

CHAINZONE

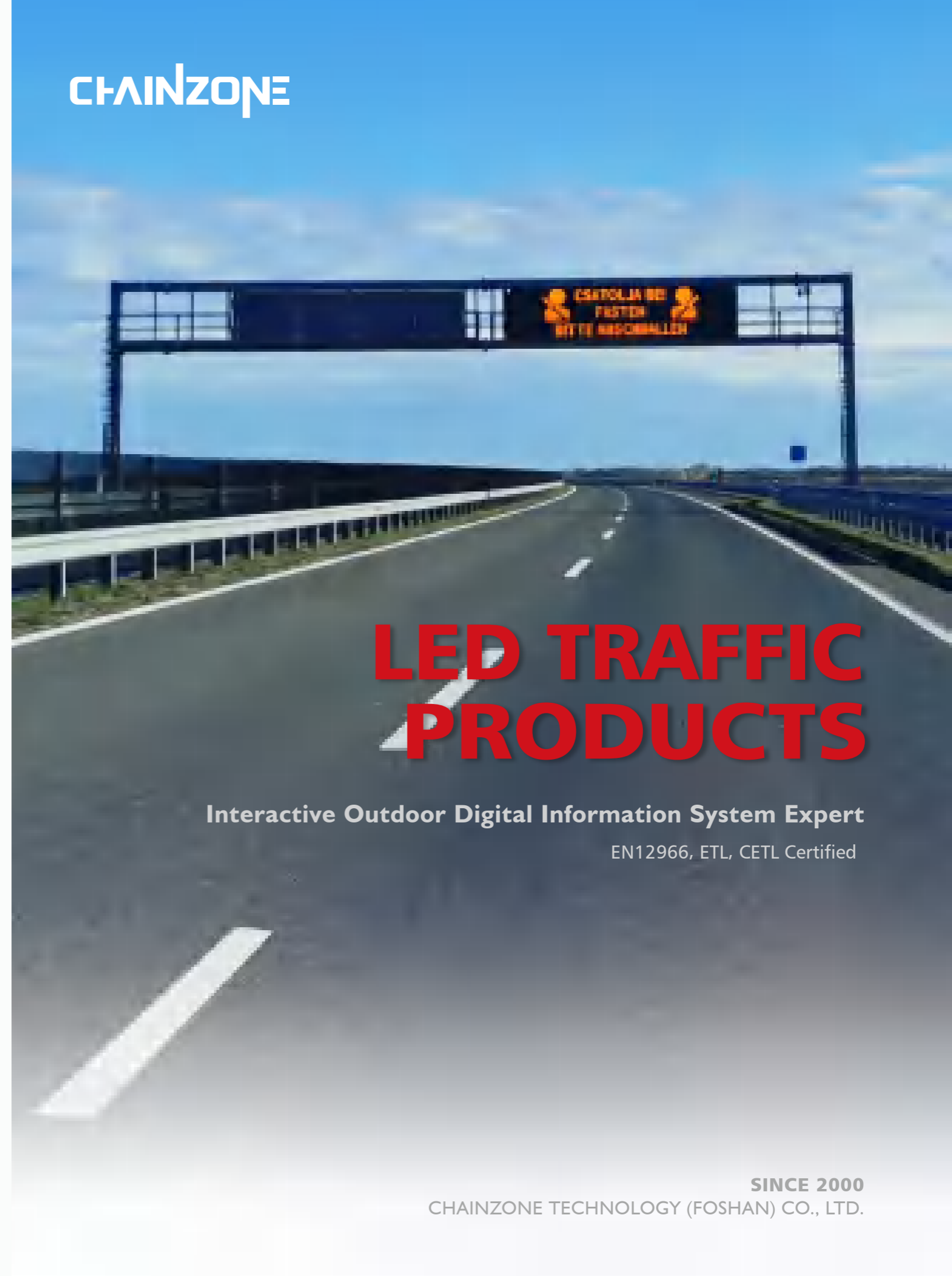
CHAINZONE  
Beyond What You Can See

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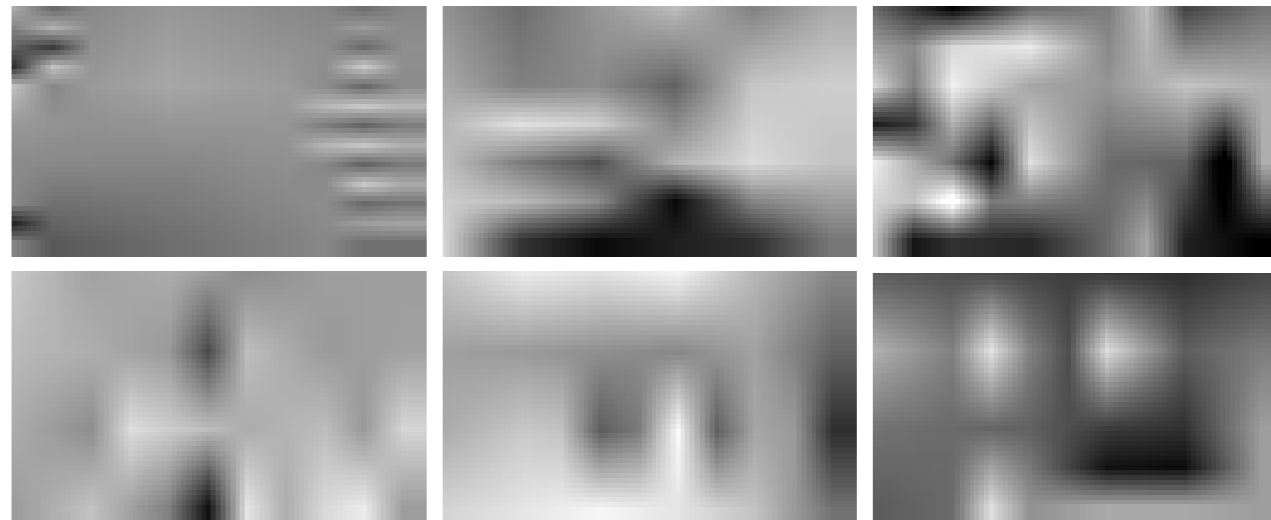


# LED TRAFFIC PRODUCTS

Interactive Outdoor Digital Information System Expert

EN12966, ETL, CETL Certified

**SINCE 2000**  
CHAINZONE TECHNOLOGY (FOSHAN) CO., LTD.



# About Us

Established in 2000, Chainzone Technology (Foshan) Co., Ltd. (short as "Chainzone" in below) is specializes in providing digital information interaction products and services globally. Chainzone has served numerous globally leading projects in more than 120 countries and regions, which include the Hong Kong Zhuhai-Macao Bridge (HZMB) and the Ryfast tunnel project (the world's longest sub-sea road tunnel system).

Chainzone is mainly engaged in intelligent traffic and intelligent display.

In the field of intelligent traffic, Chainzone has independently developed a variety of cloud-edge-terminal-collaboration based products, enabling its business to cover road construction, operation, development and the whole traffic ecology. Starting from planning, Chainzone actively participates in road construction, traffic optimization and road digitalization.

In the field of intelligent display, Chainzone has developed multiple solutions for different application scenarios, covering both indoor outdoor displays and outdoor displays. Based on customer requirements, Chainzone continuously expands its competitive advantages in visual presentation and system control.

Over the years, thanks to excellent product quality, Chainzone won the trust of global customers, and has been awarded many honorary titles such as "National High-tech Enterprise", "Guangdong Province Export Famous Brand Enterprise", etc.

Chainzone owns two brands, "ChainZONE" and "iMPOSA", which are registered in more than 30 countries and regions including the United States, the United Kingdom, etc.



Better Way of Smart Mobility



# 01

## Fixed VMS

### Series



# EN12966 L Series VMS



## Application

The variable message sign is a useful medium to alert motorway users when there are abrupt changes in traffic patterns, road conditions, emergencies, or special events. The application of VMS on road can improve traffic flow while ensuring the safety of drivers and passengers. Variable message signs are ultra-bright and highly legible, with a variety of functions for many applications: lane closure, highway construction, work zone, parking lot guidance, etc. A combination of different colors and sizes makes these signs extremely efficient in conveying safety messages to road users.

## Feature

- The embedded system can perform constant diagnosis and report any abnormal status to the central system
- The VMS can be monitored by our proprietary central management system
- **ChainSpot**® which is developed independently by Chainzone's R&D team
- The excellent LED optical system meets EN12966 standards and provides the highest optical performance
- The LED beam can be precisely projected to the road surface
- A wide range of pixel pitch options from 12mm to 31.25mm, adaptable to any application
- SMD LED technology, better color mixture and uniformity
- Modular design for easy maintenance
- Integrated light sensor for automatic control
- The integrated sensor can monitor cabinet temperature
- Easily programmed and more advanced functions for users' options



Teamwork



Report



Convenient Maintenance



Temperature Detection

## Specification

VMS L-Series			
Model	VMS20L-RGB	VMS25L-RGB	VMS31.25L-RGB
Pixel Pitch (mm)	20	25	31.25
Module Resolution (pixels)	8×16	8×16	8×8
Size of Module (mm) (H×W)	160×320	200×400	250×250
Optical Characteristics			
Conformity	EN12966 Standards & NEMA TS4		
Luminance	L3/L3(*) (Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup> )		
Luminance Ratio	R3		
Color	C2		
Beam Width	B1, B2, B3, B4, B5, <b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down)		
Brightness Control	100 Levels		
Physical Characteristics			
Enclosure Material	Aluminum		
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)		
Working Temperature	<b>T1</b> (-15°C ~ +60°C), <b>T2</b> (-25°C ~ +55°C), <b>T3</b> (-40°C ~ +40°C)		
Humidity Range	RH<95%		
Resistance to Pollution	D3		
Ingress Protection Class	IP54, IP56, IP65, IP66		
Maintenance	Back Maintenance		
Electrical Specifications			
Power Supply	90 ~ 260VAC (50/60Hz)		
Solar Power System	12/24 VDC		
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber		
Protocol	NTCIP 1203 / MODBUS / UTM / XML / JetfileII / Profibus / RSMP / HTTP / API		
EMC / FCC Certification	Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016		
Certification	EN12966, ETL, CETL		

# EN12966 M Series VMS



## Feature

- SMD LED technology, better color mixture and uniformity
- Modular design for easy maintenance
- Integrated sensors for temperature and brightness detection
- Chainzone's ball-shaped lens composition
- The reflection of light is greatly reduced, ensuring high contrast ratio and delivering more clear images. Comprehensive color management technology, excellent display quality.
- The embedded system can perform constant diagnosis and report errors to the central system.
- The VMS can be monitored by the central management system **ChainSpot**® which is developed independently by Chainzone's R&D team

## Visual Performance

- **High luminance ratio of LED modules**  
Chainzone's modular design with ball-shaped optical lens achieves higher Luminance Ratio by reducing sunlight reflection and increasing luminance output. Thus, VMS can reach L3 & R3 class at very low power consumption.
- **Unique rear design:fast and better heat dissipation in VMS**  
The heat generated by electronic components on the circuit boards is dissipated to open air directly. Extraordinary thermo-stability and environment-adaptability. High IP Level.



Continuous Diagnosis



Report



Teamwork



High Contrast Ratio



Convenient Maintenance



Temperature Detection

## Specification

VMS M-Series				
Model	VMS10M-RGB	VMS12M-RGB	VMS16M-RGB	VMS20M-RGB
Pixel Pitch (mm)	10	12	16	20
Module Resolution (pixels)	12x24	16x32	8x16	8x16
Size of Module (mm) (HxW)	120x240	160x320	96x192	160x320
Optical Characteristics				
Conformity	EN12966 Standards & NEMA TS4			
Luminance	L3/L3(*) (Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup> )			
Luminance Ratio	R3			
Color	C2			
Beam Width	B1, B2, B3, B4, B5, <b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down)			
Brightness Control	100 Levels			
Physical Characteristics				
Enclosure Material	Aluminum			
Enclosure Surface	Powder Coated, Matte Blank (Other colors available)			
Working Temperature	<b>T1</b> (-15°C ~ +60°C ), <b>T2</b> (-25°C ~ +55°C ), <b>T3</b> (-40°C ~ +40°C )			
Humidity Range	RH<95%			
Resistance to Pollution	D3			
Ingress Protection Class	IP54, IP56, IP65, IP66			
Maintenance	Back Maintenance			
Electrical Specifications				
Power Supply	90 ~ 260VAC (50/60Hz)			
Solar Power System	12/24 VDC			
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / Optic Fiber			
Protocol	NTCIP 1203 / MODBUS / UTM / XML / JetfileII / Profibus / RSMP / HTTP / API			
EMC / FCC Certification	Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016			
Certification	EN12966, ETL, CETL			

# Walk-in VMS



## Application

To provide safe maintenance and reliable operation, Chainzone's walk-in VMS is equipped with modern cabinet design, intelligent features and extraordinary strength. The excellent LED optical system is compliant with EN12966 standard and has the highest optical performance. Full matrix configuration in amber or full-color LEDs from 20 to 31 mm pixel spacing is available.

## Feature

- Convenient access for maintenance personnel
- Open workspace and organized components facilitate maintenance operation
- Tough aluminum mask for superior contrast and minimal glare
- Positive-pressure, forced-air ventilation system for VMS longevity



Easy Access



High Contrast Ratio



Convenient Maintenance



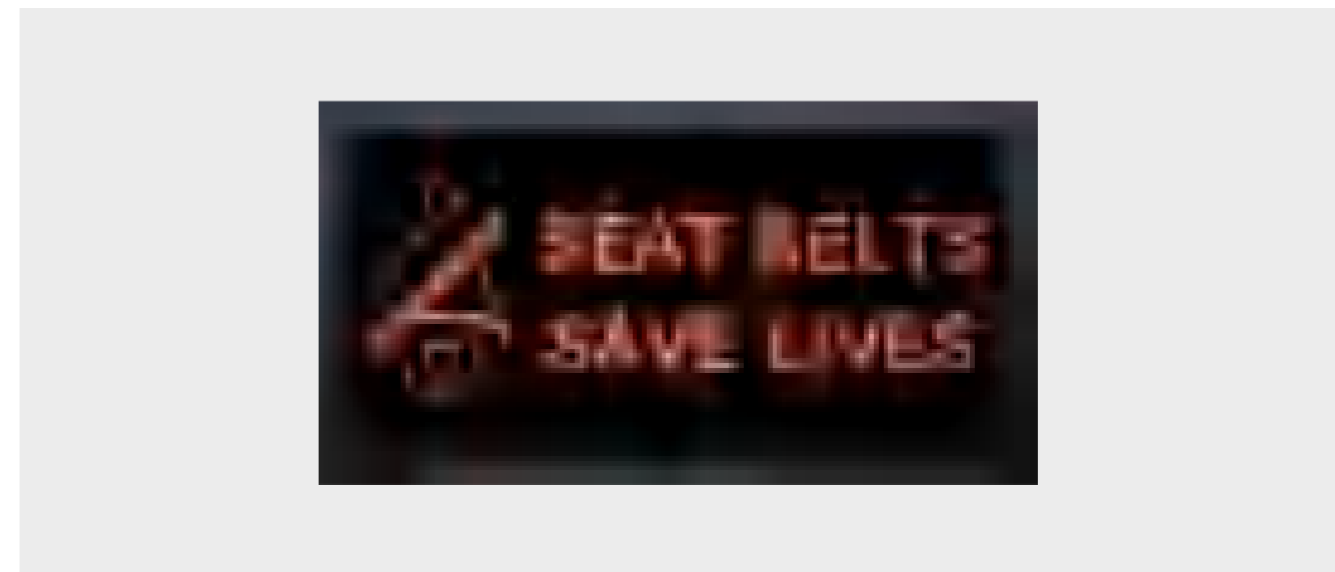
Ventilation System



## Specification

Walk-in VMS		
Model	VMS20L-RGB	VMS25L-RGB
Pixel Pitch (mm)	20	25
Module Resolution (pixels)	8×19	8×19
Size of Module (mm) (H×W)	190×320	200×400
Optical Characteristics		
Conformity	EN12966 Standards & NEMA TS4	
Luminance	L3/L3(*) (Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup> )	
Luminance Ratio	R3	
Color	C2	
Beam Width	B1, B2, B3, B4, B5, <b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down)	
Brightness Control	100Levels	
Physical Characteristics		
Enclosure Material	Aluminum	
Enclosure Surface	Powder Coated, Matte Blank (Other colors available)	
Working Temperature	<b>T1</b> (-15°C ~ +60°C), <b>T2</b> (-25°C ~ +55°C), <b>T3</b> (-40°C ~ +40°C)	
Humidity Range	RH<95%	
Resistance to Pollution	D3	
Ingress Protection Class	IP54	
Maintenance	Walk-in Maintenance	
Electrical Specifications		
Power Supply	90 ~ 260VAC (50/60Hz)	
Solar Power System	12/24 VDC	
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber	
Protocol	NTCIP 1203 / MODBUS / UTM / XML / JetfileII / Profibus / RSMP / HTTP / API	
EMC / FCC Certification	Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016	
Certification	EN12966, ETL, CETL	

# B Series VMS

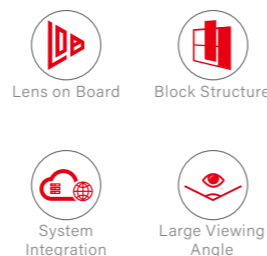


## Application

In the present time, the urban population has grown rapidly leading to further deterioration of urban traffic. To deal with the problem of urban congestion, the Smart City solution has been proposed. The application of VMS in the city will effectively guide vehicle direction, reduce congestion and improve transportation efficiency.

## Feature

- SMD LED plus optical lens technology
- Modular design for easy maintenance
- Integrated sensors for temperature and brightness detection
- Wider viewing angle special for smart city solution
- Multiple VMS can be integrated into a network which can be managed by our central control system.



