# PRODUCT QUICK GUIDE INTELLIGENT TRAFFIC SYSTEM 2021 H1



# Intelligent Traffic System

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## Intelligent Traffic System

As city populations grow, so do car ownership and the burdens on urban traffic systems. The key objective remains keeping everyone moving safely and responsibly on the road, optimizing the use of available transportation and parking resources, and responding to traffic and security events as swiftly as possible. Hikvision's Intelligent Traffic System helps alleviate these concerns altogether. It effectively regulates traffic order by detecting and managing various road violations, such as running a red light, speeding, improper lane usage, and illegal parking. It also helps optimize traffic flow and ease gridlock by adjusting red and green light durations according to actual road conditions. An ITS guidance screen can be placed near congested areas to display alternate route information to keep traffic under control, reduce driver frustration, and relieve officers from having to manually direct traffic in dangerous conditions.





At entrances and exits, Hikvision's ANPR Cameras automatically recognize a vehicle's plate number and display it on the control center screen. The Authorized List function with barrier integration enables quick and fluid passing of registered vehicles, preventing congestion at entrances and exits and improving traffic efficiency. The Parking Guidance System combines deep learning algorithms, video monitoring, and information dissemination technologies to give drivers dynamic, real-time information about parking availability within controlled bays. The system helps drivers find the closest parking spaces available. Then, by simply entering their plate number in full or in part, the vehicle can be easily located on the floor map with the best route to it.



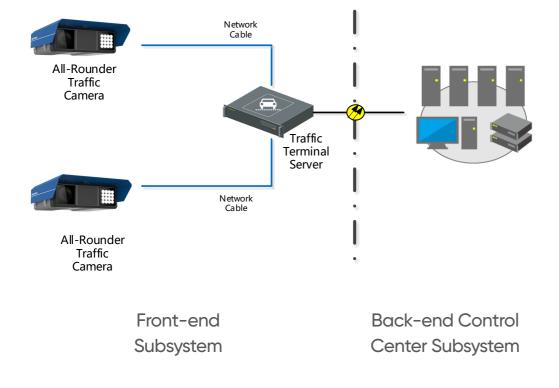
## Intelligent Traffic System Checkpoint System

The checkpoint capture system is designed for applications in urban roads and expressways. When a vehicle passes by, information such as the license plate, type, color, and radar-detected speed will be collected and utilized by our professional video management platform for further applications, such as intelligent vehicle searches, for example.

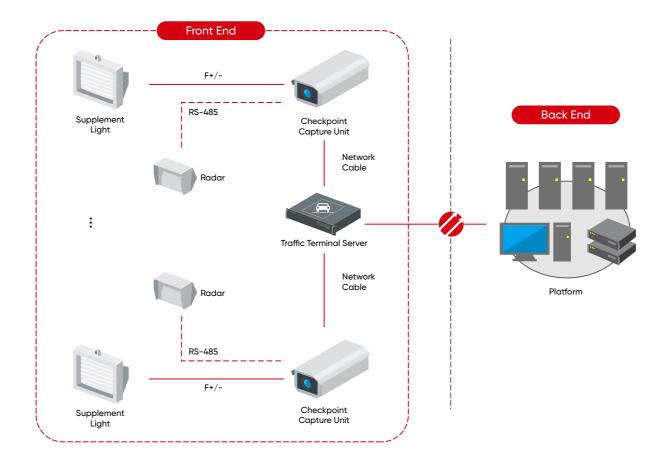
Hikvision launched innovative ITS cameras for traffic speed enforcement and violation detection. The new All-Rounder Traffic Camera is engineered with an all-in-one structure, embedding video, radar and supplemental light in one module, helping traffic authorities ramp up the detection of violations with easier installation and system operation.

- > High quality imaging with up to 9 MP resolution (1" GMOS)
- > Excellent low-light performance
- > Efficient H.265 compression technology
- > 3D DNR technology delivers clean and sharp images
- High-precision Speed Detection Radar with a velocity range of 5 to 250 km/h
- > Supports automatic number plate recognition (ANPR)

Vehicle feature recognition: Vehicle type / color / manufacturer / number plate color recognition / no-plate vehicle capture. Violation detection: Driving on lane line, Illegal lane change, wrong-way driving, seatbelt and phone use violations. Application scenarios: Highways, tunnels, toll stations, urban roads, etc.



| Model                             | ids-tcv507-bir   | ids-tcv907-bir   |
|-----------------------------------|--|--|
| lmage                             |  | (Deep Learning   |
| Image Sensor                      | 2/3" GMOS  | 1" GMOS  |
| Resolution                        | 2464 × 2056  | 4096 × 2160  |
| Video<br>Compression              | H.265/H.264/MJPEG  | H.265/H.264/MJPEG  |
| Lens                              | 15-50 mm   | 11-40mm  |
| Light Range                       | Up to 40 m   | Up to 40 m   |
| Light Beads                       | 16   | 16   |
| Wavelength                        | 850nm  | 850nm  |
| Central Frequency                 | 24.05 to 24.25 GHz   | 24.05 to 24.25 GHz   |
| Measurement<br>Accuracy           | -4 to 0 km/h   | -4 to 0 km/h   |
| Velocity Range                    | 10 to 300 km/h   | 10 to 300 km/h   |
| Tracking Target                   | Up to 32   | Up to 32   |
| Double Trigger                    | Approaching direction, leaving direction, and both   | Approaching direction, leaving direction, and both   |
| Coverage                          | 1-2 lanes  | up to 3 lanes  |
| LPR Accuracy                      | > 98%  | > 98%  |
| Smart Function                    | Vehicle type classification, vehicle color<br>recognition, no-plate vehicle capture,<br>moving direction detection | Vehicle type classification, vehicle color<br>recognition, no-plate vehicle capture,<br>moving direction detection |
| Vehicle Type                      | Car/Van/Bus/Truck/Light Truck/SUV_MPV/<br>Pickup/Pedestrian/Motorcycle/Tricycle                                    | Car/Van/Bus/Truck/Light Truck/SUV_MPV/<br>Pickup/Pedestrian/Motorcycle/Tricycle                                    |
| Vehicle Color                     | Recognizable at daytime only   | Recognizable at daytime only   |
| Vehicle<br>Manufacturer           | Support  | Support  |
| Standard<br>Protocols             | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP,<br>RTCP, NTP, IPv6, UDP  | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP,<br>RTCP, NTP, IPv6, UDP  |
| Driving on Lane<br>Line Detection | Support  | Support  |
| Illegal Lane<br>Change Detection  | Support  | Support  |
| Wrong-way Driving<br>Detection    | Support  | Support  |
| Emergency Lane<br>Occupation      | Support (truck forbidden lane, emergency lane, urban bus lane)   | Support (truck forbidden lane, emergency lane, urban bus lane)   |
| Seatbelt Detection                | Support (with flash light)   | Support (with flash light)   |
| Phone Call<br>Detection           | Support (with flash light)   | Support (with flash light)   |
| Frame Rate                        | 50 Hz: 50 fps; 60 Hz: 30 fps   | 50 Hz: 25 fp; 60 Hz: 30 fps  |
| Protection Level                  | IP65   | IP65   |
| Local Storage                     | TF card, up to 128 GB  | TF card, up to 128 GB  |
| Weight<br>Dimensions (W × H       | Approx. 7.2 kg (15.9 lb.)<br>With package: 375 × 372 × 141 mm (14.8 ×  | Approx. 7.2 kg (15.9 lb.)<br>With package: 375 × 372 × 141 mm (14.8 ×  |
| × D)<br>Operating                 | 14.6 × 5.6 inch)   | 14.6 × 5.6 inch)   |
| Temperature                       | -30 °C to 70 °C (-22 °F to 158 °F)   | -30 °C to 70 °C (-22 °F to 158 °F)   |
| Humidity                          | 95% or less, non-condensing  | 95% or less, non-condensing  |
| Power                             | 36 VDC ± 20% / 100 to 240 VAC  | 36 VDC ± 20% / 100 to 240 VAC  |



Checkpoint

| Model                             | IDS-TCV500-BI/1550/H1  | iDS-TCV900-BI/1140/H1  |  |
|-----------------------------------|--|--|--|
| lmage                             | (HOT   |  |  |
| Image Sensor                      | 2/3" GMOS  | 1" GMOS  |  |
| Resolution                        | 2464 × 2056  | 4096 × 2160  |  |
| Video Compression                 | H.265/H.264/MJPEG  | H.265/H.264/MJPEG  |  |
| Lens                              | 15-50 mm   | 11-40mm  |  |
| Light Range                       | Up to 30 m   | Up to 27 m   |  |
| Coverage                          | 1-2 lanes  | 2-3 lanes  |  |
| LPR Accuracy                      | > 98%  | > 98%  |  |
| Supplement Light                  | External strobe/flash/continuous light   | External strobe/flash/continuous light   |  |
| Smart Function                    | Vehicle type classification, vehicle color recognition, no-<br>plate vehicle capture, moving direction detection | Vehicle type classification, vehicle color recognition, no-<br>plate vehicle capture, moving direction detection |  |
| Vehicle Type                      | Car/Van/Bus/Truck/Light Truck/SUV_MPV/Pickup/<br>Pedestrian/Motorcycle/Tricycle                                  | Car/Van/Bus/Truck/Light Truck/SUV_MPV/Pickup/<br>Pedestrian/Motorcycle/Tricycle                                  |  |
| Vehicle Color                     | Recognizable at daytime only   | Recognizable at daytime only   |  |
| Vehicle Manufacturer              | Support  | Support  |  |
| Standard Protocols                | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP   | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP   |  |
| Driving on Lane Line<br>Detection | Support (only strobe light mode)   | Support (only strobe light mode)   |  |
| Illegal Lane Change<br>Detection  | Support (only strobe light mode)   | Support (only strobe light mode)   |  |
| Wrong-Way Driving<br>Detection    | Support  | Support  |  |
| Emergency Lane<br>Occupation      | Support (truck forbidden lane, emergency lane, urban bus lane)   | Support (truck forbidden lane, emergency lane, urban bus lane)   |  |
| Seatbelt Detection                | Support (with flash light)   | Support (with flash light)   |  |
| Phone Call Detection              | Support (with flash light)   | Support (with flash light)   |  |
| Capture Speed Range               | 5 to 250 km/h  | 5 to 250 km/h  |  |
| Frame Rate                        | 50 Hz: 50 fps<br>60 Hz: 30 fps   | 50 Hz: 25 fps<br>60 Hz: 30 fps   |  |
| Protection Level                  | IP66   | IP66   |  |
| Local Storage                     | TF card, up to 128 GB  | TF card, up to 128 GB  |  |
| Weight                            | 6.5 ± 0.5 kg (14.3 ± 1.1 lb)   | 6.5 ± 0.5 kg (14.3 ± 1.1 lb)   |  |
| Dimensions (W × H × D)            | With package: 175.68 × 137.5 × 443.99 mm (6.92 × 5.41 × 17.48 inch)  | Whith package: 175.68 × 137.5 × 443.99 mm (6.92 × 5.41 × 17.48 inch)   |  |
| Operating Temperature             | -40 °C to +60 °C (-40 °F to +140 °F)   | -40 °C to +60 °C (-40 °F to +140 °F)   |  |
| Humidity                          | 95% or less, non-condensing  | 95% or less, non-condensing  |  |
| Power                             | 24 VDC ± 20% / 100 to 240 VAC  | 24 VDC ± 20% / 100 to 240 VAC  |  |

