

THALIA

Smart Pole System

BUILDING A FUTURE, WE ALL DESERVE



Summary

Smart Pole System integrates LED street lights, LED display screens, IP cameras, environmental/air sensors, SOS emergency intercoms, Wi-Fi Aps, IP speakers, mobile chargers and charging stations.

With the concept of 'Smart City', the smart pole system will help efficiently manage urban street lighting, conduct information dissemination, security monitoring, emergency alarms, air quality detection, provide internet access to the public, and facilitate charging for their devices and electricity.

This software platform is an open platform, providing API interfaces for third parties to integrate and collaborate with it.



All-in-One Smart Pole

ALL-IN-ONE SMART POLE



① SMART POLE

FEATURES:

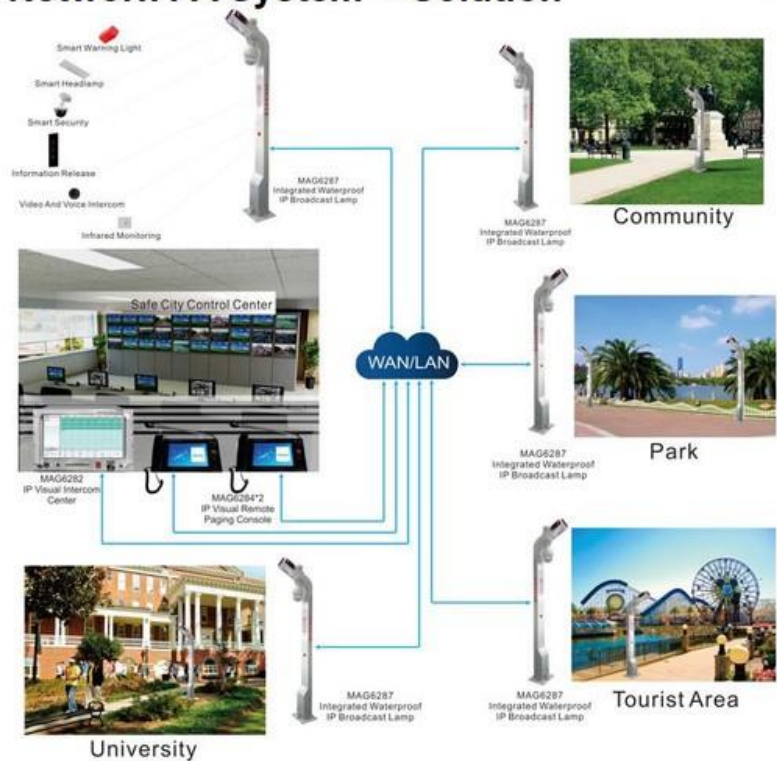
1. With environmental monitoring function
2. With intelligent lighting module.
3. With a 2 megapixel wide dynamic camera for multiple streams.
4. Can bind an IPC camera for alarm linkage.
5. LED full-color dot matrix screen.
6. With a one-key alarm button for voice help.
7. With network play terminal function .



Configuration for Working with Network PA System -- Solution

Solution Design for Smart City

- The intelligent public address light pole adopts composite street light pole, which highly integrates LED intelligent lighting, intelligent warning light, intelligent security, visual intercom, information release, environmental monitoring, infrared sensing intelligent voice broadcasting, etc.
- Support remote control and multi-dimensional data analysis and decision-making, greatly reducing construction and operation and maintenance costs, and promoting energy conservation and emission reduction.
- As an important public infrastructure, the intelligent public address light pole effectively facilitates the development of a safe and smart city.