## Specification

VMS B-Series	
Model	VMS16B40-RGB
Pixel Pitch (mm)	16
Module Resolution (pixels)	12x24
Size of Module (mm) (HxW)	192x384
Optical Characteristics	
Luminance	L3/L3(*) (Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup> )
Luminance Ratio	R3
Color	C2
Beam Width	40°
Brightness Control	100 Levels
Physical Characteristics	
Enclosure Material	Aluminum
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)
Working Temperature	T1 (-15°C ~ +60°C), T2 (-25°C ~ +55°C), T3 (-40°C ~ +40°C)
Humidity Range	RH<95%
Resistance to Pollution	D3
Ingress Protection Class	IP54, IP65, IP66
Maintenance	Back Maintenance
Electrical Specifications	
Power Supply	90 ~ 260VAC (50/60Hz)
Solar Power System	12/24 VDC
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber
Protocol	NTCIP 1203 / MODBUS / UTMIC / XML / JetfileII / Profibus / RSMP / HTTP / API
EMC / FCC Certification	Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016

# EXL VMS



## Specification

EXL					
Model	EXL-6.6-SMD	EXL-8-SMD	EXL-10-SMD	EXL-16-DIP	EXL-20-DIP
Pixel Pitch (mm)	6.67	8	10	16	20
Module Resolution (pixels)	48x72	40x60	32x48	20x40	16x32
Size of Module (mm) (HxW)	320x480	320x480	320x480	320x640	320x640
Cabinet Resolution (pixels) (Front Access)	192x216	160x180	128x144	80x120	64x96
Size of Cabinet (mm) (HxW) (Front Access)	1280x1440x100	1280x1440x100	1280x1440x100	1280x1920x110	1280x1920x110
Cabinet Resolution (pixels) (Back Access)	192x144	160x120	128x96	80x80	64x64
Size of Cabinet (mm) (HxW) (Back Access)	1280x960x105	1280x960x105	1280x960x105	1280x1280x115	1280x1280x115
Luminance	>6000 cd/m <sup>2</sup>				
Luminance Ratio	>6500:1				
Viewing Angle	120° / 120°			110° / 45°	
Brightness Control	Manual / Auto / Scheduled				
Enclosure Material	Aluminum				
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)				
Working Temperature	-40°C ~ +70°C				
Humidity Range	RH<95%				
Grey Level	16 Bit				
Frame Frequency (Hz)	>60				
Refresh Frequency (Hz)	>1920				
Ingress Protection Class	Front: IP65 / Back: IP54				
Maintenance	Front / Back Maintenance				
Power Supply	85 ~ 140VAC / 180 ~ 260VAC (50/60Hz)				
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber				
Protocol	NTCIP 1203 / MODBUS / UTMIC / XML / Jetfilell / Profibus / RSMP / HTTP / API				
EMC / FCC Certification	EMC, FCC				
Certification	CE, ETL				

## Application

In some smart city projects, VMS is required to demonstrate not only pictograms but also high-resolution pictures and videos. EXL series is an ideal solution for such applications.

## Feature

- Ultra light and thin
- Anti-UV & fire resistant
- High installation accuracy with aluminum profile cabinet
- High contrast ratio
- Easy front or rear service
- Wider viewing angle specially for smart city solution



Light & Thin



UV Resistance



Front & Rear Service



High Contrast Ratio

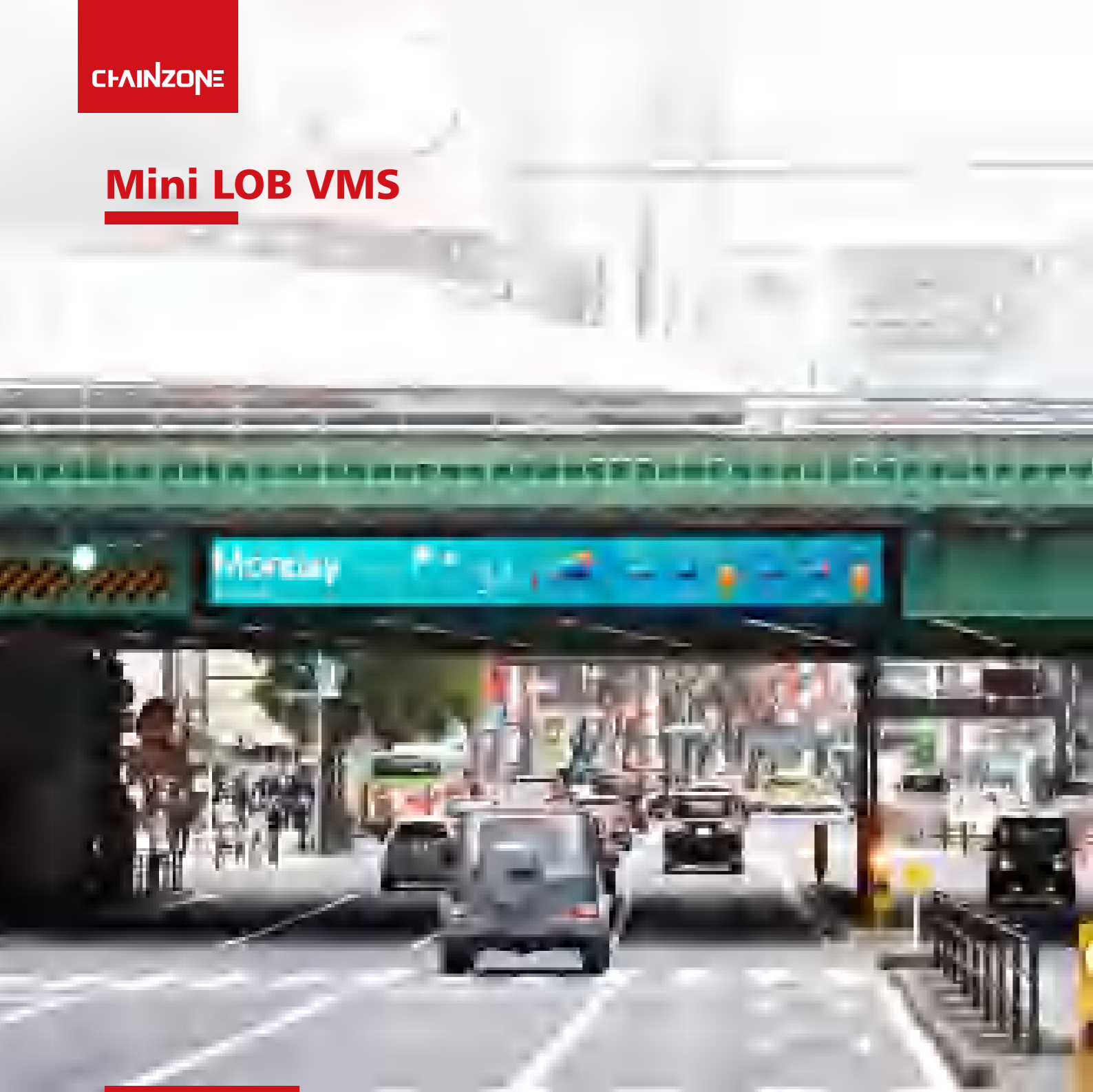


Smart Module



Large Viewing Angle

# Mini LOB VMS



## Application

The Mini LOB series is an optimal solution for VMS scenarios that prioritize high-definition image quality and low power consumption. It features advanced lens technology that ensures a perfect balance between exceptional image quality and high energy efficiency.

## Feature

- Mini LOB technology
- Modular design for easy maintenance
- Integrated sensors for temperature and brightness detection
- Wider viewing angle special for smart city solution



Convenient Maintenance



UV Resistance



Large Viewing Angle



High Contrast Ratio



Report

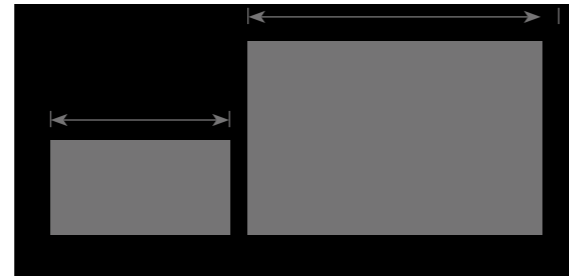
## Specification

Mini LOB	
Model	Mini LOB-10
Pixel Pitch (mm)	10
LED Type	C4535
Module Size (mm) (H x W)	160x320
Module Resolution (pixels) (H x W)	16x32
Luminance	>10000 cd/m <sup>2</sup>
Viewing Angle	100° / 40°
Brightness Control	100 Levels
Working Temperature	-40°C ~ +60°C
Humidity Range	RH<95%
Grey Level	14 Bit
Refresh Frequency (Hz)	3840
Ingress Protection Class	IP65
Maintenance	Rear / Front
Power Supply	90 ~ 260VAC (50/60Hz)
Communication	RS232 / RS485 / Ethernet Via RJ45 / GMS / GPRS / 3G / 4G / 5G / Optic Fiber
Protocol	NTCIP 1203 / MODBUS / UTMC / XML / Jetfilell / Profibus / RSMP / HTTP / API
EMC / FCC Certification	Compliant with EN50293; FCC Part 15B:2017; ICES-003:2016

# VMS Advanced Technology Introduction

## Intelligent & Efficient VMS

- Chainzone's variable message sign is certified to the EN12966 standard.
- All displays provide brilliant legibility, high energy efficiency and outstanding brightness. A wide range of variable message signs can be customized according to different project requirements.
- The unique optical lens design can maximize the effective illumination of LED lights at the best beam angle.



## Low Reflection Design

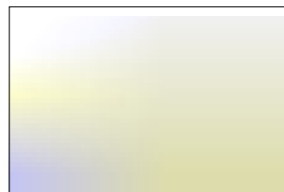
- The surface of Chainzone's VMS features a unique matte abrasive design, which creates a diffused reflection of the sunlight. As a result, the sign surface remains dark even under strong sunlight.
- With the matte abrasive surface and the external light absorption design on the lens, the luminance ratio of Chainzone's VMS can reach as high as 20:1 in white color, under the external illumination at 40000 lux.
- The optical lens of Chainzone's VMS is designed to achieve light absorption which will decrease the external light reflection on the lens, so the brightness reflection of the VMS is furtherly reduced.



## VMS with Optical Lens Structure

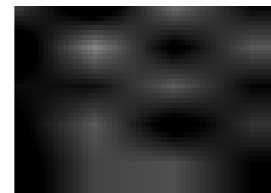
### Beam Width

Changeable with different Optical Lens, meeting B1-B7 classes of EN12966 and NEMA TS-4



### Luminance & Luminance Ratio

The highest performance indicated in the EN12966 Standards (L3/ L3(\*), R3) and NEMA TS-4



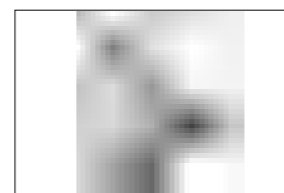
### Targeted Visibility

Optimal Intensity  
Optimal Light Pattern  
Optional Beam Width



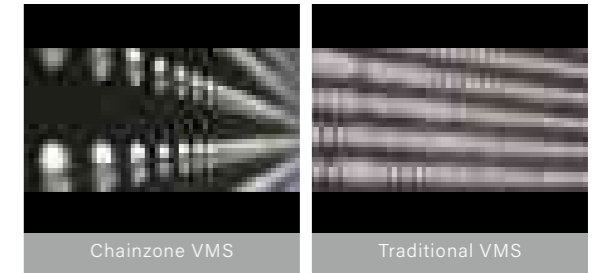
### Color Uniformity

Better Color Uniformity: The chromaticity coordinates deviations in effective angle are  $x < 0.05$



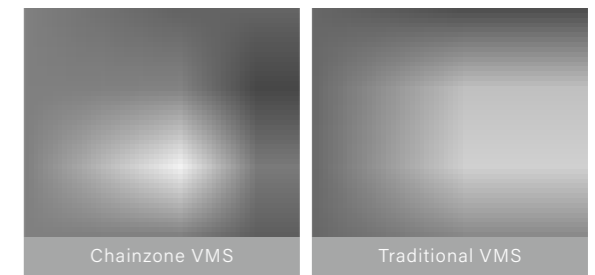
## Smooth Surface Design

- Different from traditional VMS, each pixel has a louver on the surface to improve the brightness, the optical lens VMS of Chainzone is smoother, so no dust or snow will become stuck on the surface. The VMS display content will remain clear and complete all the time.



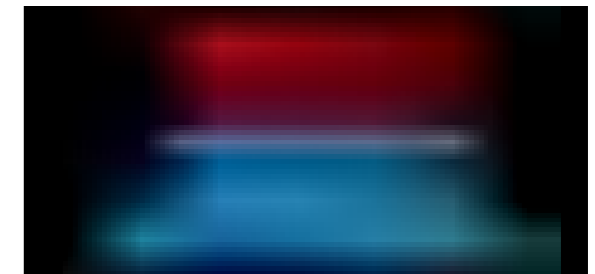
## Low Power Consumption

- System power consumption has been greatly reduced because the optical lens design multiplies light output and light contrast ratio.



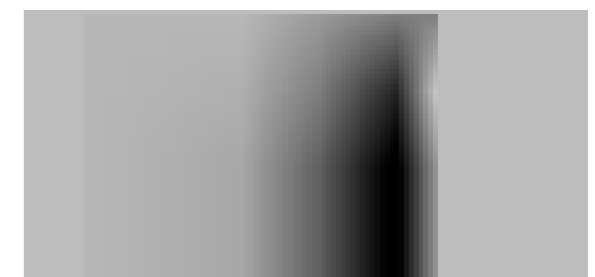
## Overheat Protection

- Built-in sensor to detect VMS cabinet temperature: The fan will be activated automatically if the inner temperature exceeds the threshold value.
- Auto Black Screen Protection Mode protects electronic components and reduces fire risks due to overheating.



## Cabinet Structure

- The optical lens is made with the best anti-UV polycarbonate (PC) material, to avoid cracks on the lens and prevent the lens from turning yellow even under long exposure to the strong sunlight.
- The whole VMS cabinet is built with a thick aluminum profile with an overall soldering technique, making the cabinet strong in structure but smooth in outer appearance.
- The surface of VMS without any louver can be self-cleaned by the rain.



# 002

## Mobile VMS Series

PROCEED  
WITH  
CAUTION

# Mobile (Trailer) VMS

## Mobile VMS with Modular Design (EN12966)

- The energy-efficient operation allows the VMS to be operational for an extended period
- Solar charging system with MPPT charging management
- Automatic shut-down function for the solar charging system when batteries are fully charged, preventing damage to batteries
- Provide AC charger to quickly charge the battery
- The battery box can be locked against unauthorized access
- The VMS can be rotated and lifted to provide an accurate display angle
- The retractable jack provides wind resistance and stable parking
- Radar speed measurement function to record the state of vehicles on the road

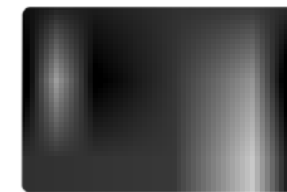


## Specification

Model	TVMS-20M-SMD	TVMS-25M-SMD	TVMS-31.25M-SMD
Pixel Pitch (mm)	20	25	31.25
LED Type	SMD		
Module Resolution (pixels) (HxW)	8x16		
Module Size (mm) (HxW)	160x320	200x400	250x250
Maximum Resolution for Trailer Mounted VMS(pixels) (HxW)	48x80	56x96	64x96
Maximum Size for Trailer Mounted VMS (mm) (HxW)	960x1600	1400x2400	2000x3000
Cabinet Dimension (mm) (HxWxD)	1160x1800x120	1600x2600x120	2085x3200x180
Display Color	Single or Full Color		
Brightness	Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup>		
Physical Characteristics			
Enclosure Structure	Aluminum Housing with Waterproof Modules		
Working Temperature	-25°C ~ +60°C		
Humidity Range	RH<95%		
Ingress Protection Class	IP65		
Maintenance Access	Front		
Electrical Specifications			
Solar Power System	DC 12V		
Sensor	Light Sensor		
Communication	RS232 / RS485 / Ethernet Via RJ45 / 3G / 4G / 5G		
Protocol	NTCIP 1203 / MODBUS / UTM / XML / JetfileII / Profibus / RSMP / HTTP / API		
Trailer Specifications			
Spraying Process	Hot Dip Galvanized / Electrostatic Powder Spraying		
Lifting System	Hydraulic Lifting System		
Trailer Size	Type-A: 1750mmx2250mm	Type-B: 2050mmx2450mm	Type-C: 2050mmx3550mm
Total Weight of Trailer and VMS	Type-A: About 700KG	Type-B: About 1000KG	Type-C: About 1200KG

## MC20 Controller

- Easier control with touch-screen handheld controller
- Firmware can be updated by USB
- RS485 serial port is supported
- Text editing and picture transferring directly via MC20
- VMS status detection and work log



- Touch Screen
- Support RS485
- Update via USB
- MC20 Transmission

## Mobile VMS with PC Cover Design

- PC cover protection, effectively preventing graffiti
- VMS can be controlled by either a remote controller or network server
- The VMS can be rotated at 360 degrees after being lifted
- GPS function is available, users can monitor the location of Mobile VMS
- Cooling fans protect sign cabinet and battery charger from overheating



- Protection
- 360 Degree Rotation
- GPS
- Rapid Heat Dissipation

## Specification

Model	TVMS-55/50PC	
Pixel Pitch (mm)	55(H), 50(W)	
LED Type	4R3G3B4Y3W	4Y
Model Resolution (pixels)	4x8	
Module Size (mm) (HxWxD)	220x400	
Maximum Resolution for Trailer Mounted VMS (pixels) (HxW)	28x48	
Cabinet Dimension (mm) (HxWxD)	1845x2725x105	
Display Color	Five Color	Single Yellow
Luminance	Yellow / White > 6200 cd/m <sup>2</sup> , Red / Green > 2800 cd/m <sup>2</sup>	Yellow > 6200 cd/m <sup>2</sup>
Sensor	Light Sensor	
Physical Characteristics		
Enclosure Structure	PC Cover + Aluminum Housing	
Working Temperature (°C)	-25°C ~ +60°C	
Humidity Range	RH<95%	
Ingress Protection Class	IP65	
Electrical Specifications		
Solar Power System	DC 12V	
Communication	RS485 / Ethernet Via RJ45 / 3G / 4G	
Protocol	NTCIP 1203 / JetfileII	

