iDS-TSS300-C/04
Smart Incident Detection Road Terminal Server

Introduction

iDS-TSS300-C/04 is a new generation device of multi-channels video smart analysis, which is based on deep learning algorithm. Applied in such scenarios as city roads, expressways, and tunnels for real-time traffic incidents detection, it can collect traffic parameters, and capture pictures of the detected incidents. iDS-TSS300-C/04 can detect and analyze traffic incidents, and collect traffic parameters from network cameras of 4 channels simultaneously.

Key Feature

- Supports access to multiple types of cameras, including normal surveillance camera, smart surveillance camera, capture camera, and ONVIF protocol-supported third-party camera.
- Supports multiple incidents detection, including lane change, driving on the lane line, wrong-way driving, stopped vehicle, congestion, pedestrians, emergency lane occupation, fallen objects, speeding, low-speed driving, fire, smoke.
- Supports multiple traffic parameters collection: vehicle type, lane flow, lane speed, space headway, time headway, lane time occupancy rate, lane space occupancy rate, queuing length, and traffic status.
- Access to cameras from 4 channels and supports patrol detection of 16 kinds of scenarios when connected to speed domes.
- Supports to search data and play back related videos according to time, channel, incident type, and capture type.
- Supports to configure multiple types of text overlay and picture composition.

Specification

System	
Operating System	Embedded Linux Operating System
Operating Interface	WEB
HDD Storage Capacity	1 × 4 TB 3.5-inch SATA HDD (Default); 4 × 6 TB (Scalable)
RESET Button	1 × Reset button
Indicator	Power Indicator, alarm status indicator, HDD indicator, running status indicator
Functions	
Lane Change	An alarm is triggered when a vehicle is detected crossing the prohibition line from one lane and enters another lane. The target short side size ≥ 64 pixels, and the occlusion ratio ≤ 30%: the capture rate is 90%, and the accuracy rate is 90%.
Driving on the Lane Line	An alarm is triggered when a vehicle is detected driving on the prohibition line for a duration exceeding the set value. The target short side size ≥ 64 pixels, and the occlusion ratio ≤ 30%: the capture rate is 90%, and the accuracy rate is 90%.
Wrong-Way Driving	An alarm is triggered when a vehicle is detected driving against the lane direction for a duration exceeding the set value. The target short side size ≥ 64 pixels, and the occlusion ratio ≤ 30%: the capture rate is 90%, and the accuracy rate is 90%.
Stopped Vehicle	An alarm is triggered when a vehicle is detected stopped on the road for a duration exceeding the set value. Target pixel ≥ 32 × 32, and the occlusion ratio ≤ 50%: the capture rate is 90%, and the accuracy rate is 90%.

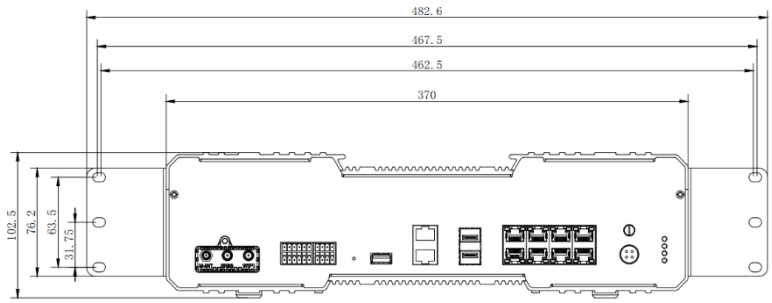
Congestion	The judgment condition of the intersection congestion is that the vehicle waiting for the red lights more than 2 times to reach the intersection stop line: the capture rate is 90%, and the accuracy rate is 90%.
Pedestrians	An alarm is triggered when a pedestrian is detected entering the prohibited area for a duration exceeding the set value. Target pixel ≥ 32 × 32, and the occlusion ratio ≤ 30%: the capture rate is 90%, and the accuracy rate is 90%. The pedestrians cannot be detected at night without light.
Emergency Lane Occupation	An alarm is triggered when a vehicle is detected driving in the emergency lane for a duration exceeding the set value. The target short side size ≥ 64 pixels, and the occlusion ratio ≤ 30%: the capture rate is 90%, and the accuracy rate is 90%.
Fallen Object	An alarm is triggered when a fallen object appears in the detection area for a duration exceeding the set value. Target pixel is ≥ 32×32: the capture rate is 60%, and the accuracy rate is 60%. Recommended detection time is 10s, supporting box type, wheel type, package, bottle type, stick type, and plastic bag detection, and the target cannot be moved. The fallen object cannot be detected at night without light (except for tunnel scenes).
Speeding (Customized)	An alarm is triggered when a vehicle is detected driving at a speed exceeding the set value for a duration exceeding the set value.
Low-Speed Driving (Customized)	An alarm is triggered when a vehicle is detected driving at a speed lower than the set value for a duration exceeding the set value.
Fire (Customized)	An alarm is triggered when fire appears and continues for a duration. Target pixel ≥ 80 × 80.
Smoke (Customized)	An alarm is triggered when smoke appears and continues for a duration. Target pixel ≥ 80 × 80.

