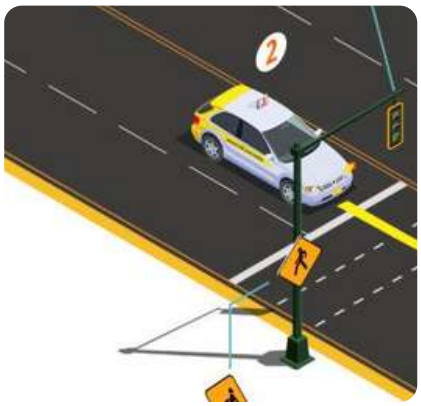
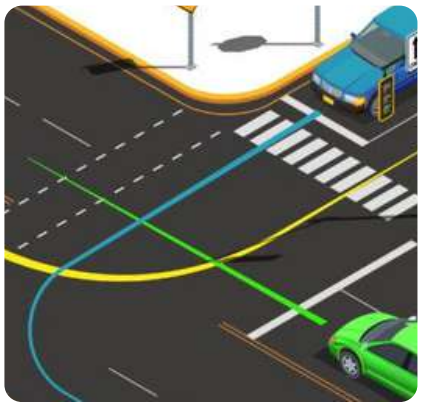
PAK GERMAN ENGINEERS

- Traffic Systems
- Automation Systems
- Solar & LED Systems
- Security Systems
- Road Safeties
- Consultancies



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About Us

WE DELIVER SOLUTIONS

- Traffic Systems
- Automation Systems
- Solar & LED Systems
- Security Systems
- Road Safeties
- Consultancies

Manufacturers of LED Traffic Lights and Traffic Management system.

PAK GERMAN ENGINEERS (PGE) is a multi-service company that specializes in traffic and transport engineering, traffic management, and automation services. They provide traffic control, home and industrial automation solutions, LED Traffic Lights, Pedestrian Traffic Lights, Variable Message Signs, vehicle detection systems, parking control, Intelligent Traffic Controllers, Video vehicle detection systems, GSM based message display boards, toll plaza solutions, video surveillance-based parking solutions, arterial systems masters, traffic control cabinets, data collection and management services, Intelligent Intersection technology, transportation maintenance services, solar street LED Lighting, solar power systems, solar water heaters, and Wind Turbine solutions. PGE is committed to providing advanced technologies that reduce traveller time, ease congestion, enhance transit operations, provide safer mobility, and improve quality of life. They are a quality assured company and are looking at ecologically friendlier options with their recent solar accreditation.

Our Mission

“Being a preferred partner for providing mobility and safety solutions to the future smart cities of the subcontinent”

Our Vision

“Enabling future cities through innovation in technology, integrity in operations and excellence in execution”

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Company Projects

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Content

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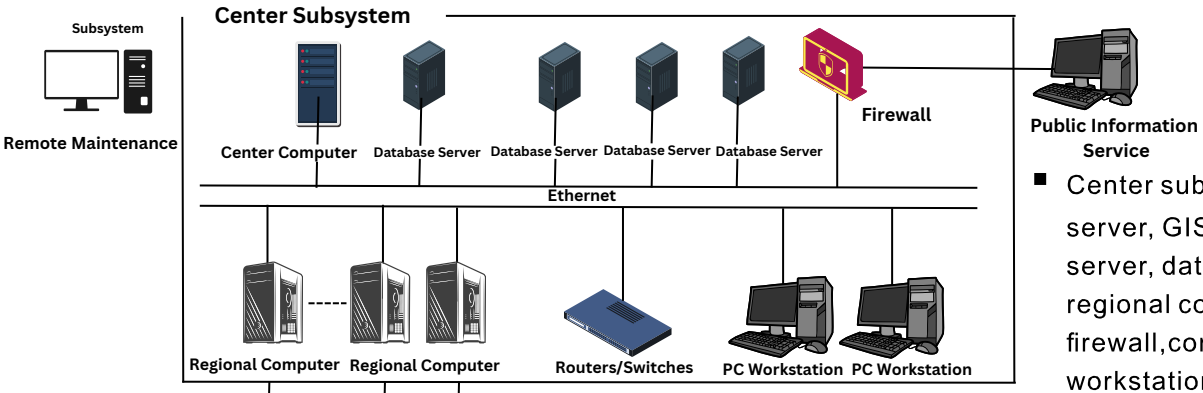
The SW-UTC system (based on GIS platform) is committed to alleviate the city traffic pressure, saving energy and improve traffic safety. It's integrated with computer technology, automatic control technology and network communication technology to make the city traffic control more intelligent and integrated.
The core idea of this control system is "traffic dispersion" and "road network equilibrium", namely, by measuring the traffic condition to optimize and adjust the signal timing.

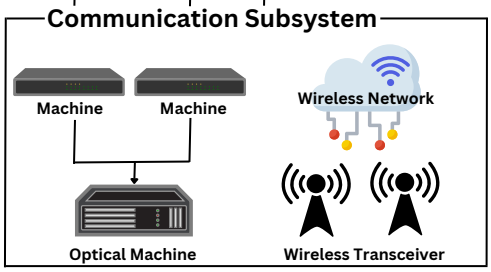
Main Features

- Area coordinate control
- Arterial coordinate control
- VIP priority control
- Central manual control
- Multi intersection centralized monitoring
- Parameter upload and download
- Real-time fault alarm
- Statistics and analysis of traffic flow
- Operation log record and management
- Hierarchical intersection display based on GIS platform
- Unified timing
- Multi-user group management
- Remote maintenance

System Configuration



- Center subsystem: database server, GIS and application server, data exchange server, regional control server, firewall,core switches, workstations, etc.



- Communication subsystem: optical fiber / wireless device.
- Intersection subsystem: centralized coordinated signal controller and vehicle detector devices.

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E100

- BRT control (optional)
- VIP vehicle priority traffic control
- Manual phase stepping control
- Pedestrian crossing trigger control

E100 is a centralizable traffic controller equipped with an ARM main control chip and embedded with Linux operating system and multi algorithmic models of different signal control modes. Benefited from modular hardware design, it's easy to maintain and extend its functions.