# VMS Web-based Management Software ChainSpot®

## Introduction

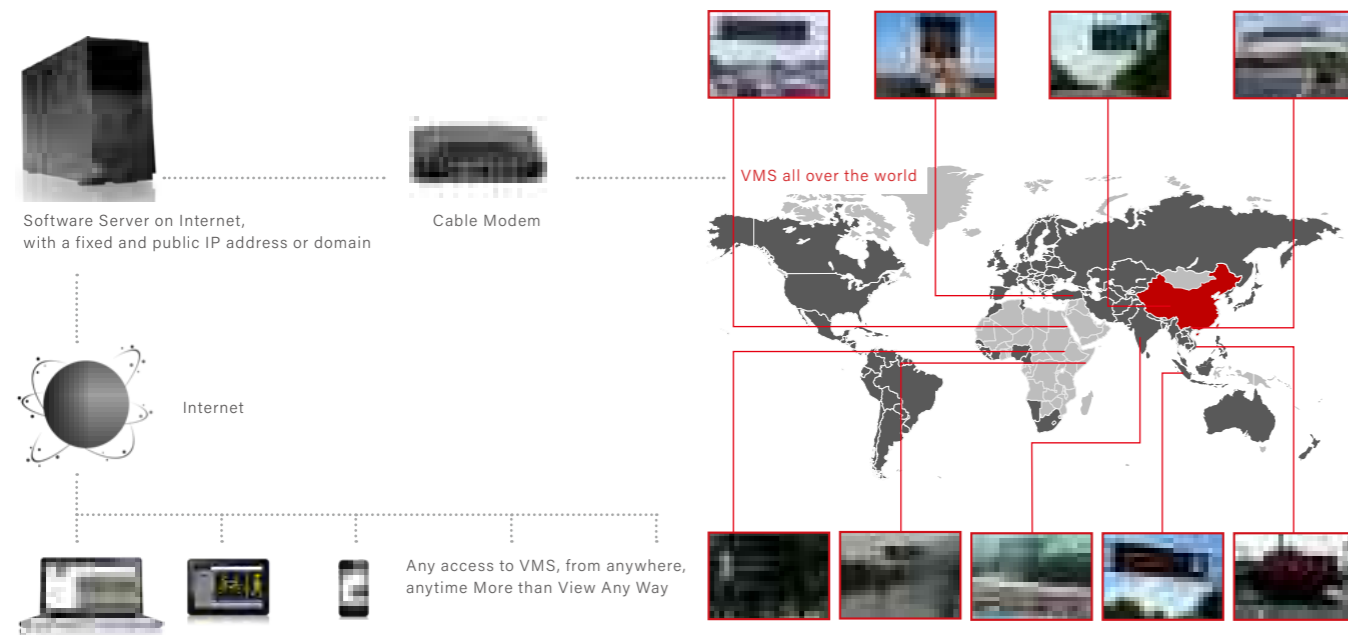
ChainSpot® is a VMS management software based on the Internet. Users can manage and control plenty of devices remotely simultaneously to check the current status and send content to the equipment. A combination of different colors and sizes makes these signs extremely efficient in conveying safety messages to road users.

## Function

- GPS Function
- VMS Status Checking
- VMS Setting
- Battery Management
- SMS Setting
- Pixel Check
- Visualized Displaying Schedule
- Radar Data Statistics and Analysis
- 100% customized interface
- NTCIP / JETFILE II protocol available
- No need to install the software in advance, user-friendly management.
- Different access to various levels of users: Super Admin/Admin/User
- Vivid status report
- Flexible scheduling function
- Encrypted data package for transmission via internet
- Monitor VMS on Google Map

## System Topology

Designed and developed by Chainzone.



### Client (User)

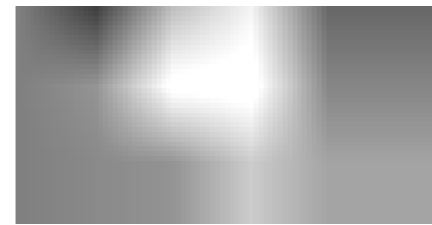
PC  
Tablet  
Smart Phones

### ChainSpot® Server

Server Online  
With a Fixed and Public IP or Domain  
Data Base  
100% Customized Web Base  
Software

### VMS

Controller (Receiving signal and reporting VMS status to Software System)  
4G Modem / Wi-Fi / Ethernet(Via Internet)  
GPS Modem for positioning  
Temperature Sensor / Light Sensor etc.



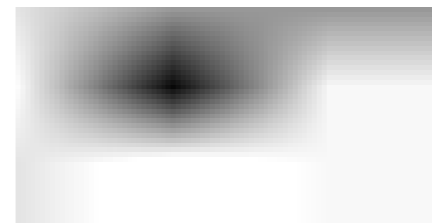
## Supporting Multiple Device

- Supporting 6 Main devices (VMS, Radar, Camera, Lane control signal, Speed Limit Sign, Wigwag) and 7 sub-devices.
- All kinds of devices can be connected with and controlled by each other.



## Gallery with Multiple Picture

- Provide thousands of pictures in different sizes that are used for traffic.
- Allow users to customize their own galleries.



## Multifunctional Matrix Editor

- User-friendly and support NMG, PMG, QST, NTCIP, and other file formats.



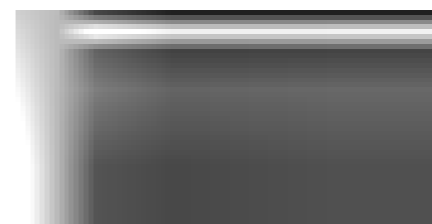
## Flexible Schedule Setting

- Supporting weekly, daily and arbitrary time scheduling.
- Vivid image display, from which you can know when and what files are playing by a glance.



## Pixel Check Report

- Graphical display of pixel detection results, users can quickly find the location of fault pixels.



## Group Management

- Quickly check the status of the device in a specific area
- Support map mode

# Vehicle-mounted VMS

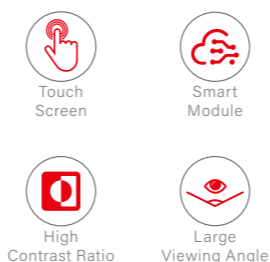


## Feature

- Installed on road construction vehicles or police vehicles, with supporting frame fixed to the roof-top.
- Wireless control, with 3G / 4G / 5G modem.
- Auto/Manual dimming control.
- With touchscreen handheld controller.
- More than 4000 images can be stored on the VMS and handheld controller due to its large storage capacity.
- Send the displaying contents to VMS via a handheld controller or a computer.
- With linear actuator, it can raise or fold down the VMS up to 90° angle

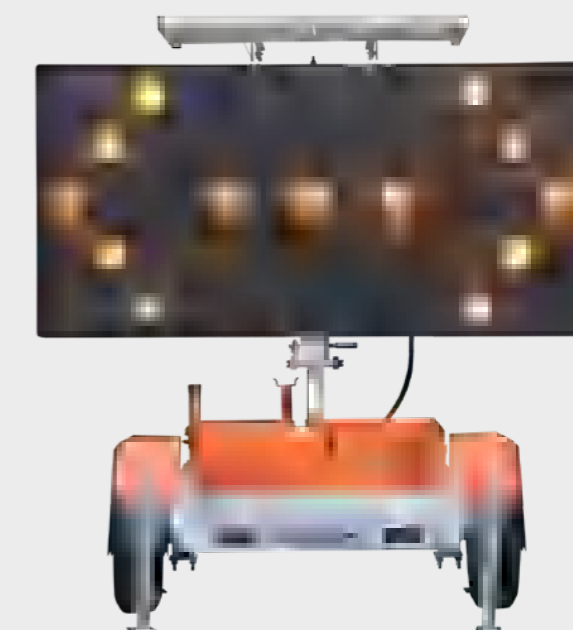
## Specification

Vehicle-mounted VMS			
Pixel Pitch(mm)	12	16	20
LED Type	SMD		
Color	full color		
Resolution	Customized		
Screen Size	Customized		
Viewing Distance	0 ~ 600m		
Viewing Angle	B4, B6 (±15° horizontal & -10° vertical down)		
Input Voltage	12VDC (24VDC is available)		
Ingress Protection Class	IP56		
Working Temperature	-25C ~ +60C		



# Arrow Board

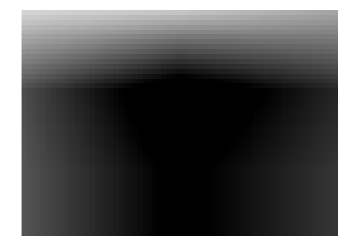
Chainzone's arrow boards have been designed and built to meet various international standards. Being very simple and compact in structure, easy and convenient in operation, Chainzone's arrow boards are widely used in China, the U.S.A, England, Australia, New-Zealand, Qatar, Singapore, Brazil, Iran, Ireland, etc.



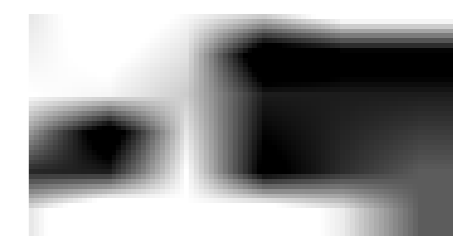
## Features and Function

- Ultra-bright TS LEDs with uniform and penetrating brightness
- Viewing Distance: 0 ~ 1000m
- Driven by constant current, the board has high reliability, excellent stability, slow degradation and low power consumption
- Easy to operate with a small and compact control box for multiple indicating patterns
- Multiple power protection mechanism, lamp status detection
- Automatic brightness control
- Long working life up to 50,000 hours
- DC 12V/24V is available; solar panel is optional
- Aluminum cabinet with polycarbonate lamp shell, which has better performance
- Can be mounted to all kinds of constructing vehicles, trucks or trailers
- With touch-screen handheld controller

## Arrow Board Handheld Controller



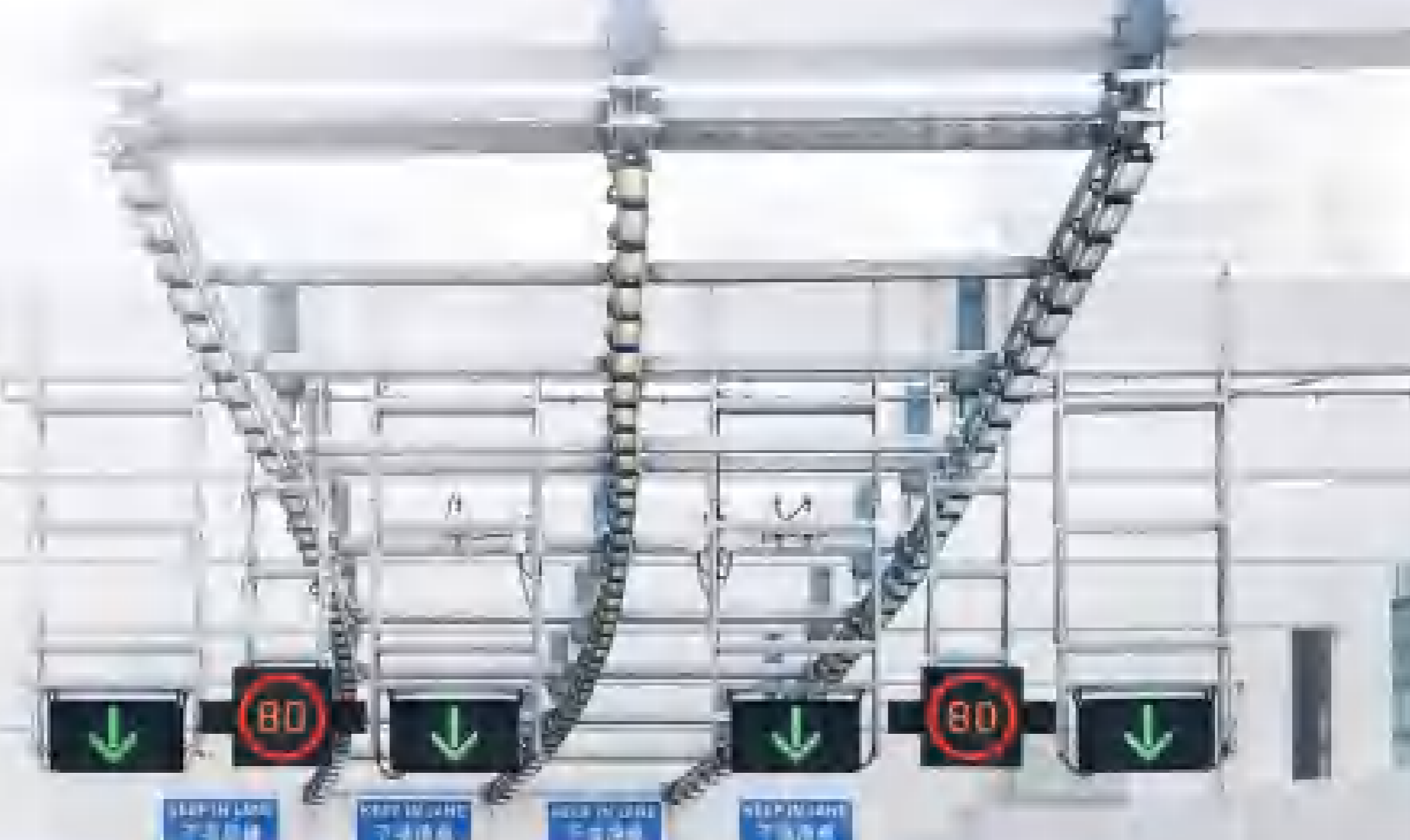
## Connection of the Arrow Board



## Specification

Model	Number of lights	Diameter of Optional LED Heads (mm)	Cabinet Dimension		Working Voltage
			Height	Width	
DXP-Type A	13	100mm	650mm	1260mm	12V (10.5~15V) or 24V (22~28V)
DXP-Type B	15	100mm	750mm	1500mm	
DXP-Type C	17	138mm	1220mm	2440mm	
KSB-72X36TS25L	25	138mm	914mm	1828mm	

# 03 Lane Sign Series



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

Control Center

Cases

# Lane Control Signal (LCS)

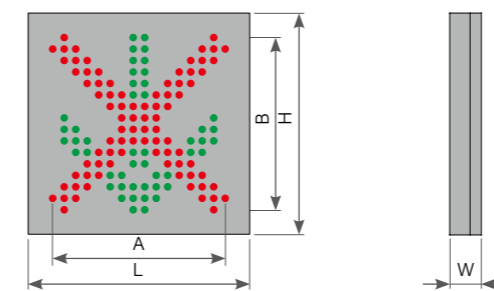


## Application

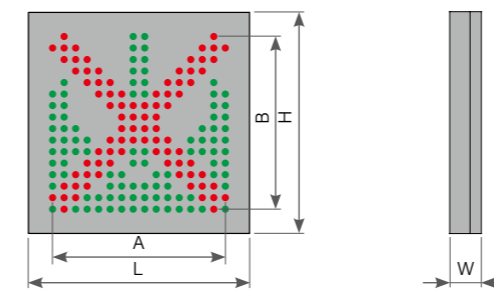
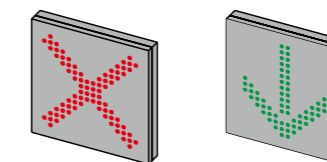
Lane Control Signals are widely used at highways, toll gates, and tunnels to direct vehicles passing through the lanes safely.

## Feature

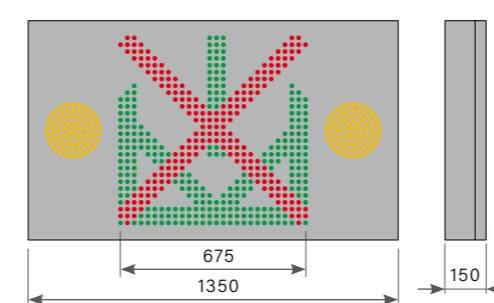
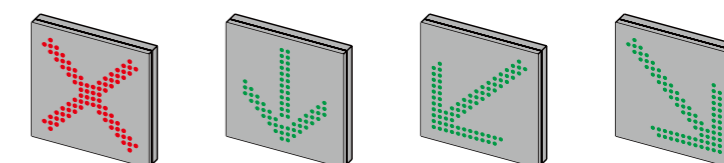
- **High reliability**  
SMD LED + optical lens is much more reliable than exposed DIP LED
- **Energy-efficient**  
SMD + optical lens technology reduces power consumption by approximately 50% compared to DIP LED + louver design
- **High Contrast Ratio**  
Under sunny and snowy conditions, SMD + Optical lens technology delivers much clearer road information to the drivers than the DIP LED + Visor design or DIP LED + PC design
- **Excellent Optical Performance**  
Chainzone's Lane Control Signals achieve the highest optical performance of EN12966 standard: L3 / L3(\*) / L3(T), R3, C2, B1-B7
- **IP56 and IP65**  
The housings of the Lane Control Signals are fully welded with an internal stiffener. It ensures no water can enter into the housing.
- **Lighter Weight and Anti-rust**  
The housings of Lane Control Signals are made of aluminum, while stainless steel is optional



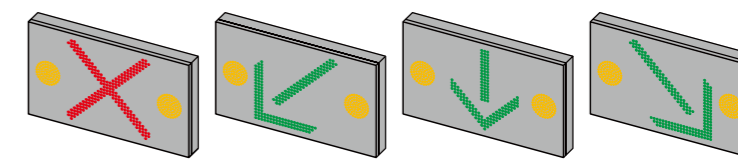
LCS-XXXA



LCS-XXXB



LCS-1350C



## Specification

Model	LCS-400A	LCS-400B	LCS-500A	LCS-500B	LCS-600A	LCS-600B	LCS-800A	LCS-800B	LCS-1000A	LCS-1000B	LCS-1350C
Housing Size (WxHxD) (mm)	400x400x100		500x500x100		600x600x100		800x800x100		1000x1000x100		1350x800x150
Display Size (AxB) (mm)	288x288		375x375		468.75x468.75		675x675		843.75x843.75		675x675
Pixel Pitch	16mm		25mm		31.25mm		25mm		31.25mm		25mm
Display	Red X, Green / Amber ↙ ↓ ↘										
Enclosure Material	Aluminum										
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)										
LED Type	SMD LEDs with Optical Lens										
Power Supply	90 ~ 260VAC (50/60Hz), 12/24 VDC										
Optical Performance	EN12966 (L3 / L3(*) / L3(T), R3, C2, B6)										
Communication	RS232 / RS485 / Ethernet Via RJ45 / Optic Fiber										
Protocol	NTCIP 1203 / MODBUS / J1587 / Profibus										
Control Mode	I/O Control (Dry Contact optional) / Protocol Control										
Working Temperature	T1 (-15°C ~ +60°C), T2 (-25°C ~ +55°C), T3 (-40°C ~ +40°C)										
Ingress Protection Class	IP56, IP65, IP66										

# Speed Limit Sign (SLS)



## Application

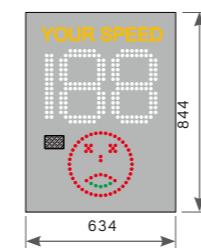
Speed Limit Signs are used to define the speeds for vehicles on public roads, and are one of the measures available to control traffic speeds. They usually are mounted at the school area, lanes, highways and tunnels.

