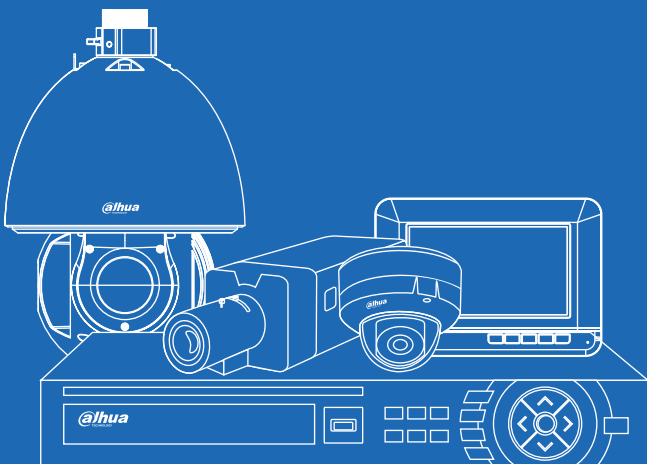


# Vertical Solution Guide



# Vertical Solution Guide

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Dahua Technology is a world-leading and advanced video surveillance solution provider since 2001. Dahua provides complete range of product lines and solutions for a wide spectrum of industry segments to cater different needs.

## Omni-directional Protection / Upgrading Experience

All the different product mix offers a flexible and ponderable solution to fit your requirements. You can find a complete set of solutions including retail, safe residential, smart home, commercial building, banking and mobile in this guide. Each solution is more specific and combines with cutting edge technology; Dahua are given to enhance security features to provide you with peace of mind and security.



# Retail



## Design Points

- Video Surveillance
  - Bullet cameras on fixed targets, such as racks and cashier desks;
  - WDR cameras to deal with brightness contrast, entrances for example;
  - HD PTZ cameras for panoramic monitoring;
  - IR cameras monitor on warehouse and other places where are dim or in complete darkness.
- Access Control
  - Unique authentication to every single staff;
  - Integrated with fire & alarm system, doors are automatically open when an emergency occurs.
- Analysis & Reporting
  - Video Content Analysis (VCA) for counting and reporting.
- POS Integration
  - POS OSD on camera for each sales item; and sales data linked to recording file.
- Environment Monitoring
  - Real-time monitoring and display on warehouse humidity and temperature.



Store Protection



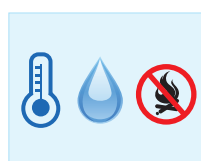
Warehouse Monitor



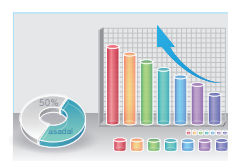
Customer Counting



Access Control



Environment Monitoring



Reporting



IR Camera



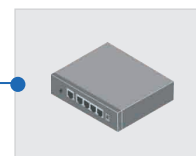
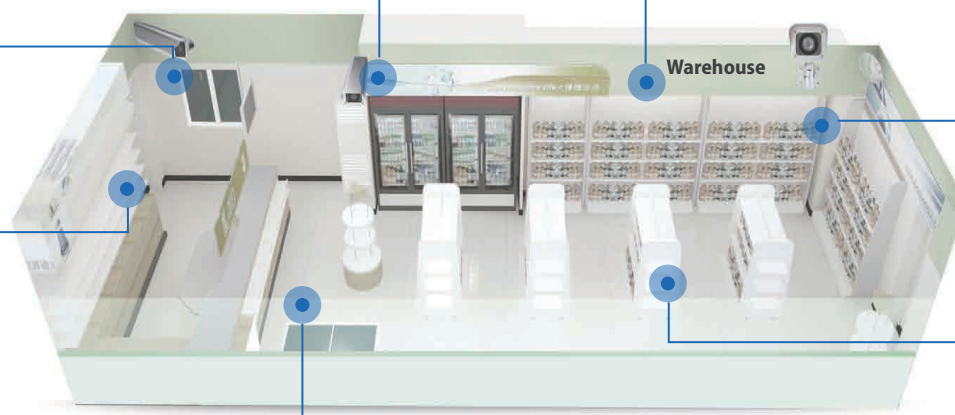
Bullet Camera



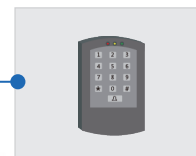
HD PTZ Camera



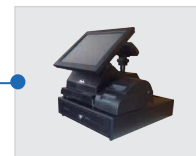
WDR Dome Camera



Environment Control



Access Control



POS Integration

## Model


DH-HCVR5104/5108C-V2  
4/8CH 720P Smart 1U  
HDCVI DVR

DH-HAC-HFW1100R-VF  
1Megapixel 720P Water-proof  
HDCVI IR-Bullet Camera

DH-HAC-HFW1100R/RM  
1Megapixel 720P Water-proof  
HDCVI IR-Bullet Camera

DH-HAC-HDW1100R  
1Megapixel 720P IR  
HDCVI Mini Dome Camera

# Vertical Solution Guide

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## Safe Residential Area



### Design Points

- Video intercom, safe access management
- Remote control by PC and mobile phone
- Real-time video surveillance and alarm
- Vehicle access control management

Community



Villa



(See the right page for the detail)



