CHAINZONE

Beyond What You Can See

CHAINZONE TECHNOLOGY (FOSHAN) CO., LTD.

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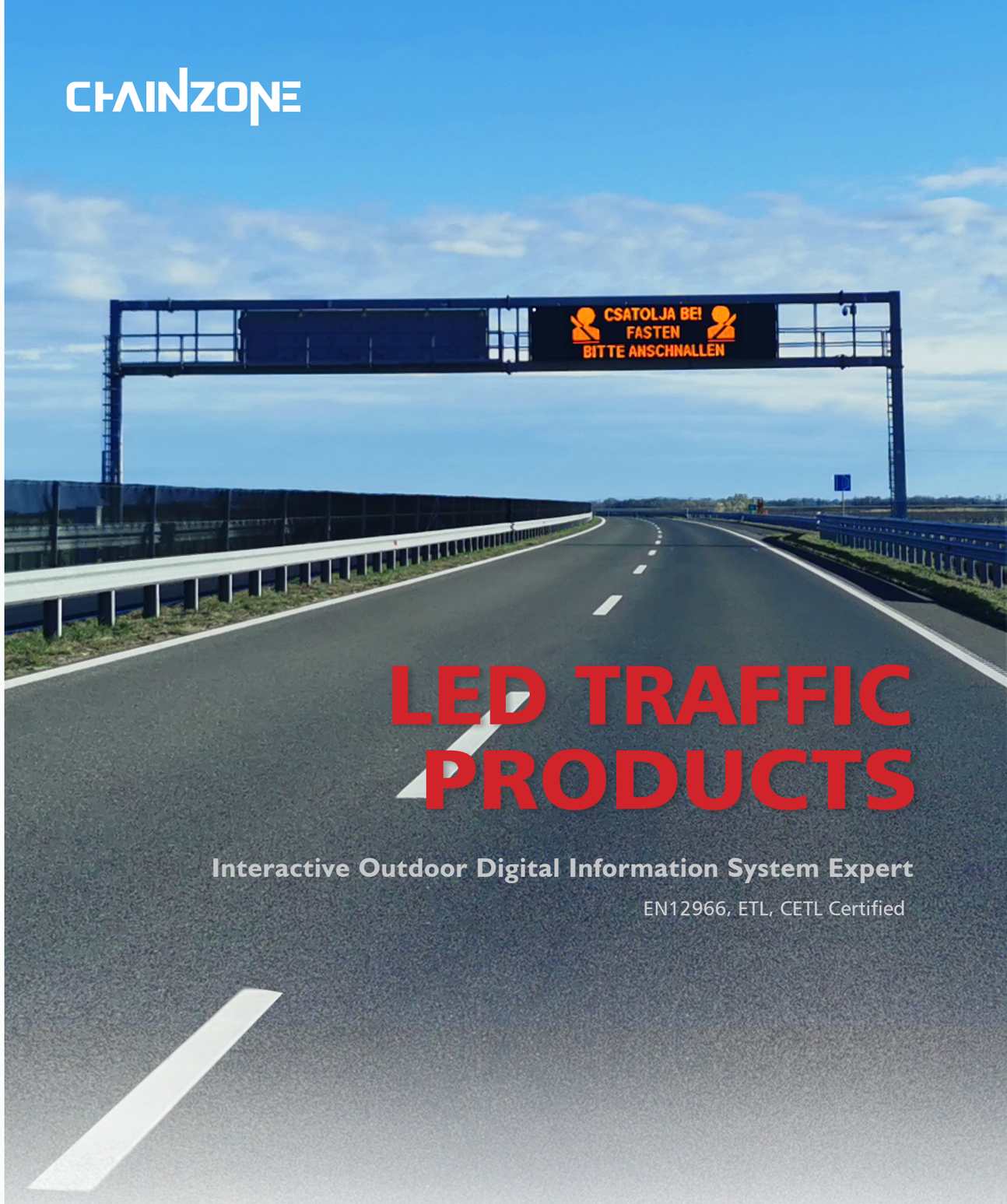


LED TRAFFIC PRODUCTS

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.

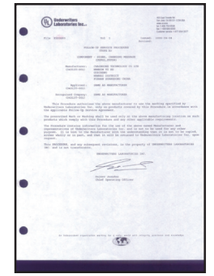
In the field of intelligent traffic, Chainzone has independently developed a variety of cloud-edge-terminal-collaboration based products, enabling its business to cover road construction, operation, development and the whole traffic ecology. Starting from planning, Chainzone actively participates in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

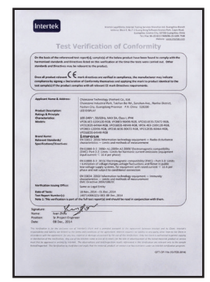
In the field of intelligent display, Chainzone has developed multiple solutions for different application scenarios, covering both indoor outdoor displays and outdoor displays. Based on customer requirements, Chainzone continuously expands its competitive advantages in visual presentation and system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

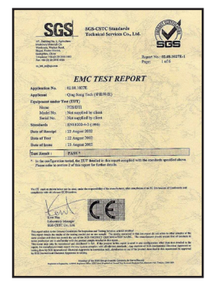
Over the years, thanks to excellent product quality, Chainzone won the trust of global customers, and has been awarded many honorary titles such as "National High-tech Enterprise", "Guangdong Province Export Famous Brand Enterprise", etc.

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







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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