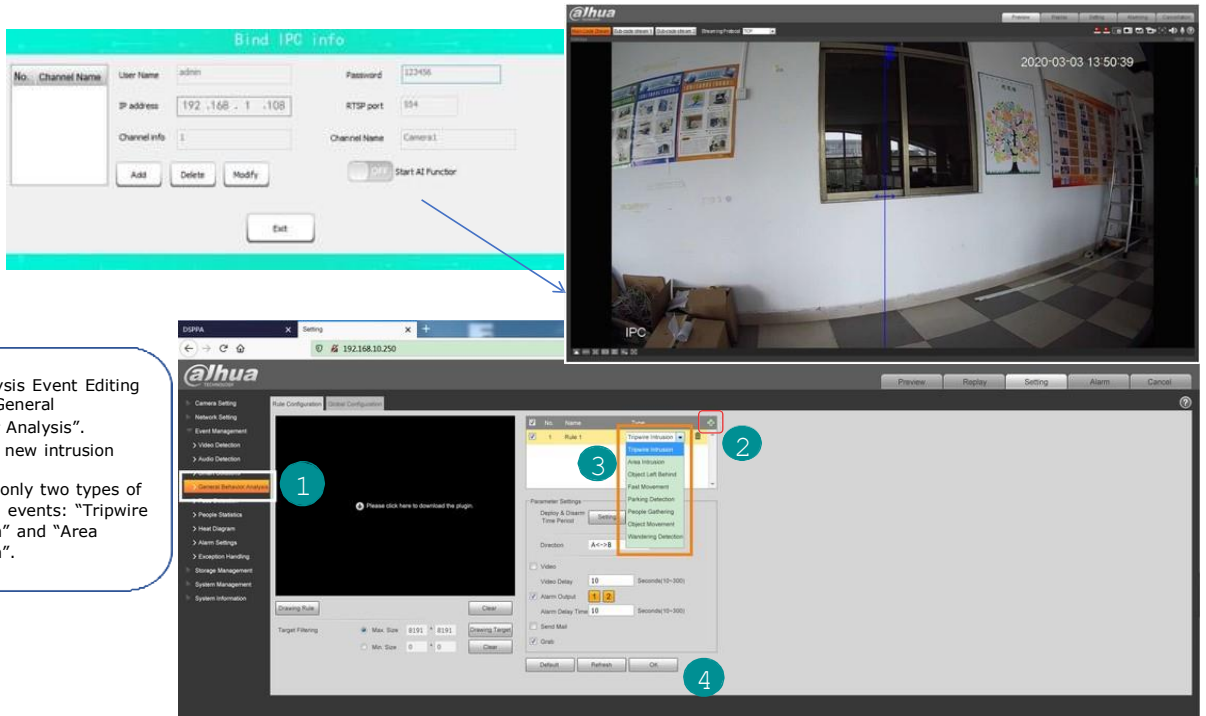
No.	Model	Product Name	Quantity
PA System			
1	MAG6282	Visual Network Public Address Center	1 PC
2	MAG6284	Video Paging Controller	2 PCS
3	MAG6287	Intelligent PA Light Pole	5 PCS

PLATFORM MANAGEMENT



ALL-IN-ONE SMART POLE

DSPPA main control for video calls and video previews



- Behavior Analysis Event Editing
- Select "General Behavior Analysis".
 - Create a new intrusion event.
 - Support only two types of intrusion events: "Tripwire Intrusion" and "Area Intrusion".

DSPPA Audio/Video AI Linkage

All-in-One Modular Smart Pole



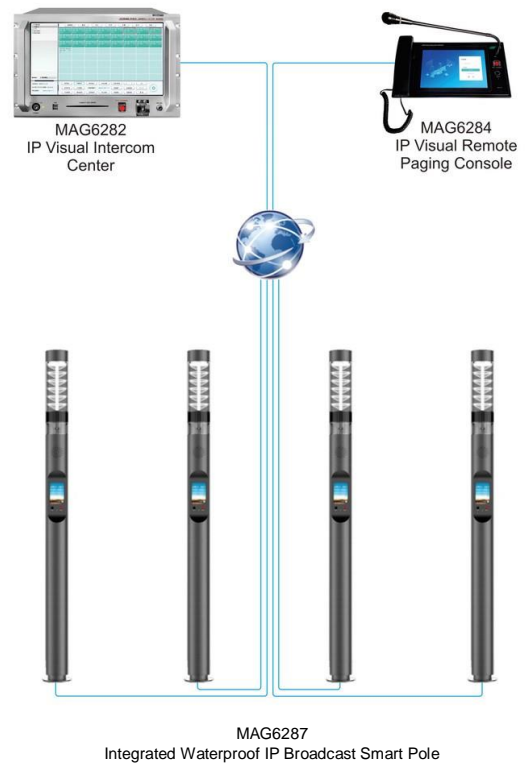
ALL-IN-ONE MODULAR SMART POLE

The All-in-One Smart Pole can be customised into modular

The smart pole system adopts composite street light poles, which highly integrates LED intelligent lighting, intelligent warning lights, intelligent security, visual intercom, information release, environmental monitoring, infrared sensing intelligent voice broadcasting, etc.

Support remote control and multidimensional data analysis and decision-making, thereby greatly reducing construction and operation and maintenance costs, and promoting energy conservation and emission reduction.