#### Traffic Server

| Model                               | DS-TP50-16E  |
|-------------------------------------|--|
| lmage                               |  |
| Processor                           | High-performance ARM A17 processor   |
| Operation System                    | Embedded Linux operation system  |
| Operation Medium                    | WEB  |
| Storage                             | 4 SATA interfaces for 4 HDDs   |
| Capacity                            | Up to 6 TB capacity for each HDD   |
| External Storage                    | 1 eSATA interface for 1 external HDD   |
| Reset Button                        | 1  |
| Indicator                           | 4 x indicator (1 x Power Indicator, 1 x<br>Alarm Indicator, 1 x HDD Indicator, 1 x<br>Ready Indicator)   |
| Network Interface                   | 16 x 1000 M Ethernet interface, 1 x<br>internal 10/100/1000 M self-adaptive<br>Ethernet interface, 1 x external<br>10/100/1000 M self-adaptive Ethernet<br>interface, 1 x internal 1000 M fiber<br>interface, 1 x external 1000 M fiber<br>interface |
| Alarm Input                         | 2 relay alarm inputs   |
| Alarm Output                        | 2 relay alarm outputs  |
| Power Output                        | One 12 VDC power output  |
| Video                               | Stores videos. Storage duration depends on stream bitrate and HDD capacity.  |
| Uploading                           | Automatic Network Replenishment (ANR) and manual uploading   |
| Network                             | 2 IP addresses of different network segment are configurable   |
| Power Supply                        | Adaptor of 12 VDC/12.5 A   |
| Dimension (W $\times$ D $\times$ H) | 370 × 273 × 102.5 mm (14.6 × 10.7 × 4.0 inch)  |
| Working Temperature                 | -40 °C to +70 °C (-40 °F to +158 °F)   |
| Working Humidity                    | 10% to 90%   |

#### Radar

| Model                         | DS-TD10N-1                                     | DS-TD10M-1                                     |
|-------------------------------|--|--|
| Image                         |  |  |
| Power Supply                  | 9 ~12 VDC                                      | 9 -12 VDC                                      |
| Central Frequency             | 24.15 GHz                                      | 24.15 GHz                                      |
| Center Frequency<br>Deviation | ≤ ±45 MHz                                      | ≤ ±45 MHz                                      |
| Antenna Beam Width            | 6° × 6°  | 35° × 16°                                      |
| Working Temperature<br>Range  | -40 °C to +70 °C                               | -40 °C to +70 °C                               |
| Working Humidity<br>Range     | 5%RH-95%RH                                     | 5%RH-95%RH                                     |
| Measurement<br>Accuracy       | -4-0 km/h                                      | -4-0 km/h                                      |
| Trigger Consistency           | ≤±1 m  | ≤±lm   |
| Velocity Range                | 10-250 km/h                                    | 10-250 km/h                                    |
| Direction Information         | Support  | Support  |
| Double Trigger                | Support vehicle front & rear triggering        | Support vehicle front & rear triggering        |
| Multiple Lanes                | Support up to 1 lane                           | Support up to 3 lanes                          |
| Wi-Fi Setting                 | Support  | Support  |
| Capture Distance              | Single lane 18-28 m                            | 18-28 m  |
| Communication<br>Interface    | RS485 (RS232 optional)                         | RS485, Wi-Fi                                   |
| Dimension                     | 190 × 190 × 53 mm (7.48 × 7.48 × 2.09<br>inch) | 166 × 139 × 40 mm (6.54 × 5.47 × 1.57<br>inch) |

#### Supplement Light

| Model  | DS-TL2000AI-L1  | Model                     | DS-TL2000CI  |
|--|---|---------------------------|--|
| lmage  |   | Image                     |  |
| Light Type   | IR strabe supplement light  | Light Type                | IR continuous light  |
| LED Lamp Beads   | 16  | LED Lamp<br>Beads         | 16   |
| Color Temperature                                      | -   | Color<br>Temperature      | -  |
| Angle of Light   | 10°   | Angle of Light            | 40°  |
| Coverage   | single lane   | Effective<br>Distance     | 16-25 m  |
| Effective Distance                                     | 16-25 m   | Response<br>Time          | ≤ 20 us  |
| Trigger Manner   | TTL level (switch trigger optional)   | Day and Night<br>Function | Support ambient brightness detection, automatic start-up at low illumination |
| Trigger Level  | 4V - 6V (High level trigger)  | Brightness<br>Control     | -  |
| Trigger Frequency                                      | -   | Remote<br>Control         | -  |
| Trigger Duty Ratio                                     | tio 1% -39% (Enter the protection state at Duty Radio ≥ 40%)                                |                           | -  |
| Response Time  | ≤ 20 us   | Exception<br>Detection    | -  |
| Day and Night Function                                 | Support ambient brightness detection,<br>automatic start-up at low illumination (optional)  | Service Life              | ≥ 50000 H  |
| Configuration  | Ultra-high frequency flash delay setting  | Housing<br>Material       | Die-cast aluminum  |
| Service Life   | ≥ 50000 H   | Power Supply              | 220 VAC±20%, 47Hz-63Hz   |
| Power Supply   | 220 VAC ±20%, 47Hz-63Hz<br>110 VAC ±20%, 47Hz-63Hz  | Consumption               | Max.36W<br>(Determined by control model)                                     |
| Consumption  | Max.36W (Determined by control model)   | Operating<br>Temperature  | -40 °C to +70 °C   |
| Operating Temperature                                  | Operating Temperature -40 °C to +70 °C  |                           | 10%-90%, no condensation   |
| Operating Humidity 10%-90%, no condensation            |   | Weatherproof<br>Rating    | IP66   |
| Weatherproof Rating IP65                               |   | Dimension                 | 128 mm (D) × 216 mm (H) × 159 mm (W)   |
| Dimension         128 mm (W) × 216 mm (H) × 159 mm (D) |   | Mounting<br>Model         | Support front-mounted (bracket rotation angle -90 ° to +90 °)                |
| Mounting Model   | Support front-mounted and side-mounted installation (bracket rotation angle -90 ° to +90 °) | Weight                    | 2.72 kg  |
| Weight   | 2.72 kg   | Wave Length               | ≥ 850 nm (Infrared)  |

| Model                    | SL-1211-11  |
|--------------------------|---|
| lmage                    |   |
| Power Supply             | AC220V±10% / 48Hz-52Hz  |
| Wave Length              | 2 850 nm (Infrared)   |
| Color Temperature        | 5500 K ± 500 K  |
| Flash energy             | 200 J   |
| Power Consumption        | Average < 100 W (@ 1 flash / s ), max <<br>300 W  |
| Peak flash duration      | 1 / 30 ms   |
| Response Time            | Max. 67ms   |
| Effective distance       | 16 m to 25 m  |
| Trigger Manner           | TTL level   |
| Photosensitivity         | Through photosensitivity to achieve<br>different brightness during the day and<br>night |
| Grating                  | Built-in grating (external grating optional);<br>Effectively reducing light pollution   |
| Coverage                 | Single lane   |
| Operating<br>Temperature | -25 - + 70 °C   |
| Operating Humidity       | 5%-90% (40 °C), no condensation   |
| Service Life             | 220 Million times   |
| Other Functions          | Strobe Interval Protect   |
| Protection Level         | IP65  |
| Weight                   | 3.5 Kg  |

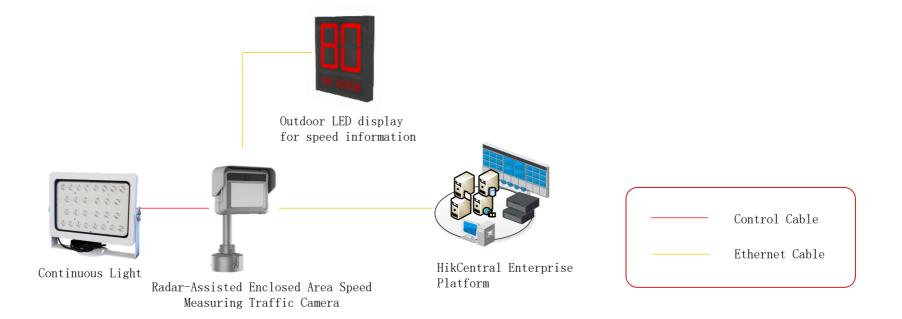
## Intelligent Traffic System Radar-Assisted Speed Measuring System for Enclosed Area

The Radar-Assisted Speed Measuring System for Enclosed Areas can measure vehicle speeds accurately, capture passing vehicle images, and recognize vehicle features, showing the real-time speed and ANPR results on screen. It can regulate driving behaviors, reduce traffic accident rate, and guarantee pedestrians and vehicles safety. The solution also helps reduce noise pollution and swirling dust in enclosed areas such as industrial parks and office parks.

