HIKVISION **Solution for Analog Surveillance**

V1.1 , 2015.5

Reference

These are all found with the products either printed or on CD and on our website.

- User Manual of Hikvision analogue devices

- Specification of Hikvision analogue devices

- Catalog of Hikvision analogue devices

- Quick Start Guide of Hikvision analogue devices

Training Objectives

- After this course, you will be able to:

    - Understand more about Hikvision Analogue based products

    - Understand more about Hikvision HD Analogue products - TURBO.

    - Design a small analog surveillance system using Hikvision products

Content

Video Surveillance Requirements

- Clear Images Day and Night
- Large Storage Availability
- Fast & Clear Playback of Recorded Footage
- Smart Detection to enhance uses of CCTV

First Choice for Security Professionals

Video Quality

- Analogue camera provides 720TVL resolution
- Turbo HD (TVI) provides 1080p (2MP) video quality over coaxial

Content

HIKVISION Traditional Analog Camera

HIKVISION

E Series

| EXIR bullet with IP66 & fixed lens(-IT3/5) | IR bullet with IP66 & fixed lens | EXIR turret with IP66 & fixed lens(-IT3) | IR Dome with IP66 & fixed lens (-IR/IRP/IRM) | Internal Dome |

| IR bullet with IP66 & vari-focal (-VFIR3) | IR dome with IP66 & vari-focal (-VFIR3) | IR Dome with vandal proof & IP66(-VPIR3) | IR indoor dome with vari-focal (-VFIR2) |

First Choice for Security Professionals

HIKVISION Traditional Analog Camera

HIKVISION

```
                    ┌─────────────┐
                    │  H series   │
                    └─────────────┘
```

Box camera	IR Bullet with vari-focal lens & IP66 (-VFIR3/VF)	Dome without IR (-VF)	Dome with (IR)&VF&VP& IP66 (-VP/AVPIR2)	EXIR Bullet with IP66 (-IT3/5)	EXIR Dome with IP66(-IT3)

HIKVISION Traditional Analogue DVR

HIKVISION

DS-7200HWI-SH

DS-7200HVI-SV

DS-7300HWI-SH

ENTRY LEVEL
4-32 channels
HDMI Output
CIF Real-Time WD1
Real Time

DS-9100HWI-ST

DS-8124HWSI-SH/
DS-8132HWSI-SH

DS-9200HWI-ST

ADVANCED LEVEL
4/32 channels
WD1
8 SATA
Defog & 3D DNR

Turbo HD Family

HIKVISION

Camera

PTZ

Entry Level

MINI

720p: normal and low illumination series
1080p: higher resolution imaging

720p/23x, 1080p/30x
All PTZ dome cameras support UTC

DVR

2 SATA

1.5U chassis
4 SATA

2U chassis
8 SATA

720p	1080p
72HGHI-SH series	72HQHI-SH series
73HGHI-SH series	73HQHI-SH series
81HGHI-SH series	81HQHI-SH series

First Choice for Security Professionals

Turbo HD Camera Product Family

HIKVISION

```
                          ┌─────────────┐
                          │    TURBO    │
                          └──────┬──────┘
     ┌──────────┬──────────┬─────┴─────┬──────────┬──────────┐
```

Bullet camera	IR Bullet camera IP66	Turret Camera &IP66	IR dome camera	EXIR turret camera &IP66	IR indoor Dome camera

720p/1080p   720p/1080p   720p/1080p   720p/1080p   720p/1080p   720p/1080p

First Choice for Security Professionals
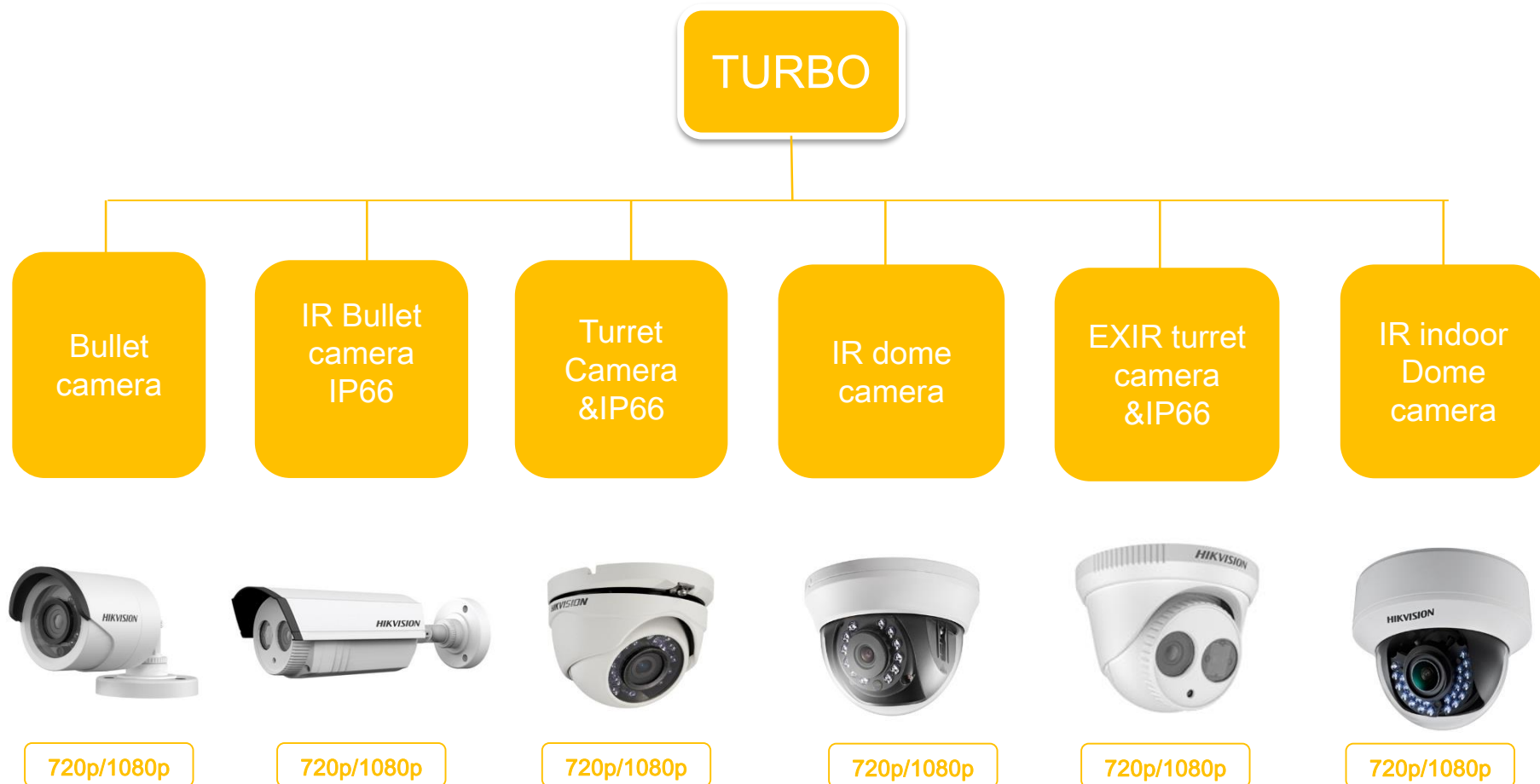
Turbo HD PTZ Speed Dome