## Specification

Model	SLS-844x634	SLS-950x656	SLS-1050x656	SLS-1080x787	SLS-600A	SLS-600B	SLS-800A	SLS-800B
Housing Size (WxHxD) (mm)	844x634x100	950x656x100	1050x656x100	1080x787x100	600x600x100		800x800x100	
Ring Diameter (R) (mm)	288x288	375x375	468.75x468.75	675x675	843.75x843.75		675x675	
Pitch Size	16mm	16mm	20mm	16mm	12mm		16mm	
Display	White / Amber Characters with Red Ring (Can be Customized)							
Enclosure Material	Aluminum							
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)							
LED Type	SMD LEDs with Optical Lens							
Power Supply	90 ~ 260VAC (50/60Hz), 12/24 VDC							
Optical Performance	EN12966 (L3 / L3(*) / L3(T), R3, C2, B6)							
Communication	RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber							
Protocol	NTCIP 1203 / MODBUS / Jetfilell / Profibus							
Control Mode	I/O Control (Dry Contact optional) / Protocol Control							
Working Temperature	T1 (-15°C ~ +60°C), T2 (-25°C ~ +55°C), T3 (-40°C ~ +40°C)							
Ingress Protection Class	IP56, IP65, IP66							



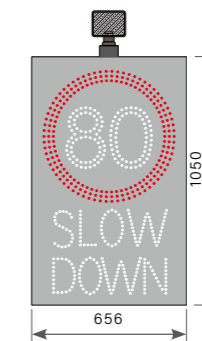
## Selections



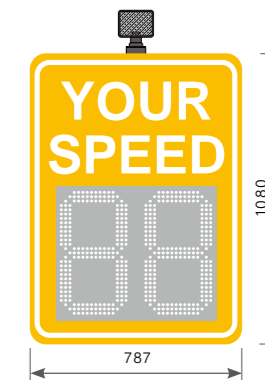
SLS-844x634



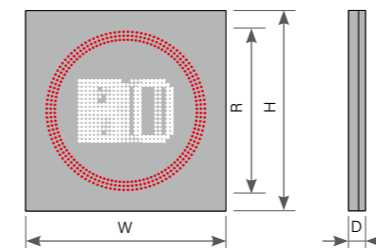
SLS-950x656



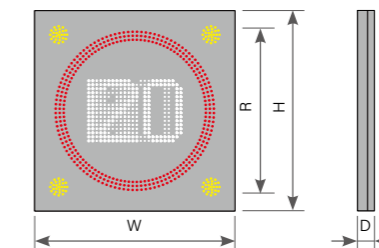
SLS-1050x656



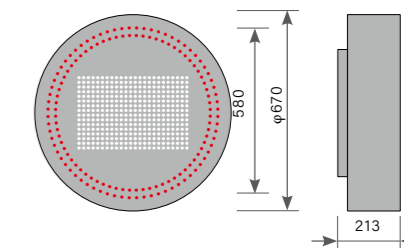
SLS-1080x787



SLS-XXXX



SLS-XXXB



SLS-DXXX

## Feature

- Enhanced reliability**  
SMD LED + optical lens is more reliable than exposed DIP LED
- Lower Power Consumption**  
SMD + optical lens technology reduces power consumption by approximately 50% compared to DIP LED + visor design
- High Contrast Ratio**  
Under the strong sun or large amounts of snow, SMD + Optical lens technology delivers much clearer road information to the drivers than the DIP LED + PC designs
- Excellent Optical Performance**  
Chainzone's Speed Limit Signs achieve the highest optical performance of EN12966 standard: L3 / L3(\*) / L3(T), R3, C2, B1-B7
- Outstanding Water-proof Performance: IP56 and IP65**
- Lighter and anti-rust properties**  
All Speed Limit Sign housing are made of aluminum, while stainless steel is optional
- Speed Detection**  
Radar inside or outside the housing

SLS-900A	SLS-900B	SLS-1000A	SLS-1000B	SLS-1050A	SLS-1050B	SLS-1360A	SLS-1360B	SLS-D540	SLS-D670	SLS-D880	SLS-D1160
900x900x100		1000x1000x100		1050x1050x100		1360x1360x180		Φ540x213	Φ670x213	Φ880x213	Φ1160x213
720		790		900		1200		455	580	790	1030
20mm		20mm		20mm		20mm		12mm	12mm	20mm	20mm

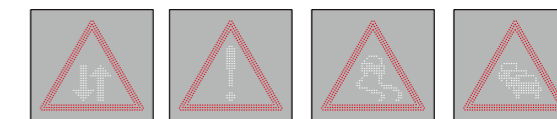
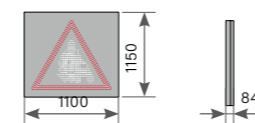
White / Amber Characters with Red Ring (Can be Customized)											
Aluminum											
Powder Coated, Matte Black (Other Colors Available)											
SMD LEDs with Optical Lens											
90 ~ 260VAC (50/60Hz), 12/24 VDC											
EN12966 (L3 / L3(*) / L3(T), R3, C2, B6)											
RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber											
NTCIP 1203 / MODBUS / Jetfilell / Profibus											
I/O Control (Dry Contact optional) / Protocol Control											
T1 (-15°C ~ +60°C), T2 (-25°C ~ +55°C), T3 (-40°C ~ +40°C)											
IP56, IP65, IP66											

# Multiple Lane Sign (MLS)

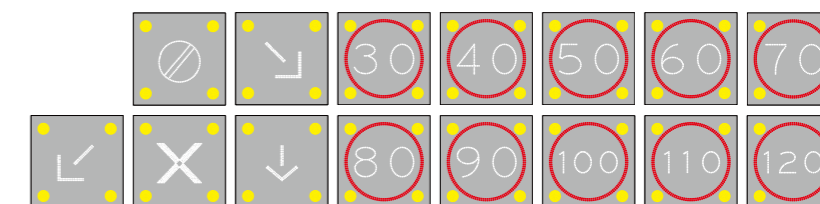
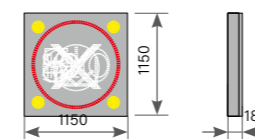


## Multiple Lane Sign

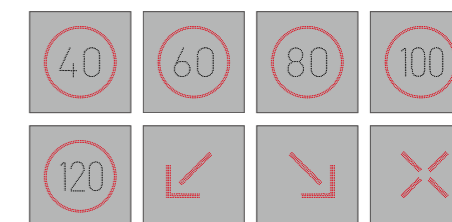
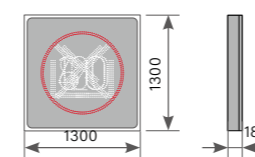
MLS-1000X1000



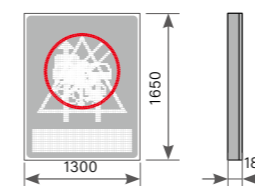
MLS-1150X1150



MLS-1300X1300



MLS-1650X1300

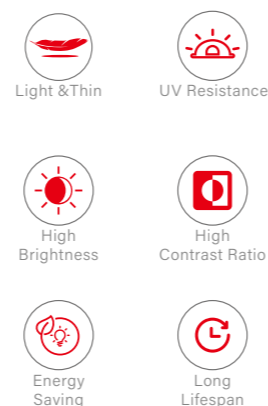


## Application

Multiple Lane Signs usually contain multiple traffic symbols to provide traffic safety information to road users. They are widely used as danger signs, warning signs, etc. and are mounted on public roads, highways, and tunnels.

## Feature

- Enhanced reliability**  
SMD LED + optical lens is more reliable than exposed DIP LED
- Lower Power Consumption**  
SMD + optical lens technology reduces power consumption by approximately 50% compared to DIP LED + visor design
- High Contrast Ratio**  
Under the strong sun or large amounts of snow, SMD + Optical lens technology delivers much clearer road information to the drivers than the DIP LED + PC design
- Excellent Optical Performance**  
Chainzone's Multiple Lane Signs achieve the highest optical performance of EN12966 standard: L3 / L3\* / L3 (T), R3, C2, B1-B7
- Water-proof Ingress Protection: IP56 and IP65**
- Lighter Weight and Anti-rust**  
All multiple lane sign housing is made of aluminum, while stainless steel is optional



## Specification

Model	MLS-1000x1000	MLS-1150x1150	MLS-1300x1300	MLS-1650x1300
Housing Size (WxHxD) (mm)	1000x1000x100	1150x1150x180	1300x1300x180	1650x1300x180
Ring Diameter (R) (mm)		970	850	850
Triangle Length (mm)	840			985
Pitch Size (mm)	20	20	20	20
Display	Red x, Green / Amber ↙ ↓ ↘			
Enclosure Materia	Aluminum			
Enclosure Surface	Powder Coated, Matte Black (Other Colors Available)			
LED Type	SMD LEDs with Optical Lens			
Power Supply	90 ~ 260VAC (50/60Hz), 12/24 VDC			
Optical Performance	EN12966 (L3 / L3(*) / L3(T), R3, C2, B6)			
Protocol	NTCIP 1203 / MODBUS / JetfileII / Profibus			
Communication	RS232 / RS485 / Ethernet Via RJ45 / Optic Fiber			
Control Mode	I/O Control (Dry Contact optional) / Protocol Control			
Working Temperature	T1 (-15°C ~ +60°C), T2 (-25°C ~ +55°C), T3 (-40°C ~ +40°C)			
Ingress Protection Class	IP56, IP65, IP66			

# Passenger Information Sign (PIS) Series

Company

Fixed VMS

Mobile VMS

Lane Sign

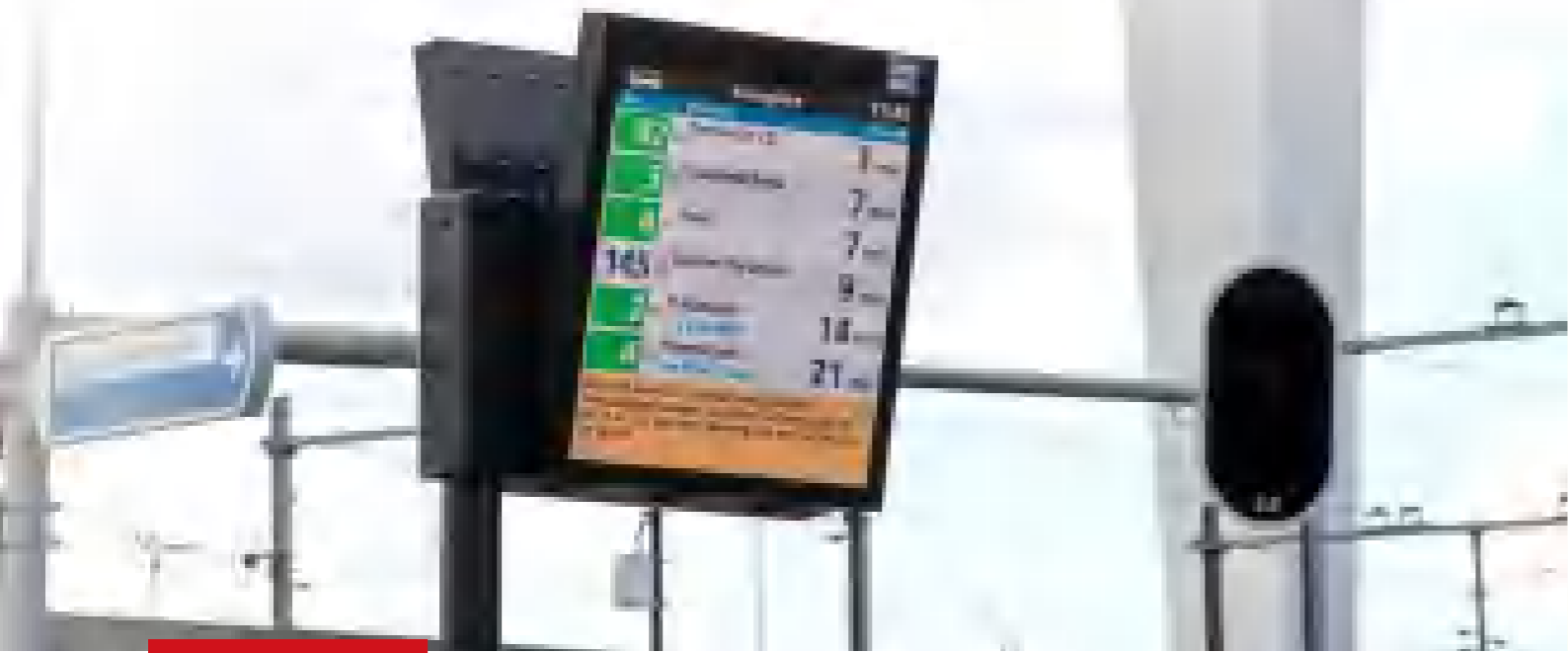
PIS

Traffic Signal

Control Center

Cases

# Passenger Information Sign Type A



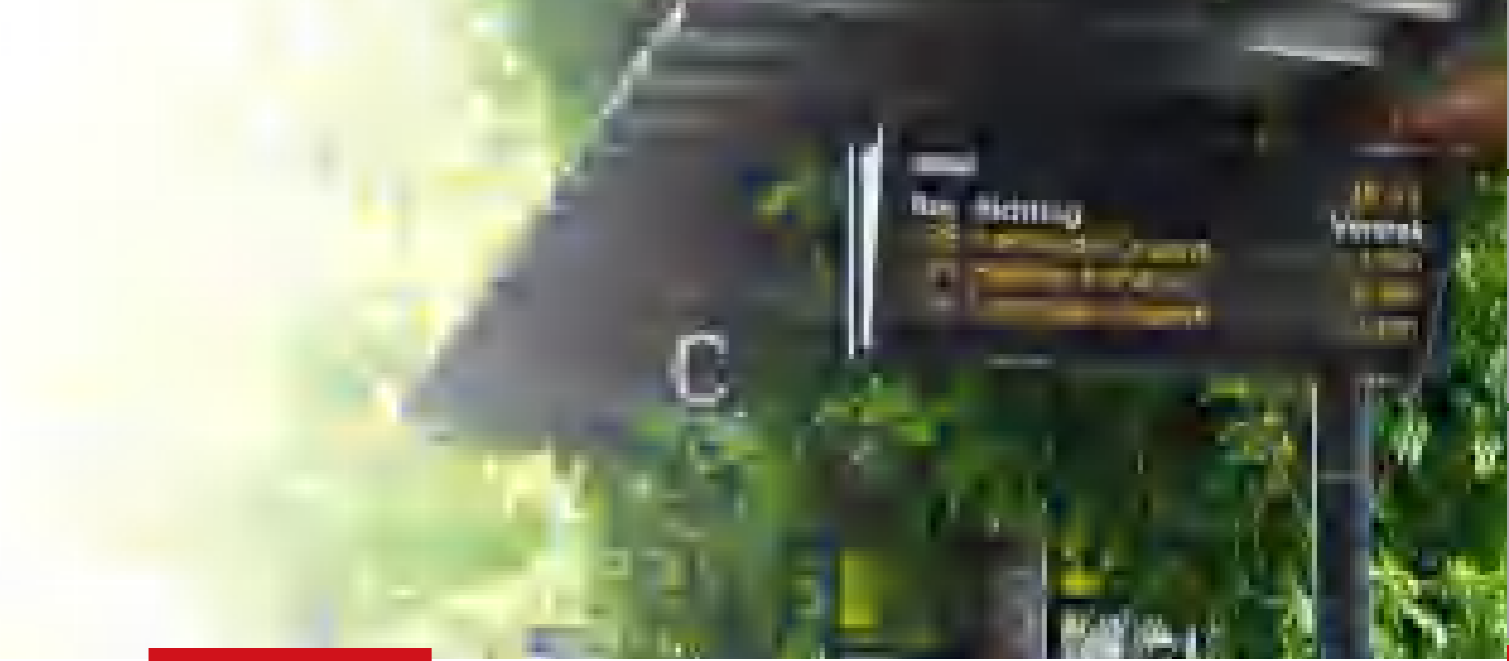
## Feature

- Modular design for easy maintenance
- Surface aluminum powder coated according to RAL (optional stainless steel)
- Customized mounting brackets available for any shelter
- Easy secondary development with embedded X Windows toolkit
- Maintenance completed by single personnel

## Specification

Model	PIS-6
Pixel Pitch (mm)	6
Module Resolution (HxW)	16x23
Module Size (HxW) (mm)	96x193
Font Height (mm)	43
Reading Distance (m)	30~33
Viewing Angle	150° (110° for 50% luminance Angle)
LED	3-in-1 SMD LED
Color	Full Color / Single Color
Luminance	> 5000 cd/m <sup>2</sup>
Working Temperature	-20°C ~ +45°C
Ingress Protection Class	IP65
Brightness Control	Automatic / Manual / Schedule
Power Supply	90 ~ 260VAC (50/60Hz)
Detection	Temperature, Humidity, Impact, Door-opened, Pixel Error

# Passenger Information Sign Type B



## Feature

- Debian GNU/Linux 10 (Buster), Lxde graphic desk is embedded inside the controller. Standard Xlib can control the screen.
- SDK and demo source are provided for easy development.
- The software package is preinstalled, like vsftpd, ssh, vnc, gcc, etc. More software can be installed via "apt-get install".
- Complete API is provided for access to hardware resources, such as RS232, RS485, GPIO, Audio, sensors, etc.
- VNC remote desk login is available. PC and cell phone can check the status of the sign, which will facilitate the development.
- The clone function is available to enable quick copy to all the PIS controllers.