- > ANPR recognition for multiple lanes
- > Vehicle tracking for speed measurement
- > Convenient configuration & delivery
- > Real-time speed & ANPR info display
- > Multiple display modes for notification and warning
- > Speeding alarms



| Model                             | iDS-TCS402-B/CS  | Model                     | DS-TVL224-8-5EY                                 |
|-----------------------------------|--|---------------------------|---|
| Image                             | Ceep Learning  | lmage                     |   |
| Frequency Band                    | 77 GHz   |                           | Display for Speed                               |
| Wave Length                       | 4 mm   |                           |   |
| Speed Detection Range             | 1 to 120 km/h  | Character Standard        | Number 8  |
| Min. Illumination                 | Color: 0.01 Lux @ (F1.2, AGC ON)<br>B/W: 0.001 Lux @ (F1.2, AGC ON)  | Character Number          | 2   |
| Day/Night Switch                  | ICR  | Color                     | Red, Green, Yellow                              |
| Focal Length                      | 16mm   |                           | Width: 641 mm, Height: 540 mm                   |
| Video Compression                 | H.265/H.264  | Size                      | (approximately)                                 |
| Max. Resolution                   | 2712 × 1536  | D                         | isplay for License Plate                        |
| Video Frame Rate                  | 25fps  | Character Standard        | P10   |
| Smart Function                    | LPR; Vehicle feature recognition:<br>vehicle type classification,<br>vehicle color recognition, no-<br>plate<br>vehicle capture, moving<br>direction detection | Color                     | Red, Green, Yellow                              |
| Coverage                          | 2 lanes  | Size                      | Width: 641 mm, height: 161<br>mm(approximately) |
| Multi-Target Detection            | Able to track and detect max.<br>128 targets.  | Resolution                | 64 × 16   |
| Network Interface                 | 2, RJ45 100M/1000M self-<br>adaptive Ethernet interface  |                           | Whole Display                                   |
| Serial Port                       | 1, RS-485 interface<br>1, RS-232 interface   |                           |   |
| Output Interface                  | 1-ch level output  | Luminance                 | 5,000 cd/ m²                                    |
| Protection Level                  | IP66   | Max. Visual Range         | 50m   |
| Operating &Storage<br>Temperature | -30 °C to +70 °C (-22 °F to +158<br>°F)  | Power Supply              | 100 to 240 VAC                                  |
| Operating & Storage<br>Humidity   | <95% (non-condensing)  | Max. Power<br>Consumption | 200W  |
| Dimensions                        | 226 × 206.4 × 375.3 mm (8.9 ×<br>8.1 × 14.8 inch)  | Materials                 | Aluminum plate                                  |
| Power Supply                      | 24 VAC ± 10%   | Dimension                 | Width: 740 mm, Height: 850 mm, Depth: 90<br>mm  |
| Power Consumption                 | < 15 W   |                           |   |
| Weight                            | 3 kg (6.6 lb)  | Weight                    | 25kg  |



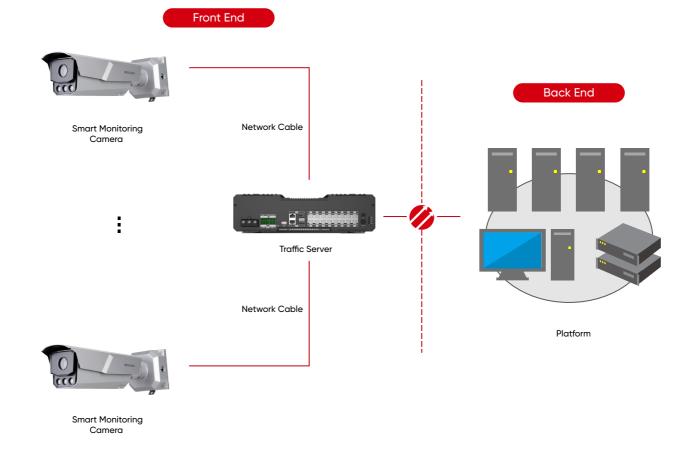


## Intelligent Traffic System Smart Monitoring System

This system is easy to install and improves efficiency. It monitors large areas and supports vehicle capture and ANPR.

DarkFighter technology gives this system excellent image performance at all light levels.

- > High quality imaging with up to 4 MP resolution (1/1.8" CMOS)
- > Clear imaging against strong back light with 140 dB WDR technology
- > Excellent low-light performance with DarkFighter technology
- > Motorized vari-focal lens for easy installation and monitoring
- > Efficient H.265 compression technology
- Smart functions: ANPR, vehicle type, vehicle color, and manufacturer recognition, no-plate vehicle capture, driving direction detection, and motorcycle capture
- > Application scenarios: tunnels, toll stations, urban roads, parking entrances



Smart Monitoring Unit

| Model                              | iDS-TCM403-A  | iDS-TCM403-AI  |
|------------------------------------|---|--|
| lmage                              | Ceep Learning   | From<br>The provide the second s |
| Focal Length                       | iDS-TCM403-A/3813<br>IDS-TCM403-A/0832: 8-32 mm                                 | IDS-TCM403-AI/0832: 8-32 mm  |
| Light Range                        | 3.8-13mm: Up to 50 m / 8-32 mm: Up to 100 m                                     | 8-32 mm: Up to 100 m   |
| Coverage                           | 1-2 lanes   | 1-2 lanes  |
| Capture Speed Range                | 3.8-13mm, 5-80 km/h<br>08-32mm, 5-165km/h                                       | 5 - 165km/h  |
| Capture Accuracy                   | 98%   | 98%  |
| LPR Accuracy                       | 98%   | 98%  |
| Frame Rate                         | 50 HZ: 2688 × 1520 @ 25 fps<br>60 HZ: 2688 × 1520 @ 30 fps                      | 50 HZ: 2688 × 1520 @ 25 fps<br>60 HZ: 2688 × 1520 @ 30 fps   |
| Vehicle Type                       | Not support   | Car/Van/Bus/Truck/Others   |
| Vehicle Color                      | Not support   | Recognizable at daytime only   |
| Video Compression                  | H.265/H.264   | H.265/H.264/MJPEG  |
| Standard Protocols                 | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP                  | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP   |
| Serial Port                        | 2 RS-485 ports, 1 RS-232 port   | 2 RS-485 ports, 1 RS-232 port  |
| By Video                           | Continuous video analysis with automatic vehicle detection, even without plate. | Continuous video analysis with automatic vehicle detection, even without plate.  |
| ANPR Camera                        | 4 MP (1/1.8" CMOS), max.2688 × 1520   | 4 MP (1/1.8" CMOS), max.2688 × 1520  |
| Supplement Light                   | 3 LED lights  | 3 LED IR lights  |
| Protection Level                   | IP67, IK10  | IP67, IK10   |
| Storage                            | TF card, up to 128 GB   | TF card, up to 128 GB  |
| Operating & Storage<br>Temperature | -30 °C to +70 °C (-22 °F to +158 °F)  | -30 °C to +70 °C (-22 °F to +158 °F)   |
| Operating & Storage<br>Humidity    | Humidity: 95% or less (non-condensing)  | Humidity: 95% or less (non-condensing)   |
| Dimensions (W × H × D)             | 428.5 × 120 × 132.8 mm (16.87 × 4.72 × 5.23 inch)                               | 428.5 × 120 × 132.8 mm (16.87 × 4.72 × 5.23 inch)  |
| Weight                             | 3.12 ± 0.5 kg (6.88 ± 1.1 lb)   | 3.12 ± 0.5 kg (6.88 ± 1.1 lb)  |
| Power Supply                       | 12 VDC to 24 VDC ± 20%, PoE (802.3at, class 4)                                  | 12 VDC to 24 VDC ± 20%, PoE (802.3at, class 4)   |