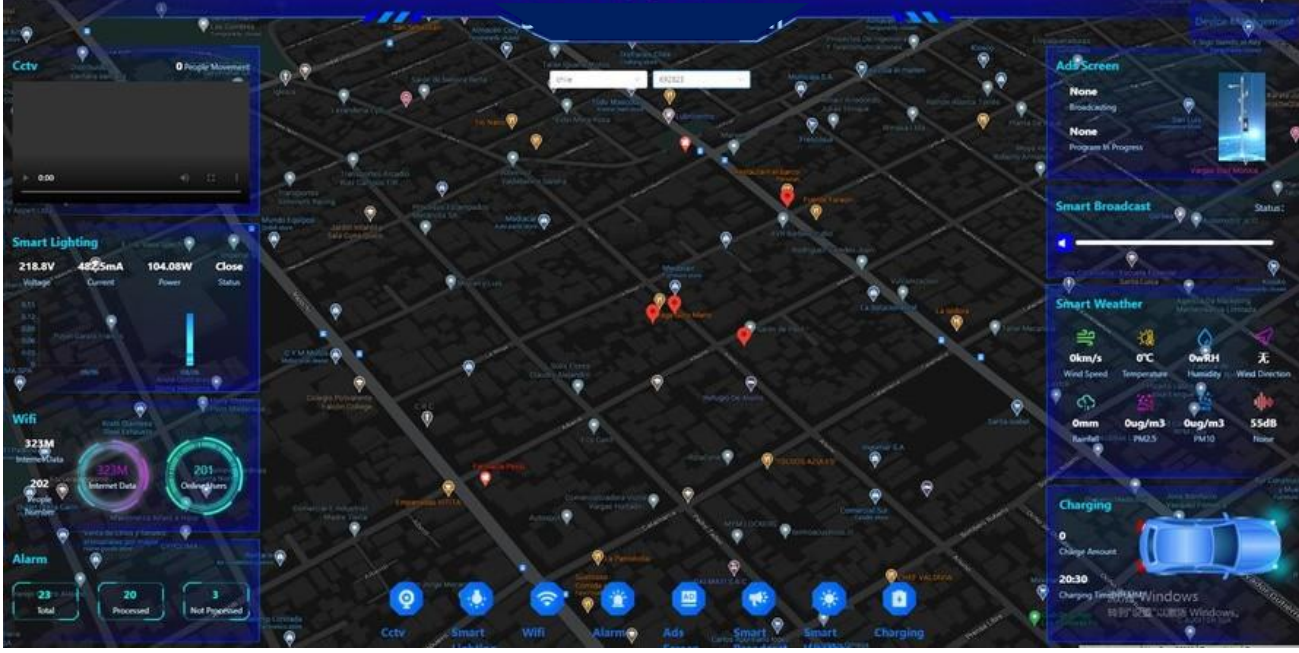
As an important public infrastructure, the smart pole system effectively facilitates the safe and intelligent development of the city.



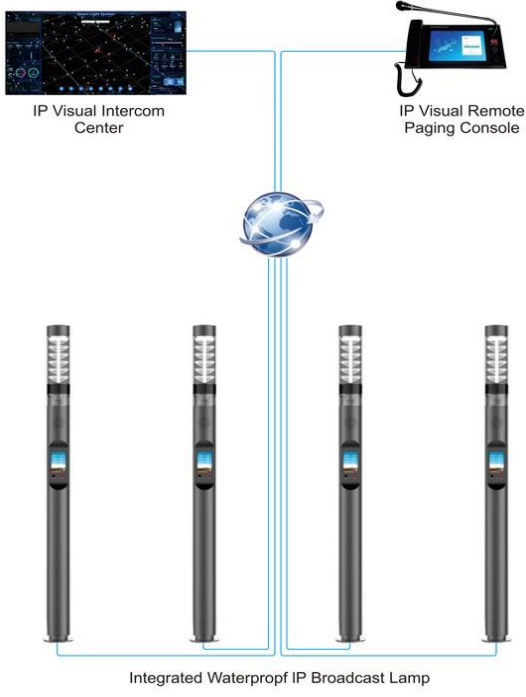
No.	Model	Product Name	Quantity
PA System			
1	MAG6282	IP Visual Intercom Center	1 pcs
2	MAG6284	IP Visual Remote Paging Console	1 pcs
3	MAG6287	Integrated Waterproof IP Broadcast Smart Pole	4 pcs

Modular Smart Pole

MODULAR SMART POLE



Management System

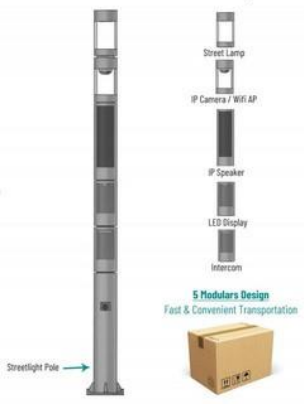


- Automatic Brightness Control**
Automatically adjust screen brightness according to changes in light environment
- Remote Notification Release**
Release emergency broadcasts and real-time announcements
- Remote Program Distribution**
Send anytime, anywhere, whenever you want



- Remote One-Key Power Off**
Power it off remotely with one key in case of emergencies
- Intelligent Monitoring**
Control and monitor road and traffic conditions in real time on a 24-hour basis
- Visual Help Intercom**
Press the button to get instant help from the police

SMART STREET POLE 5 Modulators Design
Customize your Smart Pole with our selection of modular options. Choose from various Functional Modules to suit your needs.



SPEAKER MODULE



Features

- Scheduled playback: You can set the time and broadcast announcements or some notes.
- Volume control: 0-100, drag the slider for a desired volume, and the current volume will be displayed digitally.
- Broadcast call: In response to emergency situations, you can call people on the scene and provide timely help to them.
- Can be linked for camera triggering and voice alarm.



- ROUND MODULAR - IP Speaker.
- Material: 3.5mm Galvanized Steel.
- Dimension: 500*Ø180mm.
- Power Supply: DC24V,1.5A(BS-9621A03) or POE.
- Power Output:30W/60W(DC24V), 15W(POE).
- Standby Power Consumption: ≤2W.
- Support external audio source access.
- Support mobile phone Bluetooth pairing to play music streaming.
- Support remote volume adjustment on the server software.
- Size: 296*140*130mm.