### Model



**ITC102-GVRB3A**  
ITS 1 Megapixel  
All-in-one Camera



**SD59212S/220S/230S-HN**  
2Mp Full HD 12x/20x/30x  
Ultra-high Speed Network  
IR PTZ Dome Camera



**DH-VTH1520CH**  
7- Inch Color Indoor Monitor



**DH-VT01210C-X**  
Outdoor Station



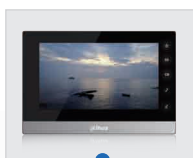
# Villa



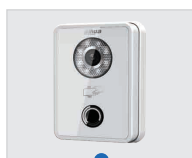
## App control



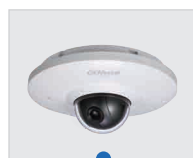
Indoor Station



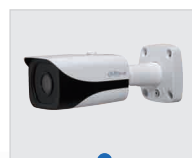
Outdoor Station



IP Camera



IP Camera



Alarm Sensor



Alarm Sensor



Alarm Sensor



Alarm Sensor



NVR

## Model



**DH-VT06210B**  
Outdoor Station



**IPC-HDB4300F-PT**  
3Megapixel Full HD Network  
Vandal-proof PT Dome Camera



**IPC-HFW4200E**  
2Megapixel Full HD Network  
Small IR-Bullet Camera



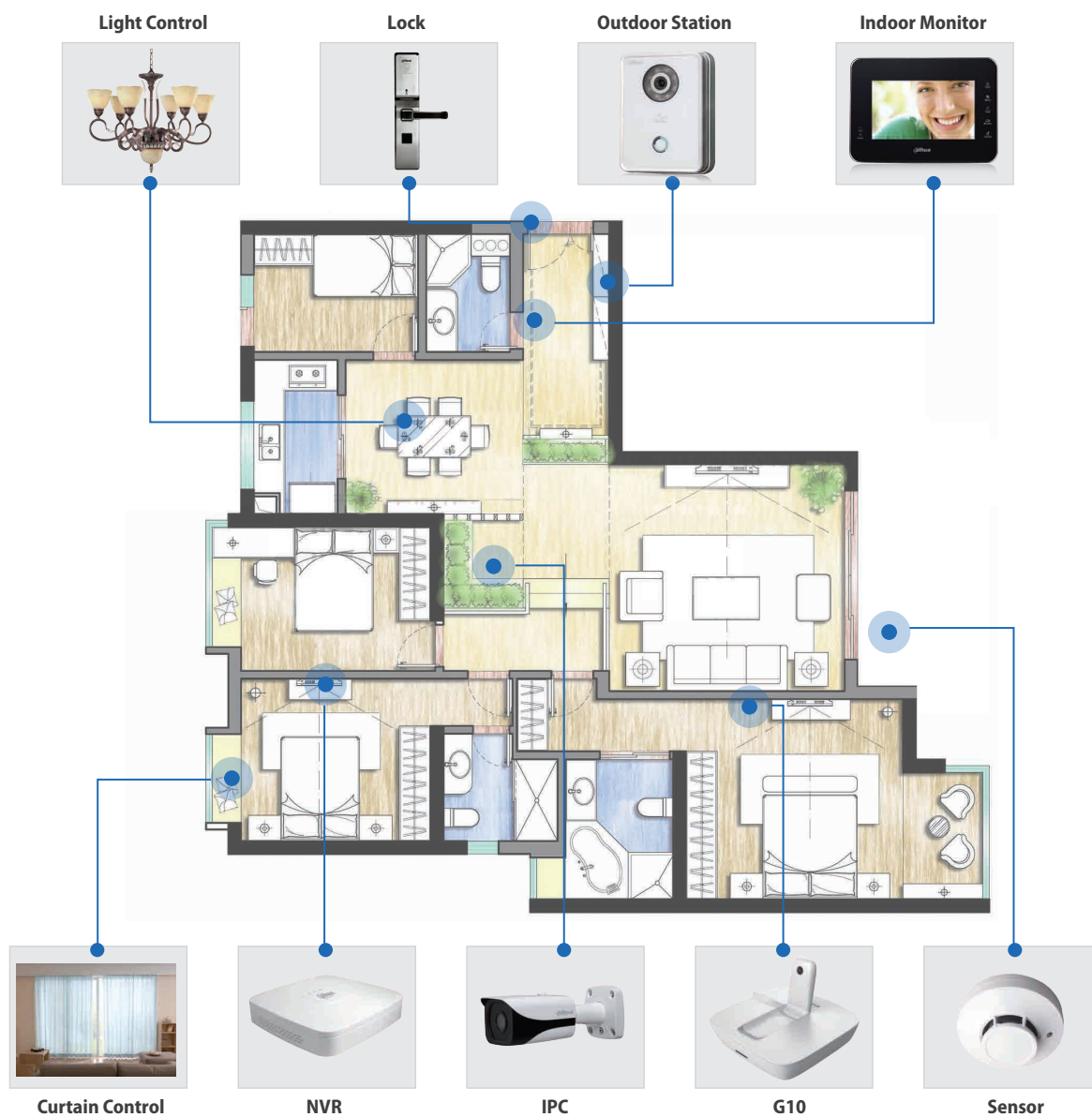
**NVR1104/1108(-P)**  
4/8CH Smart 1U NVR

## Smart Home



### Design Points

- TCP/IP, SIP protocol for video intercom
- Compatible with 6 security sensors
- Real-time video surveillance
- Wireless smart home control
- TV control
- Remote control by mobile phones