Main Features

- Centralized coordinate control by command center
- Multi-periods fixed time control
- Self-adaptive arterial and area coordinate control
- Off-line arterial and area coordinate control
- Wireless coordinate control via optional GPS module
- Single point self-adaptive control
- Actuated/semi-actuated control
- Traffic data acquisition and analysis
- Malfunction detection and alarm
- Yellow flashing and all red modes
- Over-voltage protection
- Door-opening alarm
- Mobile terminal operation (optional mobile phone or pad)

Technical Parameters

Signal output	56-Way, extendable to 112-way		
Input detection interface	28 Vehicle inputs; 8 pedestrian request inputs dry contact or OC transistor output, RJ45		
Presettable time base schedule	40	Presettable stage table	16
Presettable period table	16	Max stage no.for each stage table	16
Max time periods no.of each period table	48	Presettable phase number	24
Presettable plans	32		

Interface Type

Standard EIA level RS232	3, Baud rate:1200bps-115200bps
RS485 interface	1, Used for count-down timer communication
Network interface	1, 10M/100M Adaptive
USB 2.0 interface	1
GPS interface	1, With GPS time service
Pedestrian request interface	2, Dry contact signal (optional)
Flashing yellow controller interface	1 For the optocoupler output, 1 is connected to the OC transistor output

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FXT

Features

- Various control modes (multi-periods, yellow flashing, manual control).
- Simulated intersection display for easier programming.
- Simple wiring according to E, S, W and S.
- Various protection functions including electric leakage protection, lightning protection, output short-circuit protection, high current shock protection.
- Automatic green conflict detection.
- Built-in central control system to ensure work stability
- Modular design - easy for maintenance and function extension.

Working Voltage	AC85-265V, 50~60Hz	Insulation Value	≥100MΩ
Signal Outputs	44 outputs / 16 groups	Working Periods	2x99(Workday/Weekend)
Working Menus	32(each menu max 99 steps)	Max Step Length	255s
Working Temp	-40°C~75°C	Humidity	5%~95%
Size / IP Level	550*400*950mm / IP54	Time Error	±1S

SW200 is an intelligent traffic signal controller by ourselves design. The control concept based on NTCIP. It's stable and reliable with modular hardware design and multi control modes.

PGE-200

Features

- Multi control modes including single junction signal optimization, multi-period fixed time control, green wave control, centralized network control, pedestrian request function, etc
- Main power and backup power switching
- Auto control mode downgrading under unrecoverable fault
- Independent hardware yellow flashing
- Fault detection on signal failure
- Illumination function
- Mini LCD screen to show time/IP address/running plan, etc. parameters

Working Voltage	AC86-264V，50/60Hz	Unloaded Power	<30W
Signal Outputs	48 outputs / 16groups	Pedestrian Req. Inputs	8
Veh. Det. Inputs	24	Veh. Det. Data Storage	>15 days
Presettable Stage Plan	16	Max Time Periods No. / Periods Table	24
Presettable Time Base Schedule	32	Workinng Temperature	-40℃ ~ +70℃
Interfaces	Ethernet: RJ45, RS232, RS485, WiFi, I/O port		

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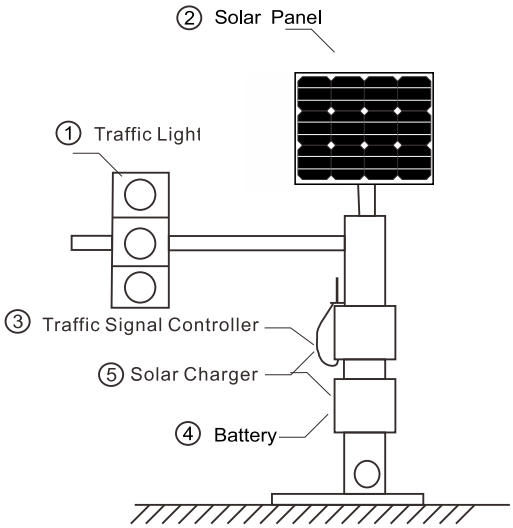


❍ System Introduction

The solar powered wireless traffic signal control system designed for typical junction consists of several stations where each station includes solar panel, battery, traffic signal controller (master/slave) and traffic light.

❍ Features&Benefits

- Low labour cost for installation
- Environmental Protection
- Optimal solution for junction where ducting is not feasible

Solar Power System

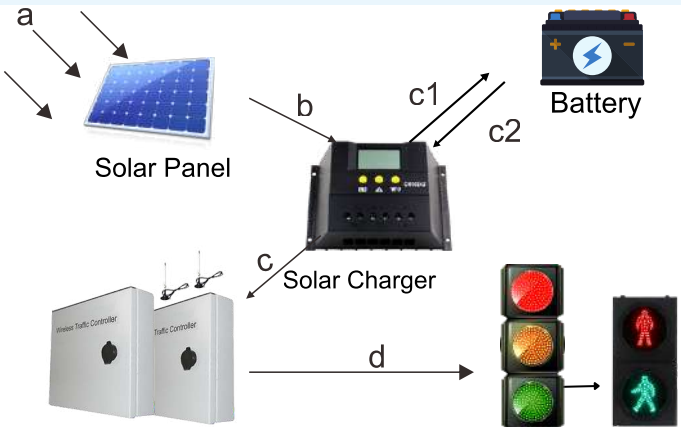
a. Solar cell(solar panel) converts the energy of light directly into electricity by the photovoltaic effect

b.Electricity is distributed through solar charge controller device

c. Solar charge controller supplies part of electricity for traffic signal system and the rest is stored in battery as a backup(c1&c2)

c1. Charge c2. Discharge

d. Signal control devices (master/slaves) run traffic lights according to a specific plan



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Features

- Stable GFSK communication system at 490MHZ
- 8 selective signal channels of wireless communication
- Optimal solution for junctions without power grid/ducting is not easy
- Multi-period working modes, manual stepping control, yellow flashing,etc
- Easy settings with hand-held remoter
- Wide solar working voltage, 12/24VDC self-adaptive, over voltage protection on 30VDC

Working Voltage	DC12/24V(self-adaptive)	Unloaded Power	<1W@DC12V&<1.5W@DC24V
Signal Outputs	11 outputs / controller	Working Period	16
Master Controller Qty	1pcs	Slave Controller Qty	0-8pcs
Temperature	-20°C~80°C	Humidity	98%
MTBF	>10000hrs	MTTR	≤0.5hrs
Dimension/ IP Level	300x281.2x82mm/ IP54	Setting Saving Time	≥10years
Wireless Communication Distance	>600m	Wireless communication parameters	GFSK 490MHz, Baud rate9600bps, Transmitting power ≤100mW

Remote Programer

Overview

Hand-held remoter is a wireless communication mini-signal control unit equipped with industrial-grade single chip microcomputer and LCD12864 display screen. It can conveniently and quickly achieve time and date setting, traffic schedules and plans setting, wireless organization setting, and working status monitoring on wireless master and slave controllers.