HIKVISION

DS-2AE4123TI-A(3)
DS-2AE4223TI-A(3)

DS-2AE5230T-A(3)
DS-2AE5223TI-A(3)
DS-2AE5123TI-A(3)

DS-2AE7230TI-A
DS-2AE7123TI-A

720P, 23X,100m IR
1080P,23X,100m IR

1080P, 30X
1080P,23X,150m IR
720P, 23X,150m IR

1080P, 30X, 120m IR
720P, 23X, 120m IR

Turbo HD DVR Family

HIKVISION

DS-7100HGHI-SH

DS-7100HQHI-SH

DS-7200HGHI-SH

DS-7200HQHI-SH

DS-7300HGHI-SH

DS-7300HQHI-SH

DS-8100HGHI-SH

DS-9000HQHI-SH

DS-71/72HGHI-E1/2

TURBO HD DVR
4/8/16/24/32 channels
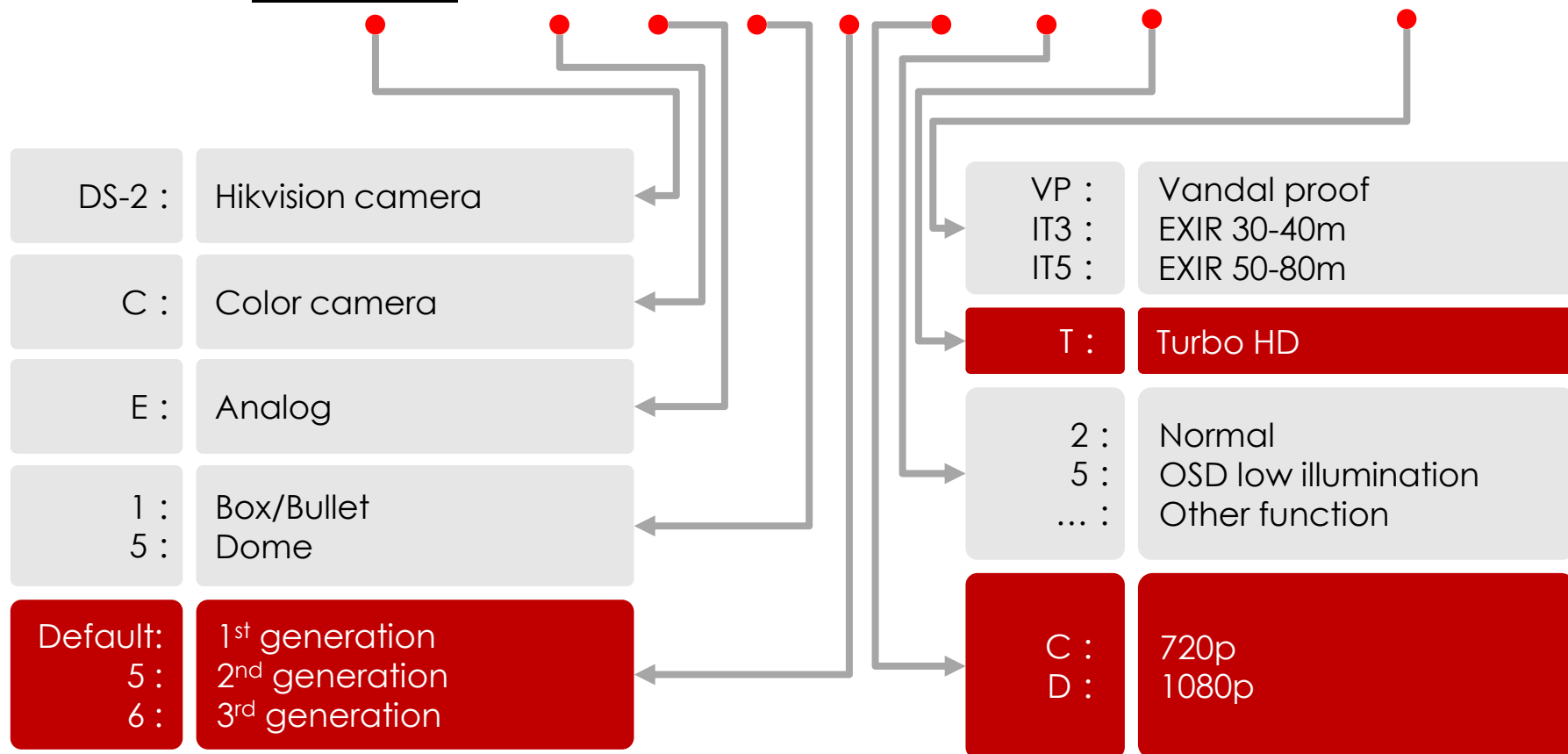720P/1080P Real Time
1/2/4/8 SATA