### Model



**DH-VTH1560BW**  
7-Inch Color  
Indoor Monitor



**DH-VT02000A**  
Villa Outdoor Station



**DH-NVR104-P**  
4CH Smart Box 4PoE  
Network Video Recorder



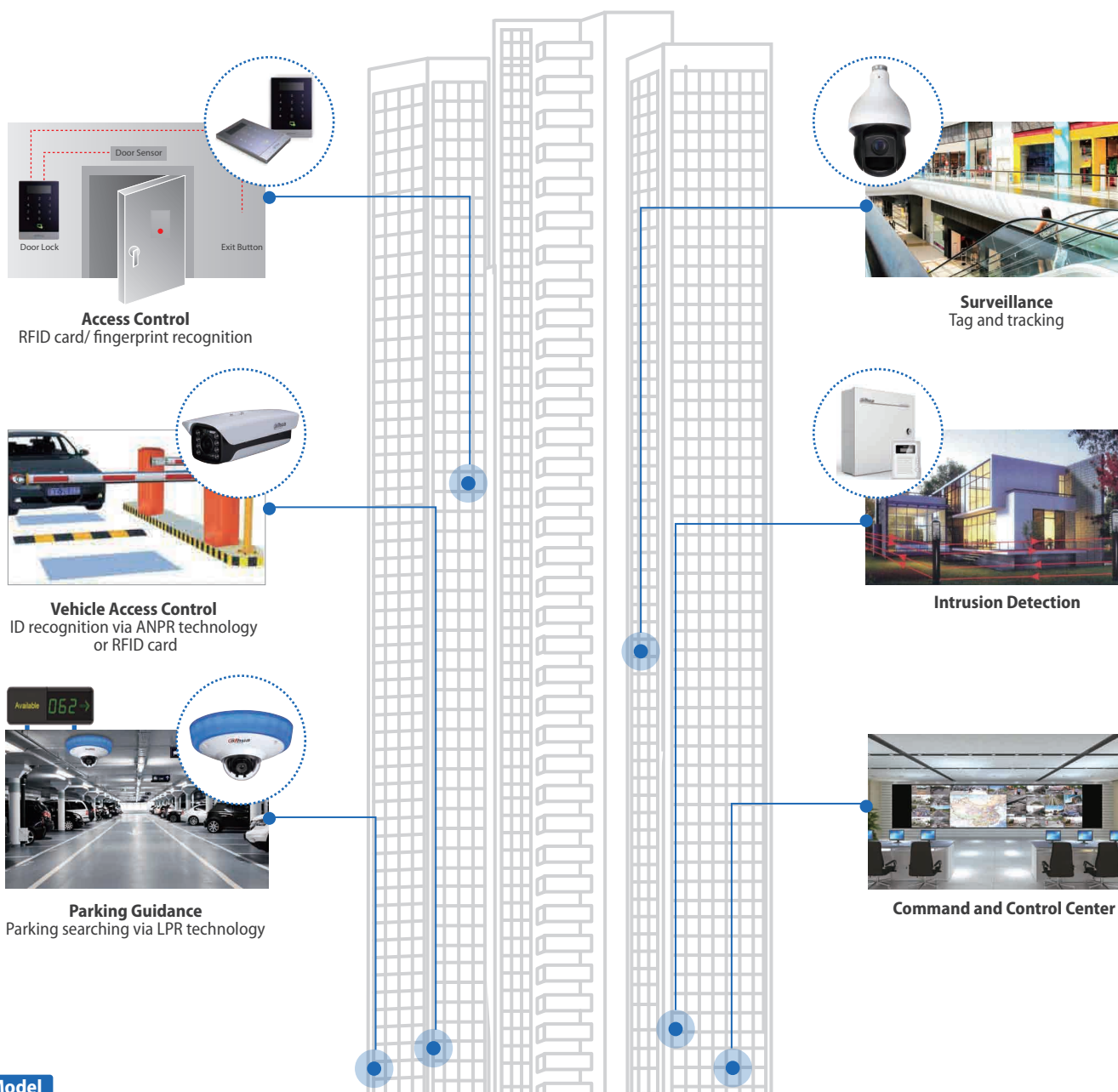
**IPC-KW100W**  
1.3Mp HD Cube  
Network Camera

# Commercial Building



## Design Points

- HDCVI video surveillance, coaxial HD, long-distance & non-latency transmission
- Intrusion alarm activates video recheck
- Vehicle access control, tracking and guidance by LPR (License Plate Recognition)
- Real-time monitoring of access event and door status
- Time/attendance info; visitors management
- Multi-site control



