



AI & BI Assist Retail Transformation And Upgrade

Dahua smart retail solution



Loss Prevention



Better Experience



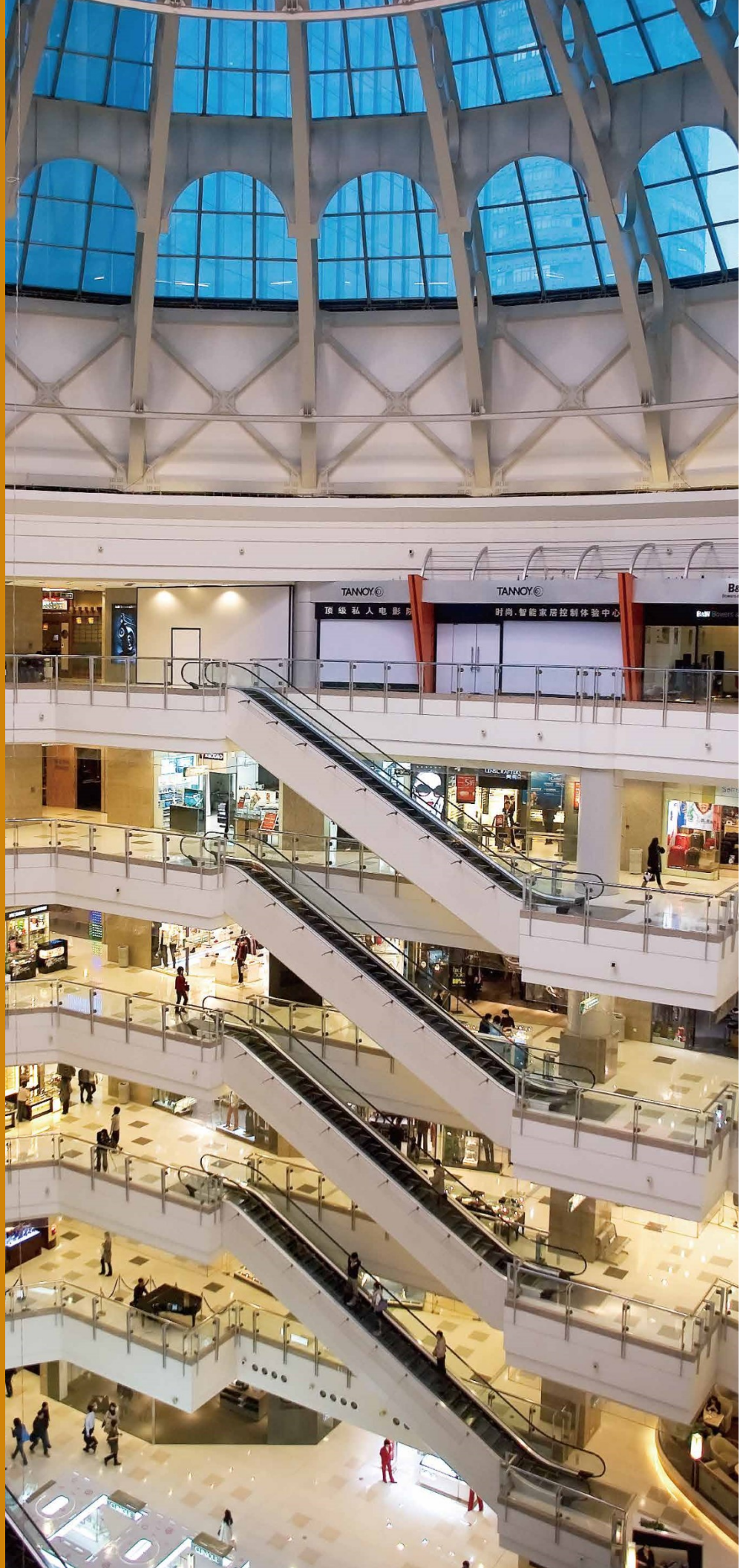
Operation Management

RETAIL CHALLENGES AND SOLUTIONS

The retail sector has felt the disruptive impact of the internet more than most industries. Some have reacted to online competition by closing physical stores, while others are attempting to reinvent them for the digital age.

Traditional retail lacks tools for effective data collection and visualization, making it unable to provide basis for decision-making in the store.