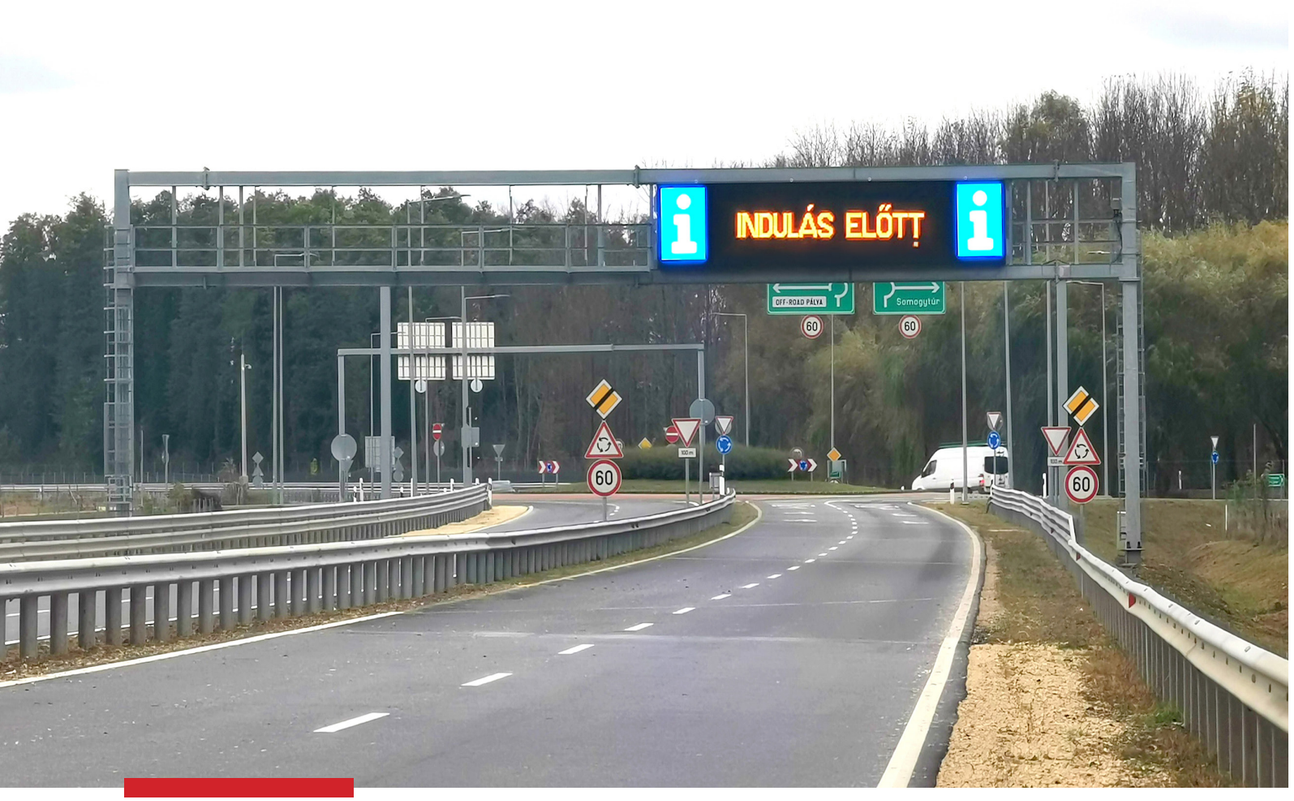
- The embedded system can perform constant diagnosis and report any abnormal status to the central system
- The VMS can be monitored by our proprietary central management system
- ***Chain*Spot®** which is developed independently by Chainzone's R&D team
- The excellent LED optical system meets EN12966 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

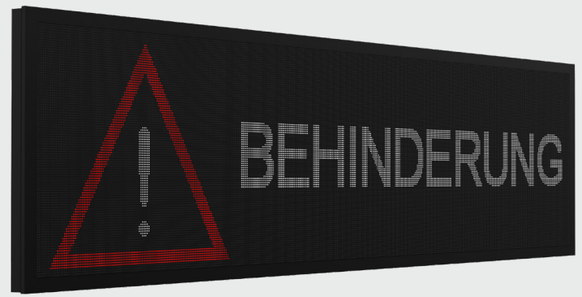
Teamwork · Report · Convenient Maintenance · Temperature Detection

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/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)		
Luminance Ratio	R3		
Color	C2		
Beam Width	B1, B2, B3, B4, B5, **B6** (±15° horizontal & -10° vertical down), **B7** (±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	**T1** (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)		
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 / UTMC / 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)	12×24	16×32	8×16	8×16	8×16
Size of Module (mm) (H×W)	120×240	160×320	96×192	128×256	160×320
Optical Characteristics					
Conformity	EN12966 Standards & NEMA TS4				
Luminance	L3/L3(*) (Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)				
Luminance Ratio	R3				
Color	C2				
Beam Width	B1, B2, B3, B4, B5, **B6** (±15° horizontal & -10° vertical down), **B7** (±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	**T1** (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)				
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 / UTMC / 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

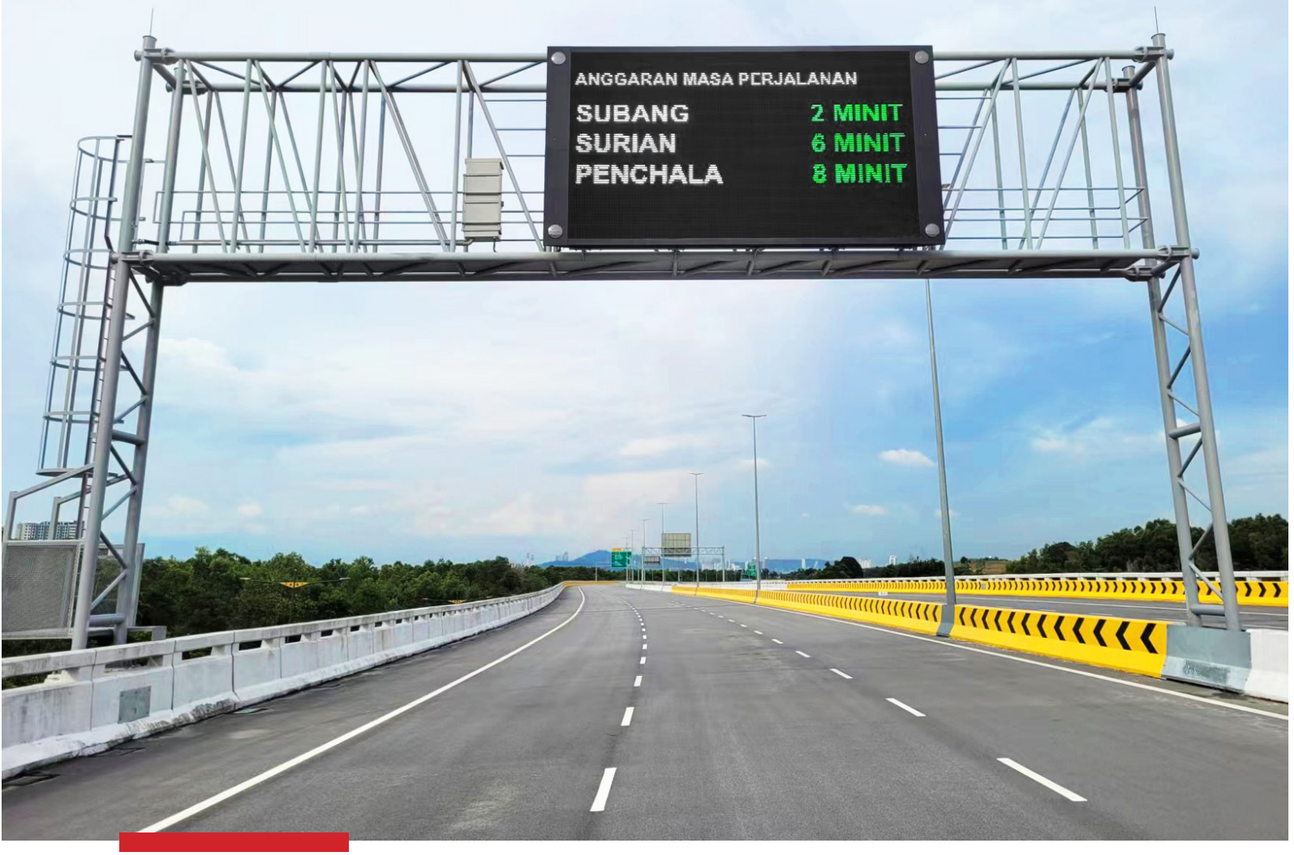
Convenient Maintenance

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/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)	
Luminance Ratio	R3	
Color	C2	
Beam Width	B1, B2, B3, B4, B5, **B6** (±15° horizontal & -10° vertical down), **B7** (±30° horizontal & -20° vertical down)	
Brightness Control	100Levels	
Physical Characteristics		
Enclosure Material	Aluminum	
Enclosure Surface	Powder Coated, Matte Blank (Other colors available)	
Working Temperature	**T1** (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)	
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 / UTMC / 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.