## Model



**DH-A55008-GW**  
alarm panel, 4-channel video input, 8-channel alarm input



**DH-BSC1221A**  
Integrated host, Touch key + LCD screen



**ITC134-PVRB4A**  
Collect the information of two parking space.



**ITC102-GVRB3A-IR**  
Embedded automatic license plate recognition algorithm.

## Banking



### Design Points

#### Video Surveillance

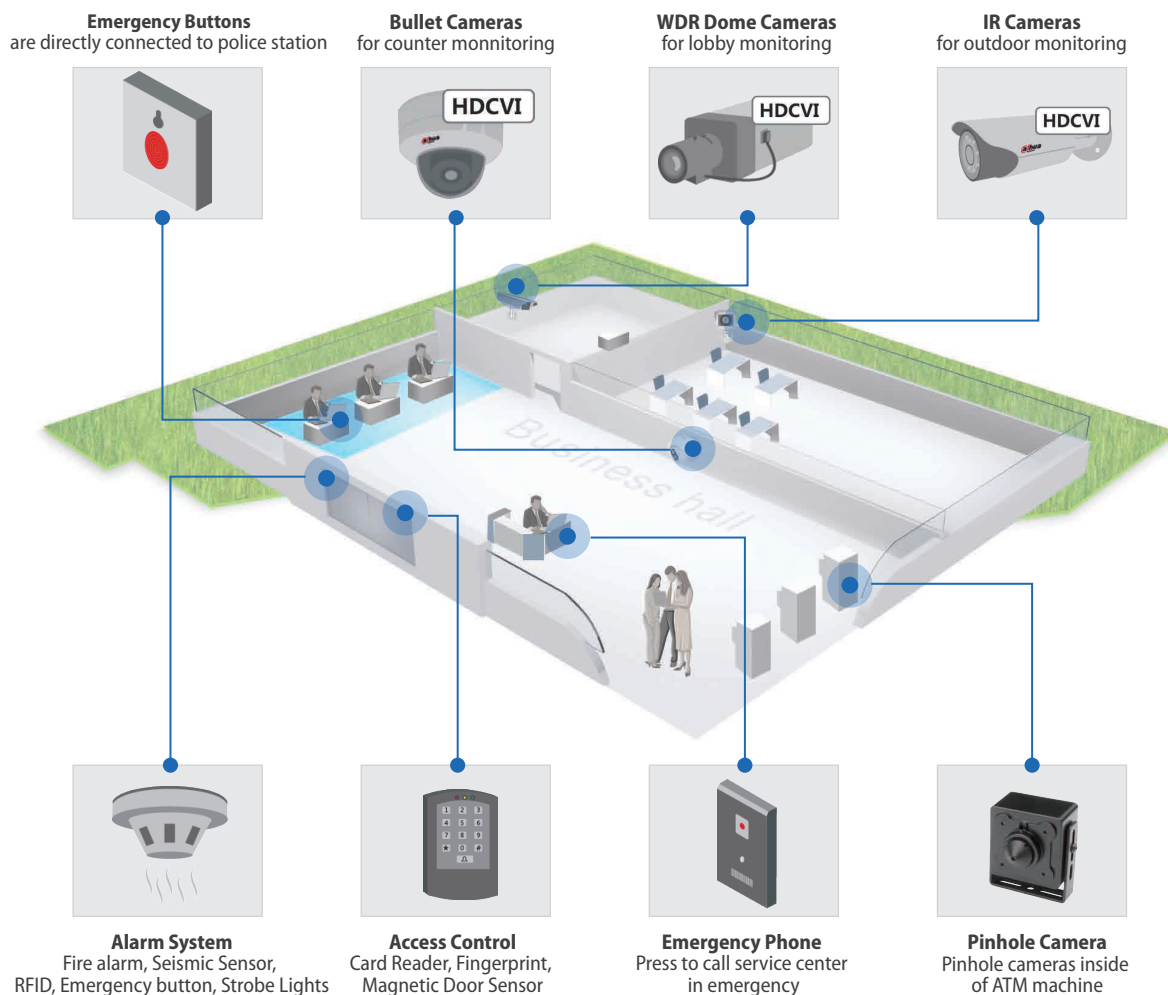
- Outdoor: 1080p HDCVI infrared cameras for day and night monitoring.
- Indoor: 1080p HDCVI WDR cameras for clear capturing and instant detection for forensics end.
- Hallway: 1080p HDCVI infrared cameras for illegal invasion prevention.
- Office area: 1080p HDCVI infrared dome cameras for office monitoring in case of internal property loss.

#### Alarms

- Smoke detector, infrared sensor and alarm devices are adopted; for example, emergency alarm buttons at the counter, smoke detectors in the hall and office area, and these alarm signals are all connected to the monitor/alarm host and uploaded to the control center for instant monitoring and recording.
- Broadcast and pickup in the lobby, two-way talk at each counter.

### What is HDCVI?

HDCVI (High Definition Composite Video Interface) is an over-coaxial -cable analog HD video transmission standard which developed in-house by Dahua. The technology renders two HD video formats —1080p and 720p, providing longer transmission, HD quality affordable cost.



### Model



**DH-HCVR7404/7408/7416L**  
4/8/16CH Tribrid HDCVI & Analog & IP 1.5U DVR



**DH-HCVR7804/7808/7816S**  
4/8/16CH Tribrid HDCVI & Analog & IP 2U DVR



**HAC-HFW3220E-Z:**  
2Megapixel 1080P Water-proof HDCVI IR-Bullet Camera



**DH-HAC-HF3101**  
1.3Megapixel 720P WDR HDCVI Camera



**HAC-HDBW3220E-Z**  
2Megapixel 1080P Vandal-proof HDCVI IR Dome Camera



# ATM



## Design Points

### Self-service Sector

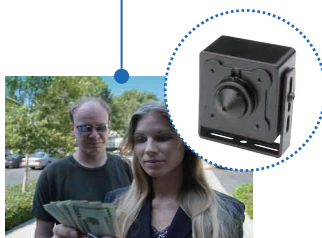
- Facial: 700TVL low-light or WDR pinhole camera to have an overview facial monitoring;
- Cash Input Slot: 700 TVL low-light pinhole camera to monitor whether the cash has been taken out;
- Cash Output Slot: 700TVL low-light camera to see whether the cash has been properly and correctly fed in;
- Lobby: 700TVL low-light camera to have an overview monitoring in case of any emergencies such as fighting, theft or robbery.

### Alarms

- Emergency alarm buttons, smoke detectors, infrared sensors and other alarm devices are installed, all signals will be connected to the monitor/alarm host and uploaded to the control center for instant monitoring and recording;
- Broadcast and pickups system: the center can broadcast to deter crimes.