Turbo Tri-brid Technology

Analogue

Turbo

IPC

TURBO TVI Recorder
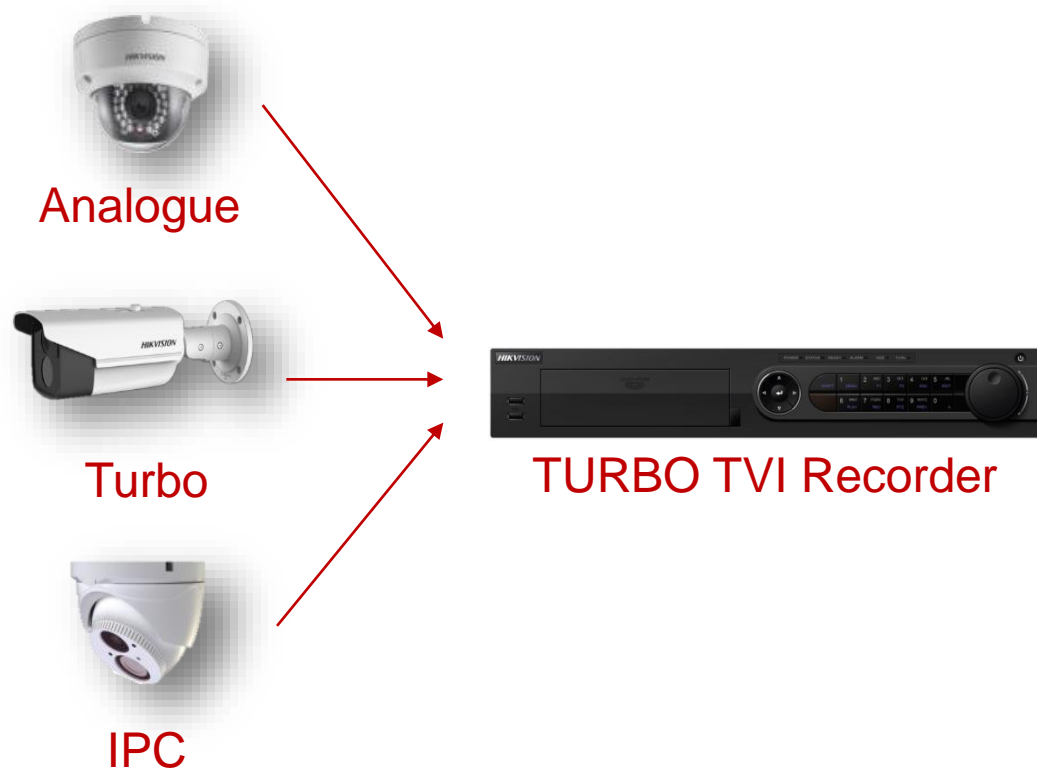
HDMI / VGA / BNC

Name Rule- Turbo HD Camera

HIKVISION

①	②	③	④	⑤	⑥	⑦	⑧	⑨
DS-2	C	E	1	6	D	5	T –	IT3

DS-2 :	Hikvision camera
C :	Color camera
E :	Analog
1 : 5 :	Box/Bullet Dome
Default: 5 : 6 :	1st generation 2nd generation 3rd generation

VP : IT3 : IT5 :	Vandal proof EXIR 30-40m EXIR 50-80m
T :	Turbo HD
2 : 5 : ... :	Normal OSD low illumination Other function
C : D :	720p 1080p

Name Rule- Turbo HD PTZ

HIKVISION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

DS-2 A F 5 1 2 3 T – A3

DS-2:	Hikvision camera
A:	Analog PTZ
E: F:	Entry-level High-end
5: 7:	5 inch IR
1: 2:	720P 1080P

A: A3:	AC24V, outdoor, IP66 AC24V, indoor
T:	Turbo HD
23: 36:	23x optical zoom 36x optical zoom

First Choice for Security Professionals

Name Rule- Turbo HD DVR

HIKVISION

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

DS -72 16 HGH- SNH

DS：	Hikvision product
78：	72/73/81 series
16：	**Number of channels**
H：	H.264 encoding
G： **Q：**	**Turbo HD720P real-time** **Turbo HD1080P real-time**

H : T : N : E :	HDMI output Advanced Small chassis Without alarm
S :	SATA interface
H :	HD video input

First Choice for Security Professionals
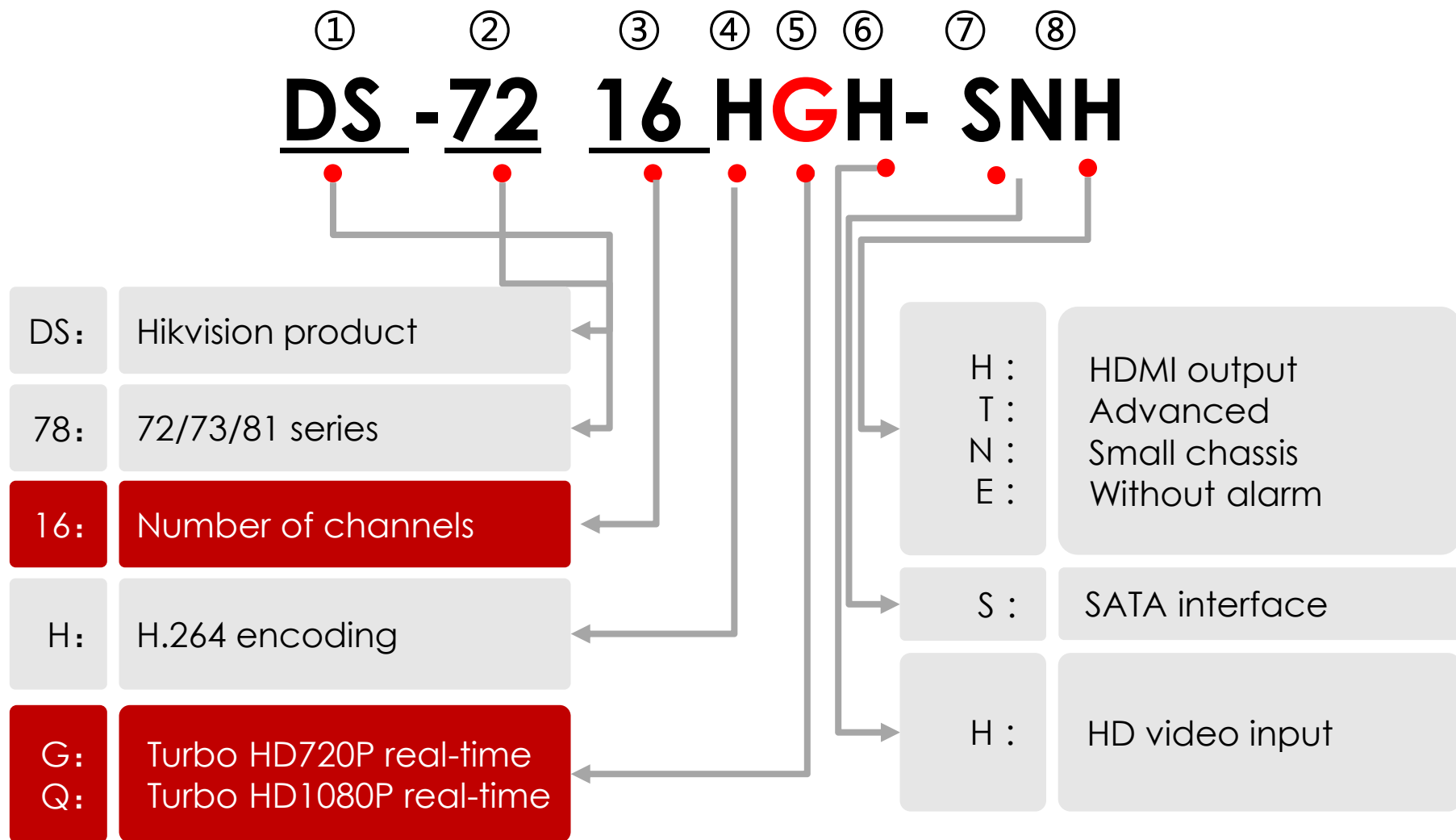
Content