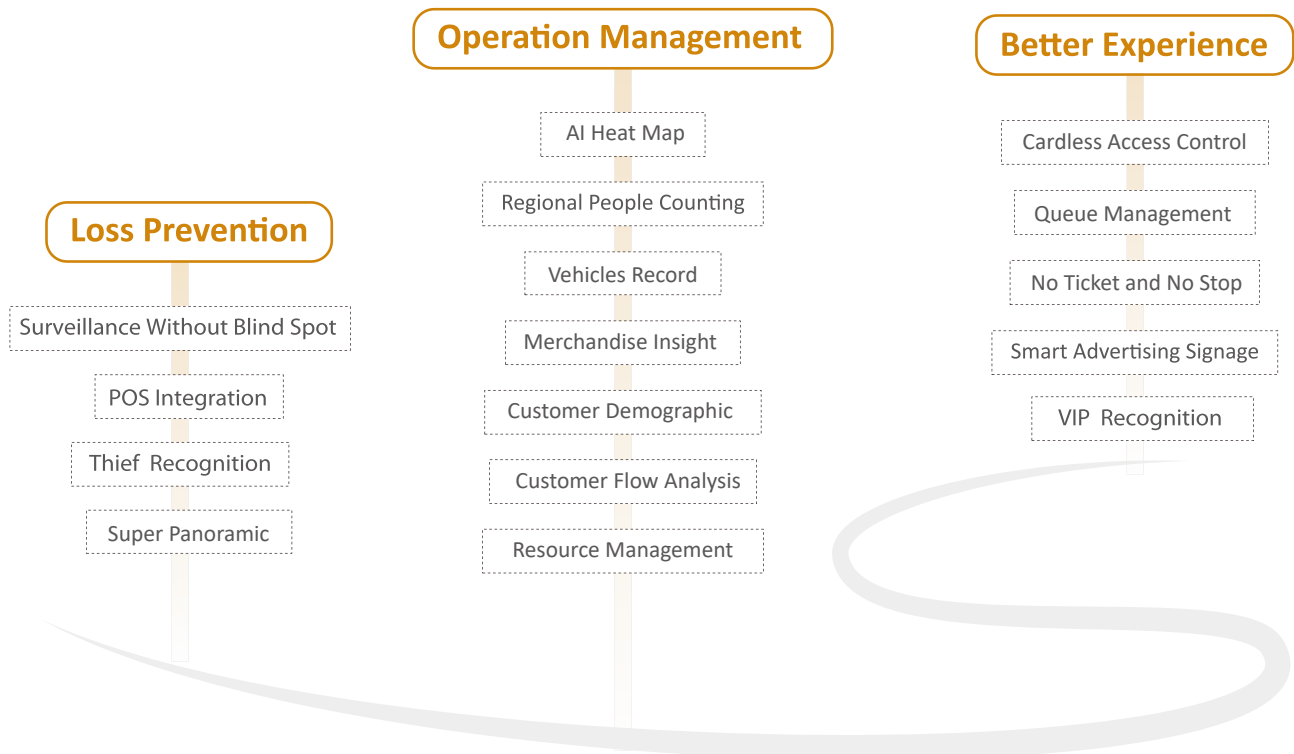
Dahua Smart Retail solutions help retailers to digitally transform and respond to increased industry competition through the use of innovative retail technology. Let's take a look at the advanced retail technology that helps retailers gain a competitive advantage.



Challenges



Digital Retail Solution



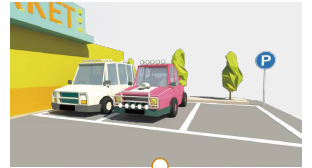
STORE LAYOUT



Store Room
• Cardless Access Control



Office
• Customer Flow Analysis
• Customer Demographics
• Merchandise Insight
• Resource Management



Parking Lot
• No ticket and No Stop
• Vehicles Record
• Super Panoramic



Store Floor
• AI Heat Map
• Regional People Counting
• Smart Advertising Signage



Checkout Counter
• Queue Management
• POS Integration



Entrance
• People Counting
• VIP & Thief Recognition
• Customer Demographics

APPLICATION AREA

Entrance

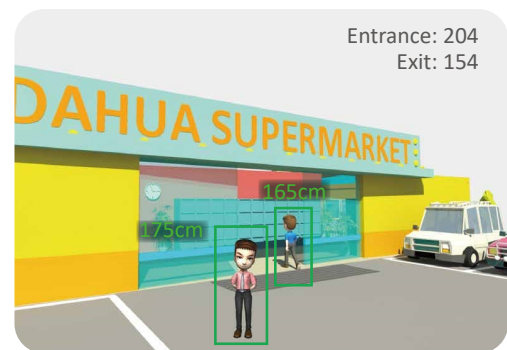


Compared to e-commerce, the traditional retail industry faces many challenges in accurately calculating the flow of visitors and efficiently adjusting business operations according to flow analysis and conversion rates.