Lens on Board

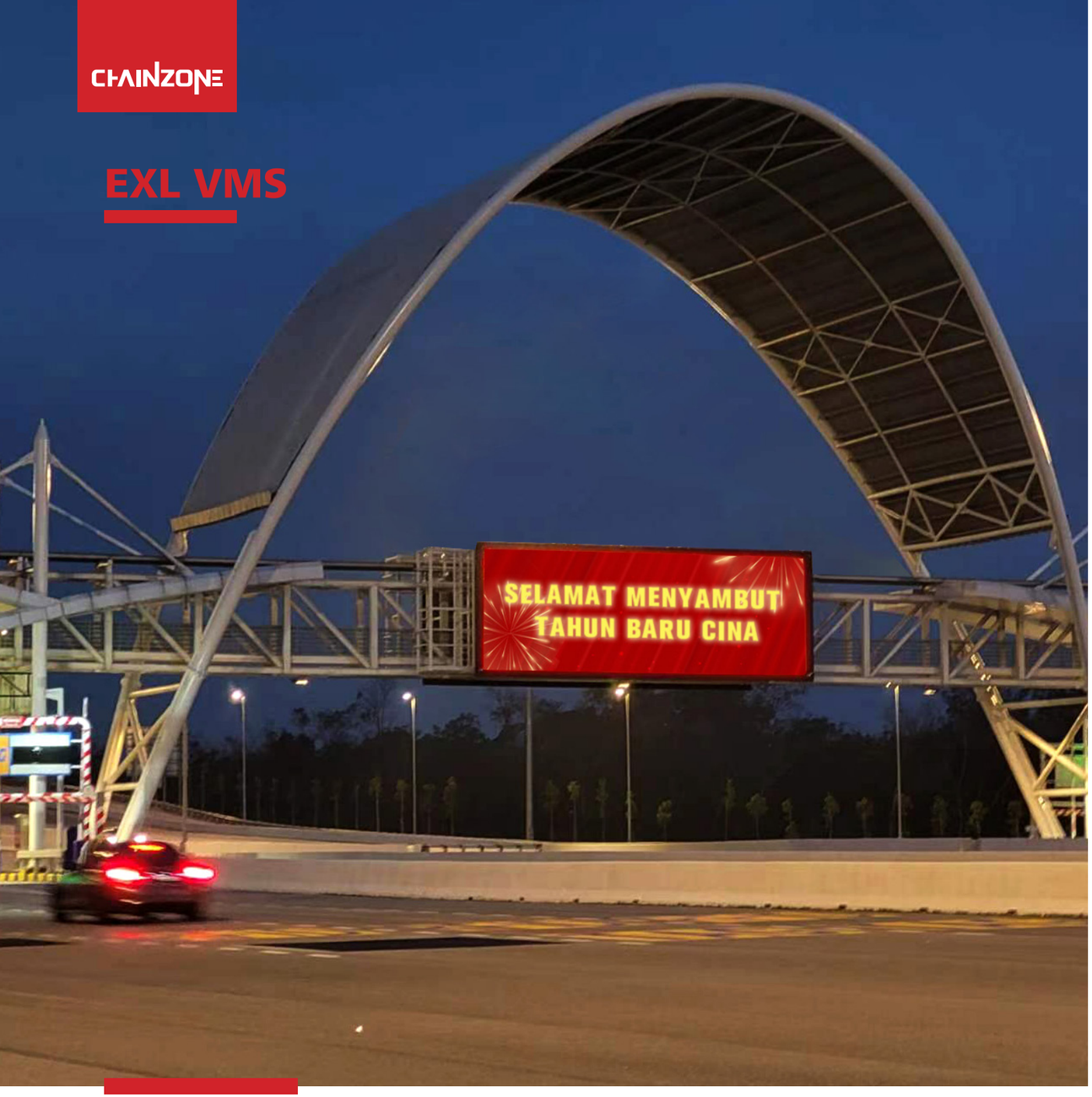
Block Structure

System Integration

Large Viewing Angle

Specification

VMS B-Series	
Model	VMS16B40-RGB
Pixel Pitch (mm)	16
Module Resolution (pixels)	12×24
Size of Module (mm) (H×W)	192×384
Optical Characteristics	
Luminance	L3/L3(*) (Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)
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℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)
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 / UTMC / XML / JetfileII /Profibus / RSMP / HTTP / API
EMC / FCC Certification	Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016



EXL VMS

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

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)	48×72	40×60	32×48	20×40	16×32
Size of Module (mm) (H×W)	320×480	320×480	320×480	320×640	320×640
Cabinet Resolution (pixels) (Front Access)	192×216	160×180	128×144	80×120	64×96
Size of Cabinet (mm) (H×W) (Front Access)	1280×1440×100	1280×1440×100	1280×1440×100	1280×1920×110	1280×1920×110
Cabinet Resolution (pixels) (Back Access)	192×144	160×120	128×96	80×80	64×64
Size of Cabinet (mm) (H×W) (Back Access)	1280×960×105	1280×960×105	1280×960×105	1280×1280×115	1280×1280×115
Luminance	>6000 cd/m²				
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℃ ~ +70℃				
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 / UTMC / XML / JetfileII /Profibus / RSMP / HTTP / API				
EMC / FCC Certification	EMC, FCC				
Certification	CE, ETL				

CHAINZONE

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

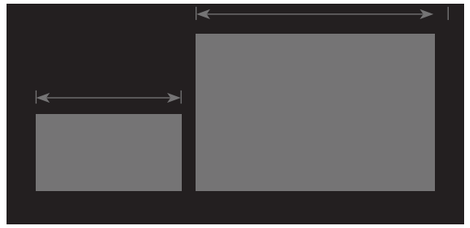
Specification

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/m²
Viewing Angle	100° / 40°
Brightness Control	100 Levels
Working Temperature	-40℃ ~ +60℃
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 / JetfileII /Profibus / RSMP / HTTP / API
EMC / FCC Certification	Compliant with EN50293; FCC Part 15B:2017; 1CES-003:2016

VMS Advanced Technology Introduction

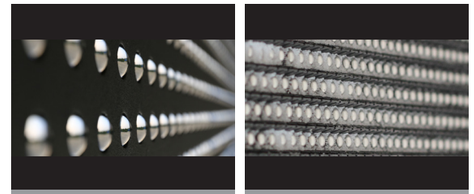
Intelligent & Efficient VMS

- 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.



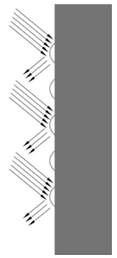
Smooth Surface Design

- 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.



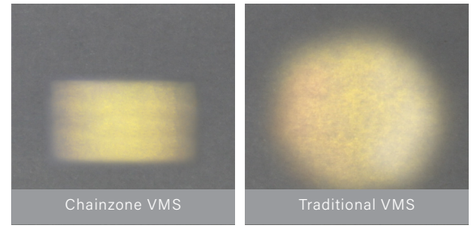
Low Reflection Design

- 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.