1. Video Surveillance Overview

2. Hikvision Analog Surveillance Products

3. System Advantages

Basic Theory

HIKVISION

Theory：
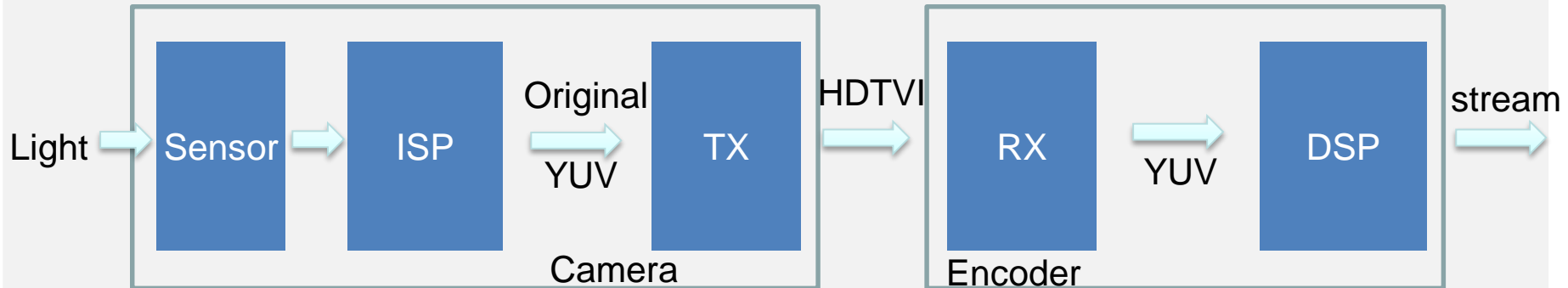
Definition

- **HDTVI**(HD Transport Video Interface) **standard**

- Transmission media：SYV75-3/SYV75-5/UTP

- Further transmission distance

- Low-frequency signal, good anti-interference performance

HDTVI system
V1.0   video data, two way control,
V2.0   coaxial audio,
V3.0   ………………..

Turbo HD Advantage

High Resolution images up to 1.3MP (720P), 2MP (1080P) over coaxial cable

Up the coaxial control

Real-Time with HD

Go Further with HD

Self-adaptive Access

HIKVISION

DVR Access → **Self-adaptive access with standard definition camera or turbo HD camera**