• People Counting

Shows exactly the number of customers entering and leaving the store in order to optimize staff schedules accordingly.

3D People Counting Cameras can distinguish people from objects and backgrounds to ensure high accuracy of data.



• VIP & Thief Recognition

Notify your staff to provide VIP service when members enter the store, improving shopping experience;

Or alert them to pay attention to suspicious individuals when they enter the store to prevent any losses.

• Customer Demographics

Understand customer base composition and traffic analysis of different customer segments. Know your customer better to create more sales opportunities.



Store Floor



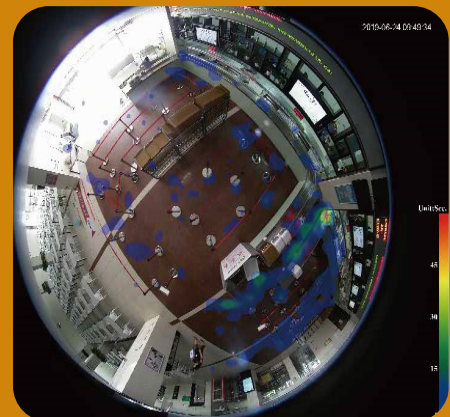
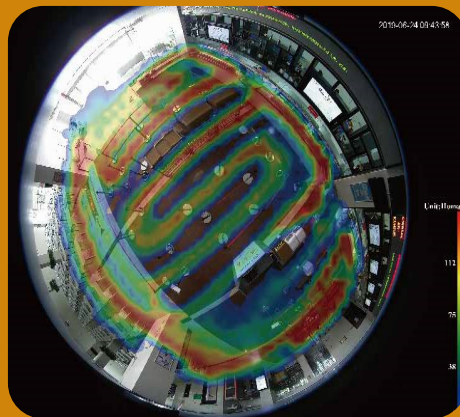
When paired with a fisheye camera, shelf areas are fully covered and advanced analysis can provide a visitor flow distribution heat map.

Increased surveillance coverage provides a safe shopping environment by reducing theft on customers' belongings and retail goods.

• AI Heat Map

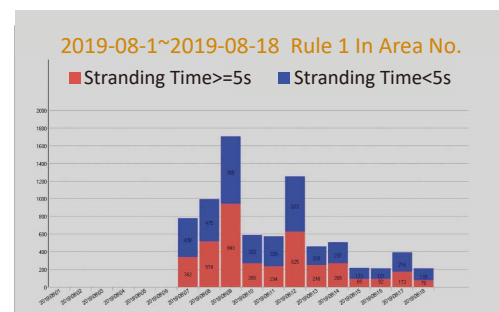
Understand which area attracts more customers and which products draw more customers' attention through AI Heat Map.

AI fisheye camera generates a heat map according to the number of people and dwell time in the area.



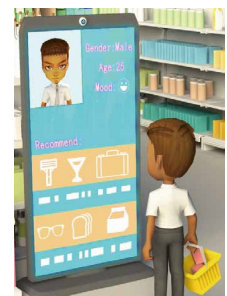
• Regional People Counting

Know the number of people and the average dwell time in specific areas in order to determine whether marketing strategy needs to be adjusted.



• Smart Advertising Signage

Promote products to your customers according to their attributes such as age, gender, and mood to intelligently draw their attention and to increase the efficiency of your marketing campaigns.



Checkout Counter



Customer disputes and cashier fraud frequently occur at the checkout counter.

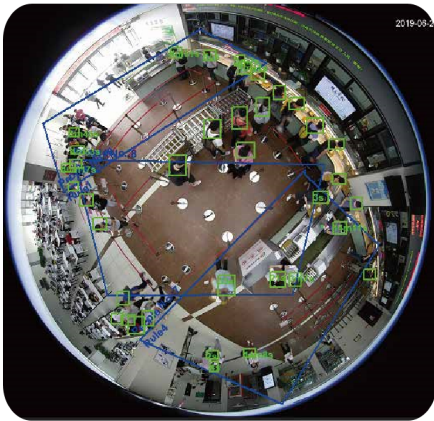
HD video, audio, and POS overlay can identify problems and provide evidence of wrongdoing.

Long waiting time affects the shopping experience.

Queue management helps managers in adjusting the number of checkout counters through real-time queue data in order to reduce customer waiting time.