Low Power Consumption

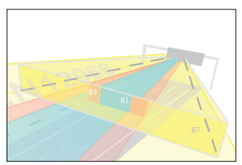
- System power consumption has been greatly reduced because the optical lens design multiplies light output and light contrast ratio.



VMS with Optical Lens Structure

Beam Width

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

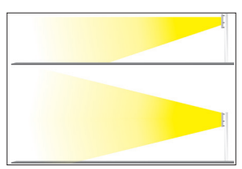


Luminance & Luminance Ratio

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

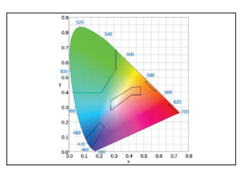
Targeted Visibility

Optimal Intensity
Optimal Light Pattern
Optional Beam Width



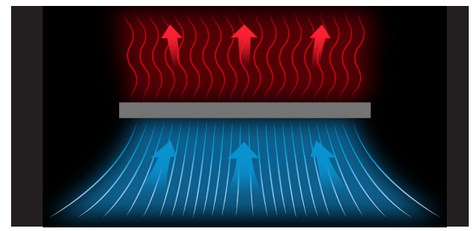
Color Uniformity

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



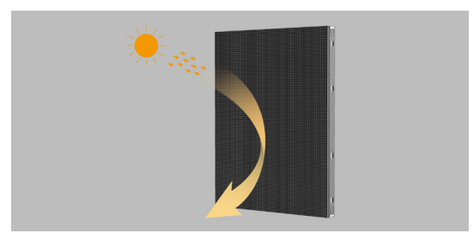
Overheat Protection

- 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.



CHAINZONE

02 Mobile VMS Series

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) (H×W)	8×16		
Module Size (mm) (H×W)	160×320	200×400	250×250
Maximum Resolution for Trailer Mounted VMS(pixels) (H×W)	48×80	56×96	64×96
Maximum Size for Trailer Mounted VMS (mm) (H×W)	960×1600	1400×2400	2000×3000
Cabinet Dimension (mm) (H×W×D)	1160×1800×120	1600×2600×120	2085×3200×180
Display Color	Single or Full Color		
Brightness	Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²		
Physical Characteristics			
Enclosure Structure	Aluminum Housing with Waterproof Modules		
Working Temperature	-25℃ ~ +60℃		
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 / UTMC / 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: 1750mm×2250mm	Type-B: 2050mm×2450mm	Type-C: 2050mm×3550mm
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 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)	4×8	
Module Size (mm) (H×W×D)	220×400	
Maximum Resolution for Trailer Mounted VMS (pixels) (H×W)	28×48	
Cabinet Dimension (mm) (H×W×D)	1845×2725×105	
Display Color	Five Color	Single Yellow
Luminance	Yellow / White > 6200 cd/m², Red / Green > 2800 cd/m²	Yellow > 6200 cd/m²
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

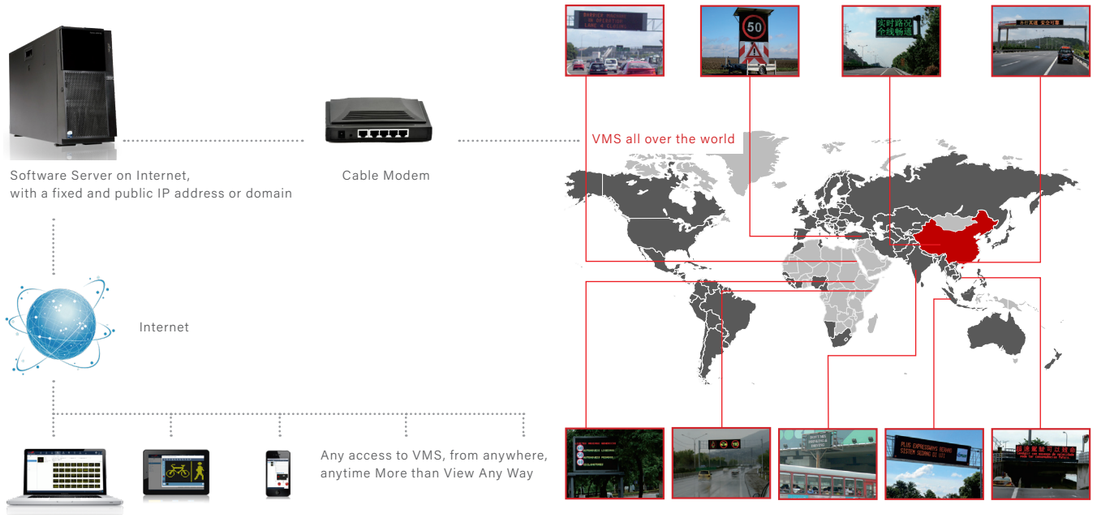
ChainSpot® is a VMS management software based on the Internet. Users can manage and control plenty of devices remotely simultaneously to check the current status and send content to the equipment. A combination of different colors and sizes makes these signs extremely efficient in conveying safety messages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

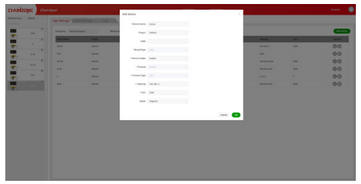
PC
Tablet
Smart Phones

ChainSpot® Server

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

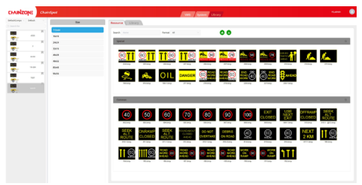
VMS

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.



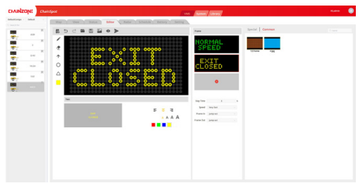
Supporting Multiple Device

- 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.



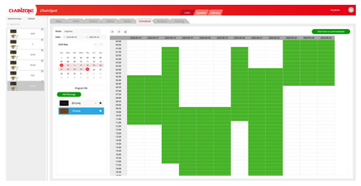
Gallery with Multiple Picture

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



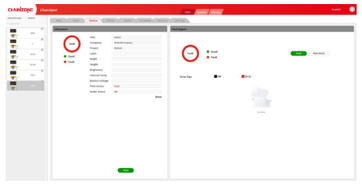
Multifunctional Matrix Editor

- 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

CHAINZONE

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	-25℃ ~ +60℃		

Touch Screen

Smart Module

High Contrast Ratio

Large Viewing Angle

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	

CHAINZONE

03

Lane Sign
Series

CHAINZONE

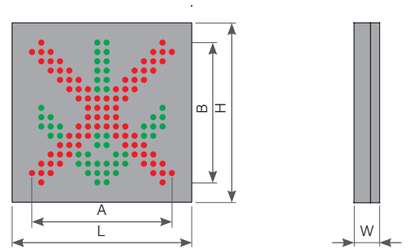
Lane Control Signal (LCS)

Application

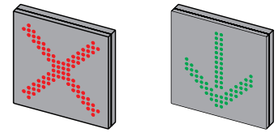
Lane Control Signals are widely used at highways, toll gates, and tunnels to direct vehicles passing through the lanes safely.