IP SPEAKER

Advertisement speaker and real-time public announcement in urgent situation.

LIGHTING MODULE



Features

- Switch control: Light on and light off.
- Time control: Set the light on time and light off time.
- Light brightness: 0-100, drag the slider for a desired brightness, and the current brightness will be displayed digitally.
- Adaptive lighting: Optional automatic adjustment, which can automatically adjust the lighting according to the ambient brightness.



- ROUND MODULAR - LED Lamp.
- Material: 3.5mm Galvanized Steel and PC.
- Dimension: 500*Ø180mm.
- Lamp: 60W, tree-type shape with transpance PMMA Shelf.
- With Single Lamp Control



STREET LAMP

Auto On/Off and Dimmable make the pole more energy saving

CAMERA MODULE



Features

- Can bind the camera for free switching of venues and real-time view of the live environment.
- Can control the camera up, down, left, right, zoom in, zoom out, etc.
- Can store the camera images for playback at any time.
- Automatically shoot and record the traffic flow and number of people at that time and display it on the platform in real time.



- ROUND MODULAR - IP CAMERA + WIFI AP.
- Material: 3.5mm Galvanized Steel and PC.
- Dimension: 500*Ø180mm.
- Size: Φ130.7×101.7mm.
- Power supply: DC12 V, maximum power 11.2W. Network interface: RJ45, 10M/100M.
- With built in microphone. Frequency: 2.4 GHz~2.4835 GHz. Maximum pixel: 2560×1440.
- Support 4x optical multiplier and 16x digital multiplier.



IP CAMERA

24-hour real-time control and monitor the road and traffic status.

INTERCOM MODULE



Features

- You can ask the monitoring center for help with one key, and conduct video intercom with the administrator, and the administrator will view the footage and make timely response measures based on the reports of the help seekers and the on-site screens.
- The administrator can initiate a video intercom to them via a paging microphone. You can alarm the monitoring center with one key, get the alarm information, and provide timely help. At the same time, you can bind an IP speaker to issue an alarm voice.



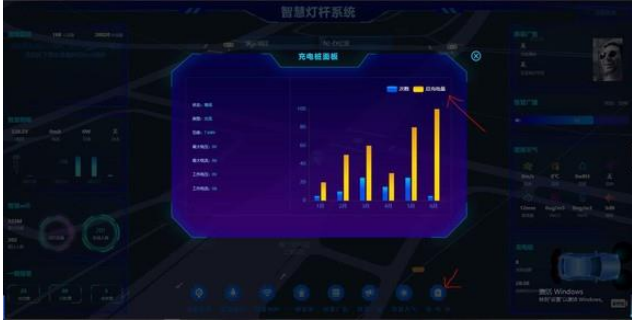
- ROUND MODULAR - Intercom / IP Speaker.
- Material: 3.5mm Galvanized Steel.
- Dimension: 500*Ø180mm.
- Product Dimensions: 140*283*92.9mm.
- Display Screen: 7-inch (1280*800); capacitive touch screen.
- Front Panel Material: Aluminum Alloy.
- Network I/F: 10BASE-T/100BASE-TX RJ45.
- Network Protocol: TCP/IP, UDP, ARP、ICMP, IGMP, SIP,
- HTTP. Power Supply: DC24V,1A. Standby Power Consumption: <4W. Overall Power Consumption: ≤6W. Audio Codec: MP2, MP3, PCM, ADPCM.
- Audio Sampling & Bit Rate: 8kHz-44.1kHz, 16bit, 8kbps~320kbps.
- Built-in Speaker: 3W 4Q.



HELP BUTTON w/INTERCOM

Press the button to get the instant help from Police in emergency.

CHARGING MODULE AND STORAGE PART



Features

- Monthly charging statistics, number of charges and amount of charges. Charge your car, payment method: QR code or VISA.
- Rated Power: 7kW. Efficiency: >99%.