Wireless Frequency	490MHz	Sending Power	200mW
Control Distance	>200m	IP Level	IP65
Charging Connector	USB B-type Connector	Charging Voltage	DC5V 1A
Setting Solution Saving	8 years	Year Time Deviation	<2.5 minutes(under 25±1°C)
Working Temperature	-30~70°C	Production Size	200*100*38mm
Continuous Use after fully charged	<10h	Battery Capacity	3.7V 2800mA polymer lithium battery

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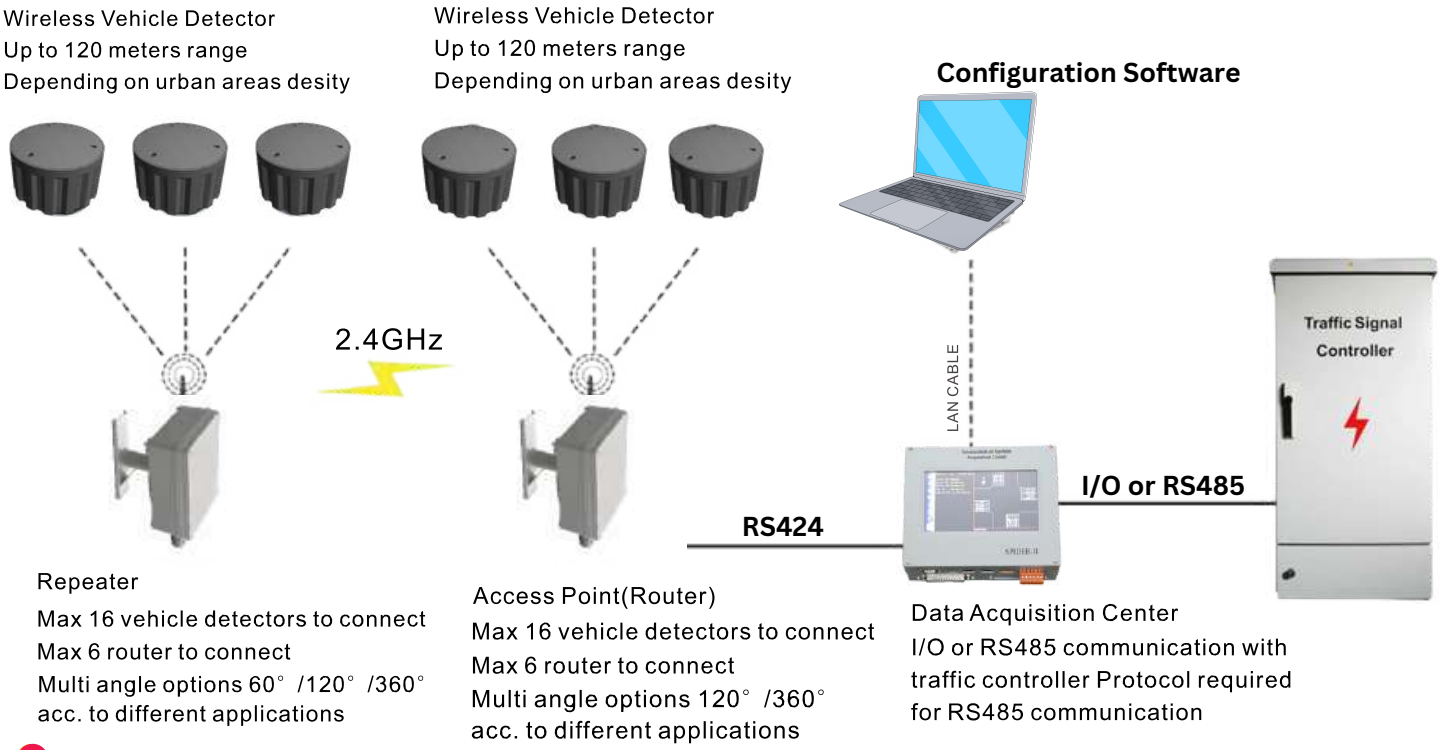

Repeater

Max 16 vehicle detectors to connect
Max 6 router to connect
Multi angle options 60° /120° /360° acc. to different applications

Access Point(Router)

Max 16 vehicle detectors to connect
Max 6 router to connect
Multi angle options 120° /360° acc. to different applications

Data Acquisition Center

I/O or RS485 communication with traffic controller Protocol required for RS485 communication

Overview

Wireless vehicle detection is a kind of new vehicle detection system which extensively used in urban traffic vehicle management to collect and transmit traffic flows and status on urban roads to front-end signal controllers and center database.

Currently, this detection technology is available from a small wireless unit (VD) which is installed, by core drilling a small hole in the surface of the carriageway (geomagnetic detector) to measure the Earth's magnetic field change when a vehicle passes by. This will be transit as a wireless signal to Routers under 2.4GHz wireless frequency, which can be processed by a Data Acquisition Center Device to generate a variety of traffic data, including vehicle presence signal, speed, headway time, occupancy time, vehicle distance, vehicle length and road saturation.

Benefits

- Reduced installation costs
- Easy installation & maintenance
- Powerful wireless signal (18dbm)
- Long battery life of 5 years
- High detection accuracy rate

Applications

- Traffic signal actuation and adaptive control
- Ramp metering and speed violation
- Occupancy detection at public parking
- Headway times for road safety

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Video Vehicle Detector

Features

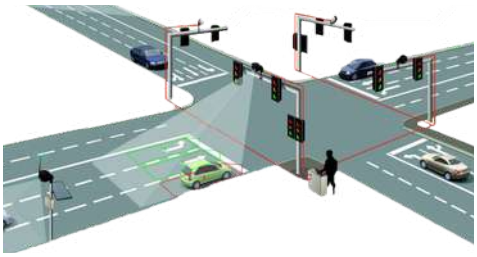
- 5 million pixel starlight image sensor, excellent night effect
- Independent CPU chip and more advanced algorithms
- Variety intelligent algorithms can collect a variety of traffic flow information
- Large-capacity memory chip which can keep 2 years statistical data
- Easy installation and remote configuration
- Compatible with horizontal/vertical pole installation

Overview

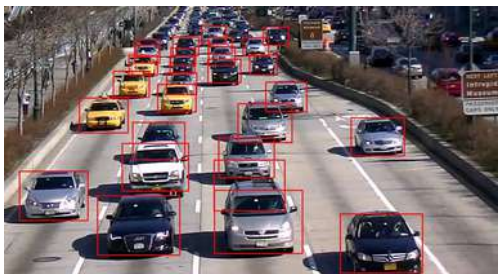
Video vehicle detector is the latest generation of vehicle detection products. It adopts the most advanced SOC+GPU hardware architecture and advanced traffic detection algorithms, which can realize the growth of future functions while maintaining efficient video detection performance and reliability.