#### Traffic Server

Continuous Supplement Light

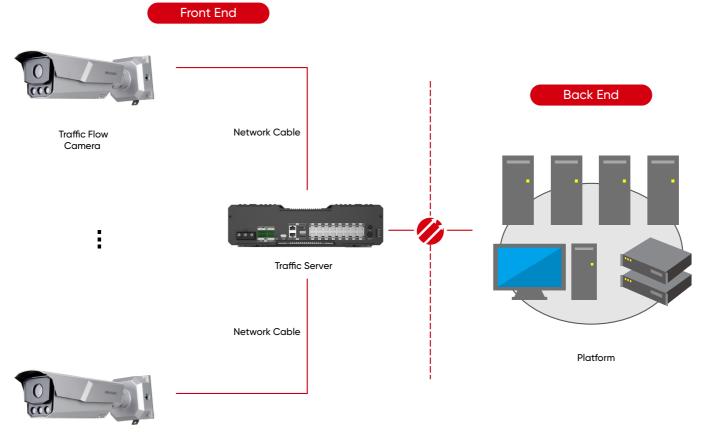
|                                     | Traffic Server  |                                      | continuous supplement Light                                      |
|-------------------------------------|---|--------------------------------------|--|
| Model                               | DS-TP50-16E   | Model                                | DS-TL2000CI  |
| lmage                               |   | lmage                                |  |
| Processor                           | High-performance ARM A17 processor  | Light Type                           | IR continuous light  |
| Operation System                    | Embedded Linux operation system   | LED Lamp Beads                       | 16   |
| Storage                             | 4 SATA interfaces for 4 HDDs  | Color Temperature                    | -  |
| Connective                          | lin to C TD connectify for each LIDD  | Angle of Light<br>Effective Distance | 40°<br>16-25 m   |
| Capacity                            | Up to 6 TB capacity for each HDD  | Response Time                        | ≤ 20 us  |
| Reset button                        | 1   |                                      | Support ambient brightness detection, automa                     |
| Indicator                           | 4 x indicator (1 x Power Indicator, 1 x<br>Alarm Indicator, 1 x HDD Indicator, 1 x  | Day and Night Function               | start-up at low illumination                                     |
|                                     | Ready Indicator)  | Brightness Control                   | -  |
|                                     | 116 x 1000 M Ethernet interface, 1 x<br>internal 10/100/1000 M self-adaptive<br>Ethernet interface, 1 x external<br>10/100/1000 M self-adaptive Ethernet<br>interface, 1 x internal 1000 M fiber<br>interface, 1 x external 1000 M fiber<br>interface | Remote Control                       | -  |
| Network Interface                   |   | Supplement Light                     | -  |
| Alarm Input                         | 2 relay alarm inputs  | Exception Detection                  | -  |
| Alarm Output                        | 2 relay alarm outputs   | Service Life                         | ≥ 50000 H  |
|                                     |   | Housing Material                     | Die-cast aluminum  |
| Video                               | Stores videos. Storage duration depends on stream bitrate and HDD capacity.   | Power Supply                         | 220 VAC ±20%, 47Hz-63Hz  |
| Uploading                           | Automatic Network Replenishment (ANR) and   | Consumption                          | Max. 36 W<br>(Determined by control model)                       |
| optoading                           | manual uploading  | Operating Temperature                | -40°C to +70°C   |
| Network                             | 2 IP addresses of different network segment are<br>configurable   | Operating Humidity                   | 10%-90%, no condensation   |
|                                     | comgarable  | Water Proof Rating                   | IP66   |
| Power Supply                        | Adaptor of 12 VDC /12.5 A   | Dimension                            | 128 mm × 216 mm × 159 mm (5.04 × 8.50 × 6.2<br>inch)             |
| Dimension (W $\times$ D $\times$ H) | 370 × 273 × 102.5 mm (14.6 × 10.7 × 4.0 inch)   | Mounting Model                       | Support front-mounted (bracket rotation angle<br>-90 ° to +90 °) |
| Working Temperature                 | -40 °C to +70 °C (-40 °F to +158 °F)  | Weight                               | 2.72 kg  |
| Working Humidity                    | 10% to 90%  | Wave Length                          | ≥ 850 nm (Infrared)  |



## Intelligent Traffic System Traffic Flow Detection System

The Traffic Flow Detection System counts vehicles and provides other traffic-related data. Captured data can be displayed to drivers via traffic guidance screens, as well as for signal control, in order to best guide the traffic and alleviate congestion.

- > One camera covers 3-4 lanes of traffic flow detection and monitoring
- > Great performance at night
- > Easy to install
- > Cost-effective
- > Maximized storage space
- Built-in 77 GHz high-frequency radar combined with 4 MP camera, covering 200 meters and supporting 2-lane ANPR with a speed deviation of -4 km/h (iDS-TCD402-CR/12)
- System features Lane Flow, Average Vehicle Speed, Lane Traffic Status (Smooth, Slow, Congested), Lane Queue Length, Congestion Level, Time Headway, Space Headway, Time Occupancy, Space Occupancy, Vehicle Type (Large, Small, Motorcycle)



Traffic Flow Camera Traffic Flow Detection Unit

Radar-Assisted Traffic Camera

#### Traffic Server

| Model                                | iDS-TCD203-A   | Model                             | IDS-TCD402-BR  | Model                               | DS-TP50-16E   |
|--------------------------------------|--|-----------------------------------|--|-------------------------------------|---|
| lmage                                | Hor<br>Contractions<br>(Deep Learning  | Image                             | (Hor   | lmage                               |   |
| Working Distance Up                  | Up to 50 m   | Frequency Band                    | 77 GHz   | Processor                           | High-performance ARM A17 processor  |
| Coverage                             | Up to 4 lanes (3 lanes recommended for best  | Wave Length                       | 4 mm   | On excision Suchem                  | Embodded Lieuw operation system   |
|                                      | performance)   | Speed Detection Range             | 1 to 200 km/h  | Operation System                    | Embedded Linux operation system   |
| Installation Height                  | 6 m - 15 m   | Min. Illumination                 | Color: 0.01 Lux @ (F1.2, AGC ON)<br>B/W: 0.001 Lux @ (F1.2, AGC ON)  | Storage                             | 4 SATA interfaces for 4 HDDs  |
| Detection (Traffic Flow)             | >95%   | Day/Night Switch                  | ICR  | Capacity                            | Up to 6 TB capacity for each HDD  |
| Real-time Output                     | Lane Flow, Average Vehicle Speed, Lane Traffic<br>Status (Smooth, Slow, Congested), Lane Queue | Focal Length                      | 12mm   |                                     | shore setting a set   |
|                                      | Length, Congestion Level   | Video Compression                 | H.265/H.264  | Reset button                        | 1   |
| Periodic Output                      | Time Headway, Space Headway, Time Occupancy,<br>Space Occupancy, Vehicle Type (Large, Small,   | Max. Resolution                   | 2688 × 1520  | Indicator                           | 4 x indicator (1 x Power Indicator, 1 x<br>Alarm Indicator, 1 x HDD Indicator, 1 x<br>Ready Indicator)  |
| ·                                    | Motorcycle)  | Video Frame Rate                  | 25fps  |                                     |   |
| LED Supplement Lights                | Build-in 3 LED supplement lights   | Traffic Data Collection           | Multiple traffic data output, including lane line, traffic<br>flow, speed, status, queue, time headway, space<br>headway, number of parking vehicle in area, average | Network Interface                   | L16 x 1000 M Ethernet interface, 1 x<br>internal 10/100/1000 M self-adaptive<br>Ethernet interface, 1 x external<br>10/100/1000 M self-adaptive Ethernet<br>interface, 1 x internal 1000 M fiber<br>interface, 1 x external 1000 M fiber<br>interface |
| Camera                               | 2 MP (1/1.8" CMOS), max. 1920 × 1080   |                                   | delay, space occupancy, time occupancy, etc. Supports real-time display of smart dynamic information.  |                                     |   |
| Frame Rate                           | 50Hz: 1920 × 1080 @ 50 fps<br>60Hz: 1920 × 1080 @ 60 fps                                       | Detection Range                   | 200 m coverage in range of the scene   |                                     |   |
| Video Compression                    | H.265/H.264  | Multi-Target Detection            | Able to track and detect max. 128 targets.   |                                     |   |
| Standard Protocols                   | TCP/IP, HTTP, HTTPS, FTP, DNS, RTP, RTSP, RTCP, NTP, IPv6, UDP                                 | Virtual Coil                      | Two virtual coils for each lane. Signal output of vehicle<br>entering and exiting virtual coils. Positions of virtual<br>coils are adjustable.                       | Alarm Input                         | 2 relay alarm inputs  |
| Serial Port                          | 2 RS - 485 ports, 1 RS - 232 port  | Road Status                       | Smooth, slow, congested status detection   | Alarm Output                        | 2 relay alarm outputs   |
| By Video                             | Continuous video analysis with automatic vehicle detection, even without plate.                | Network Interface                 | 2, RJ45 100M/1000M self-adaptive Ethernet interface  | Video                               | Stores videos. Storage duration depends on stream<br>bitrate and HDD capacity   |
| Lens                                 | 8-32 mm @ F1.4, angle of view: 42.5°~13.4°   | Serial Port                       | 1, RS-485 interface<br>1, RS-232 interface   |                                     |   |
| Protection Level                     | IP67, IK10   | Output Interface                  | 1-ch level output  | Uploading                           | Automatic Network Replenishment (ANR) and manual uploading  |
| Storage                              | TF card, up to 128 GB  | Protection Level                  | IP66   | Network                             | 2 IP addresses of different network segment are   |
| Operating & Storage<br>Temperature   | -30 °C to +70 °C (-22 °F to +158 °F)   | Operating &Storage<br>Temperature | -30 °C to +70 °C(-22 °F to +158 °F)  |                                     | configurable  |
| Operating & Storage                  |  | Operating & Storage Humidity      | <95% (non-condensing)  | Power Supply                        | Adaptor of 12 VDC/12.5 A  |
| Humidity                             | 5% to 95% @ +40 °C (+104 °F), non-condensing   | Dimensions                        | 226 × 206.4 × 375.3 mm (8.9 × 8.1 × 14.8inch)  | Dimension (W $\times$ D $\times$ H) | 370 × 273 × 102.5 mm (14.6 × 10.7 × 4.0 inch)   |
| Dimensions (W $\times$ H $\times$ D) | 120 × 132.8 × 428.5 mm (4.72 × 5.23 × 16.87 inch)  | Power Supply                      | 24 VAC ± 10%   | Working Temperature                 | -40 °C to +70 °C (-40 °F to +158 °F)  |
| Weight                               | 3.12 ± 0.5 kg (6.88 ± 1.1 lb)  | Power Consumption                 | < 15 W   | g tempolataro                       |   |
| Power Supply                         | 24 VDC   | Weight                            | 3 kg (6.6 lb)  | Working Humidity                    | 10% to 90%  |