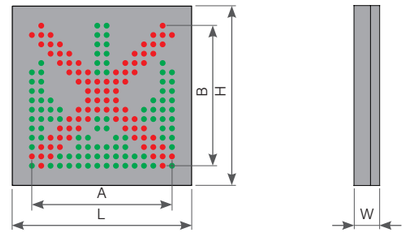
Feature

- **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

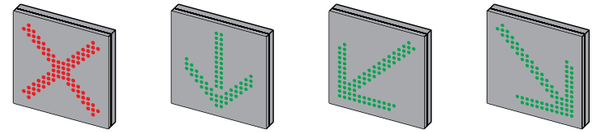


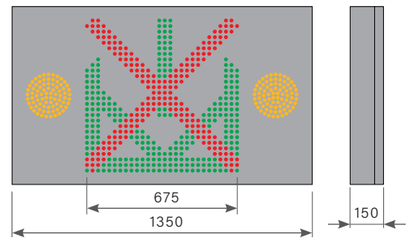
LCS-XXXA



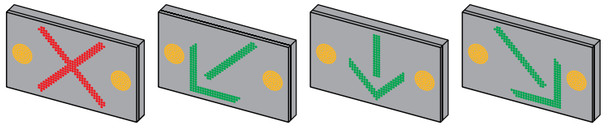


LCS-XXXB





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 (W×H×D) (mm)	400×400×100		500×500×100		600×600×100		800×800×100		1000×1000×100		1350×800×150
Display Size (A×B) (mm)	288×288		375×375		468.75×468.75		675×675		843.75×843.75		675×675
Pixel Pitch	16mm		25mm		31.25mm		25mm		31.25mm		25mm
Display	Red ×, 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 / JetfileII / Profibus										
Control Mode	I/O Control (Dry Contact optional) / Protocol Control										
Working Temperature	**T1** (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)										
Ingress Protection Class	IP56, IP65, IP66										

Speed Limit Sign (SLS)

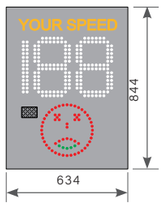
Application

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

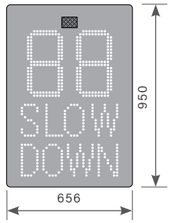
Specification

Model	SLS-844×634	SLS-950×656	SLS-1050×656	SLS-1080×787	SLS-600A	SLS-600B	SLS-800A	SLS-800B
Housing Size (W×H×D) (mm)	844×634×100	950×656×100	1050×656×100	1080×787×100	600×600×100		800×800×100	
Ring Diameter (R) (mm)	288×288	375×375	468.75×468.75	675×675	843.75×843.75		675×675	
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 / JetfileII / Profibus							
Control Mode	I/O Control (Dry Contact optional) / Protocol Control							
Working Temperature	**T1** (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)							
Ingress Protection Class	IP56, IP65, IP66							

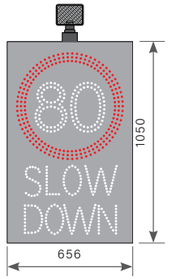
Selections



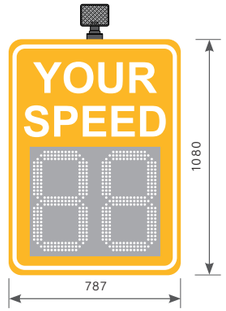
SLS-844x634



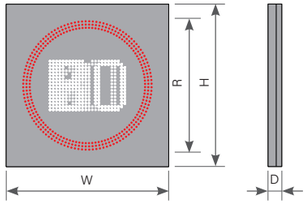
SLS-950x656



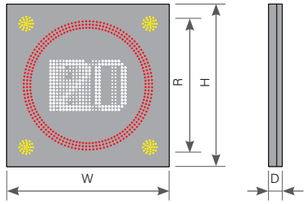
SLS-1050x656



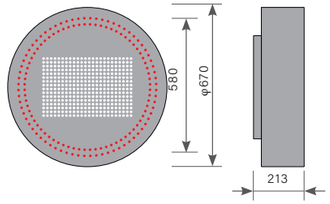
SLS-1080x787



SLS-XXXA



SLS-XXXB



SLS-DXXX

Feature

- **Enhanced reliability**
  SMD LED + optical lens is more reliable than exposed DIP LED
- **Lower Power Consumptionn**
  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
900×900×100		1000×1000×100		1050×1050×100		1360×1360×180		Φ540×213	Φ670×213	Φ880×213	Φ1160×213
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 / JetfileII / Profibus											
I/O Control (Dry Contact optional) / Protocol Control											
T1 (-15℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)											
IP56, IP65, IP66											

Multiple Lane Sign (MLS)

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.

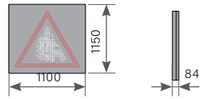
Feature

- **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

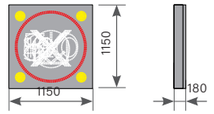
Light &Thin
UV Resistance
High Brightness
High Contrast Ratio
Energy Saving
Long Lifespan

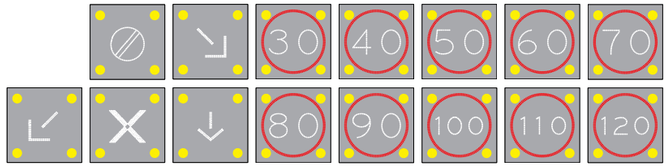
Multiple Lane Sign

MLS-1000X1000

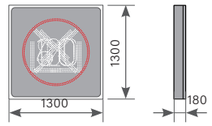


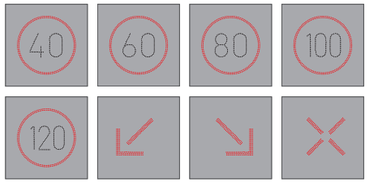
MLS-1150X1150



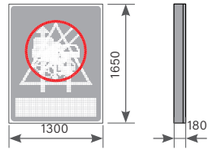


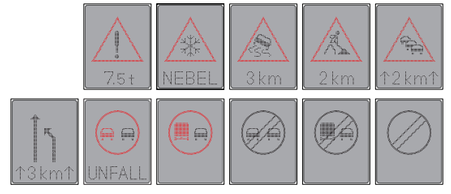
MLS-1300X1300





MLS-1650X1300





Specification

Model	MLS-1000×1000	MLS-1150×1150	MLS-1300×1300	MLS-1650×1300
Housing Size (W×H×D) (mm)	1000×1000×100	1150×1150×180	1300×1300×180	1650×1300×180
Ring Diameter (R) (mm)		970	850	850
Triangle Length (mm)	840			985
Pitch Size (mm)	20	20	20	20
Display	Red ×, 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℃ ~ +60℃), **T2** (-25℃ ~ +55℃), **T3** (-40℃ ~ +40℃)			
Ingress Protection Class	IP56, IP65, IP66			

Passenger Information Sign (PIS) Series

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 (H×W)	16×23
Module Size (H×W) (mm)	96×193
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/m²
Working Temperature	-20℃ ~ +45℃
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 (H×W)	9×42
Module Size (H×W) (mm)	45×210
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/m²
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

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.