**Cash Slot**  
(Pinhole Camera)



**Face Recognition**  
( Pinhole Camera)



**The Whole Self-service Area**  
(IR Fixed Camera or 360 degree camera)

## Model



**DVR0404AS-V(D)**  
4CH 960H ATM DVR



**CA-FW191G**  
Mega-HDIS Day/Night Water-proof IR-Bullet Camera



**CA-DW191E**  
Mega-HDIS Water-proof IR Mini Dome Camera



**CA-UM480B/580B**  
700TVL (WDR) Pinhole Camera

## Mobile



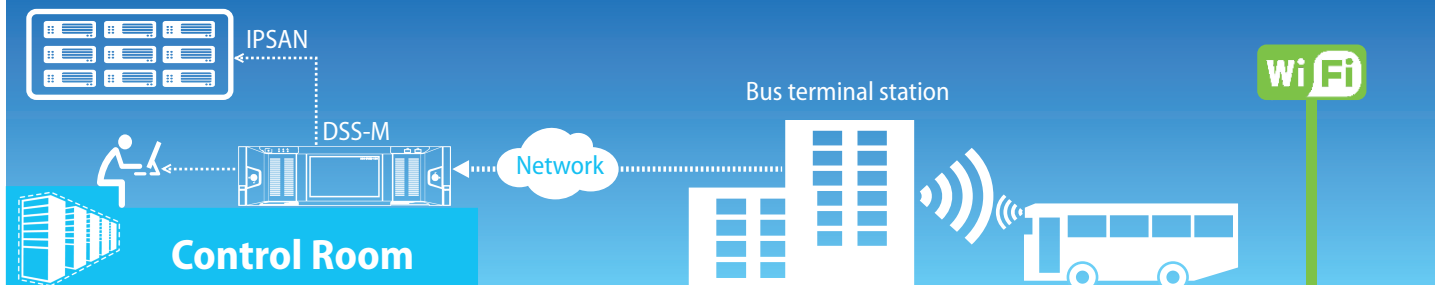
Dahua integrated mobile solution includes a full product portfolio ranging from cameras, storage devices, along with in-house software, video wall display and accessories. The solution is ideal for buses, trucks, police cars, metros, ambulances and etc., which improves safety and simplify the work on fleet dispatch and management.





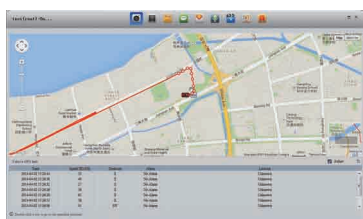
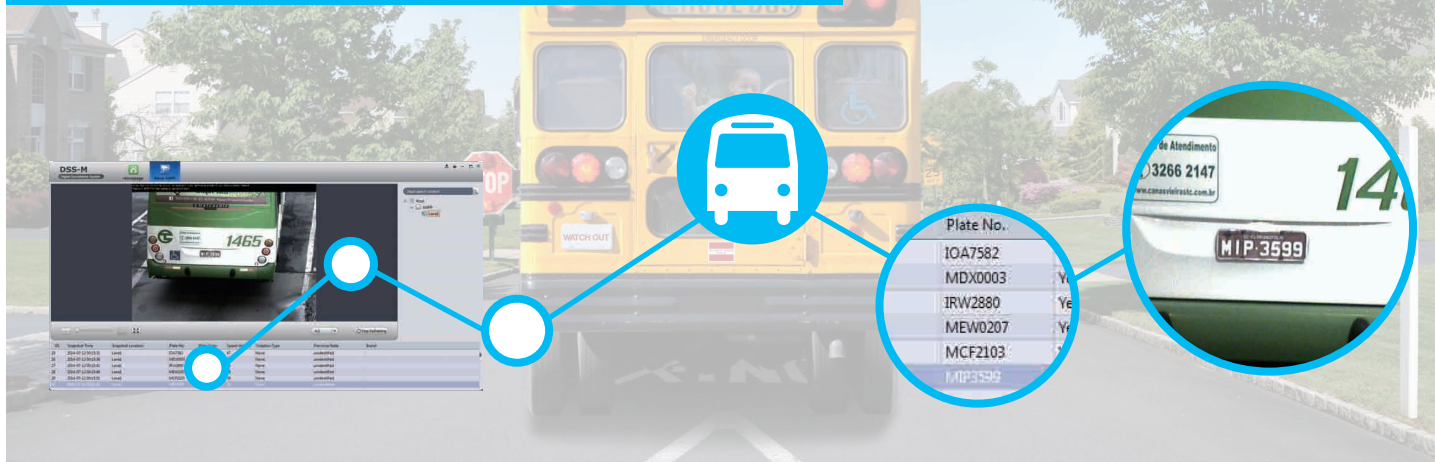
## Wireless Environment

Auto switch to Wi-Fi from 3G and do video data backup at bus station.



## License Plate Recognition (LPR) & Search in Archive:

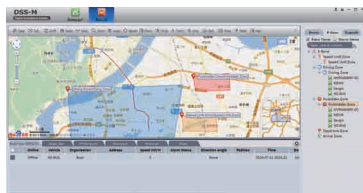
Optical Character Recognition (OCR) embedded mobile NVR for LPR



GPS for easy vehicle locating on E-map. Information such as location (GPS), speed, alarms (over-speed, over-load, low-speed and etc.) are uploaded and shown on client-end.



Master-Slave Tracking allows quick and accurate detection. Speed dome can tag and track the target quickly the second it gets into the defined area or triggers the alarm.



Electronic Fence allows users to set speed limit zone, driving zone, forbidden zone, departure zone and arrival zone for detection and alarming.



G-sensor chip enable to push alarm to platform and client-end when a vehicle has an emergency stop, loss of balance, crash and etc.

## Model



**DVR0404ME-SC**  
4CH 960H Mobile DVR



**DVR0404ME-HE**  
4CH 960H Mobile DVR



**DVR0404/0804MF-H**  
4/8CH 960H Mobile DVR



**NVR0404MF**  
4CH PoE Mobile NVR



**CA-M(W)161E**  
HDIS Mobile Dome Camera



**CA-MW181F**  
HDIS IR Mobile Camera

# Vertical Solution Guide

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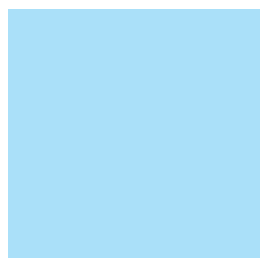
Banking

ATM

Mobile

Case Study

## Success Stories



## More Projects in





## Industrial



# Dahua Megapixel IP Solution Secures Economic Pillar Industry in **Morocco**



### Background

OCP group, headquartered in Morocco, is a global leader in phosphate and its derivatives industry—it is the world's largest exporter of phosphate rock and phosphoric acid. Its production site had been equipped with analog system for several years and the video surveillance system failed to provide any useful information after an incident. Thus, OCP group decided to level up their security by adding Dahua HD IP solution as a complementary and a replacement of its old DVRs.