## Intelligent Traffic System Automatic Incident Detection System

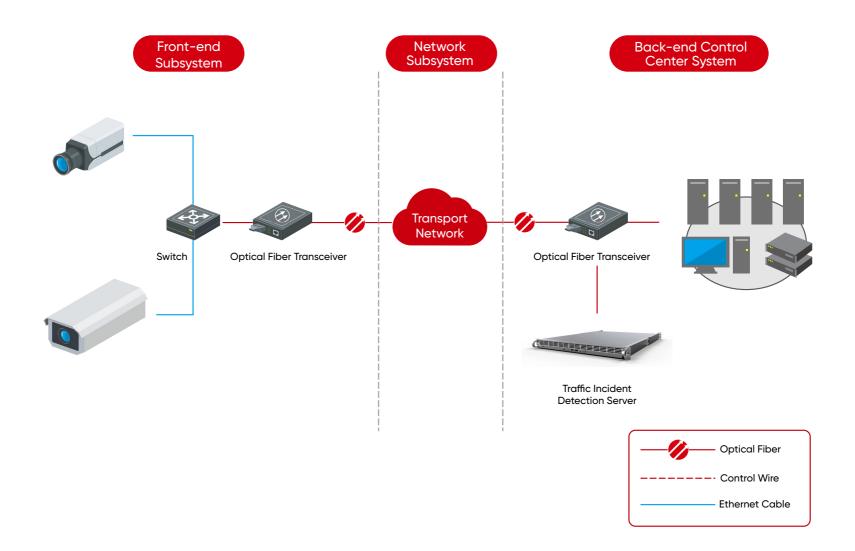
Traffic Incident Detection System is a server-based solution that provides fast incident detection and verification services to help prevent secondary accidents and other losses. Individuals on the road, such as motorists, can be warned via various message signs. Emergency services, if needed, will also be informed in time. This product can be deployed for traffic managements on accident-prone roads, tunnels, and oversize bridges.

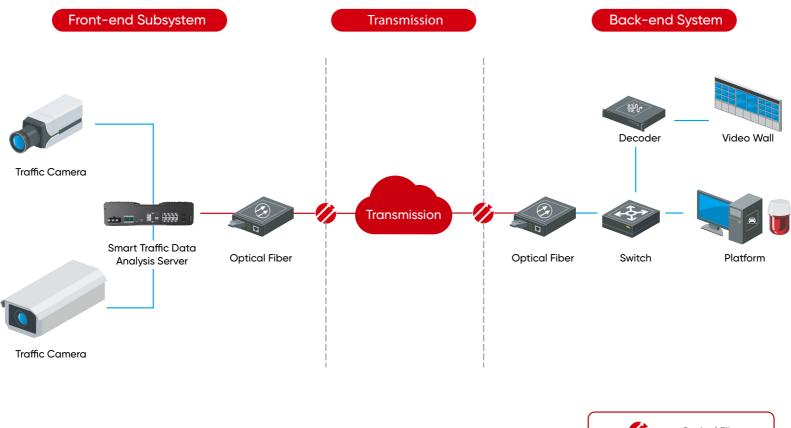
- > Deep Learning technology enables high-performance traffic incident detection
- > Simple configuration and operation sets you free from complex external operating systems
- > High-performance on simultaneous monitoring of traffic flow and traffic incident detection
- > 4- or 16-ch 4 MP traffic cameras or IPCs for video analysis
- Pedestrian, Bicycle Riding, Wrong-Way Driving, Vehicle Breakdown, Objects Dropped Down, Sudden Speed Decrease, Low Speed Driving, High Speed Driving, Illegal Parking, Driving On The Lane Line, Construction, Objects Dropped Down, Emergency Lane Occupation, Congestion, Lane Traffic Flow

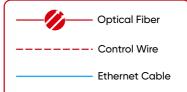


| Model                    | iDS-TSS300-C/04  | iDS-TSS500-C/16                                       |
|--------------------------|--|---|
| lmage                    | Ceep Learning  | Ceep Learning   |
| Operating<br>Interface   | WEB  | VGA   |
| HDD Storage              | Up to 4 × 3.5-inch SATA HDD, 24 TB   | -   |
| Network Interface        | NIC 1: 9 × Gigabit Ethernet interface, 1 ×<br>combo SFP Gigabit fiber optic interface<br>NIC 2: 1 × Gigabit Ethernet interface, 1 ×<br>SFP Gigabit fiber optic interface | 4-ch self-adaptive 10/100/1000M<br>network interfaces |
| Alarm Input              | 2  | -   |
| Alarm Output             | 2  | -   |
| Video Input              | Up to 4-ch 4 MP IP cameras connection  | Up to 16-ch 2 MP/3 MP IP cameras connection           |
| USB Port                 | 1 × USB 3.0  | 4 × USB 3.0, 2 × USB 2.0                              |
| RS232                    | 2  | -   |
| RS485                    | 2  | -   |
| HDMI/VGA Port            | -  | 1 VGA   |
| Memory                   | -  | 2 × 4 G Memory Bank                                   |
| Display Lamp             | Power Indicator, alarm status<br>indicator,HDD indicator, running status<br>indicator  | UID Lamp, Alarm Lamp, Power Lamp,<br>Ready Lamp       |
| Кеу                      | Power on/off, Reset  | Power on/off, Reset                                   |
| Power                    | Max. 70 W  | Hot Spare, Efficient, 1+1 Redundant,<br>800 W         |
| Dimension                | 370 mm × 273 mm × 102.5 mm (14.57 inch<br>× 10.75 inch × 4.04 inch)  | 438.4 × 591 × 43.6 mm (17.3 × 23.3 ×<br>1.7 inch)     |
| Operating<br>Temperature | -30 °C to 70 °C (86 °F to 158 °F)  | -40 °C to 70 °C (-40 °F to +158 °F)                   |
| Operating Humidity       | 10% to 90%   | 5% to 95%   |
| Weight                   | -  | 16 kg (35.3 lb)                                       |

AID Server







## Intelligent Traffic System ITS Accessories

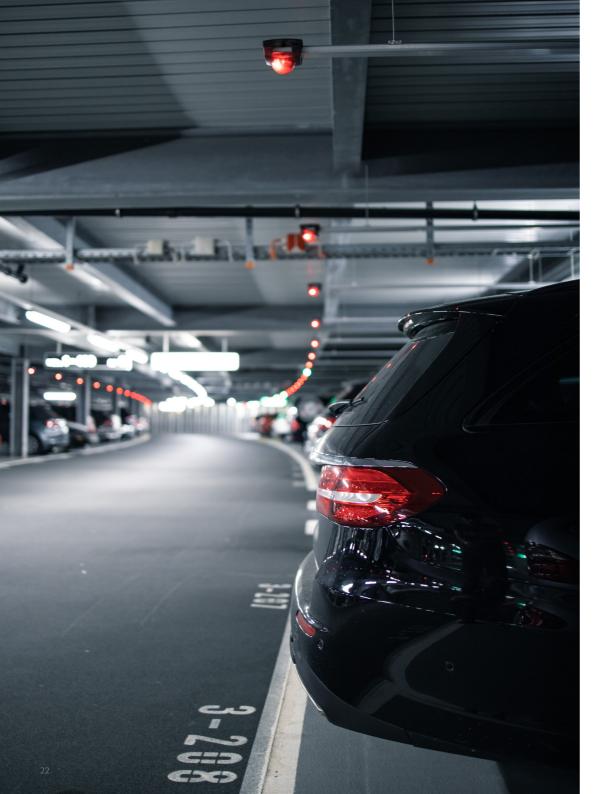
> Hoop & bracket support

• Material: Q235



| Model      | Pole Mount-1275/Outdoor<br>White   | DS-1278ZJ-HWB/HG/60-300 | DS-1701ZJ/HWB  |
|------------|--|-------------------------|--|
| lmage      | GUU  | 600                     |  |
| Color      | Hikvision White  | Hikvision White         | Hikvision White  |
| Material   | SUS304   | SUS304                  | SUS304   |
| Weight     | 1500 g   | 1150g                   | 2660 g   |
| Dimensions | Main Body: 250 x 127 x 46<br>mm (9.84 × 5 × 1.81 inch)<br>Steel Hoops Diameter: 67<br>- 127 mm (2.64 - 5 inch) | Diameter: 60-300 mm     | Main Body: 403 x 200 x<br>130 mm (15.87 × 7.87 ×<br>5.12 inch) |

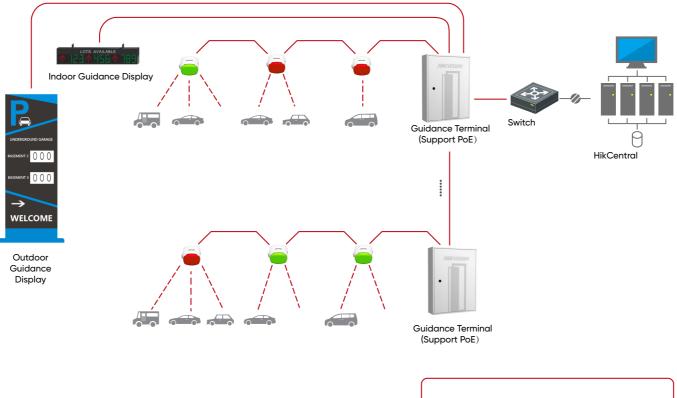




## Intelligent Traffic System Video Parking Guidance System

The Video Parking Guidance Solution combines Deep Learning algorithms, video monitoring, and information dissemination technologies to give drivers dynamic, real-time information about parking availability within controlled bays. The system helps drivers find the closest parking spaces available. Then, by simply entering their plate number in full or in part, the vehicle can be easily located on the floor map as well as the shortest and best route to it. Safety and security are enhanced in large parking garages.