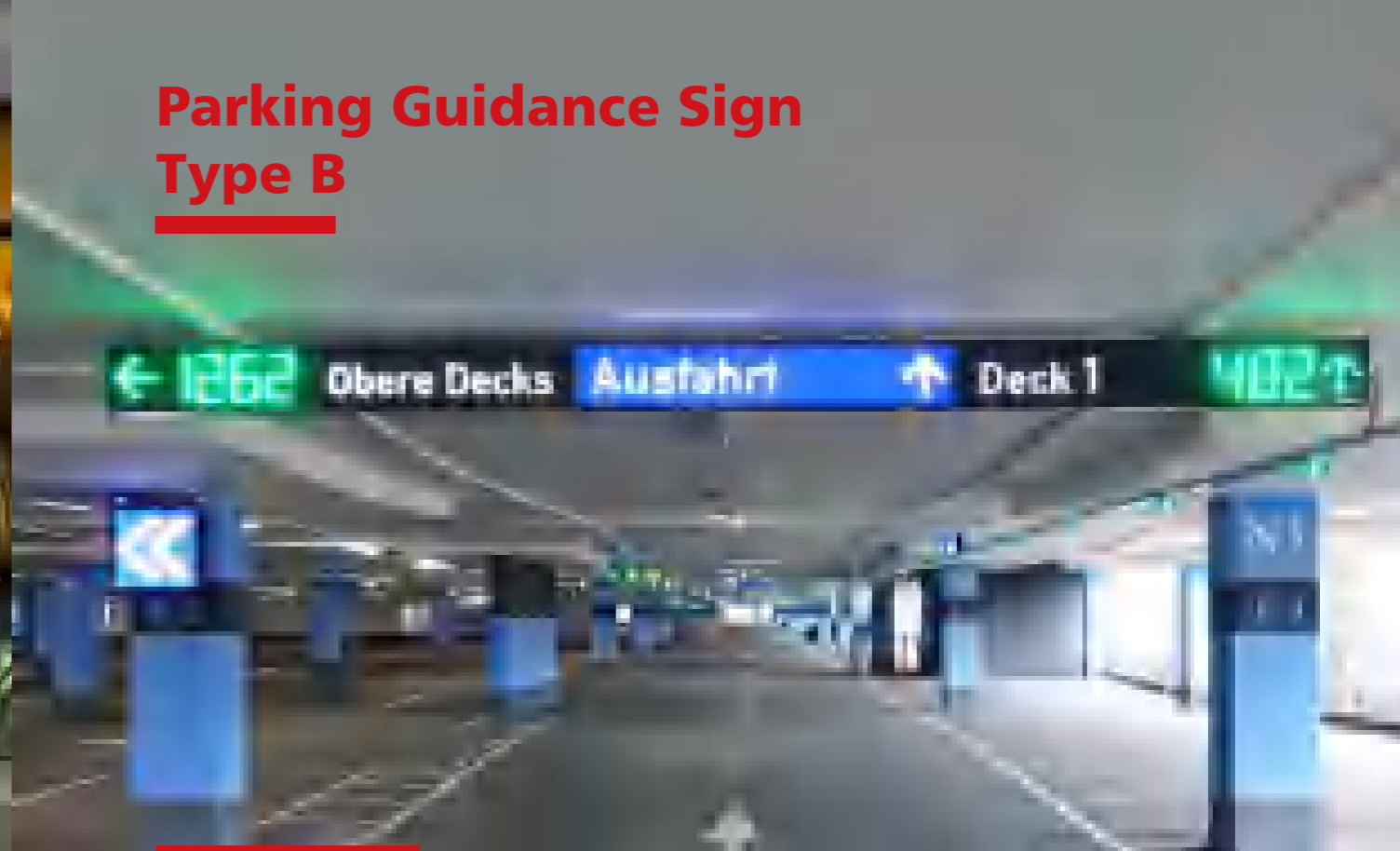
## Specification

Model	PIS-5
Pixel Pitch (mm)	5
Module Resolution (HxW)	9x42
Module Size (HxW) (mm)	45x210
Font Height (mm)	35
Reading Distance (m)	16~18
Distance Between Lines (mm)	11.5
Viewing Angle	150° (110° for 50% luminance Angle)
LED	3-in-1 SMD LED
Color	Single Color / Full Color
Luminance	> 5000 cd/m <sup>2</sup>
Working Temperature	-20°C ~ +45°C
Ingress Protection Class	IP55
Brightness Control	Automatic / Manual / Schedule
Power Supply	90 ~ 260VAC (50/60Hz)
Detection	Temperature, Humidity, Impact, Door-opened, Pixel Error

## Parking Guidance Sign Type A



## Parking Guidance Sign Type B

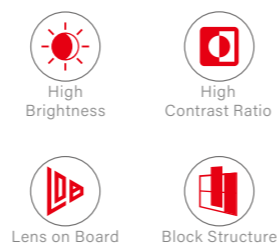


### Introduction

Parking guidance sign is used for both indoor and outdoor parking lot. As part of the parking guidance system, it can provide information on distance, direction, available space, instruction, etc. to parking users.

### Feature

- Modular design with flexible extension to different sizes.
- Smart structure for easy maintenance. High brightness and waterproof cabinet, suitable for both indoor and outdoor applications.
- Full color LED, various animations are available.
- Standard module and cabinet for easy storage.



### Specification

Model	PIS-8			
Pixel Pitch (mm)	8			
Type	Size A	Size B	Size C	Size D
Display Resolution (HxW)	16x32	32x32	16x64	16x96
Display Area (HxW) (mm)	128x256	256x256	128x512	128x768
LED	3-in-1 SMD LED			
Color	Full Color			
Brightness	>5000 cd/m <sup>2</sup>			
Maintenance	Front Open Door Access			
Power Supply	12 ~ 36VDC			
Ingress Protection Class	IP65			
Communication	RS232 / RS485, Ethernet			
Optional	Light Sensor, Wi-Fi, Modem, etc.			

### Introduction

As the nerve center of intelligent parking guidance systems, our LED signs deliver reliable performance both indoors and outdoors. They transform real-time parking space data into vital driver guidance information, ensuring efficient and accurate parking.



### Specification

Model	PIS-10	PIS-12
Pixel Pitch (mm)	10	12
Display Resolution (HxW)	12x48	16x48
Display Area (HxW) mm	120x480	192x576
Luminance	Red > 3100 cd/m <sup>2</sup> , Green > 3720 cd/m <sup>2</sup> , Yellow > 7440 cd/m <sup>2</sup> , White > 12400 cd/m <sup>2</sup>	
Viewing Angle	<b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down)	
LED	3-in-1 SMD LED	
Color	Full Color	
Number of Lines	1 ~ 5 lines	
Cabinet Size (HxW) mm	470 / 640 / 810 / 980 / 1150 x 1300	
Enclosure Material	Aluminum	
Enclosure Surface	Powder Coated, Matte Blank (Other colors available)	
Power Supply	90 ~ 260VAC (50/60Hz)	
Ingress Protection Class	IP65	
Certification	EN12966	
Brightness control	Automatic / Manual / Schedule	

### Feature

- Compliant to EN12966 standards
- Strong and elegant housing.
- Smart optical design for high brightness, high contrast ratio with low power consumption.
- Full-color SMD LED, long lifespan.
- IP65

# Smart Lighting Pole



## Feature

- Product modular design. Easy for installation and maintenance. Support global standard 4G and 5G communication.
- Fast information transmit-recvie, supporting video, animation, and pictures.
- Asynchronous/synchronous broadcast with high-definition effect.
- The intelligent cloud-based control system enables online displaying, creating a digital interactive community and bringing citizens convenient access to information.
- Widely used in urban roads, pedestrian streets, plazas, communities and other places.



High Brightness



High Contrast Ratio



Lens on Board

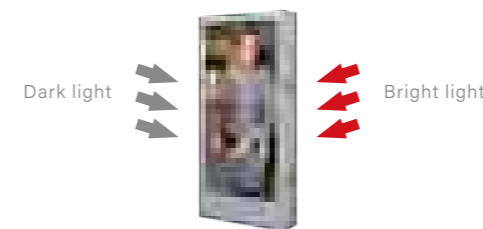


Block Structure



## Brightness Automatic Adjustment

The brightness of the screen can be automatically adjusted with the brightness of the outside light, It's the best choice for energy-saving screens in smart cities.



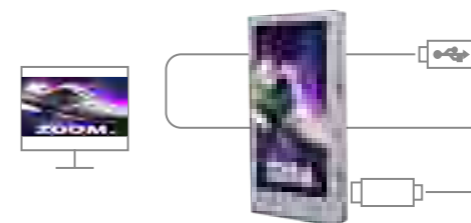
## Remote Control

It can be remotely controlled via 3G/4G/Wi-Fi/USB, and the content is released, cut-in, and updated with one click. Simple, fast and smart.



## Seamless Switching

Synchronized display, no delay, seamless program switching, and the running status of the screen can be monitored in the background.



## Specification

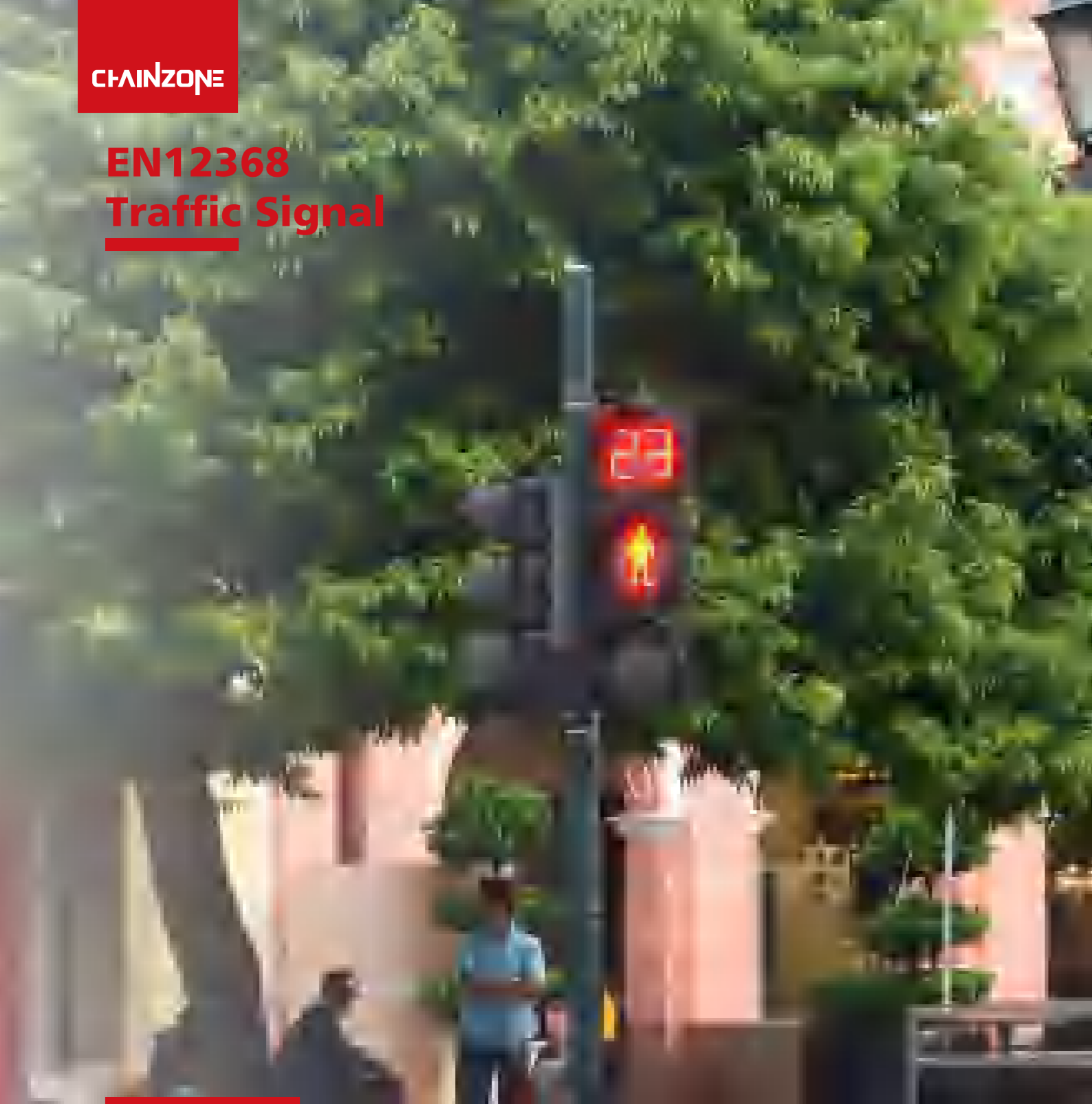
Smart Lighting Pole			
Model	SLP-2.5	SLP-3	SLP-4
Pixel Pitch (mm)	2.5	3	4
Module Resolution (pixels)	64x64	64x64	40x80
Size of Module (mm) (HxW)	160x160	192x192	160x320
Optical Characteristics			
LED Type	3 in 1 SMD LED		
Luminance	> 5000 cd/m <sup>2</sup>		
Color	Full Color		
Viewing Angle	120° / 120°		
Brightness Control	Automatic (with 16 levels of brightness; visibility does not decrease in sunlight; anti-glare at night)		
Physical Characteristics			
Cabinet	Customizable Size		
Working Temperature	-30°C ~ +60°C		
Ingress Protection Class	IP55		
Visual distance (m)	3 ~ 45		
Electrical Specifications			
Power Supply	90 ~ 260VAC (50/60Hz)		
Communication	RS232 / RS485 / Ethernet Via RJ45 / Wi-Fi / GPRS / 3G / 4G / 5G / Optic Fiber		
Life Cycle	75,000 ~ 100,000 hours		

05

# Traffic Signal Series

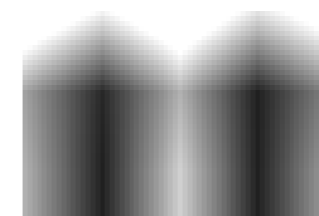


# EN12368 Traffic Signal



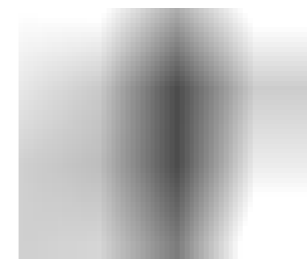
## LED Pedestrian Light Counter

Diameter: 200mm / 300mm  
 Quantity of LEDs: 84 pcs for countdown timer  
 88 pcs for running man  
 Display Color: Red and Green  
 Power Supply: 85 ~ 265VAC (50/60Hz)  
 Power Consumption: ≤10W  
 Housing: Polycarbonate



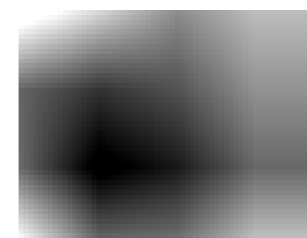
## LED Yellow Flash Light

Model: JXM-Y1-V  
 Diameter: 300mm / 400mm  
 Light Source: 4 element Ultra-Bright TS LED  
 Quantity of LEDs: 104 pcs  
 Display Color: Amber  
 Wavelength: 590 ~ 595nm  
 Power Supply: 12VDC  
 Max Power Consumption: 8W  
 Solar Panel: 10W  
 Battery specifications: 12V 9000mAh



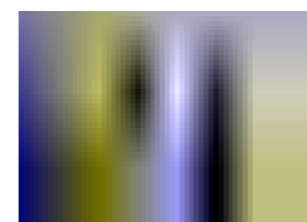
## High Flux Traffic Light

Diameter: 200mm / 300mm / 400mm  
 Power Consumption: ≤10W  
 Quantity of LEDs:  
 Red: 6 pcs, Yellow: 6 pcs, Green: 6 pcs  
 Power Supply: 85 ~ 265VAC (50/60Hz)  
 Housing: Polycarbonate  
 Certification: EN12368



## Traffic Light with Transparent Lens

Diameter: 200mm / 300mm / 400mm  
 Power Consumption: ≤15W  
 Lens: Transparent  
 Quantity of LEDs:  
 Red: 192 pcs, Yellow: 192 pcs, Green: 168 pcs  
 Power Supply: 85 ~ 265VAC (50/60Hz)  
 Housing: Polycarbonate / Aluminum  
 Certification: EN12368



## Touchable Pedestrian Crossing Button Model:PPB-3

This is used at intersections without many pedestrians. If pedestrians do not need to cross the road, cross the road and many vehicles pass by, the pedestrian lights are always red to improve traffic flow. When there are pedestrians, the signal will turn green within a few seconds after pressing the button.