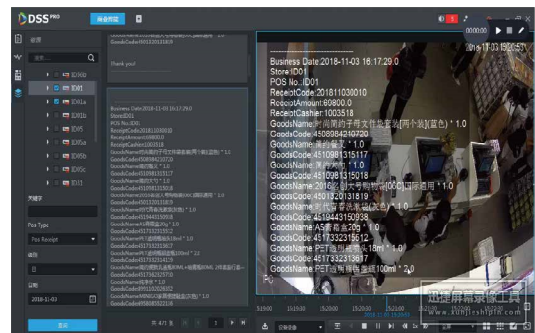
• Queue Management

Alert the manager to open another checkout counter in time if the queue length and dwell time exceeds the threshold to create better shopping experience.

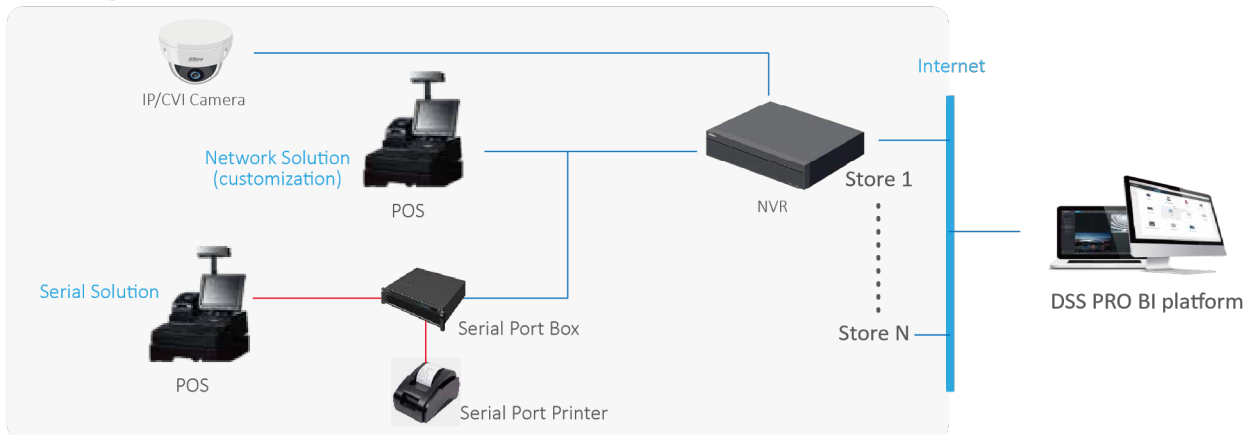


• POS Integration

Video and corresponding POS information can be shown simultaneously in both live and playback mode. The system also supports text search to find bills and their associated video recordings.



POS Integration at NVR



Office



• Customer Flow Analysis

Entry rate

Understand whether the store attracts customers using the entry rate data that shows how many people enter the store and how many people pass by.

Customer flow

It shows the total number of customers in the store at different times, as well as the number of customers from each entrance. The report can be filtered by day, month or year.

• Customer Demographics

Traffic by age

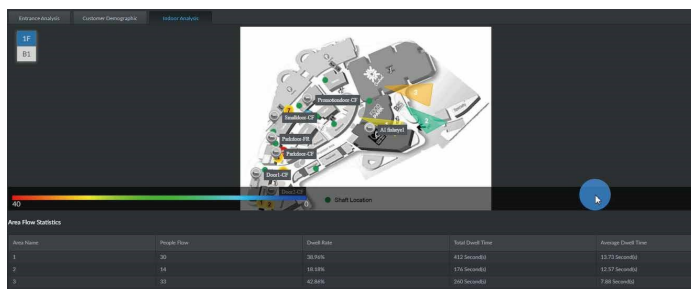
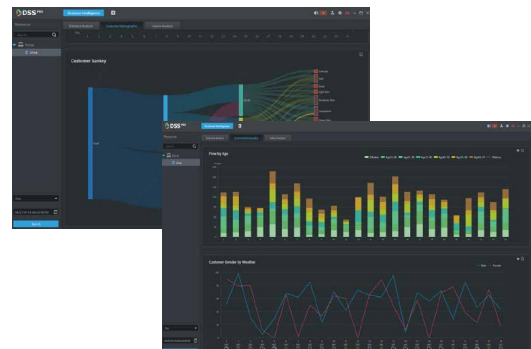
The relationship between age distribution and time. It is useful in searching the data flow based on age.

Traffic by gender

The relationship between gender and weather. It shows the impact of weather on customers of different genders.

Customer segments analysis

The relationship between weather and customer segments. It presents the analysis between weather and customer segments using a river-like chart.



• Merchandise Insight

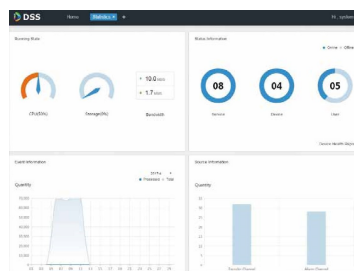
Discover which products draw more attention based on how many customers visited specific areas and how much time customers spend in those areas.