High Brightness

High Contrast Ratio

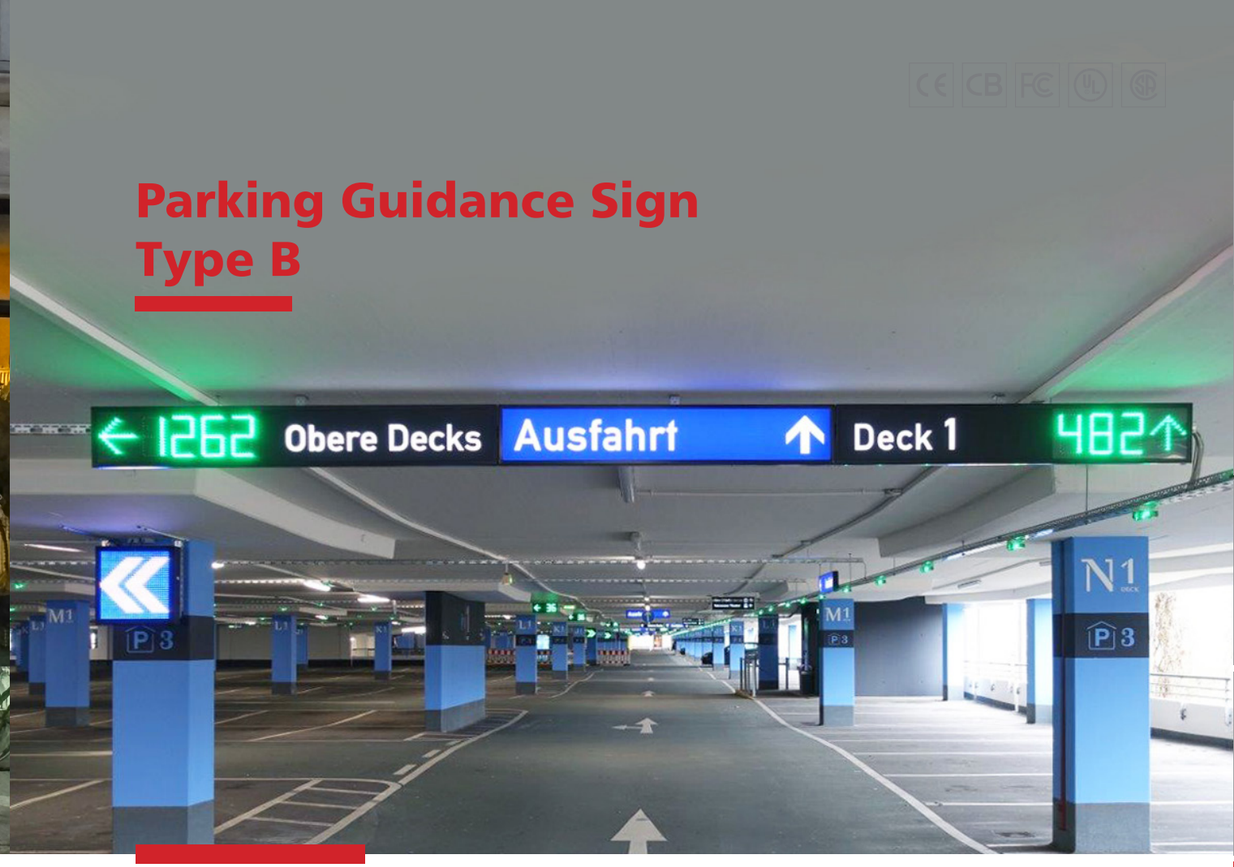
Lens on Board

Block Structure

Specification

Model	PIS-8			
Pixel Pitch (mm)	8			
Type	Size A	Size B	Size C	Size D
Display Resolution (H×W)	16×32	32×32	16×64	16×96
Display Area (H×W) (mm)	128×256	256×256	128×512	128×768
LED	3-in-1 SMD LED			
Color	Full Color			
Brightness	>5000 cd/m²			
Maintenance	Front Open Door Access			
Power Supply	12 ~ 36VDC			
Ingress Protection Class	IP65			
Communication	RS232 / RS485, Ethernet			
Optional	Light Sensor, Wi-Fi, Modem, etc.			

Parking Guidance Sign Type B



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.

High Brightness

High Contrast Ratio

Lens on Board

Block Structure

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

Specification

Model	PIS-10	PIS-12
Pixel Pitch (mm)	10	12
Display Resolution (H×W)	12×48	16×48
Display Area (H×W) mm	120×480	192×576
Luminance	Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²	
Viewing Angle	**B6** (±15° horizontal & -10° vertical down), **B7** (±30° horizontal & -20° vertical down)	
LED	3-in-1 SMD LED	
Color	Full Color	
Number of Lines	1 ~ 5 lines	
Cabinet Size (H×W) 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	

Smart Lighting Pole

Feature

- Product modular design.Easy for installation and maintenance.
  Support global standard 4G and 5G communication.
- Fast information transmit-receive, 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)	64×64	64×64	40×80
Size of Module (mm) (H×W)	160×160	192×192	160×320
Optical Characteristics			
LED Type	3 in 1 SMD LED		
Luminance	＞5000 cd/m²		
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		