### Challenge

Clear and crystal monitoring image was on top of the list; meanwhile, due to its large and wide production site, it is important to decide where to deploy and install cameras, both indoor and outdoor. Moreover, since the manufacturing base was secured by different branding devices, product compatibility becomes a key issue.

### Solution

Dahua 1.3/2-megapixel network speed domes provide real-time recording at high definitions with maximum 100-meter IR distance, ensuring a wide visual range at night as well as other poor-lighting conditions; domes' ingress protection rating is up to IP67 and IK10 to be against harsh weathers. NVR3216 supports maximum 120fps@1080P recording and accommodates two HDDs for data storage.

## Financial Institution



### Dahua Technology Enhances Security for Bank BMCI in **Morocco**



#### Background

Banque Marocaine du Commerce et de l'Industrie (BMCI), located in Morocco, is a subsidiary of the French financial group BNP Paribas. With ever growing business and out of the security concern, the bank decided to level up its analog security system, including its 250 branches throughout Morocco.

#### Challenge

It is a large-scale project as there are plenty of branches scattered throughout the country and the system should be connected and work as a network. And of course, the basic request is that the system has to be stable, smooth and 24/7 reliable, which can help security guards to notice of hazardous attempts and make instant and effective responses.

#### Solution

Based on the above factors and take budget into consideration, a hybrid solution was perfect for this upgrading. BMCI selected Dahua 3- and 2-megapixel HD network cameras for more than a thousand units and hundreds of hybrid DVRs in total. These cameras are installed in lobbies and self-service sectors, safeguarding the entrances, counters and the ATM kiosks, capturing and rendering crystal clear images with true color reproduction. Dahua DSS was used as its central monitoring software.

## Transportation



### Dahua ITS Facilitates City's Traffic in Poland



#### Background

Tricity (Trójmiasto) is an urban area consisting of three major northern Polish cities — Gdańsk, Gdynia and Sopot, situated adjacent to one other on the coast of the Gdańsk Bay, Baltic Sea; covering an area of 414.81 square kilometers, accommodating nearly 1 million commuters each day.

#### Challenge

As cities keep expanding and the major traffic concern is congestion. Its urban inner highway, which is the transport backbone, accommodating nearly 1 million commuters every day and people are spending more and more time on the road. The local authority decided to use intelligent traffic system (ITS) to better control city traffic and solve out the congestion so that residents can have better efficiency of their work and life.

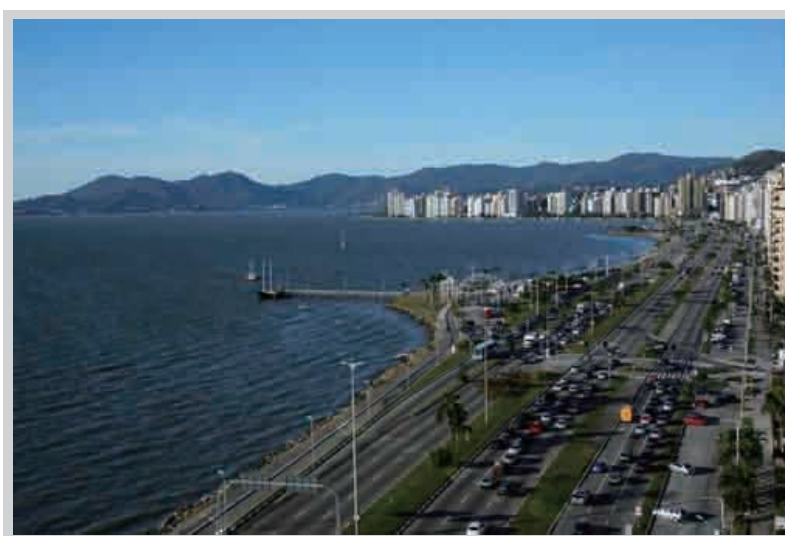
#### Solution

Dahua provides Automatic Number Plate Recognition (ANPRs), red light enforcement, and speed systems for regulating driving behaviors and fight against traffic jams. For ANPR systems, Dahua 1.4-megapixel and 11-megapixel HD traffic cameras are adopted at intersections on main roads, taking care of the snapshot of front and back side of the vehicle respectively. Moreover, both loops and video detection are used to improve accuracy. As for speeding violations, speed systems are installed and approved by metrology law to make fines to control urban driving speed and improve road safety.

## City Surveillance



### Dahua Video Surveillance Provides Peace of Mind in over 100 **Brazilian** Cities



#### Background

As a member of the BRIC countries, Brazil has become one of the fastest growing major economies in the world and here comes along a reality—the fast urbanization and expansion brings security issues. The Brazil government started to launch a national safe city project which was across the coast from southern part all the way up to the north, from the state Santa Catarina to Roraima, including cities such as Florianópolis, São Paulo, Rio de Janeiro and etc.

#### Challenge

It is a large-scaled project and for each city, they have their own specific conditions. Take a common problem as an example; there coexists rich zone and less-developed region, where requires different security deployment. But no matter what products and deployment are adopted, they have to be to-the-actual-condition under the goal of two “M”s — to minimize crimes and maximize citizens’ safety.