• Resource Management



• Store management

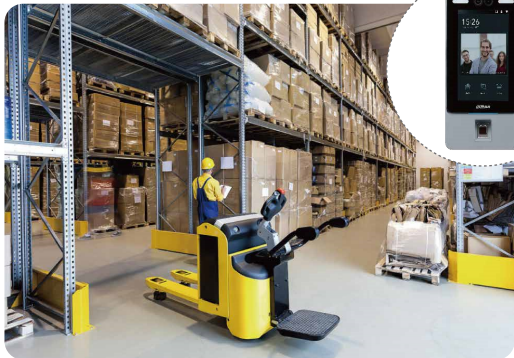
Manage your retail chain anytime, anywhere.



• System management

Real-time monitoring and maintenance of the system and the devices.

Storeroom



- **Cardless Access Control**

The facial access control can remarkably prevent losses by only authorizing the right personnel to enter the area.

Parking Lot

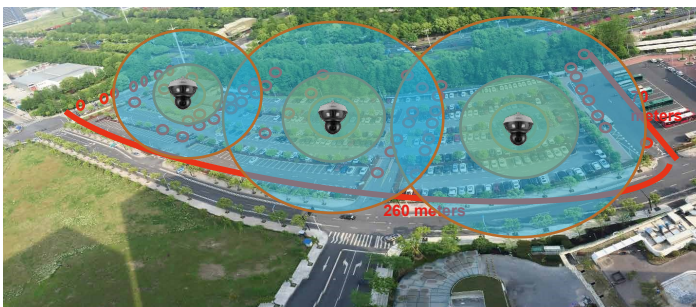


- **No Ticket and No Stop**

Vehicle access is controlled by ANPR Camera, without any tickets. It improves traffic flow with no delays.

- **Vehicles Record**

Quickly search specific vehicles based on relevant information such as plate number, color, etc.



For a 260 meters x 70 meters parking lot, Conventional IP System need more than 60 IP Cameras