CHAINZONE

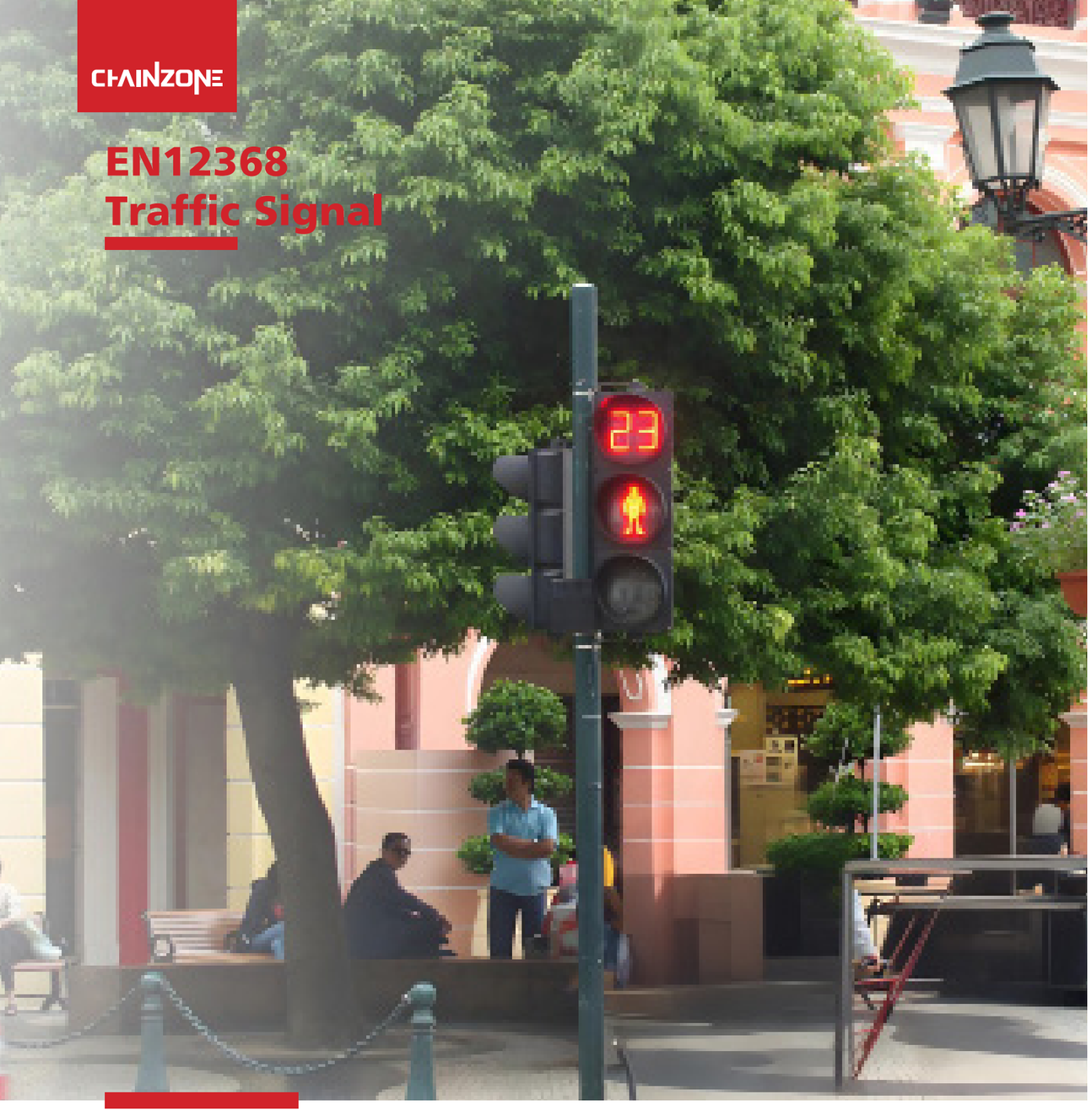
05

Traffic Signal

Series

CHAINZONE

EN12368 Traffic Signal



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.

UV Resistance

Light & Thin

Energy Saving

Long Lifespan

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

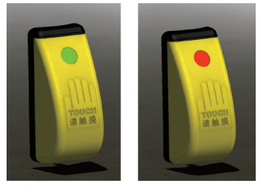
Model: JXM-Y1-V
Diameter: 300mm / 400mm
Light Source: 4 element Ultra-Bright TS LED
Quantity of LEDs: 104 pcs
Display Color: Amber
Wavelength: 590 ~ 595nm
Power Supply: 12VDC
Max Power Consumption: 8W
Solar Panel: 10W
Battery specifications: 12V 9000mAh

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.

CHAINZONE

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 (L×W×H)	600×400×1300mm
Shell Materia	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	JetfileII
Communication	RS232 / USB / Ethernet

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 (L×W×H)	600×400×1300mm
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	JetfileII / GBT-20999
Communication	RS232 / RS485 / Dua / Gigabit Network Port

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

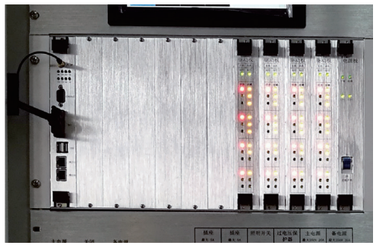
Model	TC-5000
Chassis Size (L×W×H)	600×470×1500mm
Enclosure Material	Powder Coated Stainless Steel
Ingress Protection Class	IP54
Working Temperature	-20°C ~ +70°C
Supply Output	110VAC / 230VAC (50/60Hz)
Resistance Between Output Terminal and Grounding	>50MΩ
Power Consumption of the Whole Machine	⩽50W
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	JetfileII
Communicatione	RS232 / RS485 / USB / Ethernet

CHAINZONE

TC-7000 Controller Series

Feature

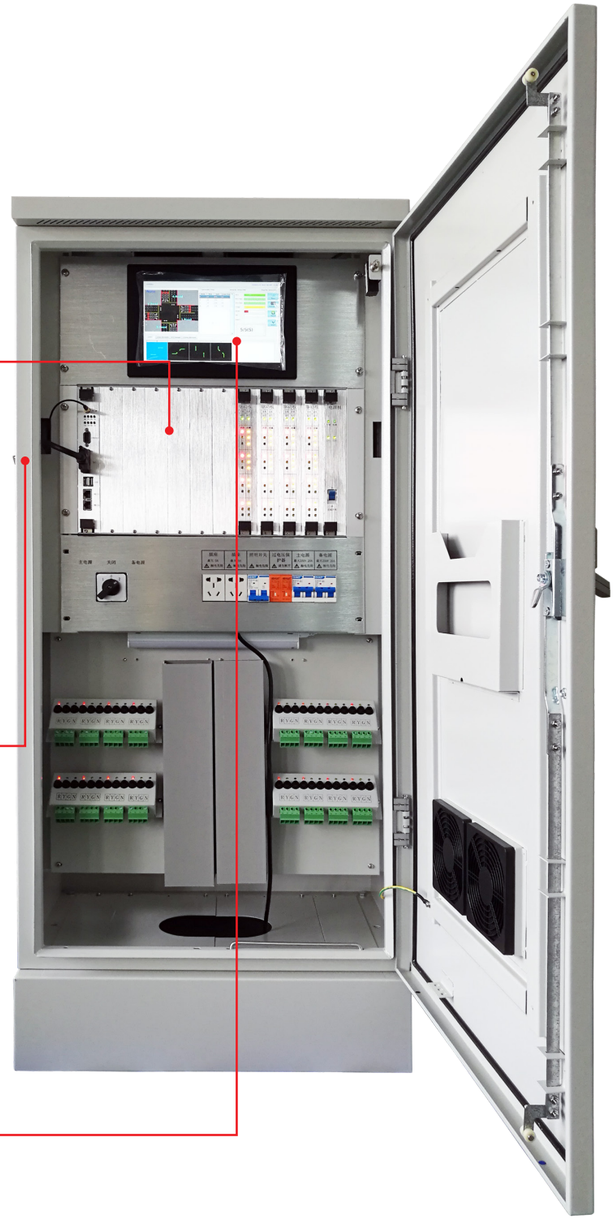
- Separated design: the main controller is separated from the signal driver modules, easier for installation, maintenance and testing
- Vehicle flow collector, pedestrian passage controller and main controller are individual modules, which can be collected according to different requirements



The 48 route circle traffic flow detector

Manual panel of traffic signal controller

1280×800 10-inch capacitive touch screen



TC-7000 System

Feature

- TI ARM Cortex-A8 1G industrial processor, onboard 512MB memory and 8GB memory are adopted
- 1280×800 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 (L×W×H)	600×470×1500mm
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	JetfileII / 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) (L×W×H)	850×850×3000 (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) (L×W×H)	1640×1162×2414
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

CHAINZONE

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.