Applications

- Traffic signal actuation and adaptive control
- Provide real-time data for traffic guidance and conflict warning



Video Vehicle Detector



Video Vehicle Detector

Parameters

Working Voltage	AC 100V~240V, 48-52Hz	Storage	2GB Nand Flash
Video Encoding	H.264 / H.265/MJPEG	Video Resolution	1920x1080, Max. 2592x1944
Ports	RJ45, RS485, RS232	Protocol	TCP/IP, SIP, RTP,etc.
IP Grade	IP67	Working Emperature	-40℃~80℃, ≤93%RH
Camera Imaging	1/1.8 inch, 5 million pixels; Dynamic range >120db; Minimum illumination >0.001Lux; Motorized zoom lens 3.6～11mm;	Detection data	Traffic flow, Vehicle speed, Occupancy rate, Vehicle type and distance, etc. Support ≥6 lanes

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Overview

We provide various traffic lights with different categories, sizes, types, and standards for urban traffic signaling applications in junctions, toll stations, parking entrance, road sections, etc. All lights are equipped with high intensity LED light source, wide input voltage power supply, highly durable and UV resistant polycarbonate housing, and mounting brackets. They are in compliance with CE, RoHS, EN12368 and ISO9001.

Lens Type

Transparent, small/fresnel, cobweb, high flux

Categories & Size

Vehicle / Pedestrian Light

100/200/300/400mm

Toll Station Light

200/300/400mm

Countdown Timer

200/300/400/600/800/900/1100mm

Warning Signals

200/300/400mm

Housing Design

American Type | European Type | E2 Type

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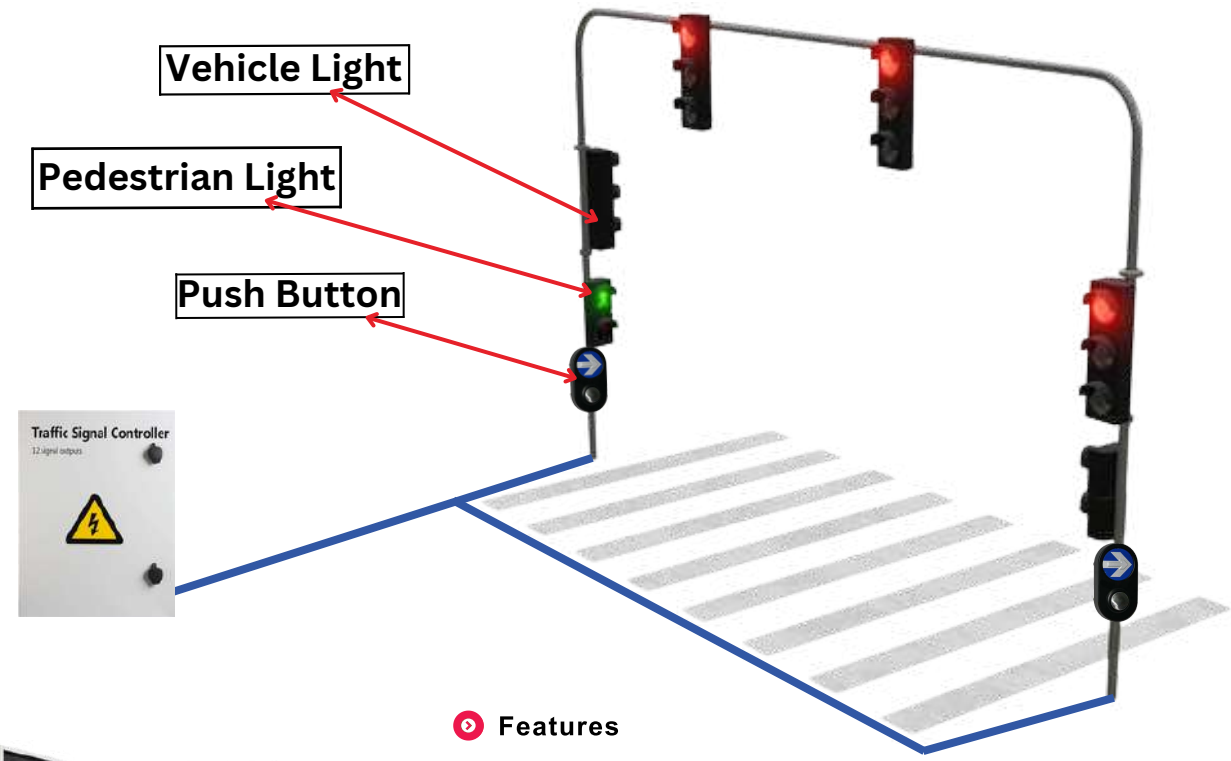
Pedestrian crossing system is an ideal solution for reducing pedestrian waiting time and enhancing pedestrian safety in places like school surrounding areas, transportation channelization island, junctions with very few pedestrians and crossing in main trunk roads.

It includes a simple 12 outputs signal controller, push button,and traffic signal light (acoustic signal optional). Normally the vehicle light is always green and pedestrian light is always red. When someone presses the push button, the traffic signal will safely transit to the requested pedestrian phase (ensuring the minimum vehicle green time – set in software). After the requested pedestrian phase green time finishes, it will automatically return back to original vehicle phase.



