform that delivers new experiences and value to our customers.

High-end luxury

Galleria is South Korea's first and premier department store, providing customers unique experiences and trendy products from world-renowned fashion houses. By leveraging our expertise in premium retail and distinctive content, we drive complex retail development and create a premium lifestyle platform.

Luxury hotel & Premium resort

THE PLAZA is one of South Korea's leading premium hotels. With its sophisticated design, outstanding service, and diverse facilities, it offers a differentiated experience. Luxury residential and hospitality brand MUWA aims to deliver unique experiences and values, offering premium content and spaces, such as vacation homes, private villas, and residences. In December 2023, we launched our first collection, MUWA NISEKO, in Hokkaido, Japan.



Hanwha Vision

'Hanwha Vision' will become your vision partner who realizes a sustainable future and provides new values.

Global vision solution provider

Over the past 30 years, we have established ourselves as a global video security specialist based on world-class optical design, manufacturing, and image processing technology.

We have been ensuring safety and security around the world and across society with products and solutions with outstanding performance, high reliability, and industry-leading cybersecurity policies.

Our growth and innovation started with our customers' needs. This began with their desire to improve safety and security, now evolving to answer wider business opportunities and challenges. Ultimately, all our solutions enable our customers to reach their goals.

Our investment in innovation and continually pushing the boundaries of what's possible in video is core to our competitiveness, ensuring our steady success in vision solutions.



History

2020 ~ Present

- 2024 Joined 'UN Global Compact(UNGC)'
 - Launched Industry's First Dual Sensor BCR Camera
 - Achieved 'ISO37301', Compliance Management System Certification
- 2023 Changed company name to 'Hanwha Vision'
 - Launched World's First built-in SSD camera, SolidEDGE
 - Established Hanwha Vision Mexico
 - Authorization as a CNA(CVE® Numbering Authority)
 - Achieved 'ISO27001', International Standard for Information Security Certification
 - Vietnam Factory reached cumulative production of 10 million units
 - Published Hanwha Vision sustainability report
- 2022 Launched IP audio system
- 2021 Launched the X AI camera series
 - Launched AI NVR and AI integrated solution
 - Developed AI-based infectious disease response solutions
- 2020 30th anniversary of the video security business
 - Launched the P AI camera series
 - Launched Wisenet 7 SoC, a camera series with Wisenet 7 SoC acquired UL CAP (UL Cybersecurity Assurance Program)

1990~2019

- 2019 UK Government official cybersecurity certification 'Secure by Default'
 - Launched the world's first 55x IR PTZ camera
- 2018 Established Hanwha Techwin Vietnam manufacturing corporation
- 2017 Wisenet 5 SoC and X camera series launched Acquired CES, a UK Government cybersecurity certification
- 2016 Establishment of Hanwha Techwin Middle East FZE
- 2015 Changed company name to Hanwha Techwin
- 2013 Wisenet 3 SoC and camera series with Wisenet 3 SoC are launched
- 2012 Launched the world's first 37x IR PTZ camera
- 2009 Establishment of Hanwha Techwin Tianjin and Shanghai
- 2008 Launched the world's first 37x PTZ camera
- 2005 Developed advanced intruder automatic location tracking system
- 2004 Developed Winner 3 Analog ISP chip
- 2001 Establishment of Hanwha Techwin Europe
- 1997 Launched the world's best ultra-low illumination video surveillance camera
- 1993 Developed Korea's first Auto Iris lens for CCTV
- 1990 Started video surveillance business, establishment of Hanwha Techwin America

YOUR VISION SOLUTION PARTNER Hanwha Vision

Collect visi	ion data	
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Data analytics based on the SaaS platform

Al-based analytics software + cloud platform



Value-added services for customers

Deliver useful information and insights that actually benefit our customers' businesses based on data analytics



The future that Hanwha Vision envisions

Today, the video surveillance industry needs more advanced video monitoring and event information collected through security devices in real-time and it is used to quickly search and analyze stored video when necessary.

The future that Hanwha Vision envisions is one in which our technology is used to drive further insights. Through our advanced vision solutions, we collect volumes of data, reveal past patterns, monitor the current situation, and inform future predictions through data analysis via the cloud. By combining video surveillance, AI and the cloud, we deliver more valuable insights our customers need to drive business efficiencies and performance.

Al camera / IoT sensor

Collect data from various devices and sensors

Server / Cloud Derive insights through cloud-based big data analytics

CORE COMPETENCIES

Hanuha Vision has core competitiveness in vision technology based on optical and image processing technology accumulated over 30 years. As image processing technology through AI has become popular, currently, what matters more is how to process information to create valuable information. In response, Hanuha Vision plans to provide valuable information in various fields through technology conversion and expansion through AI capabilities and a cloud platform.

Also, we will continue to enhance our competitiveness in cybersecurity.