### Feature

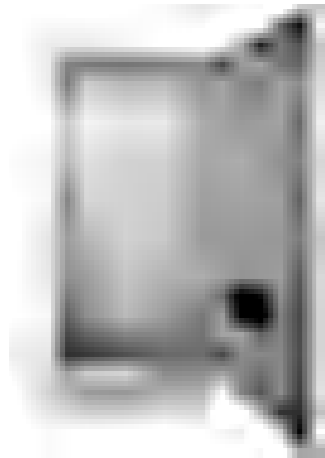
- Flame retardant, UV-resistant and high light-transmissible transparent polycarbonate lens
- Ultra-bright LED featuring a long lifespan.
- Low power consumption, saving 90% power compared with incandescent traffic lights.
- Extra thin construct design, with nice appearance, simple construction and light in weight.
- Completely waterproof with double-sealed structure.
- Simple installation and easy maintenance.
- Extremely strong housing with polycarbonate.



# Traffic Signal Controller

## TC-3500 Controller Series

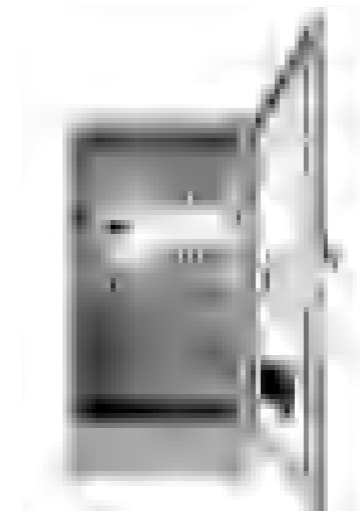
- Up to 48 outputs are supported. The panel simulates and displays the intersection signal status in real-time.
- Provides RS232, 10M / 100M Ethernet and USB communication interface mode
- Green band single point adaptive
- LCD, Chinese and English available



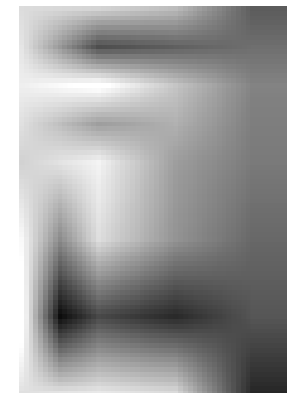
Model	TC-3500
Chassis Size (LxWxH)	600x400x1300mm
Shell Material	Powder Coated Stainless Steel
Ingress Protection Class	IP54
Working Temperature	-20°C ~ +70°C
Supply Output	110VAC / 230VAC (50/60Hz)
Resistance between Output Terminal and Grounding	>10MΩ
Power Consumption of the Whole Machine	≤ 24W
Maximum Period	32 pcs
Phase Number	16 pcs
Special Date	32 pcs
CPU	32Bit RISC Processor / 48MHz
Flash Memory	8MB
Protocol	Jetfilell
Communication	RS232 / USB / Ethernet

## TC-5000 Controller Series

- Up to 72 outputs are supported
- The panel simulates and displays intersection signal status in real time
- Provide RS232, RJ45 and USB communication interface mode
- Provide 8 groups of pedestrian key input channels
- Support GPS green band coordination function
- With side door quick control, yellow flashing, full red, manual and shutdown function panel, real-time analog display of intersection signals light status
- System self-inspection, recording fault information, including fault type, time, date and other remote networking control functions.
- Support regional adaptive coordinated control and



## TC-4000 Controller Series



- Up to 48 outputs are supported.
- Provides RS232, dual Gigabit network port communication interface mode.
- With side door quick control yellow flash, full red, manual and shutdown functions.
- 1280x800 HD 7-inch touch screen.
- Supports 4-way pedestrian crossing buttons.
- Supports GPS green band coordination function.

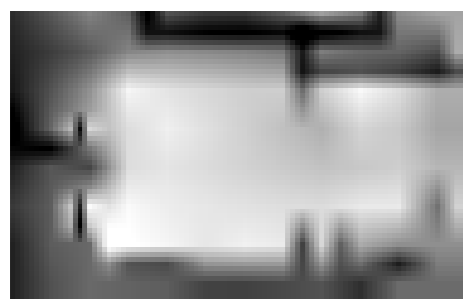
Model	TC-4000
Chassis Size (LxWxH)	600x400x1300mm
Enclosure Material	Powder Coated Stainless Steel
Ingress Protection Class	IP54
Working Temperature	-20°C ~ +70°C
Supply Output	110VAC / 230VAC (50/60Hz)
Resistance between Output Terminal and Grounding	>10MΩ
Power Consumption of the Whole Machine	≤ 24W
Maximum Period	32 pcs
Phase Number	32 pcs
Special Date	32 pcs
Pedestrian Crossing Buttons are Supported at Most	4 channels (Optional)
GPS Clock Adjustment	Support
CPU	Cortex-A8800MHz 512MB Memory and 8GB Storage Memory
Flash Memory	8MB
Protocol	Jetfilell / GBT-20999
Communication	RS232 / RS485 / Dua / Gigabit Network Port

Model	TC-5000
Chassis Size (LxWxH)	600x470x1500mm
Enclosure Material	Powder Coated Stainless Steel
Ingress Protection Class	IP54
Working Temperature	-20°C ~ +70°C
Supply Output	110VAC / 230VAC (50/60Hz)
Resistance Between Output Terminal and Grounding	>50MΩ
Power Consumption of the Whole Machine	≤ 50W
Maximum Period	32 pcs
Phase Number	32 pcs
Special Date	32 pcs
Pedestrian Crossing Buttons are Supported at Most	8 channels
GPS Clock Adjustment	Support
CPU	32Bit RISC Processor / 48MHz
Flash Memory	8MB
Protocol	Jetfilell
Communication	RS232 / RS485 / USB / Ethernet

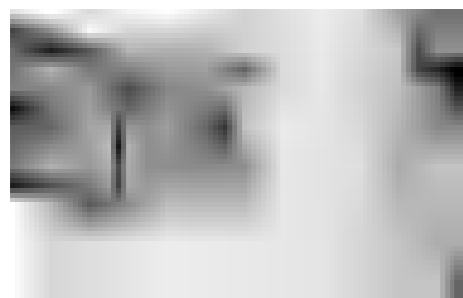
## TC-7000 Controller Series

### Feature

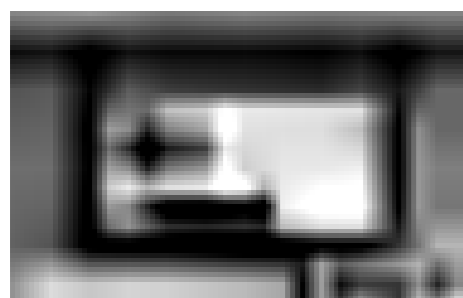
- Separated design: the main controller is separated from the signal driver modules, easier for installation, maintenance and testing
- Vehicle flow collector, pedestrian passage controller and main controller are individual modules, which can be collected according to different requirements



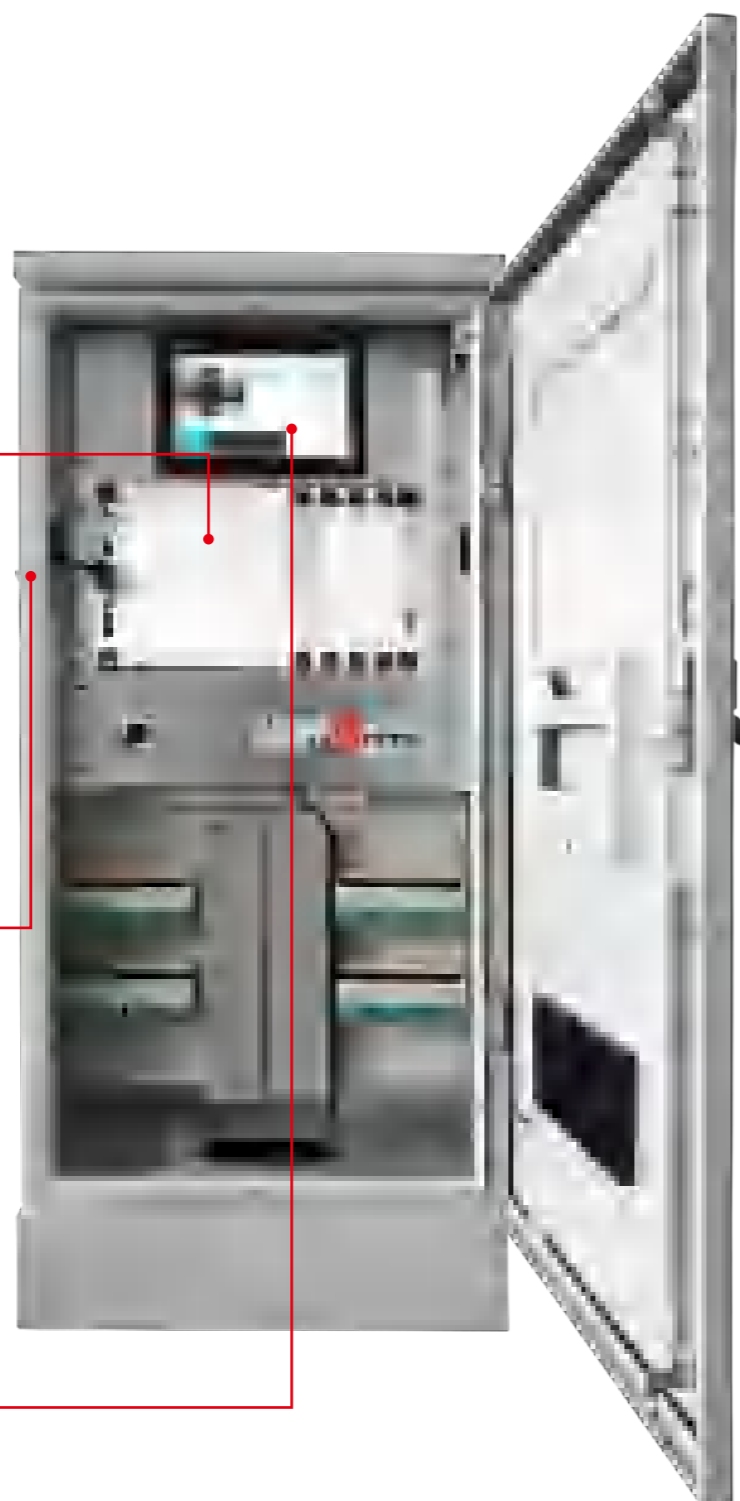
The 48 route circle traffic flow detector



Manual panel of traffic signal controller



1280x800 10-inch capacitive touch screen



## TC-7000 System

### Feature

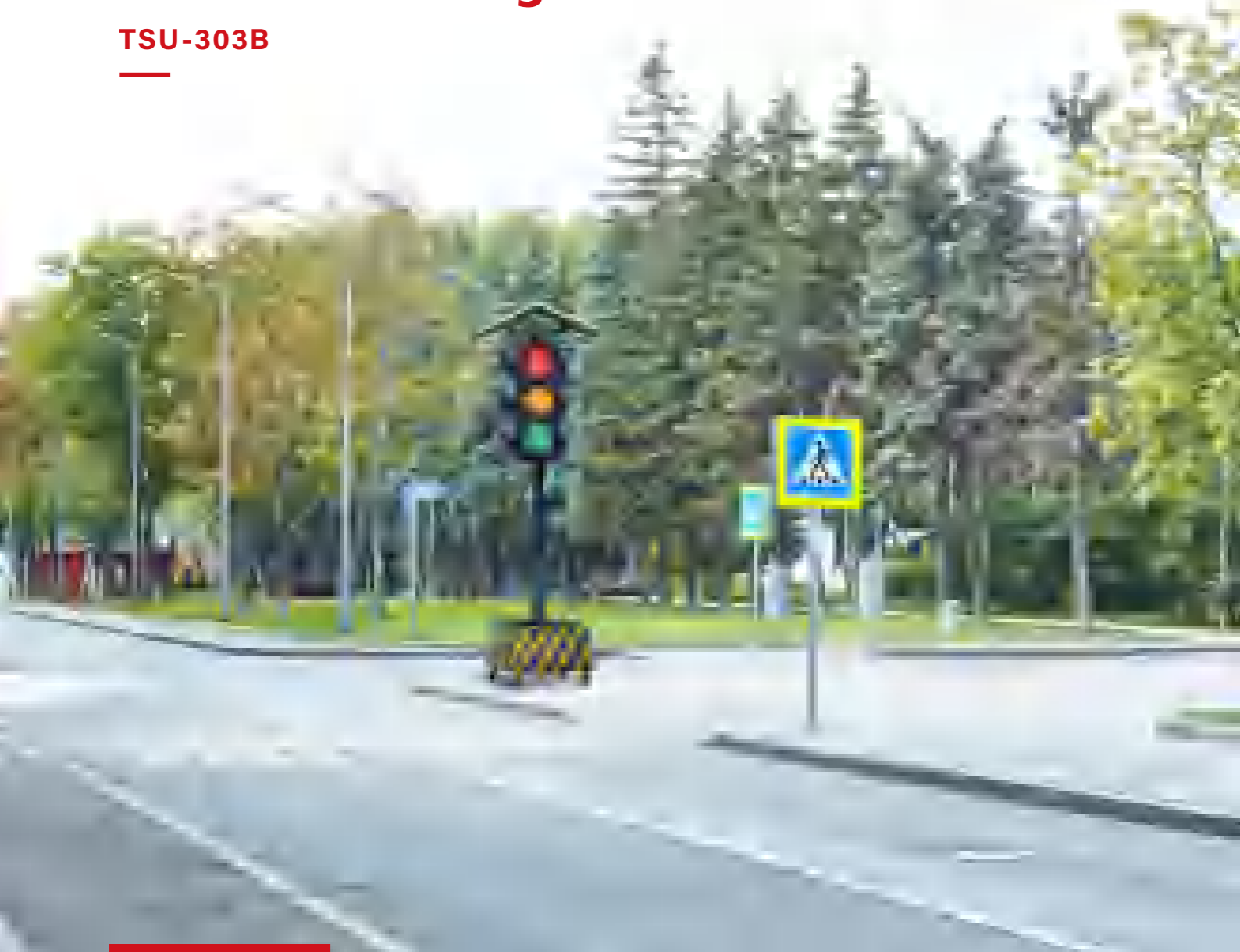
- TI ARM Cortex-A8 1G industrial processor, onboard 512MB memory and 8GB memory are adopted
- 1280x800 10-inch capacitive touch screen
- High speed and accurate signal lamp true RMS current detection technology (acquisition rate: 50 Sa/S, acquisition range: 0-1A) seamlessly realizes double gigabit network ports for signal lamp parallel open circuit detection, realizes independent access of background server and video traffic flow detection, and improves system reliability
- The 48-route circle traffic flow detector supports the detection of traffic flow, vehicle speed, vehicle type classification, headway, occupancy and other parameters
- The signal lamp driver is of modular design, with a maximum of 10 modules and 120 outputs
- The output module adopts a self-recovery fuse; In case of short circuit, it will recover automatically without replacement of the 8-way pedestrian crossing control machine
- Dual power supply design to enhance system fault tolerance
- The red and green signal light power supply is equipped with an independent switch. When the short circuit fault of the red and green signal light of the output module is detected, the power supply of the red and green signal light is automatically cut off to prevent traffic accidents
- Compatible with NTCIP communication protocol
- Design of operating system and SQL database based on Linux 4.0
- It supports parallel operation of 5 virtual intersections, and all virtual intersections have an independent time period, operation schemes and other configurations
- The second level records design and all information such as light state, current, temperature and faults every second
- GPS and NTP dual timing
- SD card data automatic backup and recovery function to quickly replace the faulty motherboard

### Specification

Module	TC-7000
Chassis Size (LxWxH)	600x470x1500mm
Enclosure Material	Powder Coated Stainless Steel
Ingress Protection Class	IP54
Work Temperature	-20°C ~ +70°C
Supply Output	110VAC / 230VAC (50/60Hz)
Main Control Panel Display Screen	1280x800 LCD Screen and Capacitive Touch Screen
Maximum Period	32 pcs
Phase Number	32 pcs
Special Date	32 pcs
Maximum Number of Signal Lamp Output Channels	120 channels
Maximum Number of Coil Type Traffic Detectors Supported	48 channels
Pedestrian Crossing Buttons are Supported at Most	8 channels
GPS Clock Adjustment	GPS and NTP Dual Timing
CPU	TI ARM® Cortex™ A8 (1GHz) Processor
Flash Memory	512MB
Protocol	Jetfilell / GBT-20999 (Design of Operating System and SQL Database Based on Linux 4.0)
Communication	RS232 / RS485 / Dual Gigabit Network Port

# Mobile Traffic Signal

## TSU-303B



### Specification

Model	TSU-303B
Dimension (mm) (LxWxH)	850x850x3000 (Fixed height, cannot be changed by lifting or lowering)
Weight	220Kg
Tire (Inch)	5"
Lifting Device	NO
Battery	12V 100Ah, 2 pcs
Solar Panel	45W / 12V, 2 pcs
AC Charger	Standard Accessory
Remote Controller	Standard Accessory