Pedestrian Crossing Controller

Features

- Fixed time mode: vehicle flow in peak time
- Pedestrian requirements mode: vehicle flow in off-peak time(day time)
- Yellow flashing mode: vehicle flow in off-peak time (middle night period)
- Switch off mode:vehicle flow in off-peak time(earlier morning period)

Input Voltage Range	85 VAC- 265 VAC, 50/60Hz	Relative Humidity	<95%
Power Consumption	≤10W (unloaded)	Settings Saving Time	10 years
Max. Output Load	100 Watts Per Output	Annualized Time Deviation	<2.5min
Working Temperature	-20°C to + 70°C		
Outputs	4 Groups of 3 Outputs Each One (ST-TSC-M12-AC1)		
Pedestrian Request Inputs	4 Opto-isolated Inputs (ST-TSC-M12-AC1)		
Ports	Ethernet: RJ45 / RS232 / RS485 (ST-TSC-M12-AC1)		

Acoustic Signal

Features

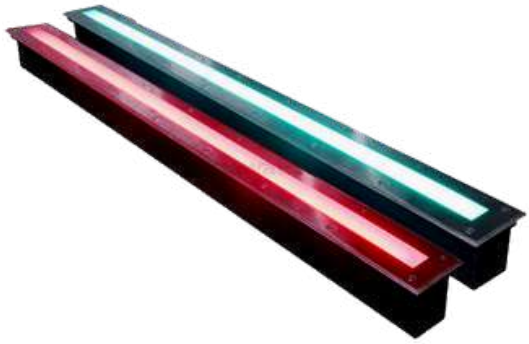
- Remote control 433MHz, 30m range
- Time interval & voice volume control
- Wide input voltage power module
- Data storage in power dump
- Low working voltage - safe environment
- Waterproof and dustproof IP54
- Easy fixation onto the lamp post
- Fully operational even in harsh weather
- Suitable for any traffic light system and different traffic/signal controllers

Parameters

Input Voltage	85-265VAC, 50/60Hz	Working Current	40-600mA
Power	≤10W (unloaded)	Working Temperature	−40°C~+80°C
Sound Volume	0-120db	IP Grade	IP54
Red Time Frequency	70±5 times/min p.m	Green Time Frequency	700±50 beeps p.m
Housing Material	Cold-rolled Iron with powder coating	Dimension	240*150*120mm^3

Features

- Easy installation to link with existing traffic control system
- Suitable to all intelligent traffic systems
- IP67 certification, resistant to dustproof, waterproof and durable – impact resistant
- Light dimming function according to external lighting environment
- Automatic synchronization with pedestrian modules without any delay
- Low energy consumption
- Fully operational in harsh enviroments and industrial areas



In-ground Pedestrian Signal

Parameters

Input Voltage	100~240AC/0.6A (50/60Hz)	Oeperating Voltage	24VDC/1A
Power Cons	≤ 6.5W	Viewing Angle	120°
Dimming Mode	Photo-sensitive dimming	SMT LED with Optical Lens	R:54pcs G:54pcs
IP Grade	IP67	Size	1000x70x60mm
Housing Mat. Top	Tempered glass/ Stainless steel frame	Weight	5KGS
Carton Size	1080mmx295mmx140mm	Temperature Range	-40°C~ +80°C

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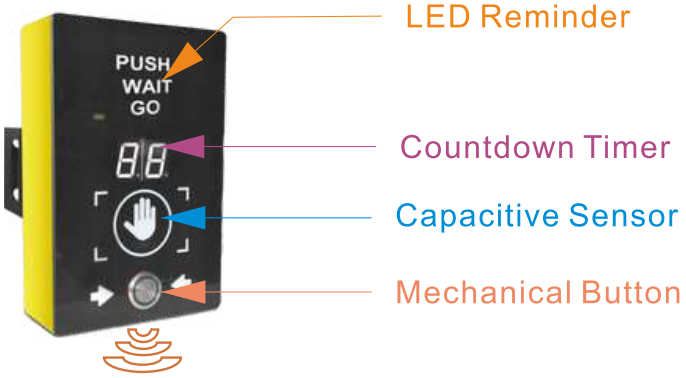

Inductive Push Button

Features

- Capacitive button and mechanical button combined in a solid module
- Humanization design with back-light words and voice prompt
- Real-time counting for the remaining red and green time
- IP65 protection level

Parameters

Input Voltage	AC100-265V, 50/60Hz	Power Consumption	<5W
Inductive Distance	5~10cm	Speak Power	3W
Countdown Timer	2 Segments Display	Countdown Timer Working Mode	RS485 communication

Mechanical Push Button

Parameters

Input Voltage	85-265VAC, 50/60Hz	IP Grade	IP65
Material	Die-casting Aluminum and Stainless steel material	Arrow Symbol Colors	Blue, Green, Yellow optional
Housing Colors	Black or Yellow optional	On-Off Mode	Magnetic Switch

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Solar warning signals/signs/road studs are designed for warning applications where dangerous conditions or obstructions exist, like railroad crossings, bridge abutments, cross walks, and sudden turnings in the road.

300mm Yellow Flasher

LED Qty(Intensity)	126pcs(≥600mcd)
Solar Panel/Battery	10W/18V, 6Ah/11.1V
Lighting Time	5~7 days after fully charged
Viewing Distance	≥500m
Temperature	-40°C~+80°C
IP Level	IP54

LED Signs

Size	400mm/600mm/other customized sizes
Illuminance	400~1200Lux
Solar Panel/Battery	12W/18V, 7-9Ah/12V
Viewing Angle/Distance	＞60° / ＞300m
Lighting Time	Nearly 120h after fully charged
IP Level	IP65

Hard Wired Road Studs

LED Qty(Intensity)	Max 18pcs(10000mcd)
Working Voltage	DC12V
Power Consumption	<1W/1side, <2W/2 sides
Size/IP	164.8*164.8*84.6mm/ IP67
Weight Capacity	80 Tons
Housing Material	Die-casting Aluminum

Solar Powered Road Studs

LED Qty(Intensity)	2/3/4/6pcs(5000~8000mcd)
Solar Panel/Battery	100MA/2V, 6Ah/1.2V
Lighting Time	100h after fully charged
Size/IP	105x105x23MM/ IP68
Weight Capacity	＞20 Tons
Housing Material	Aluminum, Polycarbonate

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ST-PTS-24DC1-A and ST-PTS-M11DC1-A are solar powered portable traffic signal trolley set with traffic signals, signal controller, solar panel, battery, solar charger on trolleys. It's an ideal solution applied for road junctions emergency or temporary case.