Standard definition camera

Turbo HD **720p** camera

Turbo HD **1080p** camera

IPC
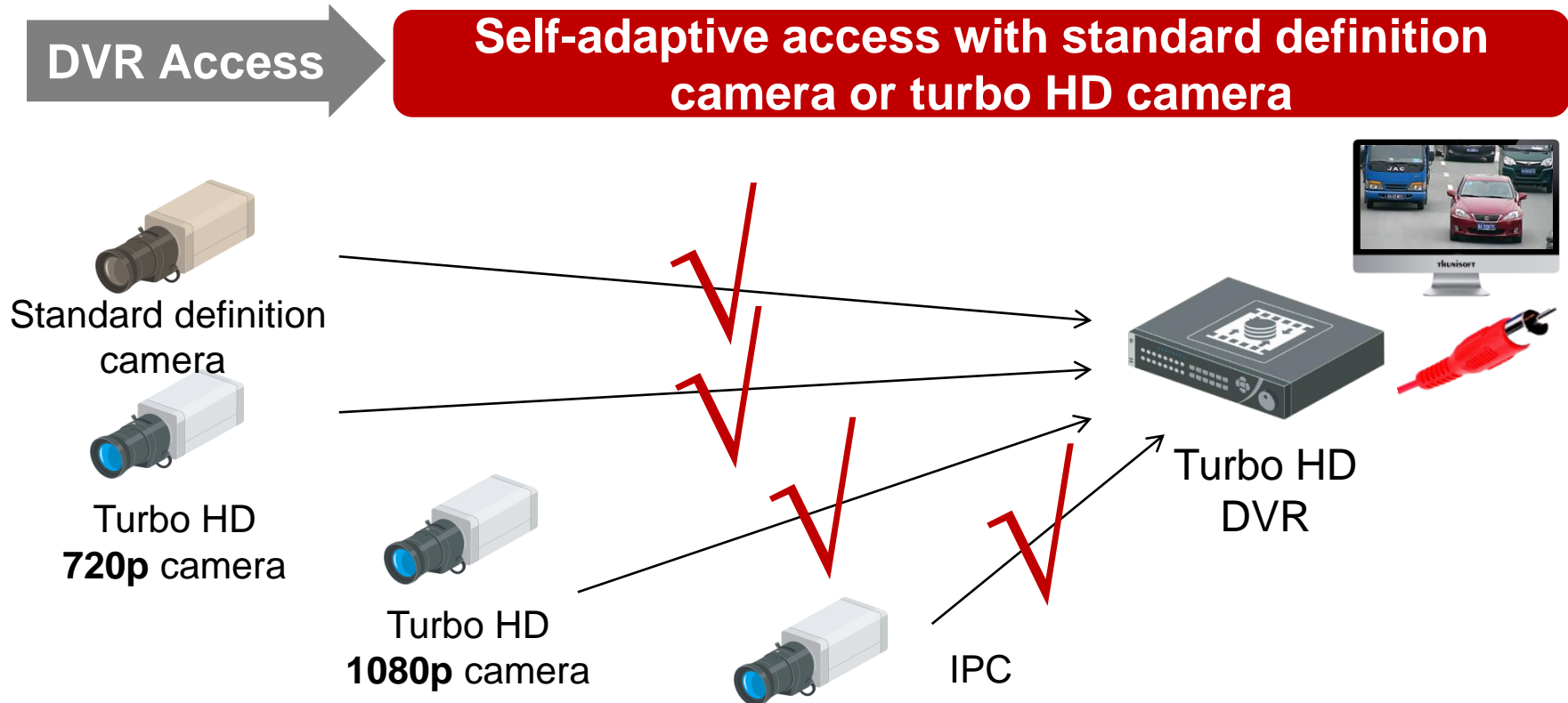
Turbo HD DVR

Self-adaptive access
◆ **Turbo HD DVR supports self-adaptive access with camera, easy operation**
◆ **1080P video can be accessed in 720P DVR, with 1080P non-real time encoding**
◆ **73/81/90 series can increase 1 IP channel by canceling 1 HD analog channel.**

Turbo HD

HIKVISION

PTZ control

Parameters adjustment

Coaxial cable

VGA/HDMI
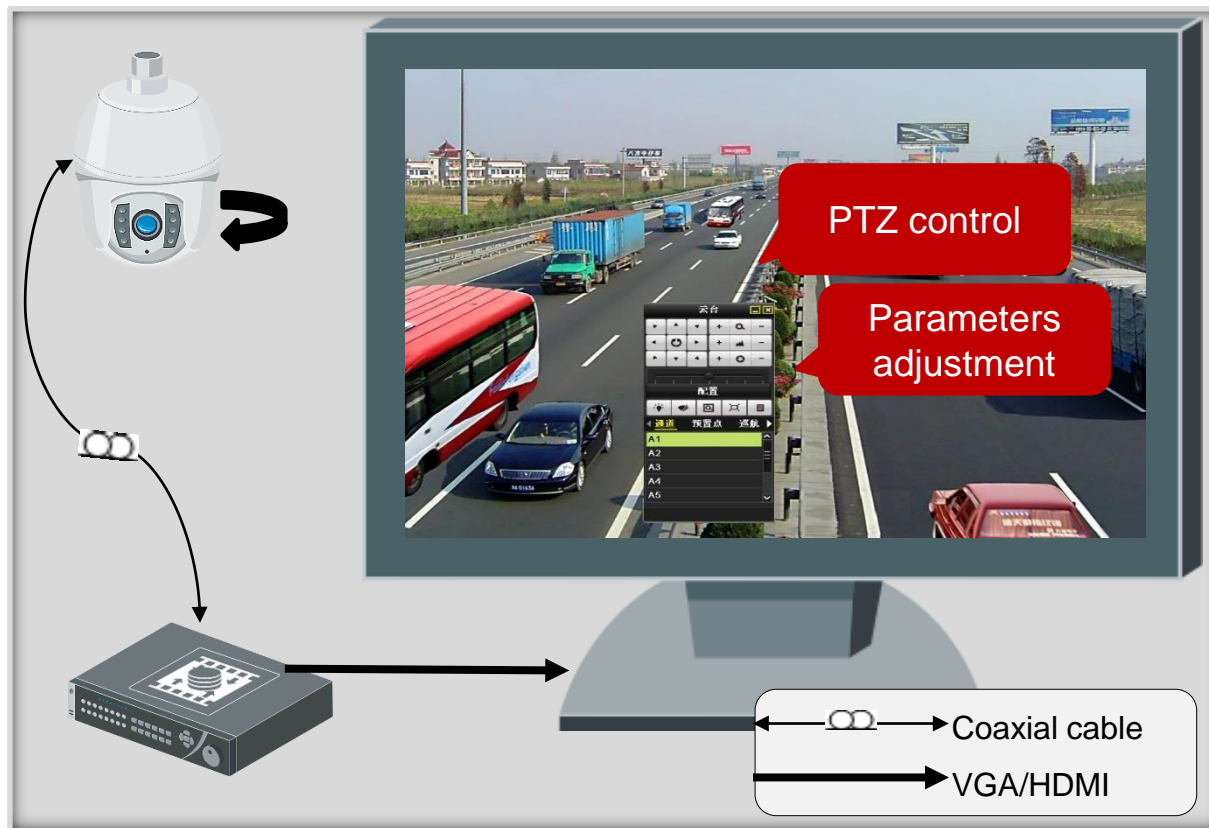
Easy operation

Plug and Play configuration with UTC - up the coax control

Simple system

System upgrading with **Coaxial Cable,** no need to change original analog cable,

Turbo HD
amazing analogue images

Real-Time HD
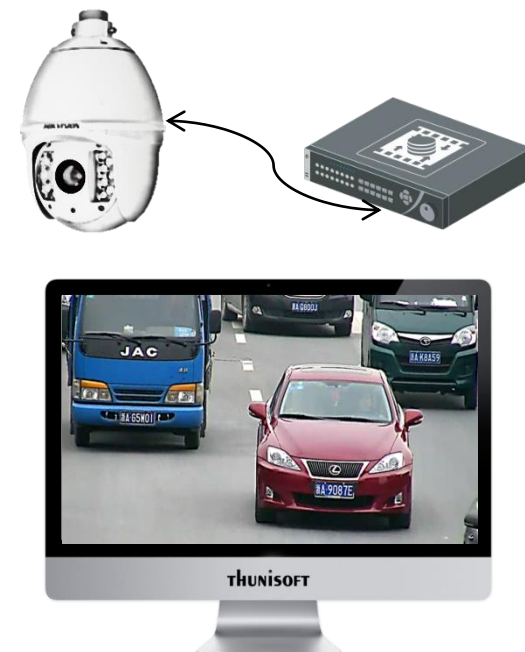
Real-Time	Real-Time Output
HD Image Quality Without Delay	HDTVI standard, image transmission without coding