Vision technology

Hanwha Vision provides high-quality image and vision information through world-class optical and image processing technology.



AI-based intelligent analysis

Hanuha Vision offers Al-based intelligent solutions through self-developed analytics algorithms while providing optimized information to customers by efficiently analyzing vast amounts of data.



Cybersecurity

Hanwha Vision conducts regular security management under the leadership of S-CERT (a dedicated security emergency response team). Hanwha Vision has been selected as an international CVE program CNA organization to manage program vulnerabilities. In addition, we have obtained numerous cybersecurity certifications from renowned global certification such as UL CAP, FIPS, TTA and more.



R&D POWER

The R&D headquarters, located in Pangyo Techno Valley, Gyeonggi-do, is the central hub of **Hanuha Vision**'s global R&D. Here, we develop and test various vision technology solutions before introducing them commercially.

Hanwha Vision secures our full-stack AI capabilities, from AI strategy to data processing, commercialization, and future development.

This accelerates our R&D to give **Hanwha Vision** sustainable competitiveness in an ever-changing market.





GLOBAL NETWORK



Hanwha Vision Global Network

Hanwha Vision has a close relationship with customers and partners around the world across R&D, manufacturing and sales.

Hanwha Vision SOLUTION LINEUP







Hanuha Vision has integrated solutions to suit various installation needs and environments.

With **Hanuha Vision**'s wide range of solutions and services, you will find the answers to your security needs that provide you with the business insights required to deliver operational efficiencies.

Camera solutions

Our cameras can collect a range of vision data for business insights and proactive security. They come with network and analog options, and include the P, X, Q, and T camera series.

Recording & Management · Analytics Solution

Data collected through a camera or sensor is recorded on video recorders or a cloud, and this can be monitored in real-time through integrated monitoring software or a viewer as well as recorded video or event confirmation. The vast amount of data is reprocessed through the cloud or analytics software and delivered back to you as meaningful, actionable insights.

Audio system solution

IP audio systems can deliver messages quickly and efficiently and can be utilized as a customized security solution in various environments when combined with a video security system.

Peripherals

These are peripherals required for system installation, connection, and expansion.

Hanwha Vision AI-BASED SMART SOLUTION

Hanwha Vision's Al-based vertical solutions analyze a large amount of metadata collected through cameras and loT sensors and provide various insights optimized for specific verticals. It can also be linked to a VMS (Video Management System), which enables video monitoring as well as event and alarm management.





Smart Solution

Retail

Information from cameras and sensors installed across a store provide a wealth of insights for improving in-store experience and performance. We accumulate data, analyze, and visualize it through AI to make it easy to see at-a-glance where to improve store management.

Insights

- Number of customers, visit length analysis
- Customer type (gender, age) analysis
- Analysis of the number of customers across multiple stores, as well as length of visit, and heatmap analysis
- Customer flow and checkout queue management
- Store ranking based on the comparative analysis of the number of customers across various stores
- Retail conversion rate analysis (linked to POS)

City

Quickly see city safety and traffic management insights to improve public security and keep traffic moving. We work with public institutions and government, to provide solutions for rapid responses to incidents in urban areas and improve traffic flow.

Insights

- License plate recognition, map-based traffic management, and counting by vehicle type
- Speed monitoring, traffic flow analysis, speeding vehicle detection
- Illegal parking, U-turn detection, accident detection
- Detection of emergency-stopped vehicles, and obstructions on the road
- On-street parking monitoring

Factory

Our solutions can detect workers not wearing safety gear as well as abnormal workplace situations in real-time by analyzing vision data. We also provide information to boost efficiency through statistical analysis of factory operations.

Insights

- Number of workers and heatmap analysis
- Factory operation status analysis
- Abnormal situation detection
- Logistics and inventory management: loading bays, fleet management

SUSTAINABILITY MANAGEMENT PHILOSOPHY OF Hanwha Vision

We are working to realize responsible management in the environmental, social, and governance aspects.



SUSTAINABILITY

As a responsible member of society, **Hanwha Vision** seeks to provide fundamental solutions to solve economic, environmental, and social problems and lead positive change through our business, technology, and social activities. Along with this, based on the philosophy of 'Together, further,' we will create a better future for all by realizing the value of fair management and sharing.

ENVIRONMENT

Hanuha Vision faithfully complies with the obligations of global environmental regulations to create a sustainable future and is making continuous efforts to minimize the impact on the environment wherever our technology and capabilities reach.

Compliance with international environmental standards

Hanuha Vision abides by the European and Chinese RoHS (Restriction of Hazardous Substances Directive) and observes the restriction on substances hazardous to the human body in our product. We have also obtained ISO14001 certification, satisfying international standards for environmental management.