The ST-PTS-24DC1-A is controlled by a 24 outputs signal controller with advanced technology like high performance CPU, LCD display, wireless manual control,etc

Features

- Efficient power supply solution & manual/auto dimming function
- Built-in 24-ouputs fixed time traffic signal controller - visual operation with LCD screen
- Portable design -easy to transport and setup

Technical Parameters

Base (Total Height)	T=1.5 iron (3.3m)	Light Unit	300mm 4 aspects light (4 sides)
Viewing Distance	＞500m	LED Qty	121pcs/unit, 5000-8000mcd/pcs
IP Level	IP54	Signal Control	24 outputs signal controller(DC10~24V)
Battery(Gel)	12V/150AH	Solar Panel	18V/160W. sc-Si cell, lifespan: 15years(1pcs)
Wind Resistance	⩾1.5KN/m2	Duration	168h continuous use after full charge

The ST-PTS-M11DC1-A uses advanced GFSK 490MHz communication to phase and monitor signals in different directions to avoid conflicts or failures. Both models offer multiple options to provide safe and efficient traffic control for a variety of short term applications.

Features

- Flexible and fast deployment with each direction each portable light
- 600m~1.5km wireless communication distance between each signal
- Multi signal control modes
- Adopting user-friendly wireless hand-held device setting and operation

Basic Parameters

Base (Total Height)	T=1.5 iron (3m)	Light Unit	300mm RYG full ball 3 aspects traffic light
Viewing Distance	＞500m	LED Qty	121pcs/unit, 5000-8000mcd/pcs
IP Level	IP54	Signal Control	Wireless signal controller(DC10~30V)
Battery(Gel)	50V/50AH	Solar Panel	18V/50W. sc-Si cell, lifespan: 15years(1pcs)
Wind Resistance	⩾1.5KN/m2	Duration	168h continuous use after full charge

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Over Height Vehicle Detection and Warning System

We are pleased to introduce the Over Height Vehicle Detection and Warning System.
This system has been devised to assist the prevention of over height vehicles colliding with low obstacles e.g. railway bridges, tunnels, motorway junction networks, underpasses and flyovers etc.

What Does Our OHVDS Do?

- Detects over height vehicles and activates visual and aural warnings.
- Directs driver to take appropriate action e.g.; DIVERT, STOP or TURN BACK.
- Mounted on poles approx. 100 meters from the obstacle it provides sufficient time for | driver to avoid collision.
- Can notify traffic-monitoring stations, law enforcement or IT control points via landline wireless.
- The detectors are capable of detecting over height vehicles traveling at up to 100 km/| even in rain, snow, or dusty conditions.

Over height is detected by OVDS.

Alarm Bell activates with warning Sign. Parabolic shield focuses sound toward vehicle, drawing attention of driver to Warning Sign.

Warning Sign activates with Alarm Bell. Sign message alerts driver to over height hazard and provides directions for appropriate response.

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Automatic Incident Detection system

The Automatic Incident Detection system is an important component of a Smart Highways solution, providing accurate and reliable vehicle tracking and Automatic Incident Detection for roads, bridges and tunnels.

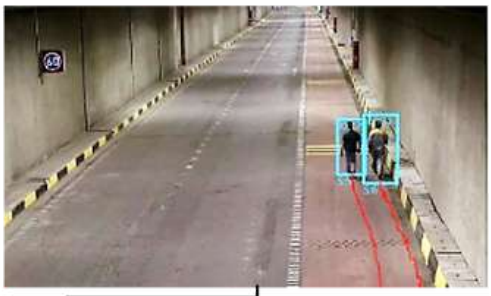
Queue
Congested Flow

Slow Vehicle

Abandoned
Object

Stopped Vehicle

Smoke
Low Visibility



Pedestrian

- The ‘Smart Highways’ concept, enables improved traffic flow and enhanced safety through the effective use of technology.

- Increasing safety on our motorways and reducing traffic congestion have become major goals.

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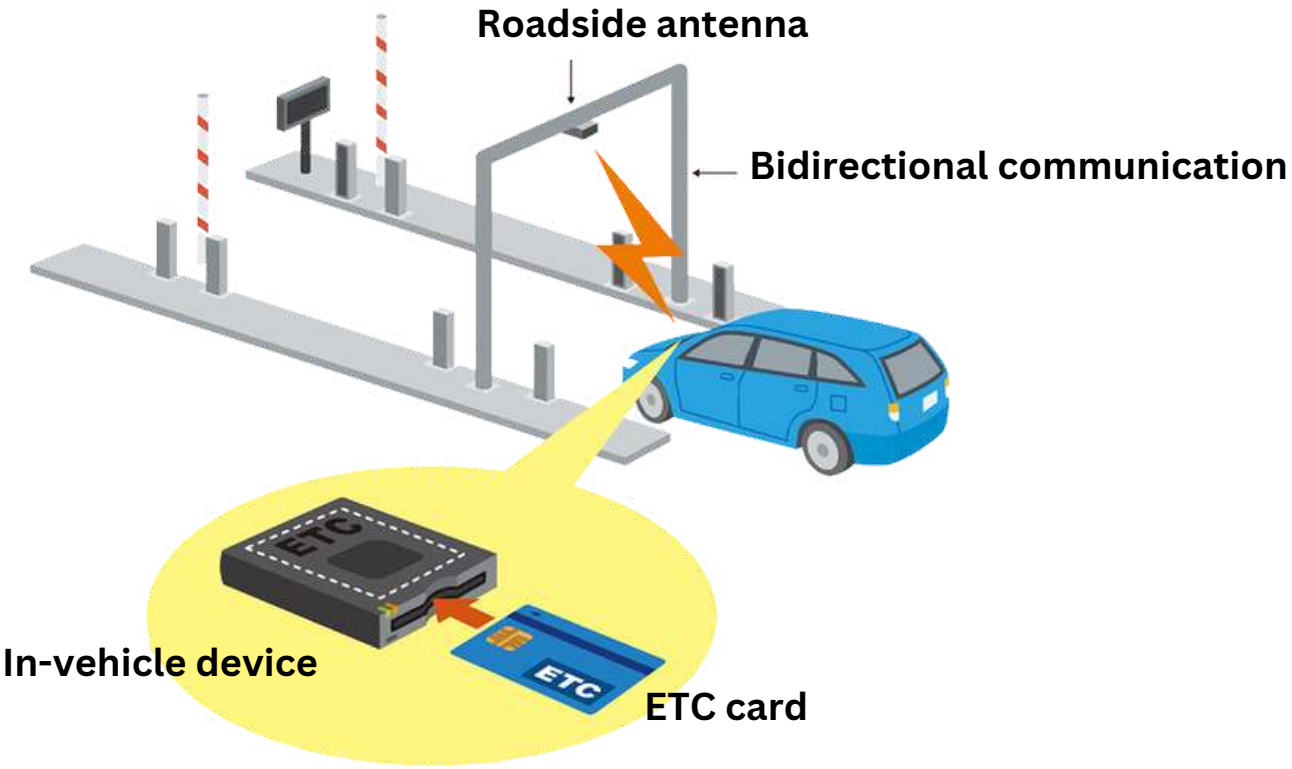
Electronic Toll Collection System

PGE provides core equipment and solutions for the ETC/MTC mixed toll system. The solution provides more convenient trip for ETC users and avoid waste of resources by the ETC lanes.