- > Embedded ANPR with AI
- The indicator light inside the parking guidance camera has seven configurable colors, allowing for dynamic indication of the purpose or status of the parking bay
- > Up to 6 single-lens parking guidance cameras or 4 dual-lens parking guidance cameras in cascaded connection for both power and network
- > Up to 24-TB edge storage for video and images from 32 single-lens parking guidance cameras or 16 dual-lens parking guidance cameras
- Video, images and data can be stored locally offline if disconnected from central management software, preventing loss of critical information, then automatically forwarded to the CMS upon reconnection.
- By integrating an LED display panel at the entrance, all available parking
  resources and information can be easily displayed for customers.



Guidance Camera — 🅢 Fiber

Parking Camera

Guidance Terminal

| Model                         | DS-TCP140-B   | DS-TCP140-B DS-TCP440-B DS-TCP440-DB   |  | DS-TCP440-BH   | DS-TCP440-DBH  | Model                         | DS-TPM400-P   |  |
|-------------------------------|---|--|--|--|--|-------------------------------|---|--|
| lmage                         |   |  |  |  |  | lmage                         | • HIKVISION   |  |
| Indicator LED                 | In integrated mode, red, green, yello<br>magenta colors can be connected; S   | w, blue, cyan and magenta colors can b<br>Support indicator flickering   | e indicated; In separation mode, up to 3   | external indicators which can indicate r   | ed, green, yellow, blue, cyan and  | CPU                           | High Performance ARM A17  |  |
| Sensor                        | 1/2.7" CMOS   | 1/3" CMOS  | 1/3" CMOS  | 1/1.8" CMOS  | 1/1.8" CMOS  |                               | digital media processor   |  |
| Min. Illumination             | Color: 0.0165 Lux @ (F2.0, AGC<br>0N)   | Color: 0.012 Lux @ (F2.0, AGC 0N)<br>B/W: 0.00062 Lux @ (F2.0, AGC   | Color: 0.012 Lux @ (F2.0, AGC 0N)<br>B/W: 0.00062 Lux @ (F2.0, AGC   | Color: 0.000048 Lux @ (F1.6, AGC<br>0N)<br>D (W. 0.000022 Lux @ (F1.6, AGC   | Color: 0.000048 Lux @ (F1.6, AGC<br>0N)  | Operating System              | Embedded Linux operating<br>system  |  |
|                               | B/W: 0.0092 Lux @ (F2.0, AGC ON)  | ON)  | ON)  | B/W: 0.000022 Lux @ (F1.6, AGC<br>ON)  | B/W: 0.000022 Lux @ (F1.6, AGC<br>ON)  | Operation Interface           | WEB<br>Access of 16 dual cameras  |  |
| Shutter                       | 1 to 1/100,000 second   | 1 to 1/100,000 second  | 1 to 1/100,000 second  | 1 to 1/100,000 second  | 1 to 1/100,000 second  | Network Video Input           | Access of 16 dual cameras<br>32 parking cameras   |  |
| Lens                          | 2.8 mm/ 4 mm  | 2.8 mm / 4 mm  | 2.8 mm   | 2.8 mm/ 4 mm   | 2.8 mm   | Audia law ut                  | 1 ob Audio los it   |  |
| Angle Adjustment              | Vertical: 0° to 30°<br>Horizontal: -30° to 30°  | Vertical: 0° to 30°<br>Horizontal: -30° to 30°   | Vertical: 0° to 30°<br>Horizontal: -30° to 30°   | Vertical: 0° to 30°<br>Horizontal: -30° to 30°   | Vertical: 0° to 30°<br>Horizontal: -30° to 30°   | Audio Input                   | 1-ch Audio Input  |  |
| Video Compression             | H.264/H.265/MJPEG   | H.264/H.265/MJPEG  | H.264/H.265/MJPEG  | H.264/H.265/MJPEG  | H.264/H.265/MJPEG  | Audio Output                  | 1-ch Audio Output   |  |
| Output Bit Rate               | 32 Kbps to 16 Mbps  | 32 Kbps to 16 Mbps   | 32 Kbps to 16 Mbps   | 32 Kbps to 16 Mbps   | 32 Kbps to 16 Mbps   |                               |   |  |
| Max. Resolution<br>Frame Rate | 1280 × 1024<br>30 fps (1280 × 1024)   | 2560 × 1440  | 2560 × 1440 × 2<br>15 fps (N)/15 fps (P)   | 2688 × 1520  | 2688 × 1520 × 2<br>15 fps (N)/15 fps (P)   | Alarm Input                   | 3-ch Alarm Input  |  |
| Image Settings                | Brightness, contrast, saturation,<br>etc. can be adjusted via client or<br>IE browser.  | 30 fps (N)/25 fps (P)<br>Brightness, contrast, saturation,<br>etc. can be adjusted via client or<br>IE browser.                | Brightness, contrast, saturation,<br>etc. can be adjusted via client or<br>IE browser.   | 30 fps (N)/25 fps (P)<br>Brightness, contrast, saturation,<br>etc. can be adjusted via client or<br>IE browser.                | Brightness, contrast, saturation,<br>etc. can be adjusted via client or<br>IE browser.   | Alarm Output                  | '<br>3-ch Alarm Output  |  |
| Backlight<br>Compensation     | Support;<br>Areas can be selected.  | Support;<br>Areas can be selected.   | Support;<br>Areas can be selected.   | Support;<br>Areas can be selected.   | rt; Support;   |                               | 2 RS485 Interfaces  |  |
| Storage                       | NAS (iSCSI optional)<br>Local storage: guidance terminal<br>HDD   | NAS (iSCSI optional)<br>Local storage: guidance terminal<br>HDD  | NAS (iSCSI optional)<br>Local storage: guidance terminal<br>HDD  | NAS (iSCSI optional)<br>Local storage: guidance terminal<br>HDD  | NAS (iSCSI optional)<br>Local storage: guidance terminal<br>HDD  | USB Interface                 | 1 USB2.0 Interfaces, 1 USB3.0<br>Interface  |  |
| Protocol                      | TCP/IP, HTTP, DHCP, DNS, DDNS,<br>RTP, RTSP, PPPoE, SMTP, NTP,<br>UPnP, SNMP, FTP, 802.1x, QoS,                                     | TCP/IP, HTTP, DHCP, DNS, DDNS,<br>RTP, RTSP, PPPoE, SMTP, NTP,<br>UPnP, SNMP, FTP, 802.1x, QoS,                                | TCP/IP, HTTP, DHCP, DNS, DDNS,<br>RTP, RTSP, PPPoE, SMTP, NTP,<br>UPnP, SNMP, FTP, 802.1x, QoS,                                | TCP/IP, HTTP, DHCP, DNS, DDNS,<br>RTP, RTSP, PPPoE, SMTP, NTP,<br>UPnP, SNMP, FTP, 802.1x, QoS,                                | TCP/IP, HTTP, DHCP, DNS, DDNS,<br>RTP, RTSP, PPPoE, SMTP, NTP,<br>UPnP, SNMP, FTP, 802.1x, QoS,                                | HDMI Interface                | 1 HDMI Interface  |  |
| General Functions             | HTTPS (SIP, SRTP and IPv6<br>optional)<br>Flashing filter, dual-<br>stream, heartbeat, mirror,<br>password protection, privacy      | HTTPS [SIP, SRTP and IPv6<br>optional]<br>Flashing filter, dual-<br>stream, heartbeat, mirror,<br>password protection, privacy | HTTPS [SIP, SRTP and IPv6<br>optional]<br>Flashing filter, dual-<br>stream, heartbeat, mirror,<br>password protection, privacy | HTTPS (SIP, SRTP and IPv6<br>optional)<br>Flashing filter, dual-<br>stream, heartbeat, mirror,<br>password protection, privacy | HTTPS (SIP, SRTP and IPv6<br>optional)<br>Flashing filter, dual-<br>stream, heartbeat, mirror,<br>password protection, privacy | Network Interface             | 16 100M Internal Ethernet<br>Interfaces, including 8<br>HIKVISION POE Ethernet<br>Interfaces; 4 1000M External<br>Ethernet Interfaces |  |
|                               | mask, watermark, NTP time<br>synchronization  | mask, watermark, NTP time<br>synchronization   | mask, watermark, NTP time<br>synchronization   | mask, watermark, NTP time<br>synchronization   | mask, watermark, NTP time<br>synchronization   | Optical Interface             | 1 Optical Interface   |  |
| Communication<br>Interface    | 2, RJ45 10 M/100 M self-adaptive<br>Ethernet interface;<br>1, power interface;<br>3, external indicator interface (for<br>-K model) | 2, RJ45 10 M/100 M self-adaptive<br>Ethernet interface;<br>1, power interface  | 2, RJ45 10 M/100 M self-adaptive<br>Ethernet interface;<br>1, power interface;<br>3 × external indicator interface             | 2, RJ45 10 M/100 M self-adaptive<br>Ethernet interface;<br>1, power interface;<br>3, external indicator interface              | 2, RJ45 10 M/100 M setf-adaptive<br>Ethernet interface;<br>1, power interface;<br>3, external indicator interface              | Data Storage                  | Parking camera capture<br>picture and video storage,<br>support up to 6 HDDs( 6 TB<br>for each HDD)                                   |  |
| iBeacon                       | Standard iBeacon protocol   | Standard iBeacon protocol  | Standard iBeacon protocol  | Standard iBeacon protocol  | Standard iBeacon protocol  | Data Unicad                   | Support data upload and   |  |
| Working<br>Temperature        | -20 °C to +50 °C (-4 °F to 122 °F)  | -20 °C to +50 °C (-4 °F to 122 °F)   | -20 °C to +50 °C (-4 °F to 122 °F)   | -20 °C to +50 °C (-4 °F to 122 °F)   | -20 °C to +50 °C (-4 °F to 122 °F)   | Data Upload                   | video stream transfer   |  |
| Working Humidity              | < 95% (no condensation)   | < 95% (no condensation)  | < 95% (no condensation)  | < 95% (no condensation)  | < 95% (no condensation)  | Power Supply                  | 220 VAC/110 VAC , Standard  |  |
| Power Supply                  | Hikvision PoE, or 12 to 24 VDC<br>wide-range voltage  | Hikvision PoE, or 12 to 24 VDC<br>wide-range voltage   | Hikvision PoE, or 12 to 24 VDC wide-range voltage  | Hikvision PoE, or 12 to 24 VDC<br>wide-range voltage   | Hikvision PoE, or 12 to 24 VDC<br>wide-range voltage   | Power                         | <500 w  |  |
| Consumption                   | 6.5 W MAX   | 6.5 W MAX  | 10 W MAX 6.5 W MAX 10 W MAX  |  |  | Mechanical<br>Characteristics | Dimension: 410 mm (Width)<br>× 130mm (Depth) × 540 mm   |  |
| Dimensions                    | 170 × 120 × 104 mm (6.7 × 4.7 ×<br>4.1 inch)  | 170 × 120 × 104 mm (6.7 × 4.7 ×<br>4.1 inch)   | 184 × 120 × 104 mm (7.2 × 4.7 ×<br>4.1 inch)   | 170 × 120 × 104 mm (6.7 × 4.7 ×<br>4.1 inch)   | 184 × 120 × 104 mm (7.2 × 4.7 ×<br>4.1 inch)   |                               | (Height)<br>Working Temperature -10   |  |
| Weight                        | 500 g (1.1 lb)  | 500 g (1.1 lb)   | 500 g (1.1 lb)   | 500 g (1.1 lb)   | 500 g (1.1 lb)   | Working Environment           | °C-50 °C, Working Humidity<br>10%-90%   |  |