3 Panoramic + PTZ Cameras can replace more than 60 Conventional IP Cameras in this parking lot

- **Super Panoramic**

4X2MP

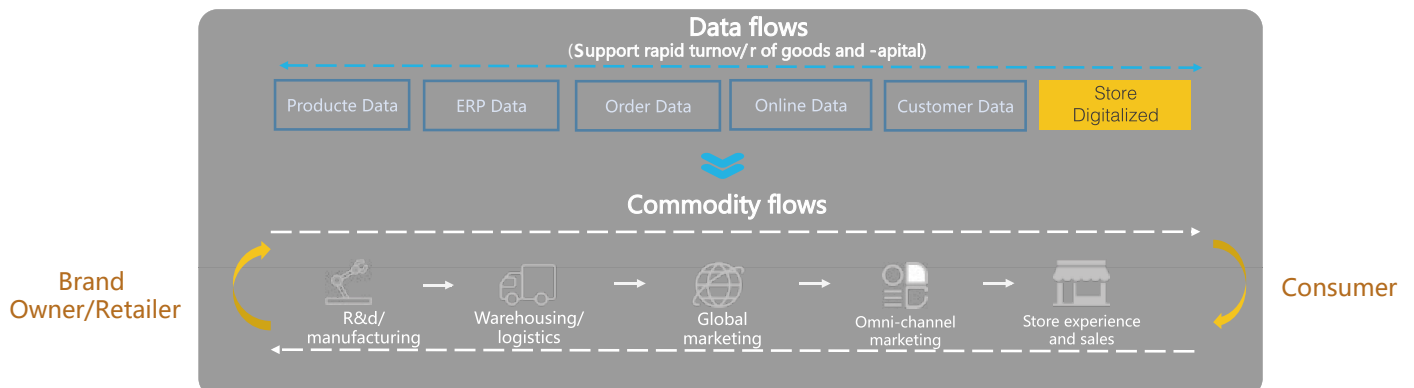
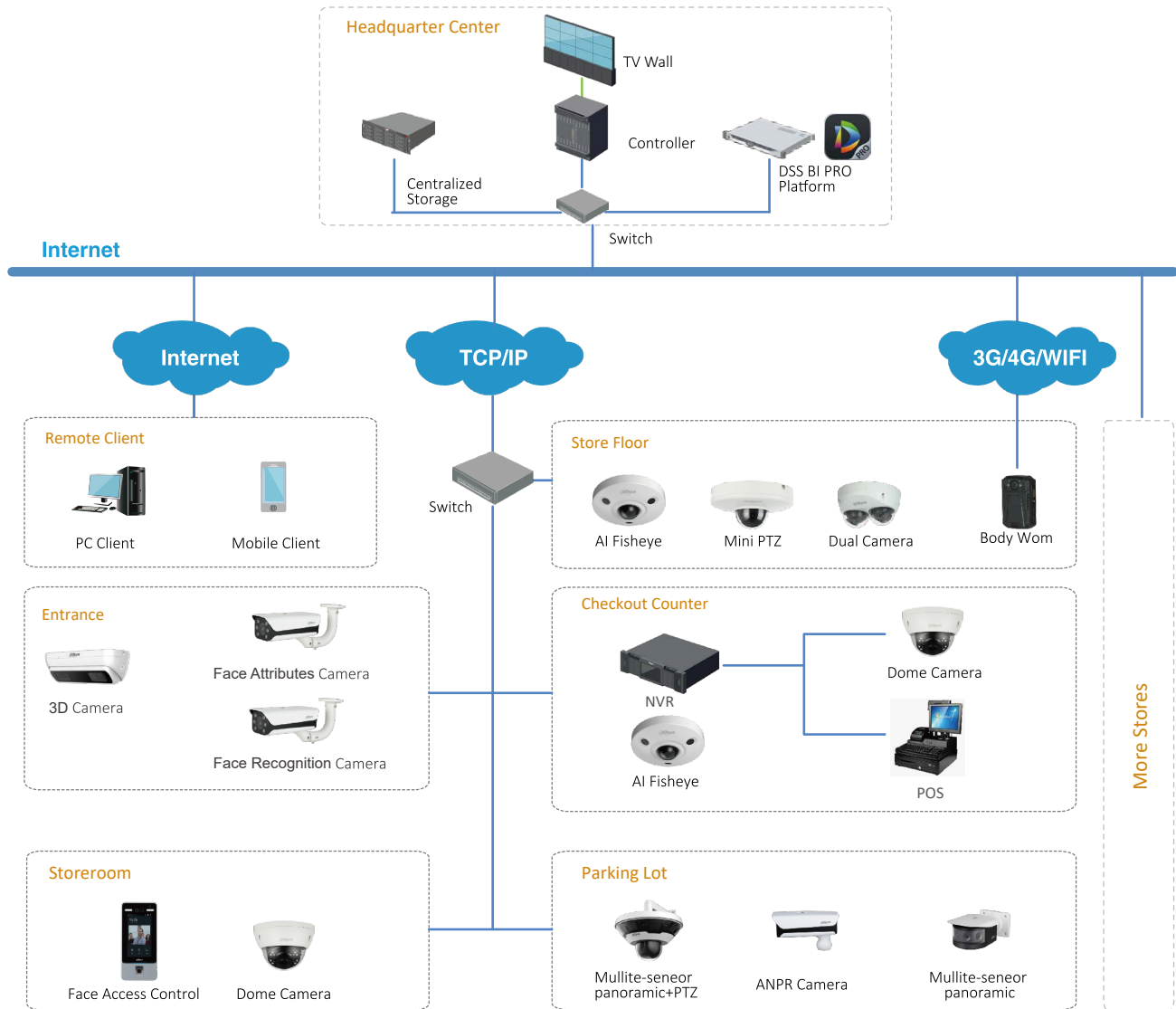
Saves construction costs and wiring

Supports 360-degree panoramic view

Supports Auto-tracking and Tripwire, Intrusion



SYSTEM STRUCTURE





PRODUCT SELECTION

DH-IPC-EBW81242



- 12MP, 1/1.7" CMOS image sensor
- Max output 12MP (4000×3000)@30fps
- 3D DNR, AWB, HLC, BLC, ROI, SVC, SMART H.264/H.265
- People counting in multiple areas, queuing management in multiple areas, heat map (number of people /time), and track map
- 2/2 Alarm in/out, 1/1 audio in/out
- 12V DC/POE power support
- IP67, IK10 protection

DH-IPC-HF7442F-FR



- 4MP, 1/1.8" CMOS image sensor, low illuminance, high image definition
- H.264 & H.265 coding, high compression ratio · WDR, day/night, 3D DNR, AWB, HLC, BLC · ROI, SVC, SMART H.264/H.265, flexible coding, applicable to various bandwidth and storage environments
- With deep learning algorithm, it supports people counting, face recognition, perimeter protection, and video metadata