Our installed RSU antennas on the existing MTC lanes enables them to act as ETC lanes.

This system could provide ETC and MTC services in one lane simultaneously by installing microwave antennas and adjusted its heights and angles.

As a result, the problems including interference from following vehicles and adjacent lane can be prevented.



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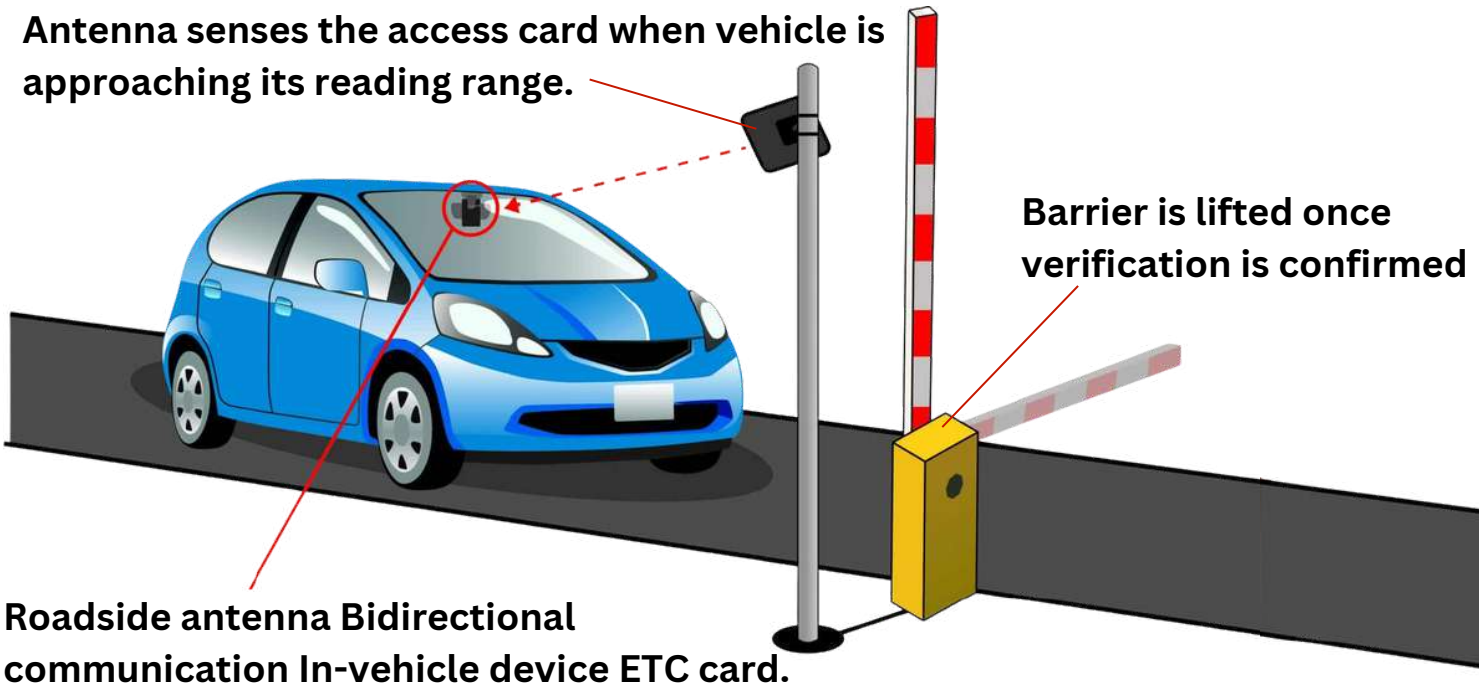
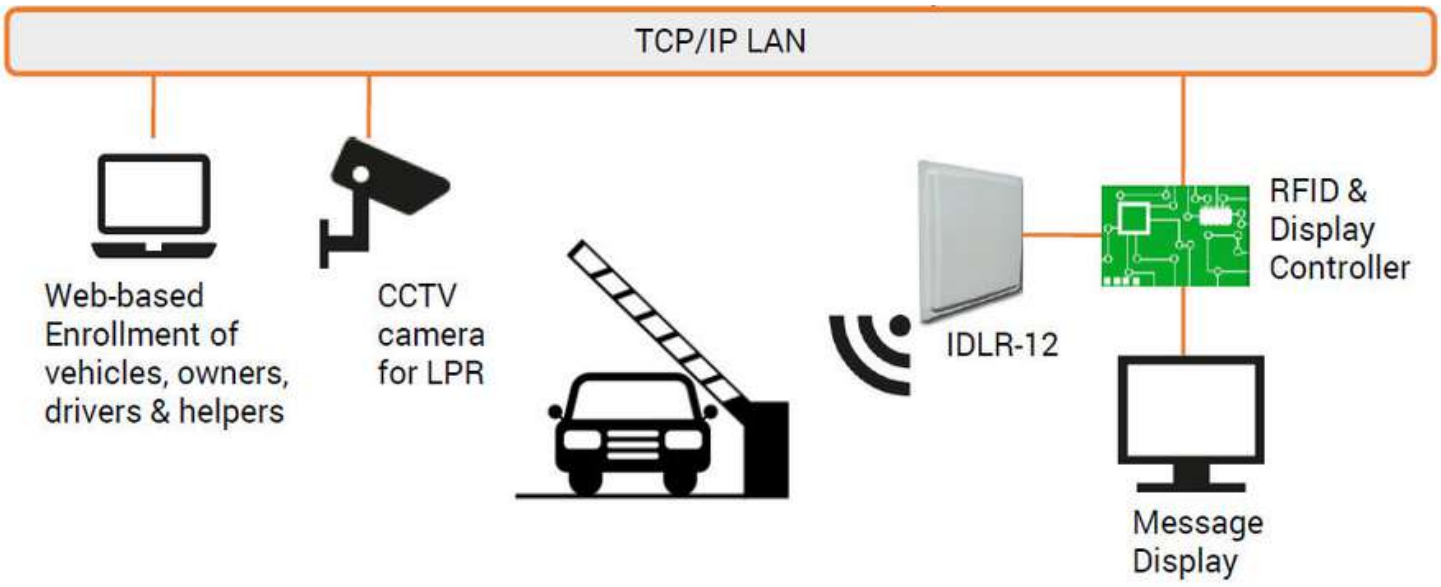
VEHICLE ACCESS MANAGEMENT SYSTEM

With our complete solution, our customers benefit from a reliable and comprehensive vehicle access management system, scalable for different business areas: from a simple employee parking lot to networked city solutions.