#### Solution

For the rich zones, cameras are mainly installed at the crossroads, public entrances, schools gates and elsewhere with high traffic flow, and privacy problem is taken good care by privacy masking function provided in Dahua DVR. As for the less well-ordered areas, such as shabby town, more focus are put on the key observation sectors; thus, domes and fixed cameras are used as combination to better fix and follow the target. The whole system runs Dahua comprehensive central management software and some customized functions are integrated to CMS to make it more timely responsive. Meanwhile, a series of customization are offered in this case.



## City Surveillance



# Dahua IP Solution to Upgrades Safe City Projects of the Heavenly City of Hangzhou



### Background

Hangzhou is the capital city of Zhejiang province in China, also known as heaven on Earth. Its divinely picturesque scenery, over thousand-year history, beautiful legends, and strong economy, has bestowed the city with a name as dream city. The city is consisted of eight administrative prefectures and two sub-urban districts, covering more than 16,596-square-km with a population of 884.4 million.

### Challenge

Hangzhou Safe city is among the first safe city projects in China tracing back to 2004, integrating public security and intelligent transportation system. The whole video surveillance system has to be interconnected and the video data shall be transmitted from local police stations, municipal management center to provincial management center. Below is to take Xiaoshan district as an example.

### Solution

There are 32 local police stations in Xiaoshan equipped with Dahua IP surveillance system, collecting videos from over 3,000 cameras installed at intersections, tunnel/metro entrances, school gates and other public locations where with high intensity. In order to process and manage massive data volume, local police stations use 60 units of Dahua network video recorders, which are equipped with a quad-core processing chip and up to RAID5, ensuring smooth operation, data safety and system stability. The whole system runs Dahua comprehensive central management software DSS. Dahua's cameras are securing over 70 percent of whole Hangzhou traffic system.

## Entertainment



### Dahua Megapixel IP Solution Secures Arabian Center in **Dubai**



#### Background

Arabian Center, located in the southeastern Dubai, is a new shopping and entertainment destination for local residents. Sprawling over a total site area in excess of 80,000 square meters, Arabian Center is a home to 200 plus renowned retail stores, ranging from fashion lines to home furnishings, electronics and etc. The security of the shopping center is given to high priority as its board intends to provide store owners a good business platform and renders costumers with a cozy and safe shopping experience.

#### Challenge

How to fight against theft and tackle with emergencies in such a wide space remains as a question. Meanwhile, different spots have their own specific requests; for example, the condition in warehouses, entrances and exits are no way the same as other areas in the mall. Other basic requests of this project includes crisp and clear image quality, in-décor design and a stable and reliable system.

#### Solution

342 units of Dahua 2-Megapixel Eco-Savvy network cameras are applied, different models for different occasions. To be specific, WDR cameras uses in-house algorithm to show better image performance, especially for the weather in Dubai. The strong sunlight is all year round which makes WDR a must for the camera installation of entrances and exits. Low light cameras are also a good choice for warehouse monitoring. The whole system runs on Dahua Smart PSS (CMS software) to have a central control and management.

## Entertainment



# Barcelona Shopping Mall Upgrades with Dahua IP Megapixel Solution



### Background

Heron City shopping mall is one of the biggest shopping centers in Barcelona, Spain. The mall is stationed with many street-popular brands, along with a wide range of restaurants and a big underground supermarket. As a local popular shopping center, Heron has its existing analog surveillance system but requires an updated HD demand, including high definition, fast transmission, versatile video management and etc. However, the today's Spanish market, the market share is still de facto analog system and people are not yet familiar with IP solutions, as network setting is not as that easy as analog one.

### Challenge

The goal is to efficiently prevent thefts, deter crimes as well as increase customer safety. Therefore, the mall executives take not only product performance but also camera design, disk capacity, ease of use, maintenance, and other factors into account.

### Solution

Dahua 2-megapixel IR bullet (IPC-HFW3200SP) and 2-megapixel eyeball domes (IPC-HDW2100P) feature the design to meet the scenarios for both indoor and outdoor. These cameras are perfectly designed for public open areas, entrances and exits, cashier in stores and parking lots. The 2-megapixel speed dome features Dahua in-house block camera, rendering clear and crisp images, and its IR distance reaches up to 100 meters, ensuring a wide range vision at poor-lighting surroundings. The PoE NVR saves a lot of time and support 8-ch 1080P playback; meanwhile, it support dual-stream recording, which is to record the real-time main stream and extra stream of all IP camera at the same time.

## Hotels



### Dahua HDCVI Secures Five-Star Rated Hotels at CICA Shanghai



#### Background

CICA Shanghai was hosted during 20<sup>th</sup> to 21<sup>th</sup> of May and the conference plays a significant role in security cooperation throughout Asia, Xi Jinping, President of People's Republic of China also attended and presided over the summit. More than 50 reception hotels are required to upgrade surveillance system from standard definition to high definition.

#### Challenge

The biggest challenge is under great pressure by time frame, how to make sure the image quality and product replacement would not compromise the daily reception and security concern of these five-star rated hotels.

#### Solution

Dahua HDCVI successfully upgrade the system without changing the existing cabling while also provides long-distance and non-latent image quality. Moreover, the whole upgrade takes more or less 10 days to as cabling are remained, only cameras, DVRs along with fiber optical transceivers are replaced by HDCVI ones. With aesthetic requirement for the hotels, HDCVI offers wide range of housings and its speed domes and box cameras are perfectly coexisting with the décor in the lobby, reception, entrance and dining areas.



## Venue



# Dahua Secures UNESCO Site in Sicily



### Background

The Island of Sicily, off the south of Italy, is home to a great portion of these historical monuments, and among them, Duomo di Monreale Cathedral is one of the most outstanding examples not to be missed. It is of utmost importance to protect the site with the best and most modern technology in an intangible way.