## TSU-205C

### Feature

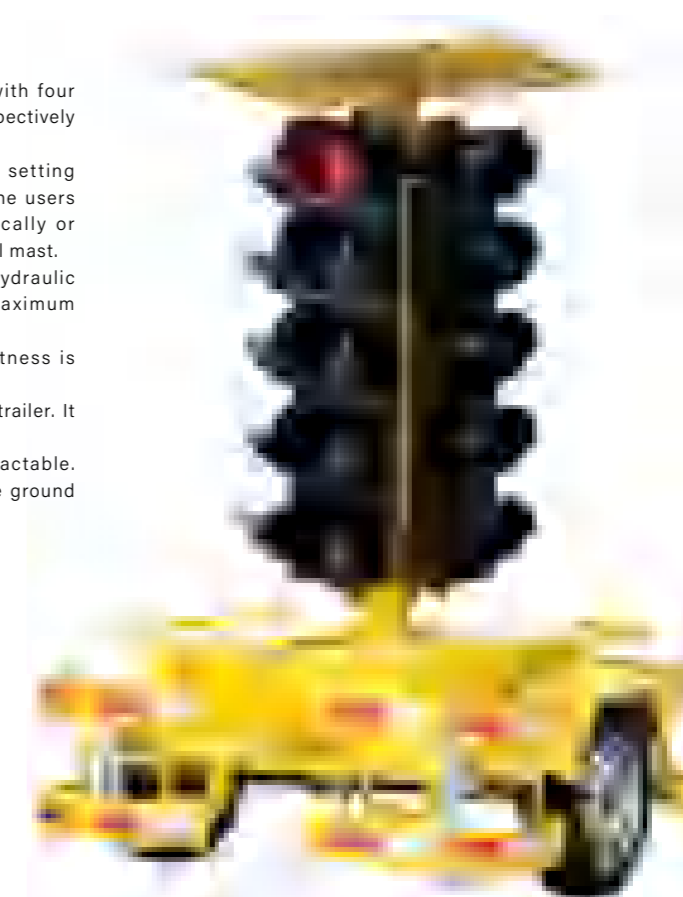
- The Solar-powered Mobile Traffic Signal Stand is built with four groups of φ200mm traffic signals facing four directions respectively and each group can comprise of up to 5 signal aspects
- The LCD monitor on the control panel with intersection setting simulating function makes site operation easy and fast. The users can use a remote controller to set the phase automatically or manually, and to lift up and lower down the LED traffic signal mast.
- The height of signals can be adjusted by the electrical hydraulic lifting system from 2200mm to 3500mm. Even at the maximum height of 3.5m, the whole system remains firmly and steady
- Auto brightness control according to the ambient brightness is available, too
- The Mobile Traffic Signal Stand is designed and built as a trailer. It can be pulled by a truck
- Both dragging arm and auxiliary support wheels are retractable. Four retractable supporting kickstands can be fixed on the ground by screws to make the system stand on the ground firmly



Hand-held remote controller



Controller



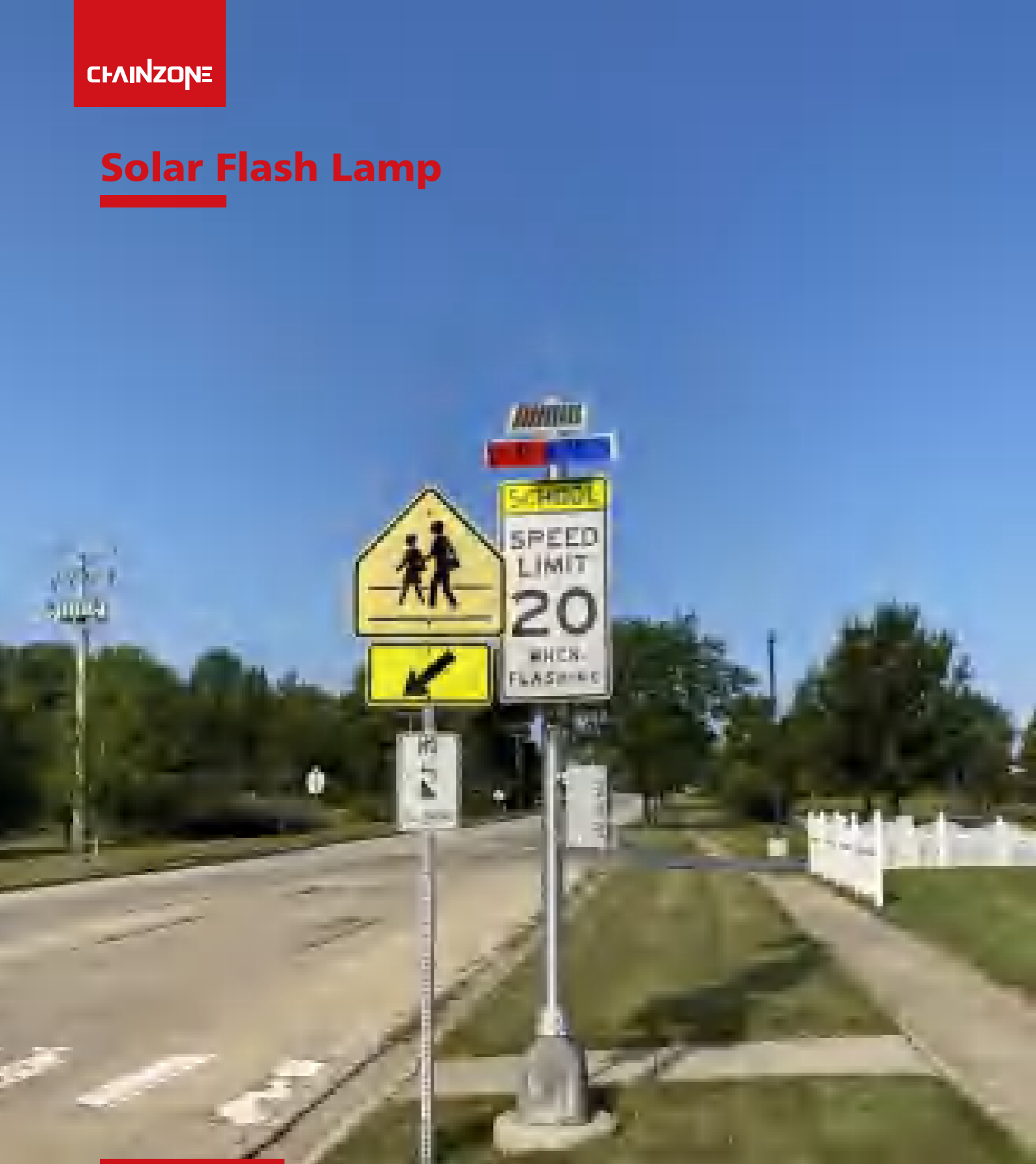
### Application

The mobile traffic signal gives clear road instructions to drivers at temporary intersections to improve road efficiency and avoid traffic jams. It is mostly used at school zones during rush hours, temporary power failure at an intersection, or intersection under construction. The mobile traffic signal with trailer can be easily used whenever and wherever with DC power. It is an efficient solution for road construction sites at a lower cost.

### Specification

Model	TSU-205C
Dimension (mm) (LxWxH)	1640x1162x2414
Maximum Height	3500mm
Weight	450Kg
Tire (Inch)	13"
Lifting Device	Hydraulic Cylinder
Battery	12V 100Ah, 2 pcs
Solar Panel	45W / 12V, 2 pcs
AC Charger	Standard Accessory
Remote Controller	Standard Accessory

# Solar Flash Lamp



## Application

Solar flash lamp is mainly used for alerting drivers and pedestrians in road sections with potential traffic safety hazards, such as intersections, curve roads, bridges, roadsides of villages, schools, residential areas, factories and other hazardous locations.



## Feature

- Solar + battery power supply can continuously operate up to 120 hours when fully charged.
- Can work 12/24 hours with stable performance, controlled by high-performance microcomputer.
- Low power consumption, multiple sealing design guarantees long waterproof life (3-5 years).
- Long visual range.

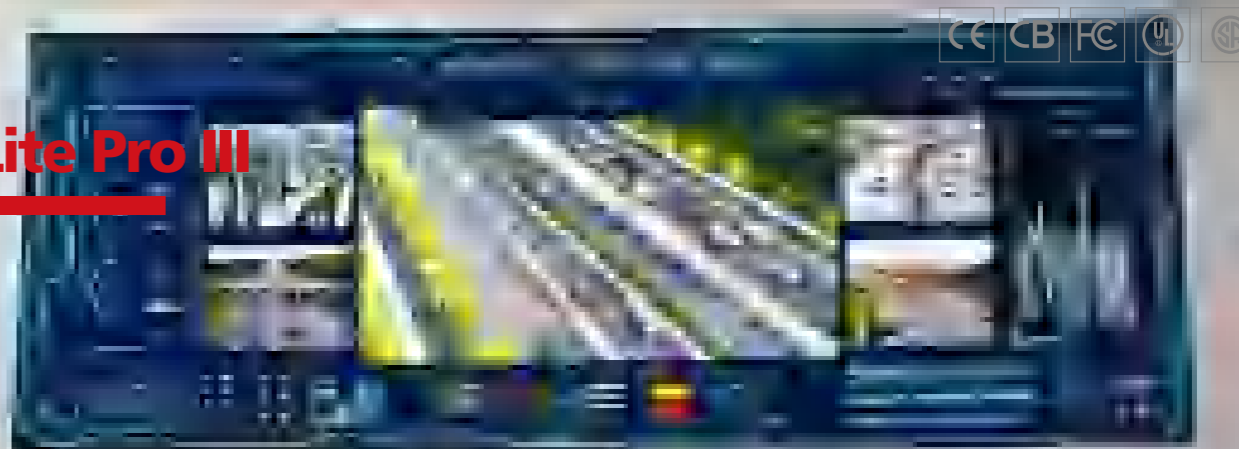
## Specification

Solar Flash Lamp	
Model	CS-SW-404B-M
Tube Pitch Diameter (mm)	80 / 100
Optical Characteristics	
Display	Red and Blue Light Flashes Alternately and Quickly
Physical Characteristics	
Enclosure Material	Aluminum, SPCC (Electrostatic Spray Outdoor White)
Working Temperature (°C)	-40°C ~ +65°C
Ingress Protection Class	IP65
Visual Distance (m)	≥1000
Electrical Specifications	
Solar Panels	12W/ 18V
Battery	12V 7Ah Maintenance-Free Lead-acid Batteries
Power Consumption	≤12W

# Control Center Series



## Lite Pro III



### Application

Lite Pro III perfectly displays image details with low brightness. Equipped with delicate color management technology and advanced image gap-covering technology guarantees its HD display effect. It can apply to video conferences, control rooms, broadcasting and TV station, etc.

### Feature

- 16:9 golden ratio cabinet
- Ultra-thin cabinet with only 32mm thickness
- High precision with die-cast aluminum cabinet
- Smart magnetic design, 100% easy front maintenance



16:9 Ratio



High contrast



Color Management



Light & Thin

### Specification

Lite Pro III Series					
Model	LPR III-0.9SF	LPR III-1.2SF	LPR III-1.5SF	LPR III-1.8SF	LPR III-2.5SF
Pixel Pitch (mm)	0.9375	1.25	1.5625	1.875	2.5
LED Type	SMD				
Module Size (mm) (H x W)	168.75x300				337.5x300
Module Resolution (pixels) (H x W)	180x320	135x240	108x192	90x160	180x160
Cabinet Size (H x W)	337.5x600				
Cabinet Resolution (pixels) (H x W)	360 x 640	270 x 480	216 x 384	180 x 320	180 x 320
Driving Voltage ①	Singal-Voltage				
Luminance ①②	600 cd/m <sup>2</sup>				
Refresh Rate (Hz)	3840				
Grey Level	14 ~ 16 bit				
Viewing Angle (H/V)	160° / 160°				
Power Consumption Max. (W/m <sup>2</sup> ) ②	400				
Power Consumption Avg. (W/m <sup>2</sup> ) ②	120				
Ingress Protection Class	IP20				
Maintenance	Front				
Weight (kg/m <sup>2</sup> )	22				
Working Temperature	-10°C ~ +40°C				
Working Humidity	10% ~ 85%RH				
Storage Temperature	-40°C ~ +70°C				
Storage Humidity	<90%RH				

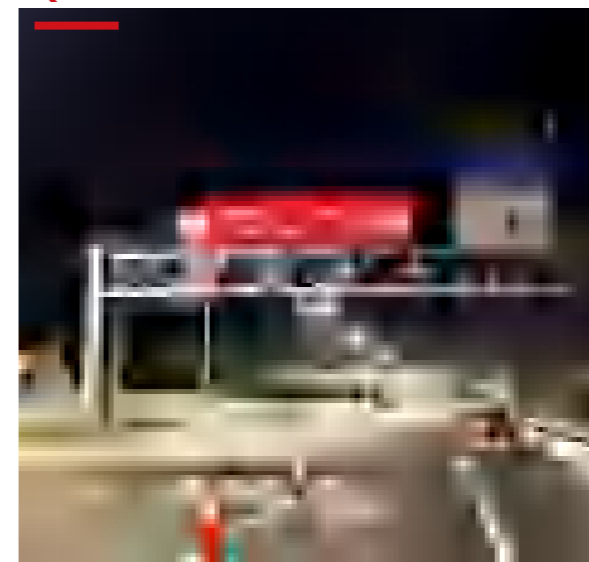
① Based on different hardware specification    ② Theoretical values only. All specifications are subject to the actual product.

# Successful Cases

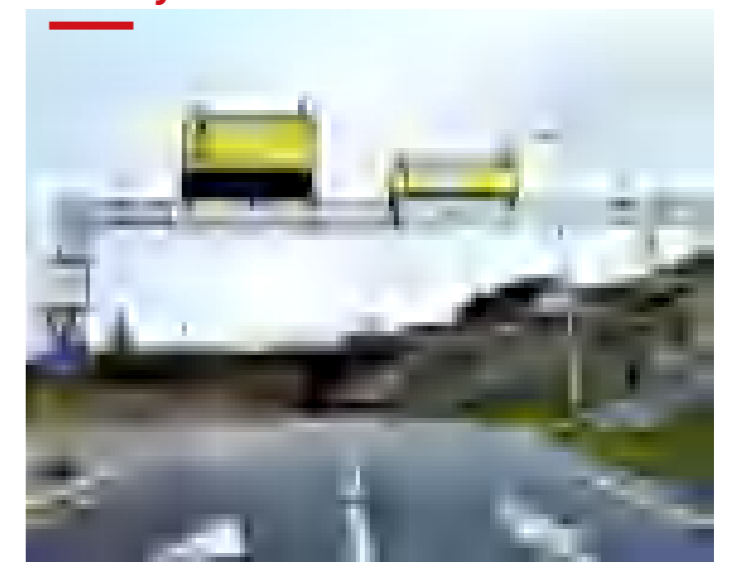
**Hong Kong-Zhuhai-Macau Bridge, Hong Kong-China**