Green purchase

In order to provide eco-friendly products to our customers, we go through a verification process through the product development and design stages. We have institutionalized the submission of information on hazardous substances in materials when purchasing parts for product production, and we are conducting environmental management capability evaluation when selecting suppliers. We also encourage purchasing environmental-friendly certified products for subsidiary materials consumed in production activities.

Eco-friendly products

Hanwha Vision attaches environmental labels on products with eco-friendly features so they can be easily identified.





SOCIETY

Hanwha Vision respects the human rights of its employees, understands the importance of work-life balance, and seeks effective collaboration through win-win cooperation with its partners. Also, by generating additional value for customers and local communities, we are leading positive change.

Flexible organizational culture and system

We find ways to create a flexible organizational culture where our members can focus both on their work and life through work-life balance. We have implemented a 'flexible commute system' for employees to manage their commuting time flexibly, and various leave systems such as a 'sabbatical month' which provides a one-month vacation, a 'dad' s vacation' to encourage male employees to use leave after their spouse gives birth, and a 'development leave' for self-development.

Mutual growth through win-win cooperation

Hanwha Vision helps SMEs strengthen their capabilities and enter the public procurement market through a 'win-win cooperation support system between large and small businesses'. We jointly produce products through our vision technology (AI, image process, optical, etc.) and support entrance into the public procurement market and the domestication of imported parts and materials.

Safety and trust-based system

We comply with worker safety standards through ISO 45001 (management systems of occupational health and safety) certification and construct a quality assurance system throughout the entire process of products and services through ISO 9-001(quality management system) to provide our customers with a sense of trust.



Hanwha Vision CORE VALUES



Technology and solutions

A company that solves personal, corporate, and social problems through advanced vision solutions and creates new growth engines



Innovation

A company that never just stays in the present but seeks answers to a better tomorrow through challenges and innovations



Growth

A company that aims for sustainable growth for ourselves and our customers through investments in the future and cooperation with trusted partners



Sustainability

A company that contributes to the sustainable environment of individuals and society through advanced technology, solutions and services

Hanwha Vision AWARD HISTORY

Award

2024	-	Govies Awards, IP Video Surveillance Cameras (PNI
	_	PSI Premier Award, Technological Innovation of the
	_	SecurityInfoWatch Readers' Choice Awards, Top P
	_	SecurityInfoWatch Readers' Choice Awards, Top P
	-	Benchmark Innovation Awards, Analytics & Softwa
	_	iF Design Award (Al Smart Parking Solution)
2023	_	GIT Security Award for the sustainability sector
	-	Govies Government Security Award for Video surv
	-	Security Info Watch.com Readers' Choice Awards
	-	US Security Today Product of the Year for the Vide
	-	Security Award Korea, Video Surveillance Grand Pr
2022	-	ASTORS Security Award for Best Thermal, Infrared
	-	CyberSecured Award Analytics for Security (TNM-
	-	Security Info Watch.com Readers' Choice Awards
	-	US Security Today Product of the Year (PNM-C120
2021	-	Govies Government Security Award for IP Video su
	-	ADI Best Operations Support
	-	US Security Today Product of the Year for network
	-	ASTORS Security Award for Best IP video security,
	-	US Secure Campus Award in the network camera s
	-	Security Awards Korea, Brand Grand prize
2020	-	US Secure Campus Award in the network camera s
	-	Govies Government Security Award in the security
2019	-	US Security Today Product of the Year for network
	-	Govies Government Security Award in the security
	-	ASTORS Homeland Security Award for Best IP Vide
	-	Security Awards Korea, Brand Grand prize
2018	-	Consumer's Choice in the network camera sector
	-	Security Awards Korea Brand Grand prize
	-	iF Design Award's main prize
2017	-	Winner of the UK Benchmark Awards in the video l
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	-	
	-	Prime Minister's Commendation on Information P
2016		TTA Test & Certification Awards' grand prize
2015	-	Smart Home Camera Red Dot Design Award
2014	_	Smart Home Camera Red Dot Design Award

M-C16013RVQ)

- e Year (SolidEDGE Al Camera)
- Product in Video Surveillance Storage, Playback & Transmission (AI Box, AIB-800)
- Product in Video Surveillance Cameras (PNM-C16013RVQ)
- are Innovation (P series Analytics)
- veillance cameras (TNM-C4960TD)
- (SolidEDGE)
- eo surveillance data storage sector (SolidEDGE)
- rize
- Camera Solution (TNM–C4960TD)
- -C4960TD)
- (PNM-C12083RVD)
- 083RVD) for the Al camera sector
- urveillance cameras (XNV–C8083R)
- k camera the Best Cybersecurity Solution sector
- sector
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- eo Security Solution
- of asmag.com
- hardware sector
- Protection Day by Korea Internet & Security Agency
- 2012 CES Innovation Award in the Smart Home Camera, Red Dot Design Award



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