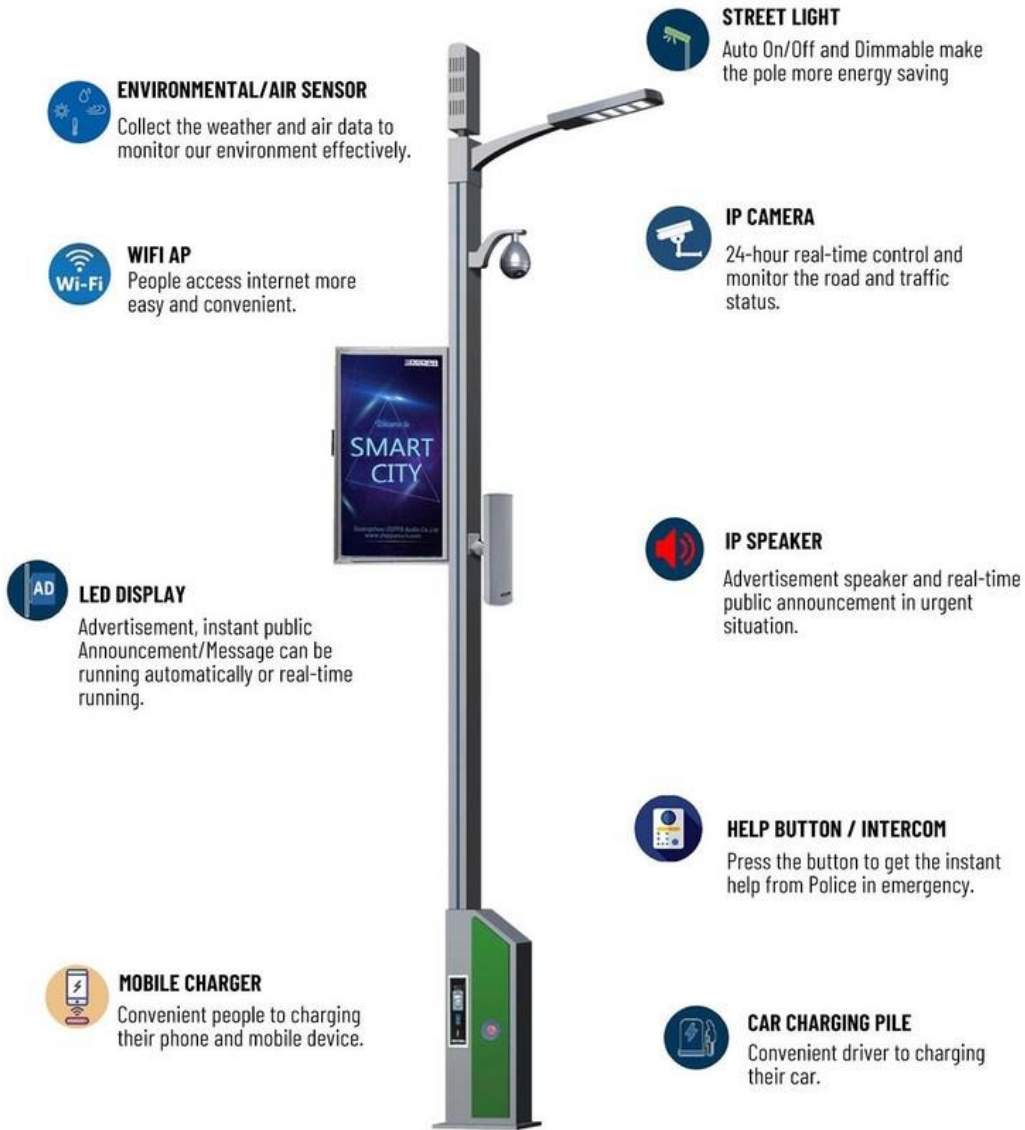
- ROUND MODULAR - Mobile Phone Charger.
- Material: 3.5mm Galvanized Steel.
- Dimension: 1200*Ø200mm.
- Special designed gateway for 5G smart poles.
- Two piece of wan socket, 8PCS 1000M outlet, built-in Cat.1 lamp controller.
- Compatibility: Camera, WiFi, Charging pipe, Emergency call,
- Screen, Broadcast etc.
- Support WiFi, 4G, Kilomega access, various ways for Ethernet connection.
- Abundant protocols, easy for interconnection, transparent data transmission. MODBUS RTU to TCP/IP, MQTT.
- Micro SIM Card, preventing from losing connection. Industrial design, aluminum alloy housing, steady operation in different working environments.



Charging & Storage Space

For holding power supplies, control boards, etc.

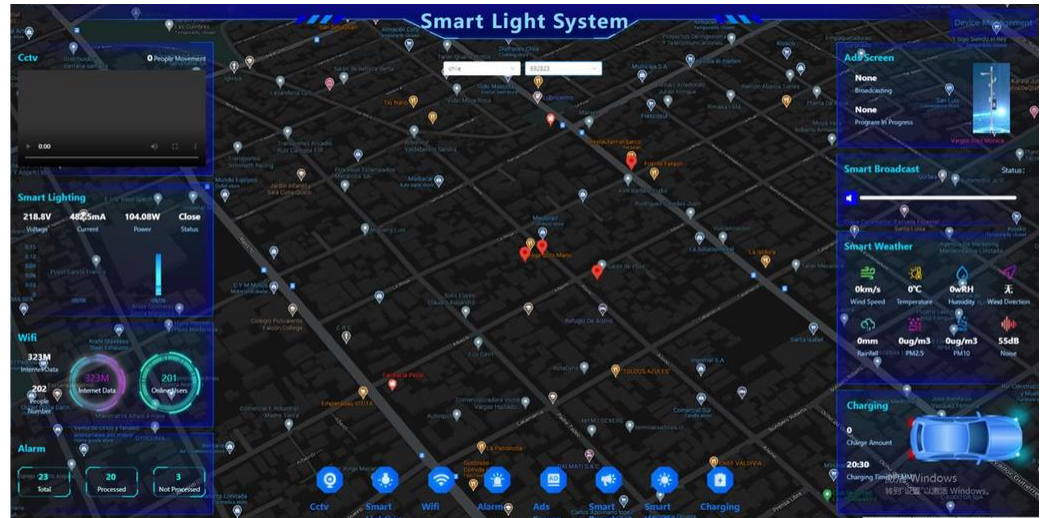
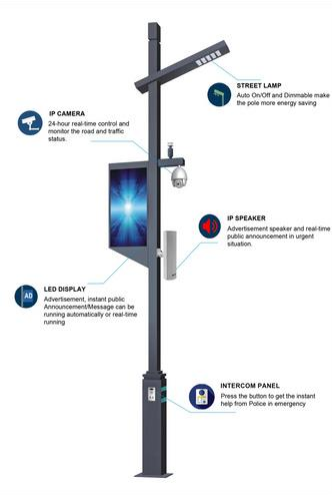
Integrated Smart Pole