### Challenge

While considering the solution scheme, the main priority to bear in mind was to maintain the historical characteristic of the building and IP technology was undoubtedly the best way forward as it allows for minimum cabling and, so is less invasive, ensuring that the delicate and subtle décor and surroundings of the cathedral remained in tact; moreover, due to the dim lighting inside, the camera's low illumination performance needed to be excellent.

### Solution

8 units of the Dahua 1.3 MP IR dome cameras were used, and the resulting video streams are processed through a PoE switch to a 16-channel network video recorder NVR. As for the exterior, Dahua 1.3MP mini IR-bullet camera was installed for its discreet appearance and superior night vision performance. The system runs Dahua PSS, a central management system to view images both locally and remotely via ADSL/3G connections. Moreover, the system as a whole is cascaded to its upper platforms of the Monreale Archdiocese, and the data is able to be transmitted to other public as well as private organizations in order to better promote Sicilian culture and tourism.

## Venue



### Dahua Ensures the Safety of Italian Motorsports Park



#### Background

Modena, known as "the capital of engines", is an ancient town in Italy. It is the heaven for racing enthusiasts since a lot of factories of the famous Italian sports car makers like Ferrari, De Tomaso, Lamborghini, Pagani and Maserati are now or once located here. The circuit length of the park reaches 2.7 Km. and the pit lane is with 21 boxes, new telemetric system and a well equipped paddock.

#### Challenge

Both of the well-knowing high risks of racing and its open outdoor environment pile up the difficulty and complexity for Autodrome di Modena in terms of security. During the design phase, two requirements were on the table, one was for the sake of security control; the other one was to offer checking on the racing of cars & motorbikes.

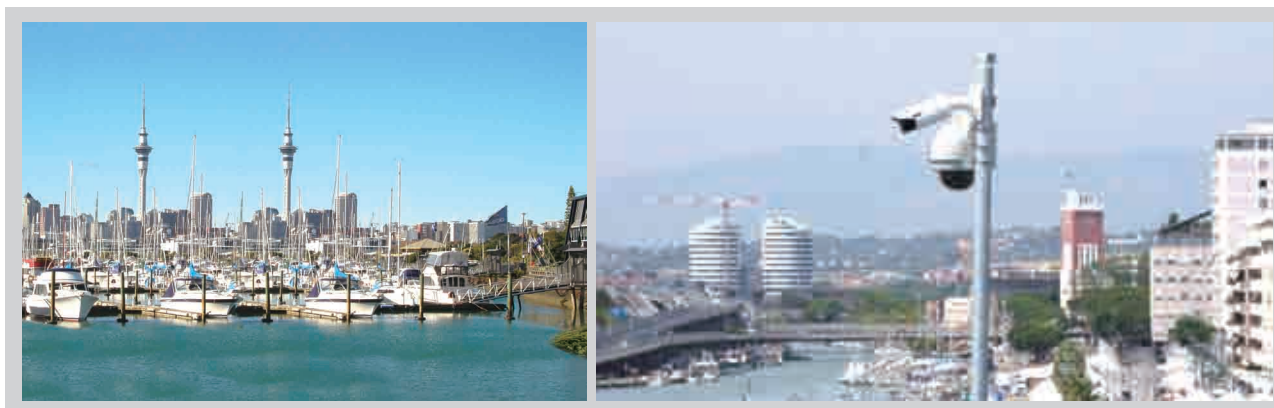
#### Solution

Dahua provides 2-megapixel full HD network cameras (IPC-HF3200) and speed dome cameras (SD6982A-HN). The storage device is Dahua 128 Channel Super NVR. With Dahua VMS, this set safeguards the venue with superb image quality with every detail captured, along with flexible and convenient management; most of all, the open architecture of super NVR makes it possible for a further implementation in the long run.

## Port



# Dahua IP Megapixel Solution Secures an **Italian** Pescara Port



### Background

Pescara harbor, an Italian port stretching along the Adriatic Coast in Pescara, is of significance for the trading and tourism around the region. The port covers a dock, a freight yard and a sea bridge, which is one of the biggest cyclo-pedestrian in Europe.

### Challenge

The complexities once encountered in this case includes the unpleasant weather and high humidity of the region as it may cause the erosion of devices and thus shorten their lifespan; also, the high temperature and moisture may affect the smooth transmission of IP stream during deployment and installation.

### Solution

The system adopts a ring networking structure with optical fiber adopted instead of a conventional star-topology one; and to further guarantee an adequate bandwidth at 108Mbps for the cycling lane, the radio transmission system was configured at an access point of dual band 2.4/5.8GHz. At the product front, Dahua 3- and 2-megapixel IR cameras (IPC-HFW3300P/IPC-HFW3200CP) and 2Mp 20x speed domes (SD6982A/6523H-HN) cruised into the final after a series of testing. Equipped with lens of 3.3~12mm and 8~16mm, box cameras manage to take a wide range scenario under surveillance. What's more, with the help of high efficient IR LEDs, cameras could also render a superb night vision effect; and as for the back-end devices, Dahua NVR, DH-SVR3016H, is applied as it can satisfy the storage of large volume footage as well as its RAID function can manage to enhance reliability and stability of the system.



# DAHUA TECHNOLOGY MAKE YOUR LIFE SAFER

\* Design and specifications are subject to change without notice.

Solution-051-02, Jan 2015



## DAHUA TECHNOLOGY CO., LTD.

No.1199 Bin'an Road, Binjiang District, Hangzhou, China. 310053

Tel: +86-571-87688883 Fax: +86-571-87688815

Email: [overseas@dahuatech.com](mailto:overseas@dahuatech.com)

[www.dahuasecurity.com](http://www.dahuasecurity.com)



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