LED Display

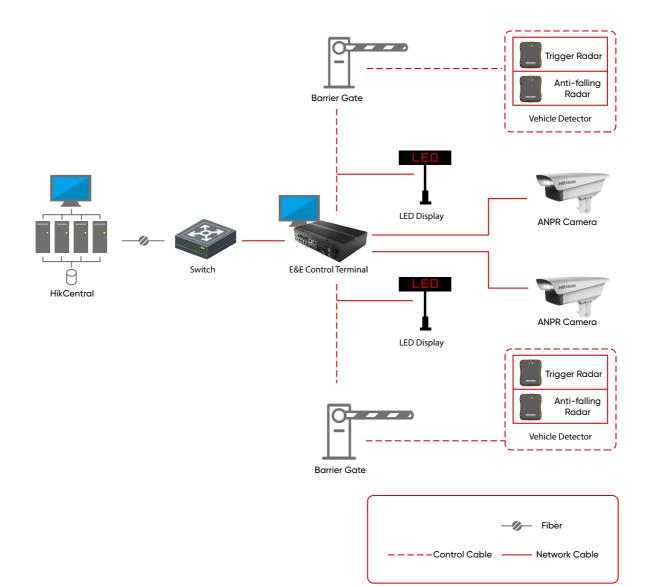
| Model                 | DS-TVL121-3-5D   | DS-TVL121-6-5D   | DS-TVL121-9-5D   | DS-TVL121-3-5                                | DS-TVL221-3-5                                | Model                          | DS-TVB200                                       |
|-----------------------|--|--|--|--|--|--------------------------------|---|
| lmage                 |  | ₩¥¥<br>500 ↑ ESI →   |  | ₩₩   |  | lmage                          |   |
| Application           | Indoor Parking Area  | Indoor Parking Area  | Indoor Parking Area  | Indoor parking lot (module)                  | Outdoor parking lot (module)                 | Module Number                  | 1-8   |
| Power Supply          | 110 VAC - 220 VAC  | 110 VAC - 220 VAC  | 110 VAC - 220 VAC  | 110 VAC - 220 VAC                            | 110 VAC - 220 VAC                            |                                |   |
| Power Consumption     | Max. 14W   | Max. 28W   | Max. 50W   | 14 W in maximum                              | 12W in maximum                               | Communication Mode             | RS485, RJ45                                     |
| Display Mode          | Shift left, Shift up, Upward<br>expanding, Downward<br>expanding | Shift left, Shift up, Upward<br>expanding, Downward<br>expanding | Shift left, Shift up, Upward<br>expanding, Downward<br>expanding | Real-time display                            | Real-time display                            | Pixel Composition of<br>Module | 1R1G Dual-color                                 |
| Dimension             | 584×224×66 mm  | 1133×224×66 mm   | 1682×224×66 mm   | 579 × 298 × 65 mm                            | 550mm×255mm×65mm                             |                                |   |
| Display Screen Border | Black Aluminum Alloy Border                                      | Black Aluminum Alloy Border                                      | Black Aluminum Alloy Border                                      | Black aluminum alloy frame                   | Black aluminium alloy frame                  | Module Size                    | 320 × 160 (mm)                                  |
| Display ICON          | Optional   | Optional   | Optional   | Support number and arrows,<br>variable       | Support 4 numbers                            | Power Supply                   | 220 VAC/110 VAC                                 |
| Display Color         | Red/Green/Yellow/Blue/Cyan/<br>Magenta/White                     | Red/Green/Yellow/Blue/Cyan/<br>Magenta/White                     | Red/Green/Yellow/Blue/Cyan/<br>Magenta/White                     | Red/Green/Yellow/Blue/Cyan/<br>Magenta/White | Red/Green/Yellow/Blue/Cyan/<br>Magenta/White |                                |   |
| Communication Mode    | RS485/RJ45   | RS485/RJ45   | RS485/RJ45   | RS485/RJ45                                   | RS485/RJ45                                   | Weight                         | 75 kg   |
| Number Display        | Support 3 numbers 1 arrow<br>display                             | Support 6 numbers 2 arrows<br>display                            | Support 9 numbers 3 arrows<br>display                            | Display 1 arrow and 3 numbers                | Display 4 numbers                            | Dimension                      | 700 × 3000 × 150mm (27.6 × 118.1<br>× 5.9 inch) |



## Intelligent Traffic System Entrance & Exit Management System

Hikvision's E&E Cameras automatically recognize a vehicle's plate number and display it on the Control Center screen. The Authorized List function with barrier integration enables fluid and quick entering and exiting of registered vehicles and can be modified easily according to requirements.

- > Embedded ANPR with AI
- > Anti-glare, high-quality images at night in spite of high beam headlights
- > Open protocol for integration
- > Easier installation
- Robust design Free from environmental influences including light, dust, rain and snow
- > Safety sensor radar ensures the barrier remains open when a passageway is not clear



#### Entrance & Exit Video Unit

Model

Image

Display

| Model                  | DS-TCG227-A/AIR  |
|------------------------|--|
| lmage                  | HOT<br>HIKVISOV<br>CDeep Learning  |
| Image Sensor           | 1/2.8" Progressive Scan CMOS   |
| Min. Illumination      | Color: 0.002Lux@(F1.2, AGC ON)<br>B/W: 0.002Lux@(F1.2, AGC ON)   |
| Shutter Speed          | 1/30 s - 1/100,000 s   |
| Lens                   | 3.1 mm - 9 mm  |
| IR Cut Filter          | Support<br>H.265, H.264  |
| Video Compression      |  |
| Video Bit Rate         | 32 Kbps ~ 16 Mbps  |
| Max. Resolution        | 1920 × 1200  |
| Frame Rate             | 25 fps(1920 × 1200)  |
| Image Setting          | Saturation: 0 to 100<br>Brightness: 0 to 100<br>Contrast: 0 to 100<br>Gain: 0 to 100<br>30 DNR: 0ff, Normal and Expert modes are<br>selectable.<br>White balance: White Balance 1 and White<br>Balance 2 are selectable. |
| Picture Format         | JPEG with configurable quality   |
| Smart Recognition      | ANPR<br>Vehicle type, color, brand recognition   |
| Protocols              | TCP/IP, HTTP, DHCP, DNS, RTP, RTSP, NTP,<br>FTP Upload Pictures  |
| Security               | User Authentication, Heartbeat, NTP  |
| Communication          | 1 RJ45 10 M/100 M/1000 M Ethernet port   |
| Built-in LED light     | 2 built-in LEDs  |
| Audio                  | l-ch audio output  |
| Memory Card Slot       | 1 TF card slot, up to 128 GB   |
| Operating Conditions   | Linux  |
| Working Temperature    | -30°C to 70°C (-22°F to 158°F)   |
| Working Humidity       | 90% or less (non-condensing)   |
| Power Supply           | PoE/12 VDC   |
| IP                     | IP67, IK10   |
| "<br>Power Consumption | 20 W   |
| Fower consumption      | ∠U VV  |

#### DS-TME40X-TPC HOT DS-TME401-TPC: Entrance controller (Ticket) Model Distinguish DS-TME402-TPC: Exit controller (Ticket) **Operation System** Embedded Linux operating system **Operation Interface** WEB 24 V power supply indicator, 12 V power supply indicator, mainboard alarm indicator, HDD read/write Indicator indicator, mainboard running status indicator Analog Video Input 2-ch, SD BNC input Network Video Input 4-ch, IP camera input Audio Input 1-ch, pickup input Audio Output 1-ch. loudspeaker output 2-ch, alarm input Alarm Input Alarm Output 2-ch, alarm output **Reserved Interface** 1-ch, fire alarm input and alarm output 1, barrier interface, including barrier control and Barrier Interface status feedback Inductive Loops Input 1, inductive loops input interface Interface LED Interface 1. external LED interface Card Reader Interface 1, user card reader interface Vehicle Detector Interface 1, vehicle detector interface Wiegand Interface 2, Wiegand interface Loudspeaker Interface 1, loudspeaker interface 1, RS-232 interface RS-232 Interface RS-485 Interface 1, RS-485 interface USB Interface N/A VGA Interface N/A 1, 100 M Ethernet interface Network Interface Memory Card N/A Width: 58 mm, thickness o a roll of paper: ≤ 60 mm Thermal Paper Number of Ticket Approx. 400 (related to the thickness of ticket paper) 12.1 inch LCD, 1024 × 768 260 × 204 mm (10.2 × 8.0 inch) Display Dimension (W × H) Information storage of the passing vehicle Data Storage Storage capacity: 1 GB Data Upload Data upload and video stream transfer Power Supply 100-240 VAC, standard Consumption < 150 W **Device Dimension** 500 × 170 × 1497 mm (19.7 × 6.7 × 58.9 inch) Working Temperature -25 °C to +75 °C (-13 °F to +167 °F ) Working Humidity 10% to 90%