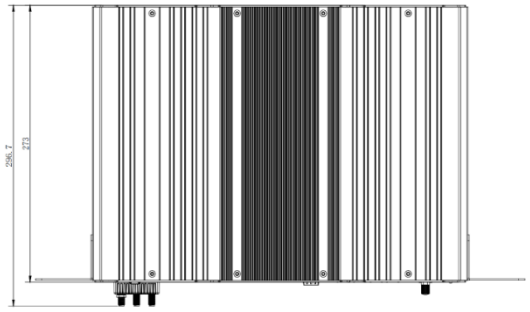
Traffic Flow Statistics	Make a statistics of vehicles that pass through the virtual coil in a lane within the set time range. Make a statistics of vehicle type, average speed, lane queue length, space headway, lane time occupancy rate, lane space occupancy rate.
Interface	
Network Interface	Dual NIC design NIC 1: 9 × Gigabit Ethernet interface, 1 × combo SFP Gigabit fiber optic interface NIC 2: 1 × Gigabit Ethernet interface, 1 × SFP Gigabit fiber optic interface
Audio Input	1
Audio Output	1
Alarm Input	2
Alarm Output	2
RS-232 Interface	2
RS-485 Interface	2
USB Interface	1 × USB 3.0
Function	
Upload	Supports transportation data ANR and manual re-uploading.
Network Configuration	Supports cameras and servers of different subnets to save IP address resource.
General	
Power Supply	12 VDC/12.5 A, 150 W
Power Consumption	Max. 70 W
Dimension (W × D × H)	370 mm × 273 mm × 102.5 mm (14.57 inch × 10.75 inch × 4.04 inch)
Working Environment	Working Temperature: -30 °C to 70 °C (-86 °F to 158 °F) Working Humidity: 10% to 90%

Available Model

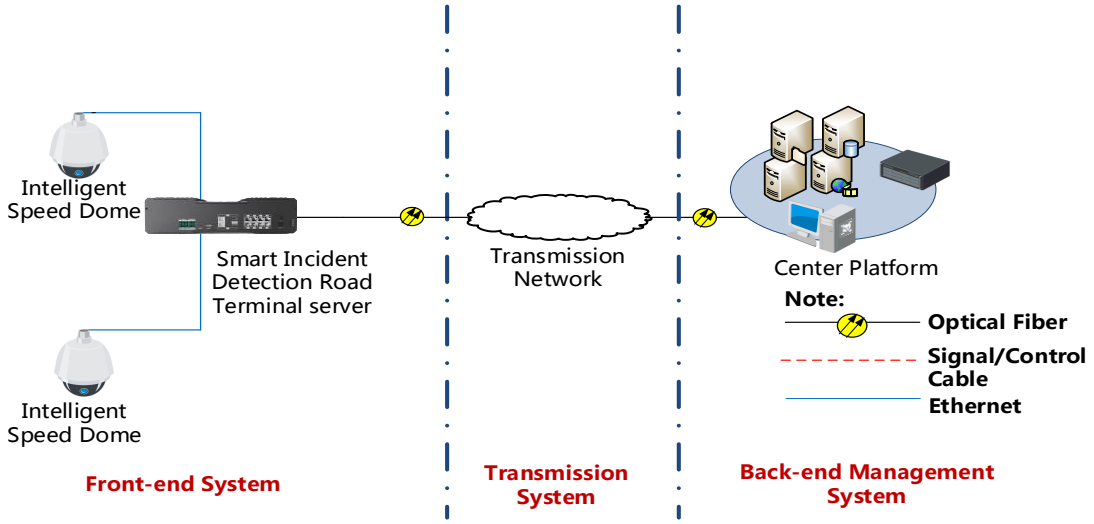
Model	*Function*	*Device Deployment*
iDS-TSS300-C/04	Supports traffic incidents auto detection, picture capture, and parameters collection from 4 MP network cameras of 4 channels.	Front-End Intersection Cabinet

Dimension





Typical Application



Headquarters
No.555 Qianmo Road, Binjiang District,
Hangzhou 310051, China
T +86-571-8807-5998
www.hikvision.com

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