FEATURES

1. With environmental monitoring function
2. With intelligent lighting module
3. With 2 megapixel wide dynamic camera for multiple streams
4. Can bind IPC camera for alarm linkage
5. LED full colour dot matrix screen
6. With one-key alarm button for voice assistance
7. With network playback terminal function





Management System

Integrated Smart Pole with Five Parts



Street Lamp



- LED Type/No.: Lumileds 3030:144pcs/216pcs/288 p c s/384pcs/576pcs.
- Material: Die-cast ADC12 Aluminum Housing with Tempered Glass.
- Color Temperature: 3000K, 6000K.
- IP Grade: IP66.
- CRI: >70Ra.
- Efficiency: 150lm/W.

IP Camera



- 3,000,000 pixels. Support 2048*1536 @30ftp
- Support H.265 efficient compression algorithm for saving more storage space.
- Support PoE (802.3af)
- Power supply Support 300 preset bits, 8 cruise scans.
- Lighting protection, surge protection and IP66.

IP Speaker



- All-weather design and waterproof unit, suitable for outdoors
- Powered by +48V PoE switch.
- Built-in high-fidelity speaker output with low consumption.
- Adopt aluminum alloy case with UV-resistant painting treatment on the surface, high-quality appearance.

LED Display



- Display pitch: 3.846mm.
- Module size: 200*200mm.
- Overall display size: 400*800mm (select according to the height of the pole) double-sized display.
- Overall display resolution: 208dot*416dot.
- Brightness: 7000cd/m, all-weather for outdoors.

Intercom Panel



- The built-in echo cancellation and anti-howling algorithm can effectively prevent howling and intercom echo.
- Support POE and DC power supply.
- Supports real-time transmission of audio and video collected by the built-in camera and microphone to the server for storage, playback, and real-time browsing.
- Lighting protection, surge protection and IP66.

LED Display

INTEGRATED SMART POLE



- Display pitch: 3.846mm.
- Module size: 200*200mm.
- Overall display size: 800*1600mm, double-sized display.
- Overall display resolution: 208dot*416dot.
- Brightness: 7000cd/m
- All-weather for outdoors.

Multi-Screen Synchronous Playback

LoRa wireless timing, achieving synchronized playback across multiple screens.

Remote One-Click Power Off

In emergency situations, remotely power off the screens with one click.

Automatic Brightness Adjustment

Adjust screen brightness according to changes in ambient light conditions.

Backend Data Management

Access data anytime, anywhere.

Scheduled Task Publishing

Scheduled playback and scheduled on/off

Intelligent Temperature Control and Heat Dissipation

Intelligently activate cooling fans according to changes in environmental temperature.



Frame Color Selections:



Product	Multiple Sizes Single / Dual-sided LED Light Pole Screen Series
Pixel Pitch	3.846mm
Module Size	200*200mm
Overall Display Size	800*1600mm, Dual-sided Display
Overall Display Resolution	208dot*416dot
Overall Appearance Dimensions	910mmX1722mmx130mm
Pixel Density	≥67600dot/m ² , High-definition outdoor display
Brightness	7000cd/m ² , suitable for all-weather outdoor use
Frame Material	Full die-cast aluminum
Protection Level	IP65
Sound	Built-in 2*33W high-quality waterproof speakers
Indicator Light	1R1G dual-color, R: power supply status; G: network status
Refresh Rate	≥3840Hz
Operating Temperature	-45°C to +85°C
Input Power	AC 220/110 ±10%, 47-63Hz
Power Consumption	Maximum: ≤1920W/panel, Average: ≤480W/panel
Weight	≤69Kg
Communication Interface	WiFi/Ethernet port for cluster control
Cooling System	Dual-axis temperature-controlled intelligent cooling

Remote Real-Time Monitoring

Access real-time monitoring anytime, anywhere.