Take Your HD Further

Further HD	• Long distance transmission with low-frequency signal • Compound signal in one cable with OSD camera menu
Anti-Interference	• Turbo HD meets HDTVI standard, which offers good anti – interference performance
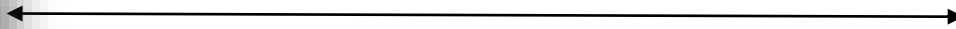
Up to 500m (720P/1080P) with high resolution images on SYV-75-5
Up to 300m (720P/1080P) with high resolution images on SYV-75-3

Highlight· Turbo HD DVR

Smart flow control

Smart flow control in HD TVI DVR

With smart flow control in Turbo HD DVR, normal decoding and fluent live view will be ensured even the transmission situation is not very well.
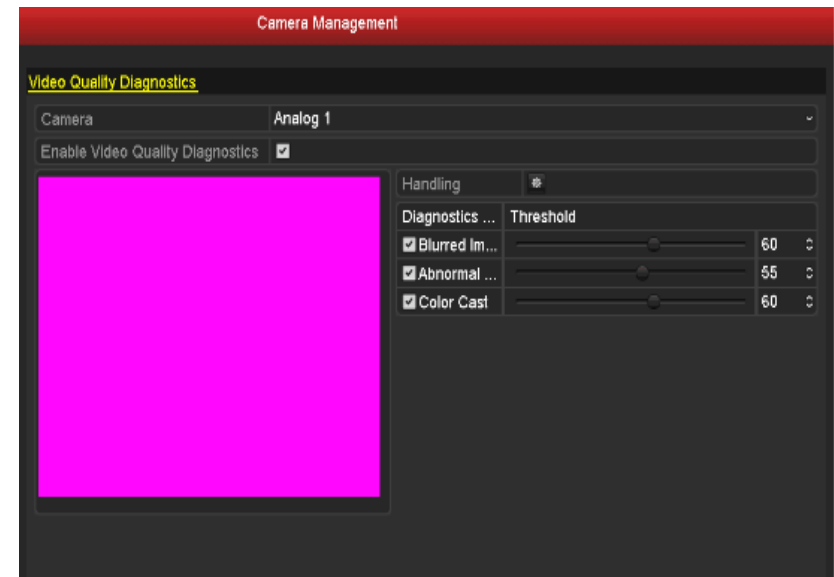

Coaxial-cable

Ethernet Cable

VGA/HDMI

4.4 Mbps

↓ 4.2 Mbps   ↑ 0.6 kbps

720p/1080p
HD analog camera

HDTVI DVR

Fluent image
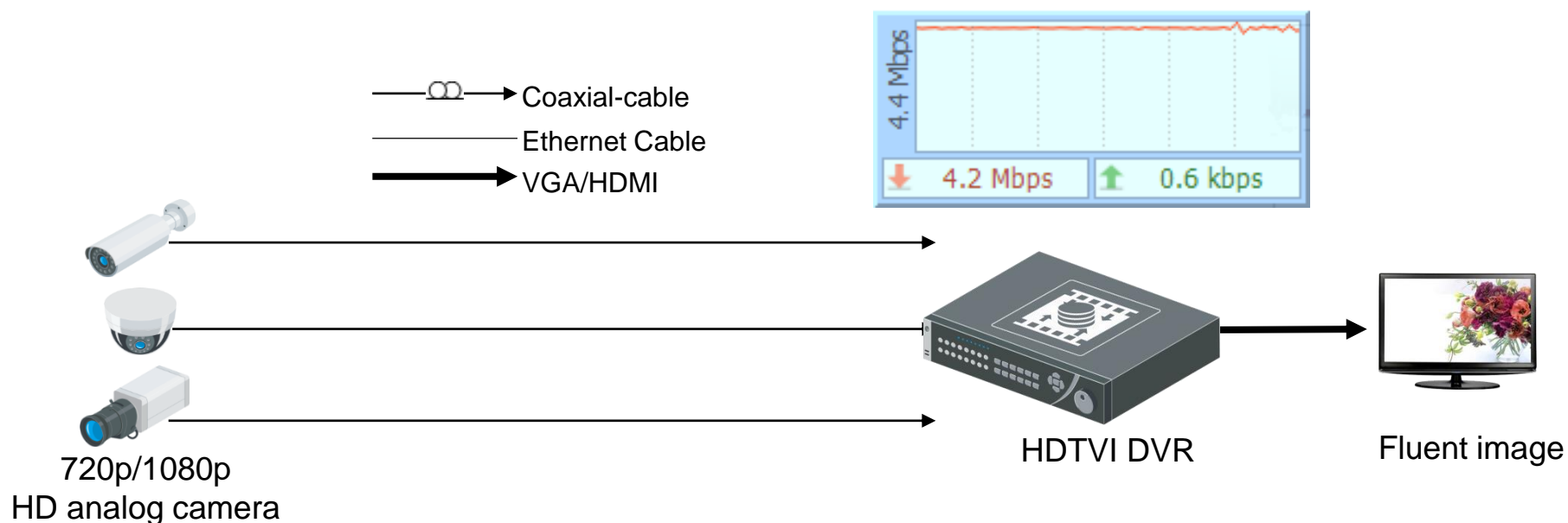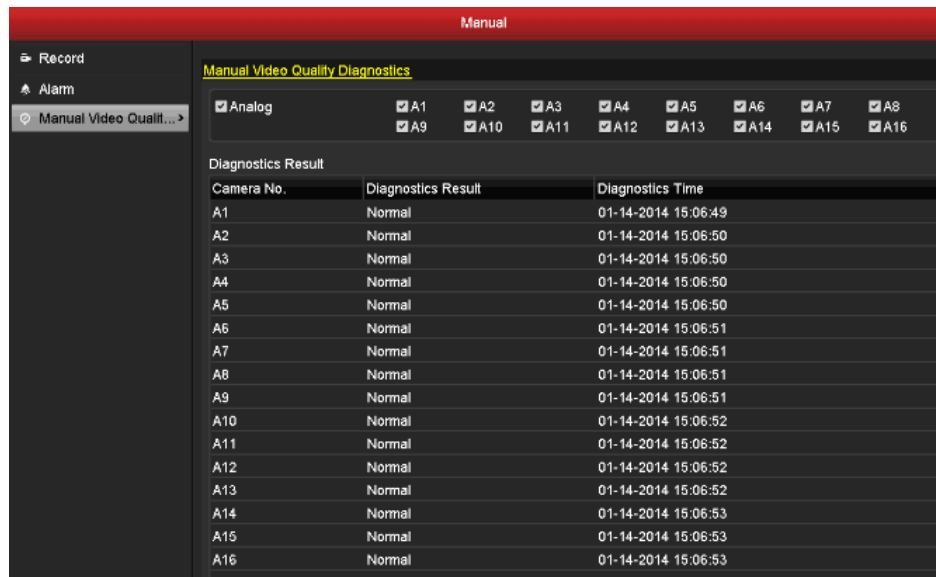
Highlight· Turbo HD DVR