Entrance & Exit Controller

## Entrance & Exit Radar

| Model                           | DS-TMG034(Capture-trigger)                       | DS-TMG034(Anti-fall)                           |  |  |  |
|---------------------------------|--|--|--|--|--|
| lmage                           |  |  |  |  |  |
| Transmitting<br>Frequency (GHz) | 79   | 79   |  |  |  |
| Transmitting Power<br>(mW)      | ≤ 10   | ≤ 10   |  |  |  |
| Beam Width                      | Vertical 34°, Horizontal 12°                     | Vertical 12°, Horizontal 34°                   |  |  |  |
| Response Time (ms)              | 1  | 1  |  |  |  |
| Trigger Distance (m)            | 6 (Programmable)                                 | 6 (Programmable)                               |  |  |  |
| Detection Area (m)              | Horizontal width: 1.5                            | Horizontal width: 1                            |  |  |  |
| Detection Target                | Vehicle  | Vehicle and pedestrian                         |  |  |  |
| Area Vehicle<br>Following       | Distinguish following distance of vehicle: 0.5 m | N/A  |  |  |  |
| Online Debugging                | Serial port debugging                            | Serial port debugging                          |  |  |  |
| Online Upgrade                  | Serial port upgrade                              | Serial port upgrade                            |  |  |  |
| Working Voltage<br>(VDC)        | 9 to 12  | 9 to 12  |  |  |  |
| Working Current (A)             | < 0.2  | < 0.2  |  |  |  |
| Consumption (W)                 | < 2  | < 2  |  |  |  |
| Working<br>Temperature          | -40 °C to +80 °C (-40 °F to +176 °F)             | -40 °C to +80 °C (-40 °F to +176 °F)           |  |  |  |
| Dimensions<br>(L × W × H)       | 136.9 × 112.4 ×29 mm (5.4 × 4.4 × 1.1<br>inch)   | 136.9 × 112.4 ×29 mm (5.4 × 4.4 × 1.1<br>inch) |  |  |  |
| Weight                          | 0.32 kg (0.70 lb)                                | 0.32 kg (0.70 lb)                              |  |  |  |

Entrance & Exit Barrier Gate

| Model                    | DS-TMG510   | DS-TMG511   | DS-TMG513   |  |  |  |
|--------------------------|---|---|---|--|--|--|
| lmage                    |   |   |   |  |  |  |
| Material                 | SECC  | SECC  | SECC  |  |  |  |
| Boom Pole Height         | 880 mm  | 880 mm  | 880 mm  |  |  |  |
| Material Thickness       | 2.0 mm  | 2.0 mm  | 2.0 mm  |  |  |  |
| Metal Door Thickness     | 1.5 mm  | 1.5 mm  | 1.5 mm  |  |  |  |
| Color                    | Orange  | Orange  | Orange  |  |  |  |
| Surface Protection       | Outdoor powder spraying                           | Outdoor powder spraying                           | Outdoor powder spraying                           |  |  |  |
| Induction                | Supported   | Supported   | Supported   |  |  |  |
| IR                       | Supported   | Supported   | Supported   |  |  |  |
| Controller               | Rise/Fall/Stop                                    | Rise/Fall/Stop                                    | Rise/Fall/Stop                                    |  |  |  |
| Working Temperature      | -30 °C to +70 °C (-22 °F to +158 °F )             | -30 °C to +70 °C (-22 °F to +158 °F )             | -30 °C to +70 °C (-22 °F to +158 °F )             |  |  |  |
| Ingress Protection       | IP54  | IP54  | IP54  |  |  |  |
| Remote Control Frequency | 433 MHz   | 433 MHz 433 MHz                                   |   |  |  |  |
| Design Life              | 5,000,000   | 5,000,000   | 5,000,000   |  |  |  |
| Weight                   | 60 ± 5 kg (132.3 ± 11.0 lb.)                      | 60 ± 5 kg (132.3 ± 11.0 lb.)                      | 60 ± 5 kg (132.3 ± 11.0 lb.)                      |  |  |  |
| Package Dimension        | 1,243 × 563 × 438 mm (48.9 × 22.2 × 17.2<br>inch) | 1,243 × 563 × 438 mm (48.9 × 22.2 × 17.2<br>inch) | 1,243 × 563 × 438 mm (48.9 × 22.2 × 17.2<br>inch) |  |  |  |
| Power Supply             | 230 VAC   | 230 VAC   | 230 VAC   |  |  |  |
| Consumption              | 300 W   | 300 W   | 300 W   |  |  |  |
| Rising Speed             | 2 m: 0.6 s<br>3 m: 0.9 s<br>4 m: 1.5 s            | 1.5 s   | 3 s   |  |  |  |
| Falling Speed            | 2 m: 2 s<br>3 m: 3 s<br>4 m: 3.5 s                | 3.5 s   | 6 s   |  |  |  |
| Max. Boom Pole Length    | 2/3/4 m   | 4(2+2) m  | 4 m   |  |  |  |
| Туре                     | Straight boom pole                                | Curved boom pole                                  | Fence boom pole                                   |  |  |  |
| Electric Current         | 1.5 A   | 1.5 A   | 1.5 A   |  |  |  |

Accessories

Entrance & Exit Control Terminal

Entrance & Exit LED Display

| Model     | ESP-L1300-R117  | ESP-L1000/1300-R117 | ESP-L2500-X1300-R117 | Model                    | DS-TPE100  | DS-TPE104  | Model                                  | DS-TVL224-4-5Y   |
|-----------|-----------------|---------------------|----------------------|--------------------------|--|--|--|--|
| lmage     |                 |                     |                      | Image                    |  | Built- in PMS software   | Image                                  | WELCOME<br>WELCOME   |
| Height    | 1.3 m           | 1.3 m               | 2.5 m                | Interfaces               | 4-ch 10/100 Mbps Ethernet<br>interfaces, 2-ch 1000 Mbps<br>Ethernet interfaces, 4-ch<br>USB2.0 interfaces, 2-ch I/<br>0 input, 4-ch relays outputs,<br>1-ch VGA output interface, 1-ch<br>reserved SATA interface, 1-ch<br>audio interface | 2-ch RS-232 Interfaces, 2 x RS-<br>485Interfaces, 4-ch USB 3.0<br>Interfaces, 5-ch 100 Mpbs/1000<br>Mpbs Self-Adaptive Interfaces,<br>supporting connecting with<br>switch,1-ch Independent 100<br>Mpbs/1000Mpbs Self-Adaptive<br>Interface,support network<br>isolation | Working Voltage<br>LED Brightness      | 220 VAC±10%, 50Hz<br>110 VAC±10%, 60Hz<br>1200 cd                              |
|           |                 |                     |                      |                          |  |  | LED Angle                              | 110°   |
|           |                 |                     |                      | Operation<br>System      | Windows 10   | Windows 10   | Frame Material                         | Iron Frame Spraying Plastic(Dark armored glass for display part)               |
| Color     | Hikvision White | Hikvision White     | Hikvision White      |                          |  |  | Installation Method                    | Hoop on the back   |
|           |                 |                     |                      | PMS Software<br>Function | N/A  | Barrier gate control, parking fee<br>calculation based on different<br>rules, passing vehicle information<br>colllection, black & white list<br>management, available parking<br>lots counting and so on   | Speaker Specification                  | 4010W  |
|           |                 |                     |                      |                          |  |  | Protection Grade                       | IP65   |
|           | wQ235           | 0235                | Q235                 | Connection               | Number of Cameras: Maximum 4   | Number of Cameras: Maximum 4   | Dot Pitch                              | P4.75  |
| Material  |                 |                     |                      |                          |  |  | Fundamental Color<br>Downward          | 1 Red 1 Green  |
|           |                 |                     |                      |                          |  |  | Communication<br>Methods               | RJ45/RS485   |
|           | 8350 g          | 9480 g              | 14350 g              | Memory                   | Memory: 4 GB   | Memory: 4 GB   | Display Method                         | Instant, Left Shift, Up Forward, etc.<br>GB2312 Character Set, 16 * 16 Lattice |
| Weight    |                 |                     |                      |                          |  |  | Character Display<br>485 Communication | Chinese Characters   |
|           |                 |                     |                      | Storage                  | HDD: 2 T / 4 T   | HDD: 2 T   | Rate<br>Communication                  | RS485: 57600 bps<br>RS485: 1200 m, RJ45: 120 m                                 |
| Dimension | Diameter: 60 mm | Diameter: 60 mm     | Diameter: 60 mm      | Storage                  | , 2 T / 4 T  | 100.21   | Distance<br>Power Consumption          | No463: 1200 HI, R043: 120 HI<br>Max 50 W, Average 30 W                         |
|           |                 |                     |                      | Working<br>Temperature   | -10°C to +70°C (14°F to 158°F)   | -20°C to +70°C (-4°F to 158°F)   | Display Size                           | 304 mm (Width) × 304 mm (Height)   |
|           |                 |                     |                      |                          |  |  | Dimension                              | 364 × 484 × 60 mm (14.33 × 19.06 × 2.36  |
|           |                 |                     |                      |                          |  |  |  | inch)  |

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