LED Display Size Options: Customized

800*1600mm	12m-14m
800*1400mm	9m-11m
600*1200mm	6m-9m
640*1280mm	6m-9m
600*1000mm	4m-8m
400*800mm	3m-5m
400*600mm	3m-5m
320*640mm	3m-5m

Reference for selecting light pole sizes.

STREET LIGHT



INTEGRATED SMART POLE

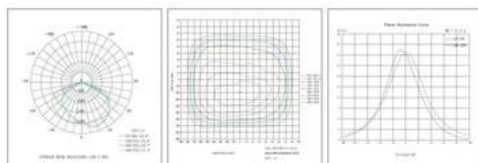
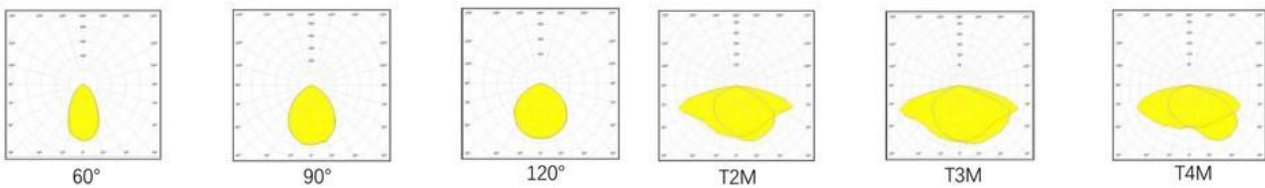
- LED Type/No.: Lumileds 3030:144pcs/216pcs/288pcs /384pcs/576pcs.
- Material: Die-cast ADC12 Aluminum Housing with Tempered Glass.
- Color Temperature: 5000K - 8000K.
- IP Grade: IP66. CRI: >70Ra.
- Efficiency: 150lm/W.



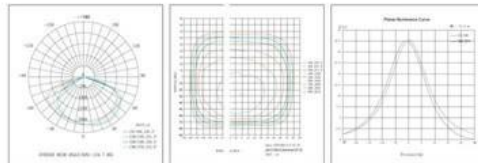
Specifications

Power	50W/100W/150W/200W/300W
Input Voltage	100-240Vac,50/60Hz
LED Type/No.	Lumileds 3030:144pcs/216pcs/288pcs/384pcs/576pcs
Efficiency	150lm/w
ColorTemperature	3000K-6000K
CRI	>70Ra
IP Grade	IP66
IK Grade	IK08
Beam Angle	60°/90°/120°/T2M/T3M/T4M
Life Time	50,000hours
Life Cycle	TM21:L80B20
Driver	Inventronic
Material	Die-cast ADC12 Aluminum Housing with Tempered Glass
Weight	4.40KG/5.32KG/6.26KG/6.87KG/8.1KG
Working Temperature	-40°C-50°C
Working Humidity	20%-95%

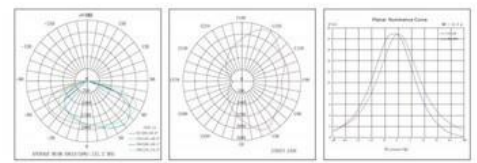
Luminous Intensity Distribution



T2M Unit light distribution curve



T3M Unit light distribution curve



T4M Unit light distribution curve

NETWORK OUTDOOR WATERPROOF SPEAKER

INTEGRATED SMART POLE



- All-weather design and waterproof unit, suitable for outdoor.
- Powered by PoE+48V switch.
- Built-in high fidelity speaker output with low consumption.
- Adopt aluminium alloy casing with UV-resistant painting treatment on the surface, high-quality appearance

Sound Field Effect Diagrams of IP PA Speakers

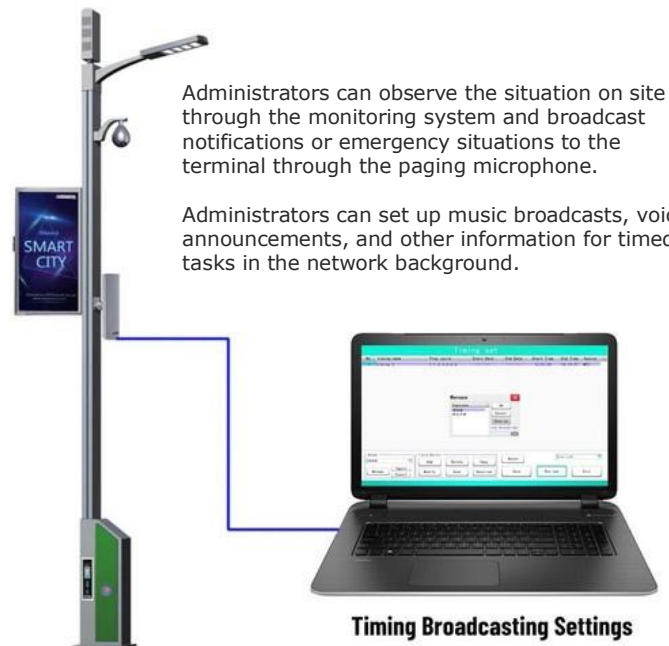


4 Installation Points

Here is a table of the total SPL of a single speaker in a 200m x 200m free field and simulated environmental sound field, at a centre frequency of 1000Hz