DH-IPC-HDW8341X-3D



- Two 1/2.8" 3Megapixel progressive scan STARVISTM CMOS
- H.265&H.264 triple-stream encoding
- 25fps@3MP(2048×1536)
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.8mm fixed lens (3.6mm optional)
- Max. IR LEDs Length 10m
- Micro SD memory, IP67, PoE
- People Counting: Support line crossing people counting, region people counting

DH-IPC-HDBW4231F-E2



- Two 1/2.8" 2Megapixel progressive scan STARVISTM CMOS
- H.265&H.264 dual-stream encoding
- 25/30fps@2M(1920×1080)
- Smart Detection supported
- WDR(120dB), Day/Night(ICR), 3DNR, AWB, AGC, BLC
- Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS
- 2.8mm fixed lens (3.6mm optional)
- Max. IR LEDs Length 20m
- Micro SD memory, IP67, IK10, PoE

ITC215-PW4I-LZF27135



- 1/2.8 inch 2Megapixel Progressive scan CMOS
- WDR, Day/Night(ICR), 3DNR, BLC, HLC
- H.265& H.264 dual-stream encoding
- IP67, and superior performance for outdoor applications
- Embedded with LPR algorithm inside the camera
- Vehicle data structuring: license plate recognition, vehicle size, vehicle color detection and etc.

DH-PSDW81642M-A360



- Panoramic: Eight 1/1.8" 2 Megapixel progressive scan CMOS
- PTZ: One 1/1.8" 4 Megapixel progressive scan CMOS
- Supports 360-degree panoramic view
- Starlight technology
- H.265/H.264 triple-stream encoding
- Day/Night (ICR); 3D DNR; AWB; AGC; BLC
- IR distance up to 400 m
- Smart tracking; Tripwire; Intrusion; Crowd map



PRODUCT SELECTION

ASI7214Y



- 7 inch LCD, touchscreen, resolution 1024 (H) × 600 (V)
- Human face images, fingerprints, cards and passwords can be recorded
- Face recognition distance is 0.3m–2m, human height range is 1.1m–2.4m
- Face verification accuracy > 99%; face comparison speed ≤ 0.5s per person; false recognition rate < 0.1%
- Supports 30,000 users, 30,000 cards, 30,000 passwords, and 50 administrators.
- Supports liveness detection

MPT310



- H.264 dual-stream video compression
- Up to 25fps@1080P resolution recording
- Supports "one-key" to start record, take photos, alarm
- HD LCD, Support touch screen
- Supports hot-swap SD card storage
- Wireless access: Bluetooth, Wi-Fi, 2G, 3G, 4G
- Supports GPS and GLONASS
- Supports Bluetooth, fingerprint identification, license

DH-LDV49-SAI200



- High quality panel, industrial-grade design, full metal casing, 5mm tempered protective glass
- Dahua MPS platform provides unified remote management for system integrators and media operators
- Strong 4 core processor provides powerful decoding capabilities
- Built-in media player software and USB player provide multiple methods to play contents.

DH-NVR5208/16/32-4KS2



- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG
- Max 160 Mbps Incoming Bandwidth
- Max 320Mbps Outgoing Bandwidth
- Up to 12MP Resolution for Preview and Playback
- HDMI/VGA simultaneous video output
- 3D intelligent positioning with Dahua PTZ camera

DHI-IVSS7016DR-4I



- Intel quad-core processor
- Max 512Mbps incoming bandwidth
- 256 Channel IP video access
- Up to 16 Channel video stream face recognition
- Up to 40 Channel picture stream face recognition
- Regular/stranger mode/ search by image
- Face database management
- Supports RAID 0/1/5/6/10
- 3HDMI/1VGA video output

DSS Pro



- Easy function upgrade via add-ons
- Backup and restore database
- Supports hot standby for master server
- Dahua's devices included: network camera, network speed dome, decoder, NVR, DVR, ANPR, etc.
- Connects third-party devices via standard ONVIF protocol
- DSS Pro SDK for third-party platform or mobile development



PRODUCT OVERVIEW

<i>Product</i>		<i>Entrance</i>	<i>Store Floor</i>	<i>Checkout Counter</i>	<i>Storeroom</i>	<i>Office</i>	<i>Parking Lot</i>
DH-IPC-EBW81242			●	●			
DH-IPC-HF7442F-FR		●					
DH-IPC-HDW8341X-3D		●		●			
DH-IPC-HDBW4431E-AS				●	●		
DH-SD12203T-GN			●				
DH-IPC-HDBW4231F-E2			●				
DH-IPC-PFW8802-A180							●
DH-PSDW81642M-A360							●
ITC215-PW4I-LZF27135							●
DH-ASI7214Y					●		
DH-ASI1212A(V2) /-D(V2)					●		
MPT310			●				
DH-LDV49-SAI200						●	
DH-NVR5208/16/32-4KS2						●	
DHI-IVSS7016DR-4I						●	
PFM885-I			●				
PFS4228-24P-370							
DSS Pro						●	



SUCCESS STORIES

With more than 16,000 employees and over 50% engaged in R&D, Dahua solutions, products, and services are applied in over 180 countries and regions.