Energy Saving

Long Lifespan

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

CHAINZONE

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)	168.75×300				337.5×300
Module Resolution (pixels) (H x W)	180×320	135×240	108×192	90×160	180X160
Cabinet Size (H x W)	337.5×600				
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/m²				
Refresh Rate (Hz)	3840				
Grey Level	14 ~ 16 bit				
Viewing Angle (H/V)	160° / 160°				
Power Consumption Max. (W/m²) ②	400				
Power Consumption Avg. (W/m²) ②	120				
Ingress Protection Class	IP20				
Maintenance	Front				
Weight (kg/m²)	22				
Working Temperature	-10℃ ~ +40℃				
Working Humidity	10% ~ 85%RH				
Storage Temperature	-40℃ ~ +70℃				
Storage Humidity	<90%RH				

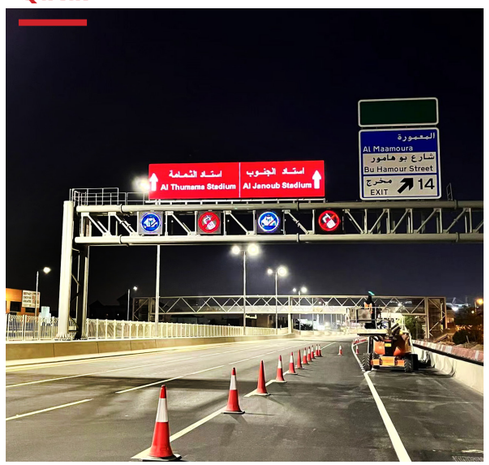
① Based on different hardware specification ② Theoretical values only. All specifications are subject to the actual product.

CHAINZONE

Successful Cases

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

Qatar

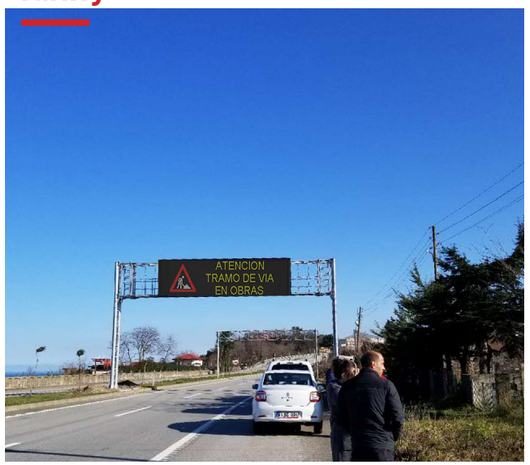


Norway

Colombia

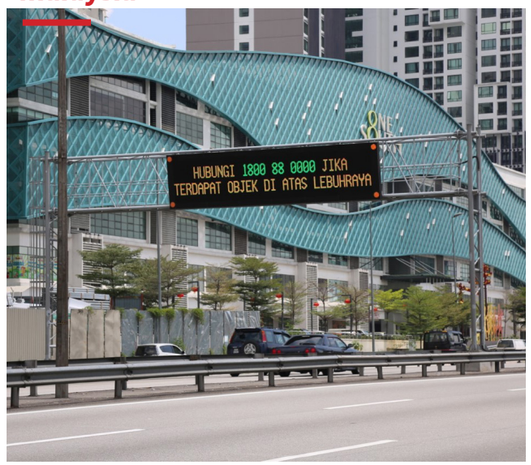
Australia

Turkey



Thailand

Malaysia



Malaysia

Turkey

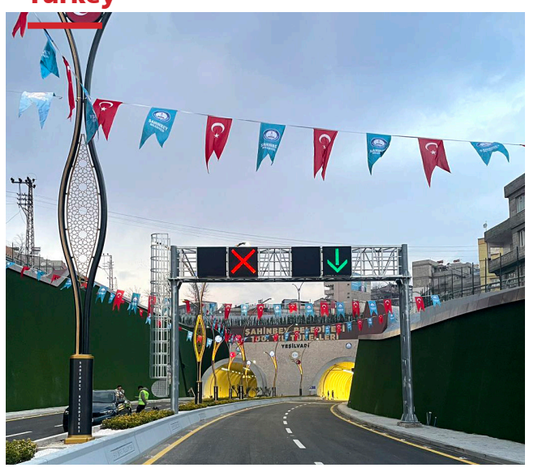
China

Hong Kong·China

Norway

Norway

Turkey



Azerbaijan

Qatar

India

Poland

Norway

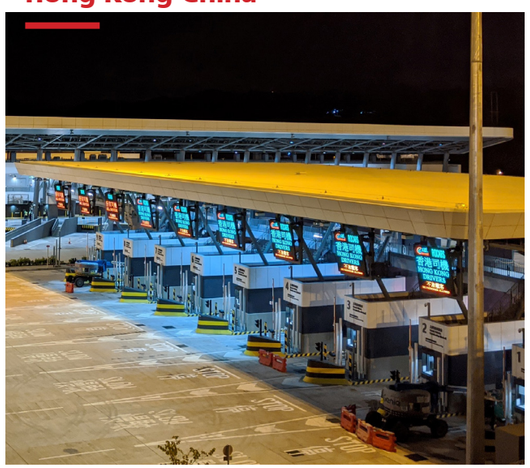
Turkey

Finland

Australia

Hong Kong·China

Hong Kong·China



Netherlands

Netherlands

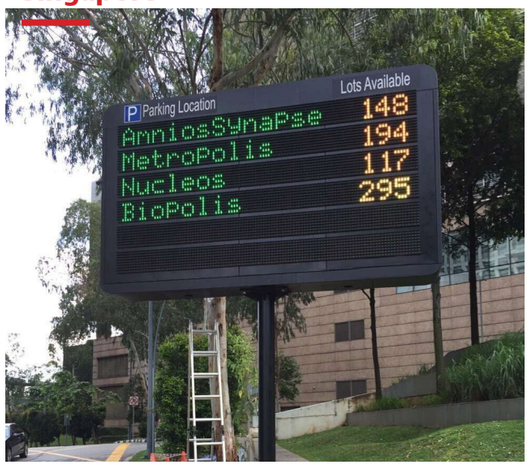
Norway

Hong Kong·China

Finland

United Kingdom

Singapore



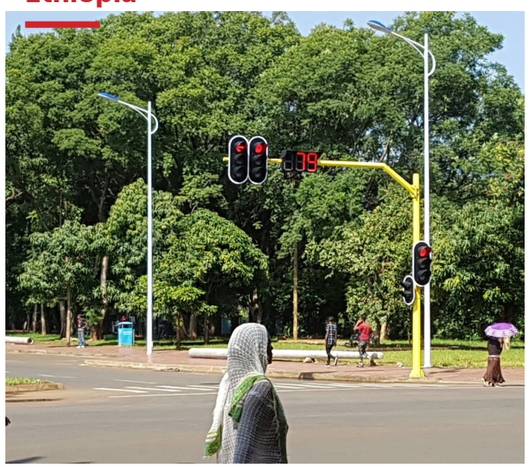
The United Arab Emirates

Canada

Netherlands

Sweden

Ethiopia



Guatemala

China