Frequency data	simulation data	3D simulation data
The average mixed SPL of a single environment simulated sound field at 1000Hz is 71.70	<p>Estimated: 100.0% Min: 57.36 dB Max: 103.08 dB Avg: 71.70 dB StdDev: 17.00 dB Max: 103.08 dB Min: 57.36 dB Data points: 2188</p>	
The average mixed SPL of a single free simulated sound field at 1000Hz is 69.09	<p>Estimated: 100.0% Min: 57.36 dB Max: 103.08 dB Avg: 69.09 dB StdDev: 17.00 dB Max: 103.08 dB Min: 57.36 dB Data points: 2010</p>	

DSPPA broadcast system equipment is designed to meet the needs of everyday business, background music, and emergency broadcast system applications. There are specifications for maximum sound pressure level and uniformity. The speakers in the broadcasting system must operate within the allowable distortion range, with a maximum mixed sound pressure level greater than 80dB in the frequency range of 125 to 4000Hz, which meets the main standards for background broadcasting. In addition, at a frequency of 1000Hz, the sound pressure level should be greater than 83dB, thus meeting the main standards for background music and business broadcasting.



Administrators can observe the situation on site through the monitoring system and broadcast notifications or emergency situations to the terminal through the paging microphone.

Administrators can set up music broadcasts, voice announcements, and other information for timed tasks in the network background.

Timing Broadcasting Settings



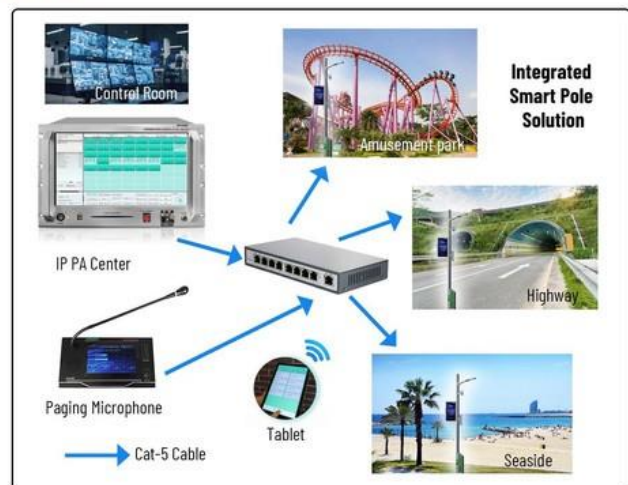
NETWORK INTERCOM PANEL/ HELP BUTTON & INTELLIGENT SURVEILLANCE CAMERA



- PX6 waterproof rating, suitable for indoor and outdoor use.
- Supports integration with customer's SIP phone system for intercom needs.
- Two-way audio and video intercom. e Basic broadcasting features such as background music and scheduled broadcast.
- POE powered, DC15V powered, with 2*10W built-in amplifier.
- One-way trigger input, one-way trigger output for linkage.
- One local line input can be connected to tie IPC camera line output.



Intelligent Surveillance Cameras



Bind IPC info			
No.	Channel Name	User Name	Password
		admin	123456
		IP address	192.168.1.108
		RTSP port	554
		Channel info	1
		Channel Name	Camera 1
		<input type="checkbox"/> Start AI Function	
<input type="button" value="Add"/> <input type="button" value="Delete"/> <input type="button" value="Modify"/>			
<input type="button" value="Exit"/>			

Monitoring System Linkage

IP CAMERA



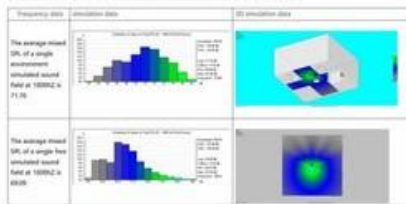
Integrate the latest technology: Adjustable Sound Wave Angle/ Adaptive Volume Control / Audio/Video Synchronization / CCTV Linkage.

IP SPEAKER

Sound Field Effect Diagrams of IP PA Speakers



Here is the table for the total SPL of a single speaker in the 200m x 200m free-field and simulated environmental sound field, at the center frequency of 1000Hz:



OSPPA broadcasting system equipment is designed to meet the requirements for daily business, background music, and emergency broadcasting system applications. There are specifications for maximum sound pressure level and uniformity. The speakers within the broadcasting system are required to operate within an allowable distortion range, with a maximum mixed sound pressure level **greater than 80dB** in the frequency range of **125 to 4000Hz**, meeting the primary standard for background broadcasting. Additionally, at **1000Hz frequency**, the sound pressure level should be **greater than 83dB**, meeting the primary standards for background music and business broadcasting.



01
CCTV Linkage

With TTS speech synthesis function and intelligent IP camera linkage

02
Acoustic Design

A variety of IP speakers to meet the needs of diverse occasions.

Can operate independently + integrate into various platforms