DVR VQD → **Video Quality Diagnostic**

Multiple types are included in the VQD: blurred image, abnormal brightness, and color cast.

· Manual video quality diagnostics
· Support configure VQD exception handling and linkage action.
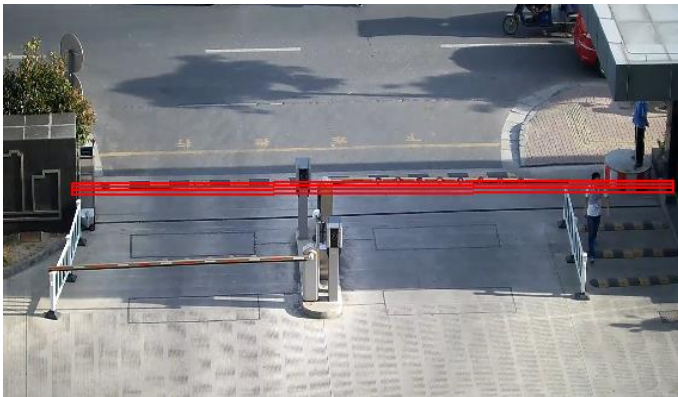
Highlight· Turbo HD DVR

VCA → **Smart detection in Turbo HD DVR**

- Multiple types are included in smart detection: intrusion detection, traversing virtual plane detection.
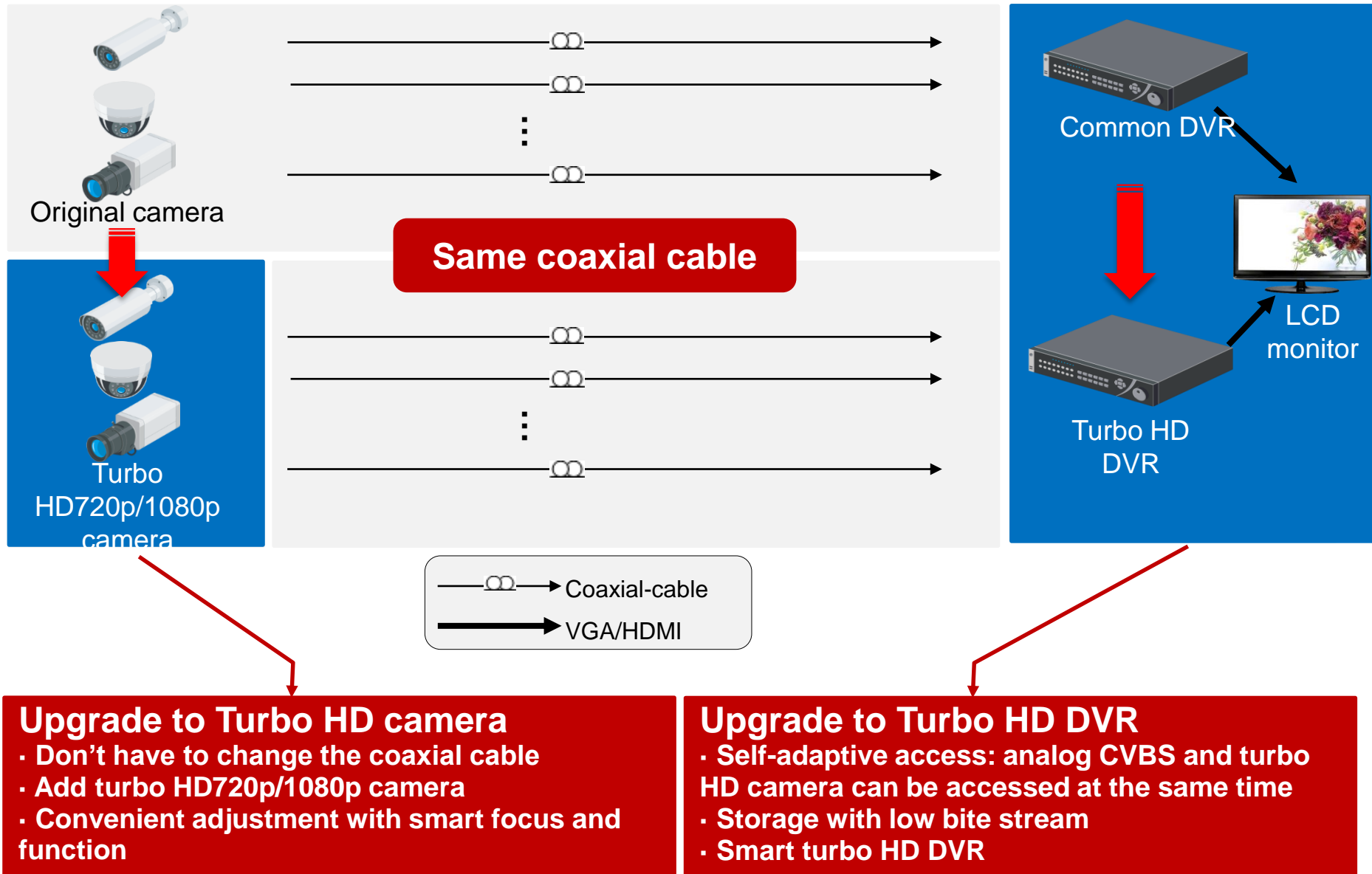
Traversing virtual plane