**Qatar**



**Norway**



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

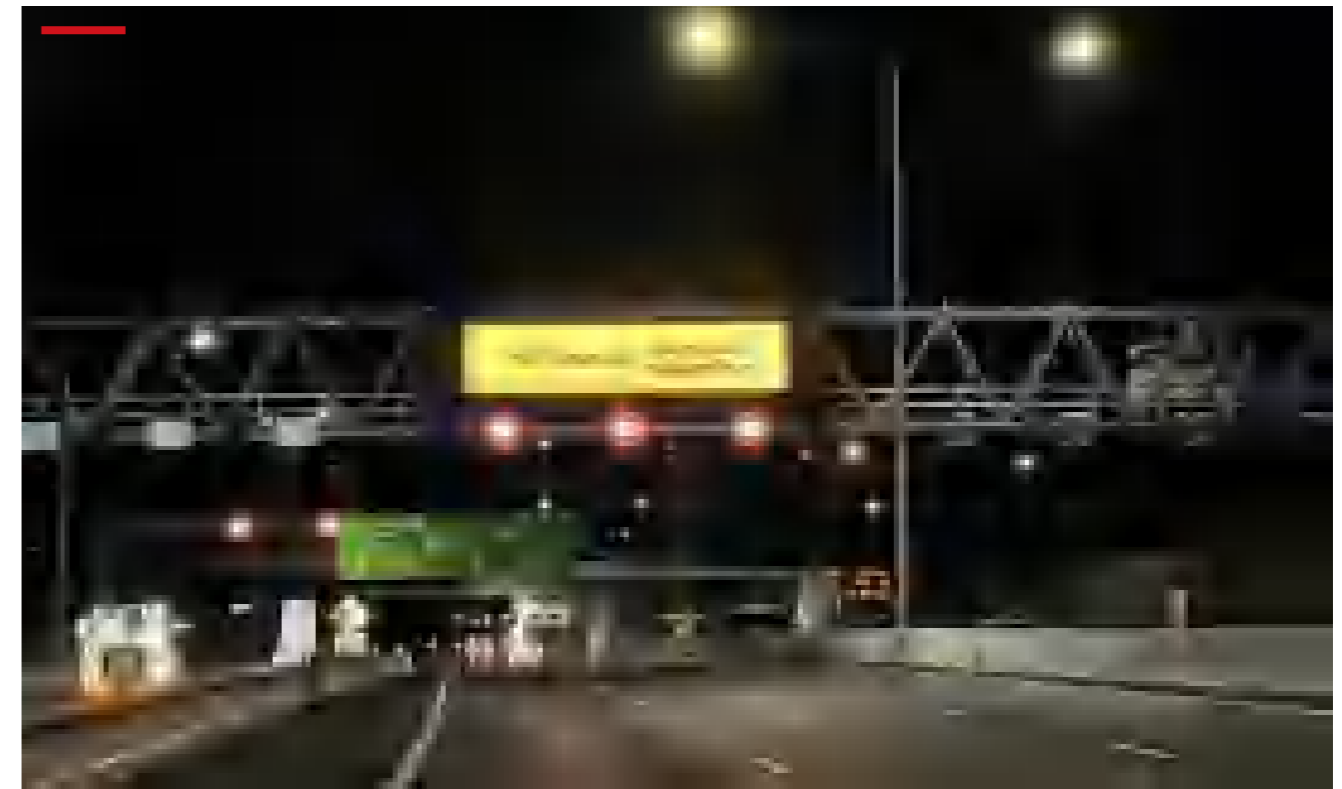
Control Center

Cases

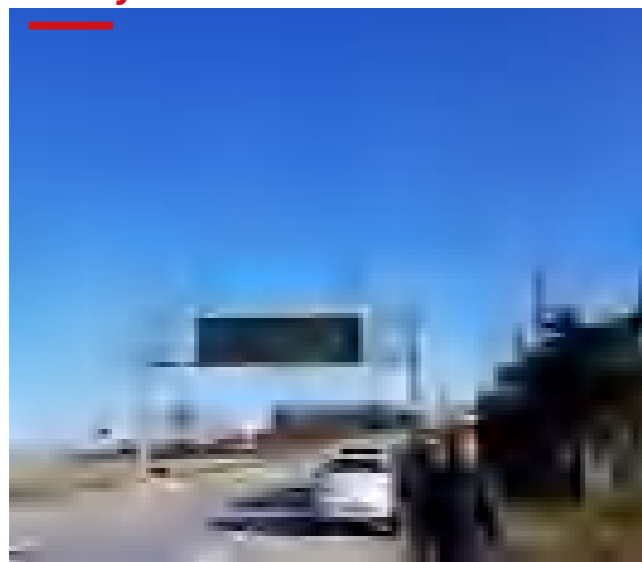
Colombia



Australia



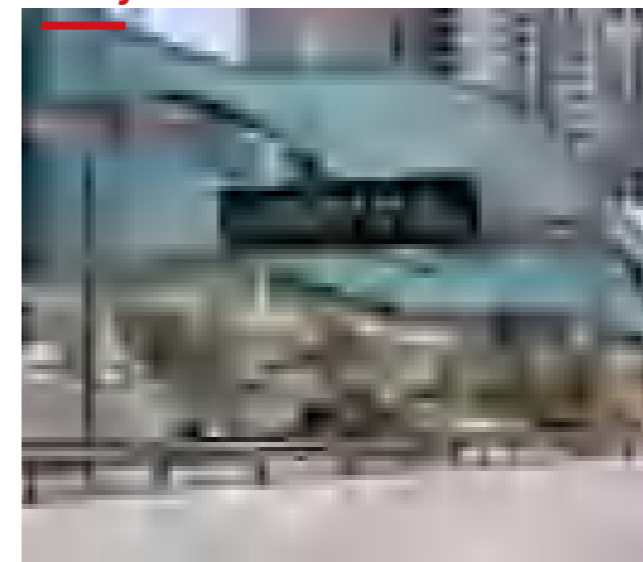
Turkey



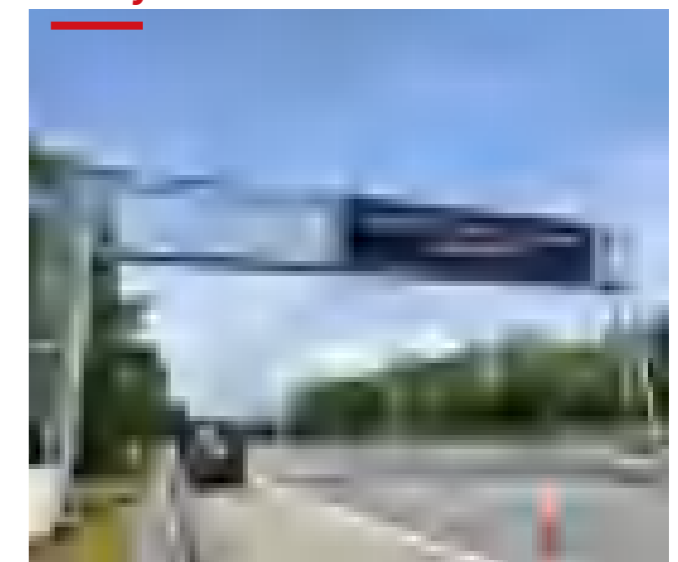
Thailand



Malaysia



Malaysia



Company

Fixed VMS

Mobile VMS

Lane Sign

PI S

Traffic Signal

Control Center

Cases

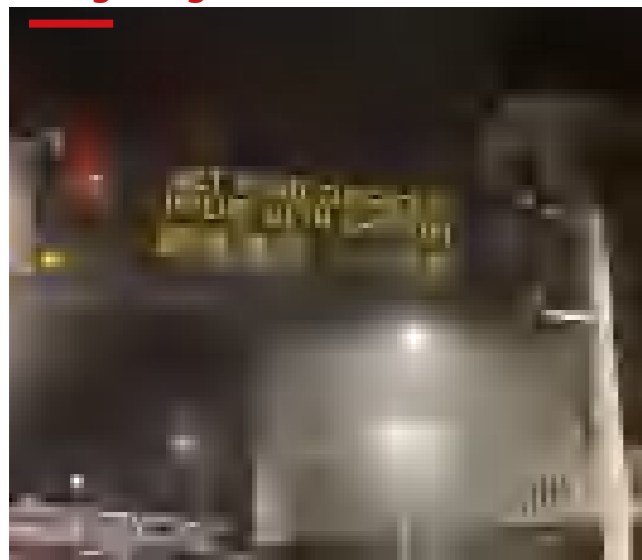
Turkey



China



Hong Kong·China



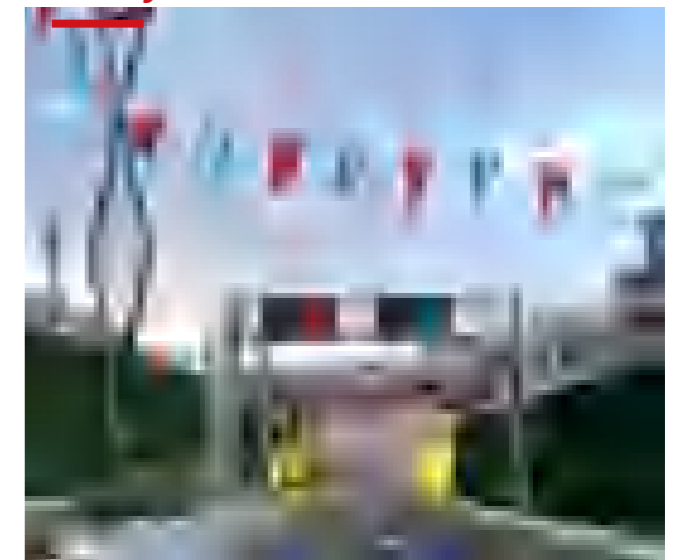
Norway



Norway



Turkey



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

Control Center

Cases

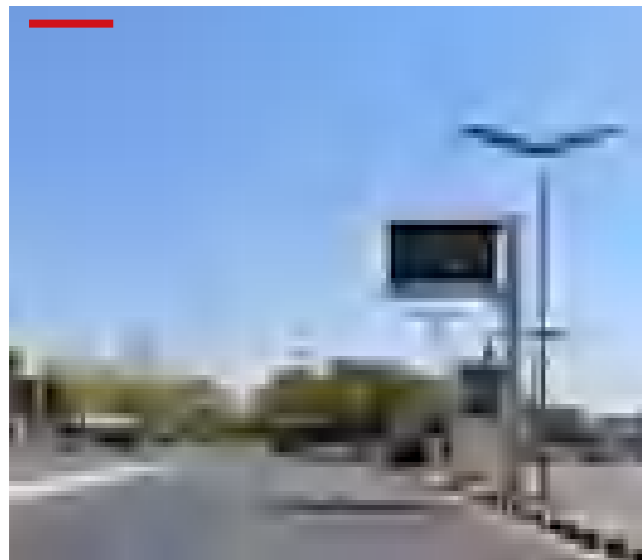
Azerbaijan



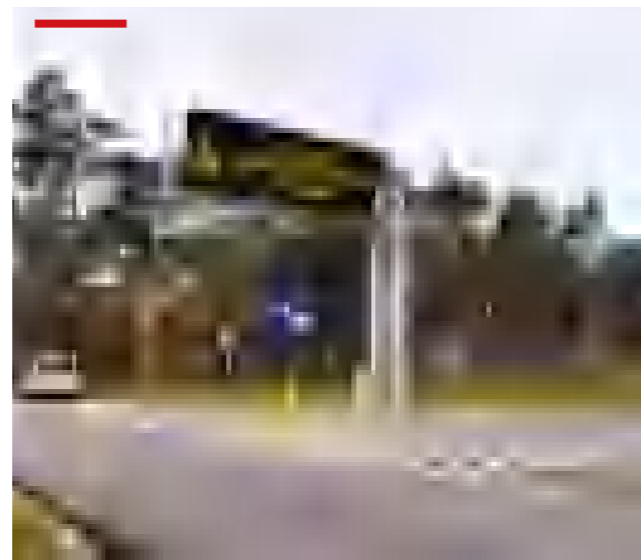
Qatar



India



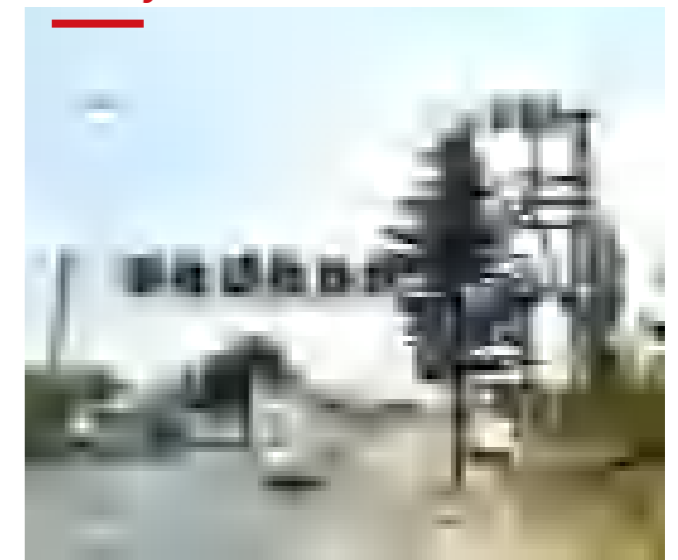
Poland



Norway



Turkey



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

Control Center

Cases

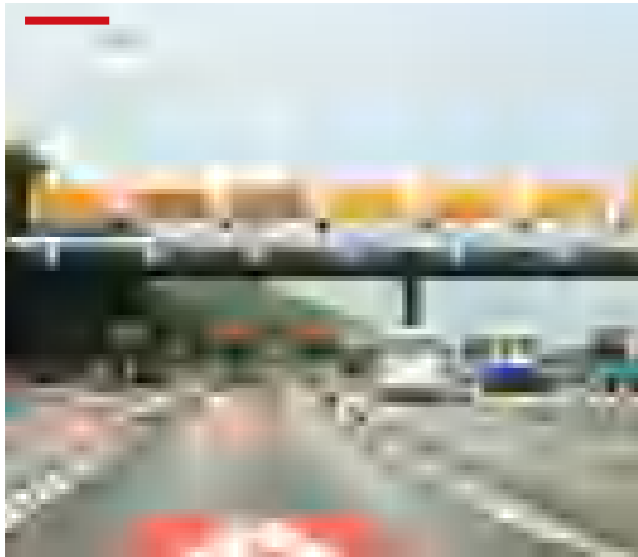
Finland



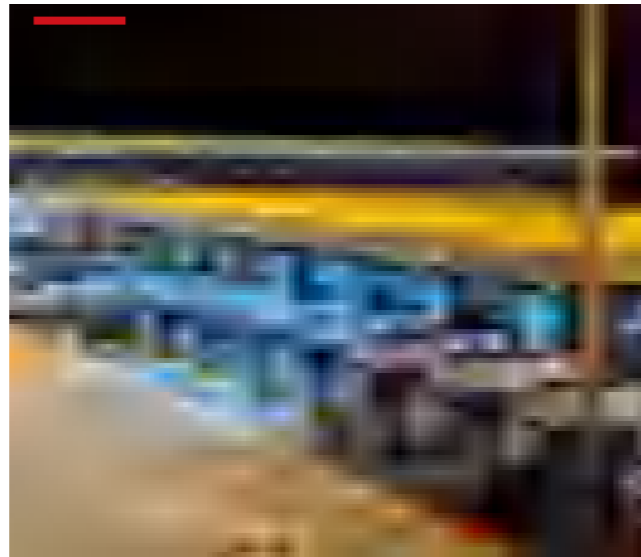
Australia



Hong Kong·China



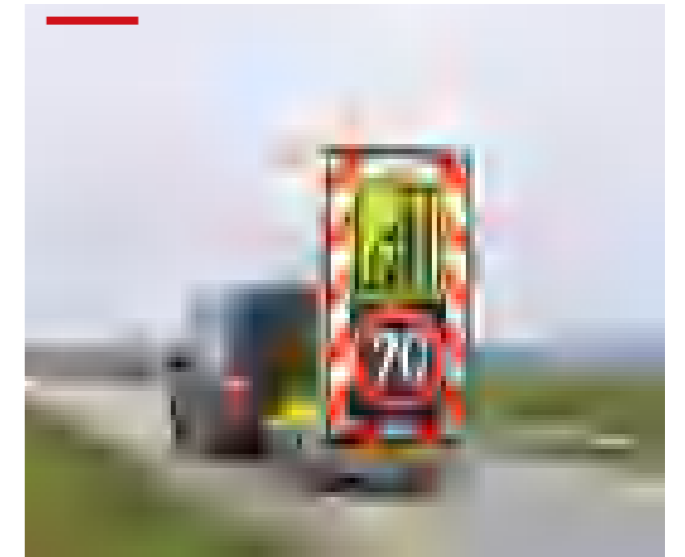
Hong Kong·China



Netherlands



Netherlands



- Company
- Fixed VMS
- Mobile VMS
- Lane Sign
- PIS
- Traffic Signal
- Control Center
- Cases

Norway



Hong Kong-China



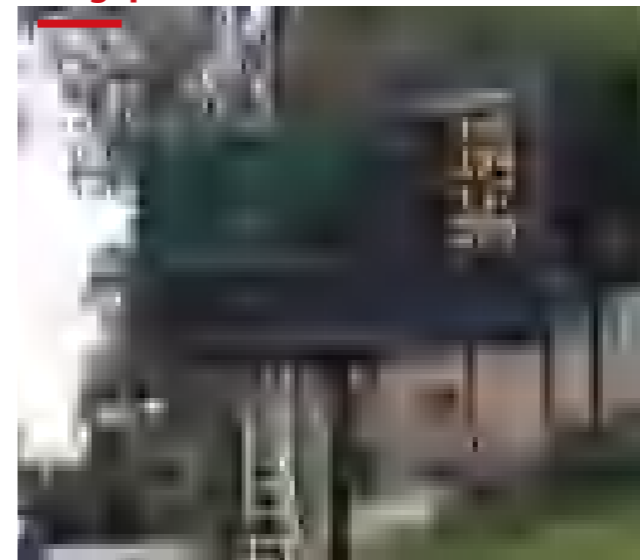
Finland



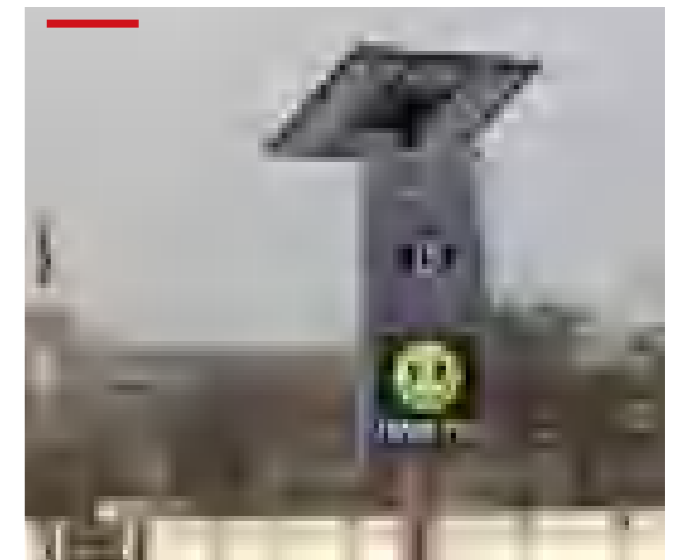
United Kingdom



Singapore



The United Arab Emirates



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

Control Center

Cases

Canada



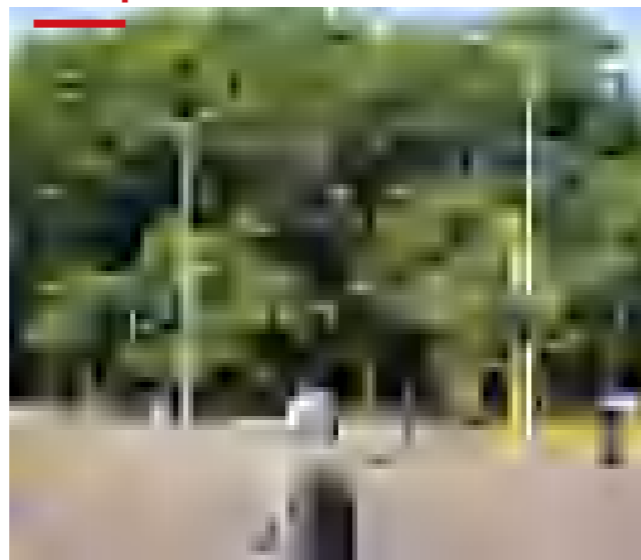
Netherlands



Sweden



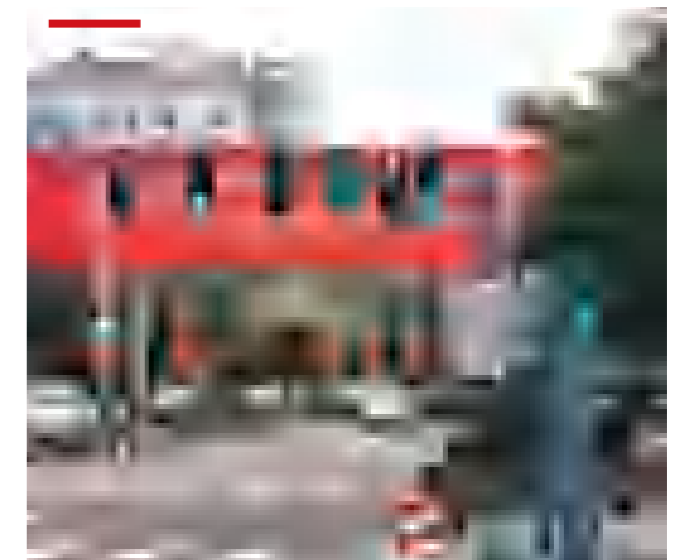
Ethiopia



Guatemala



China



Company

Fixed VMS

Mobile VMS

Lane Sign

PIS

Traffic Signal

Control Center

Cases