We have cooperated with more than 8000 retailers worldwide. We are committed to help our customers achieve digital transformation with AI and BI technology. It will significantly enhance customers' shopping experience and will enable smart operation of the store to generate more revenue.



ENABLING A SAFER SOCIETY AND SMARTER LIVING

Dahua USA

Tel: +1 (949) 679-7777
Email: sales.usa@dahuatech.com
support.usa@dahuatech.com

Dahua Mexico

Tel: +52 55 67231936
Email: sales.mx@dahuatech.com
support.mx@dahuatech.com

Dahua Colombia

Tel: +571 7446110
Email: sales.co@dahuatech.com
support.co@dahuatech.com

Dahua Brazil

Tel: +55 11 32511871
Vendas: comercial.br@dahuatech.com
Suporte Técnico: suporte.br@dahuatech.com

Dahua Perú

Tel: +511 500-8555
Email: sales.pe@dahuatech.com
support.pe@dahuatech.com

Dahua Chile

Tel: +56 232705421
Email: sales.cl@dahuatech.com
support.chile@dahuatech.com

Dahua Argentina

Email: project.ar@dahuatech.com

Dahua Panama

Email: sales.pa@dahuatech.com
Support: support.pa@dahuatech.com

Dahua Thailand

Tel: +66 2541 5188
Email: info.th@dahuatech.com
hr.th@dahuatech.com

Dahua Singapore

Tel: +65 65380952
Email: sales.sg@dahuatech.com

Dahua Turkey

Email: sales.tr@dahuatech.com
support.tr@dahuatech.com

Dahua Malaysia

Tel: +60376620731
Email: sales.my@dahuatech.com

Dahua Indonesia

Tel: +62 811 867 7728
Email: sales.indo@dahuatech.com

Dahua S.Korea

Tel: +82 7081618889
Email: sales.kr@dahuatech.com
support.kr@dahuatech.com

Dahua India

Tel: +91 1244569100
Email: sales.india@dahuatech.com

Dahua Russia

Tel: 8 (499) 682-60-00
Email: info@dahuatech.com

Dahua Kazakhstan

Tel: +7 727 3110838
Email: sales.kz@dahuatech.com

Dahua VISION LLC

Tel: +998 (78) 1488666
E-mail: dh_uzbekistan@dahuatech.com

Dahua UK

Tel: +44(0)1628 613 500
Email: sales.uk@dahuatech.com

Dahua the Netherlands

Tel: +31 (0) 79 799 96 96
Email: sales.benelux@dahuatech.com

Dahua Iberia

Tel: +34 917649862
Email: sales.iberia@dahuatech.com

Dahua Italy

Tel: +39 362182681
Email: sales.italy@dahuatech.com

Dahua Germany

Tel: +49 211 20544121
Email: sales.de@dahuatech.com

Dahua France

+33 1 48 53 70 53
Email: sales.france@dahuatech.com

Dahua CEE & Nordic

Tel: +48 223957400
Email: dh.cen@dahuatech.com

Dahua Poland

Tel: +48 223957400
Email: biuro.pl@dahuatech.com

Dahua SRB

+38 1 (11) 4429999
Email: dh.srb@dahuatech.com

Dahua Denmark

Email: Nordic.ne@dahuatech.com

Dahua Hungary

Tel: +36 17899852
Email: sales.hu@dahuatech.com

Dahua Bulgaria

Tel: +35929950013
Email: support.bg@dahuatech.com

Dahua SRL

Email: marketing.ro@dahuatech.com

Dahua Czech

Tel: +420 225 986 001
Email: admin.cz@dahuatech.com

Dahua S. Africa

Email: sales.za@dahuatech.com

Dahua Australia

Tel: +61 299285200
Email: sales.oc@dahuatech.com

Dahua Middle East

Tel: +971 48815300
Email: sales.me@dahuatech.com
info.me@dahuatech.com

* Design and specifications are subject to change without notice.

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DAHUA TECHNOLOGY

No.1199 Bin'an Road, Binjiang District, Hangzhou, China. 310053
Tel: +86-571-87688883 Fax: +86-571-87688815
Email: overseas@dahuatech.com
www.dahuasecurity.com