Intrusion detection

Upgrade to Turbo HD

HIKVISION

Original camera

Turbo HD720p/1080p camera

Same coaxial cable

Common DVR

Turbo HD DVR

LCD monitor

⊂⊃→ Coaxial-cable
→ VGA/HDMI

Upgrade to Turbo HD camera
· **Don't have to change the coaxial cable**
· **Add turbo HD720p/1080p camera**
· **Convenient adjustment with smart focus and function**

Upgrade to Turbo HD DVR
· **Self-adaptive access: analog CVBS and turbo HD camera can be accessed at the same time**
· **Storage with low bite stream**
· **Smart turbo HD DVR**

First Choice for Security Professionals

Turbo HD· Advantage

HIKVISION

Turbo HD

Front-end →

- HD 720p/1080p
- Low bit stream
- multi-signal in one cable

Easy System Upgrading

Transmission →

- No change for coaxial-cable
- Long transmission distance

Back-end →

- Turbo HD DVR
- Low bit stream
- Flexible expansion

Open Technology Flexible Expansion
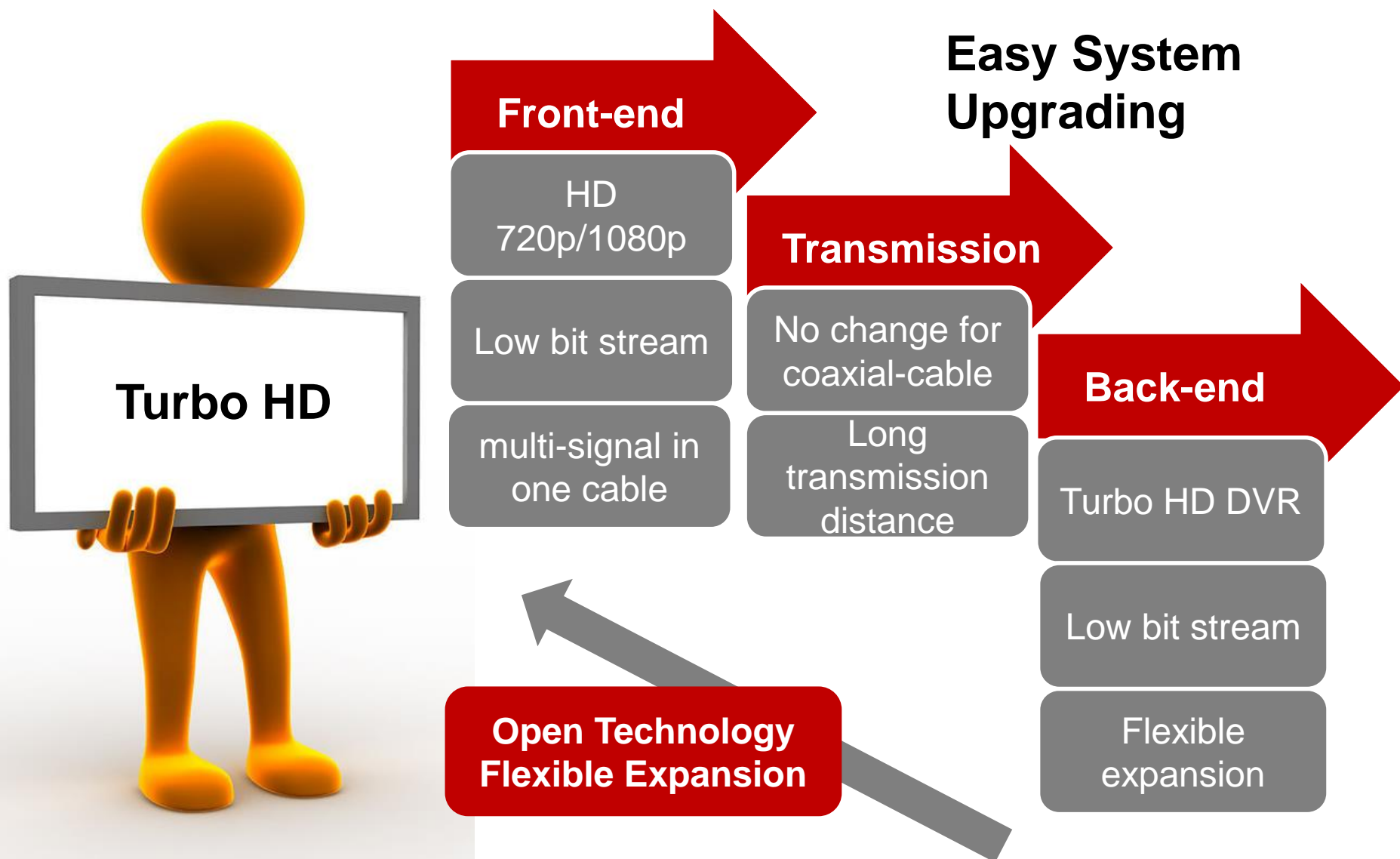
Abstraction

- *DVR: Digital Video Recorder*
- *IPC: Network Camera*
- *NVR: Network Video Recorder*
- *TVL: TV Line*
- *VMS: Video Management Software*
- *PTZ: Pan, tilt and zoom*
- *LAN: Local Area Network*
- *WAN: Wide Area Network*
- *OSD: On Screen Display*
- *WDR: Wide Dynamic Range*
- *DNR: Digital Noise Reduction*
- *HD: High Definition*

- *CMS: Central Management Server*
- *NMS: Network Management Server*
- *AMS: Alarm Management Server*
- *VRM: Video Recording Management*
- *SMS: Stream Media Server*
- *HDD: Hard Disk*
- *S.M.A.R.T: Self-Monitoring Analysis and Reporting Technology*

Thanks!

www.hikvision.com