The only Vehicles having access tag will be allowed to enter, while others without tag are restricted. RFID detects the vehicle and allow the authorized vehicle to enter by moving the barrier up and the unauthorized vehicle are blocked.



Automated Parking Management & Control System

APM&CS (Automated Parking Management & Control System) is a system for managing pay- to-park parking lots, for both hourly and season / E-Tag parkers. Composed of Entry Station, Exit Station, Barrier, MPS (Manual-pay-station), Loop Detector, software and other optional devices, PGE PMS makes your parking lots secure, intelligent and high-efficient, providing below typical different systems for different applications:
Pay at Exit is an advanced Parking Management System for managing pay-to-park facilities with high traffic flow, for both hourly and season parkers.

Hourly parkers take barcode ticket at entry and pay cash at exit, season parkers get access and leave by self-service swiping their cards on Entry Station & Exit Station respectively, or enter and leave w/o stop if window shield tag is read by long range reader.

Parking slot monitoring system

Parking space is becoming a serious problem due to increasingly numbers of vehicles on the road. Particularly, in major metro cities with large population, or in places where sports or musical activities are scheduled, looking for parking space and finding a parking spot can be a frustrating experience.

- **Car parking occupancy sensor**

- **Parking App**

- **Data collector**

- **Digital Display**

- **It is ideal solution for parking lots of premises such as shopping mall, exhibition, hospitals, airports etc.**

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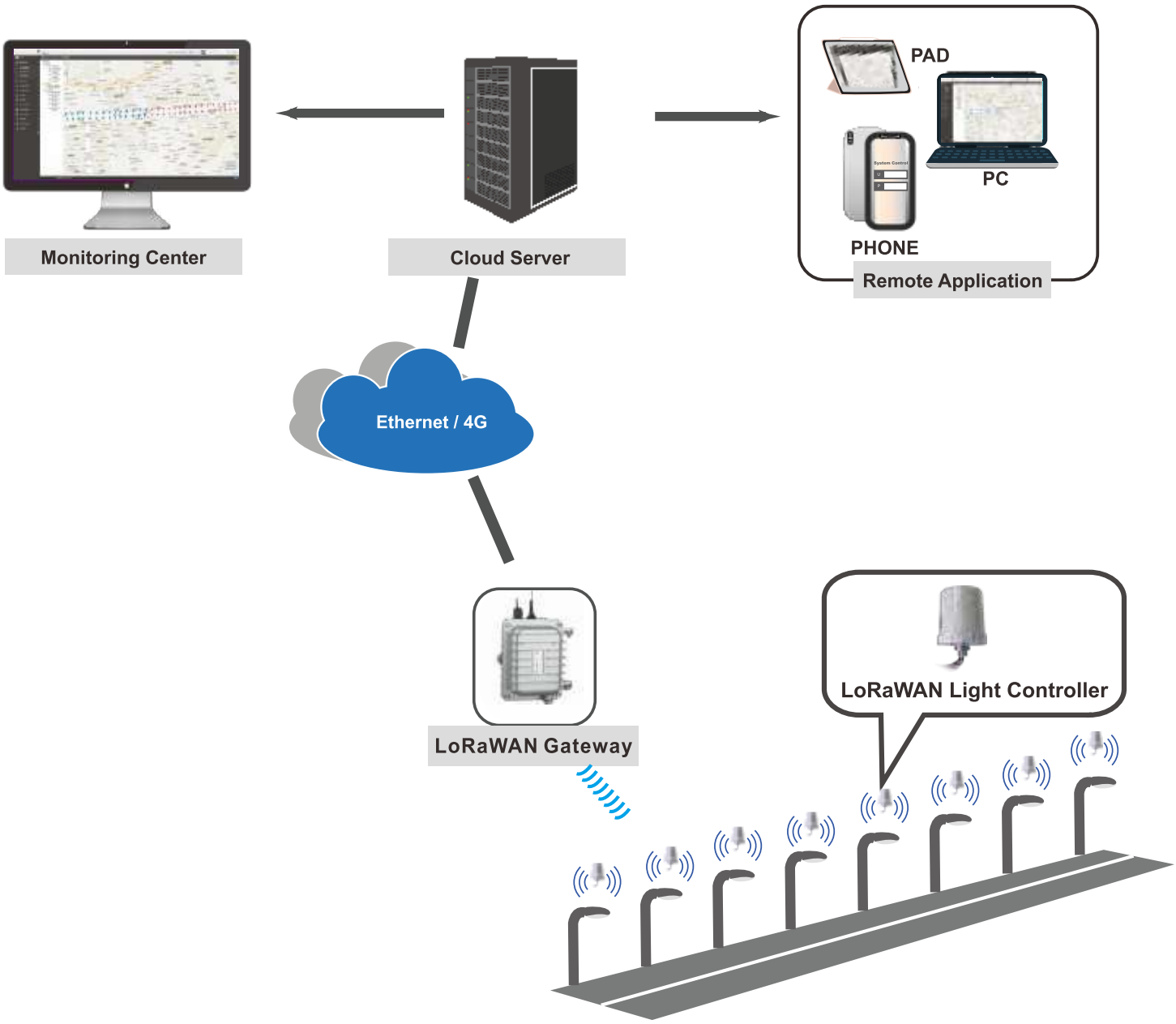

INTELLIGENT STREET LIGHT SYSTEM

Sinowatcher Intelligent Street Light System is a smart control system that based on the Internet of Things (IoT) technology which adopts LoRaWAN wireless communication, computer control system, GIS technology, safeguard procedure, and internet network facilities. The system is easy to implement, free of wiring, and with high efficiency and low cost management.

Through this system, operators can realize the intelligent management of street lights with multi functions like intelligent ON/OFF switching, targeted progressive dimming, efficient management of the consumption, monitoring, alarming, statistical statement, etc.

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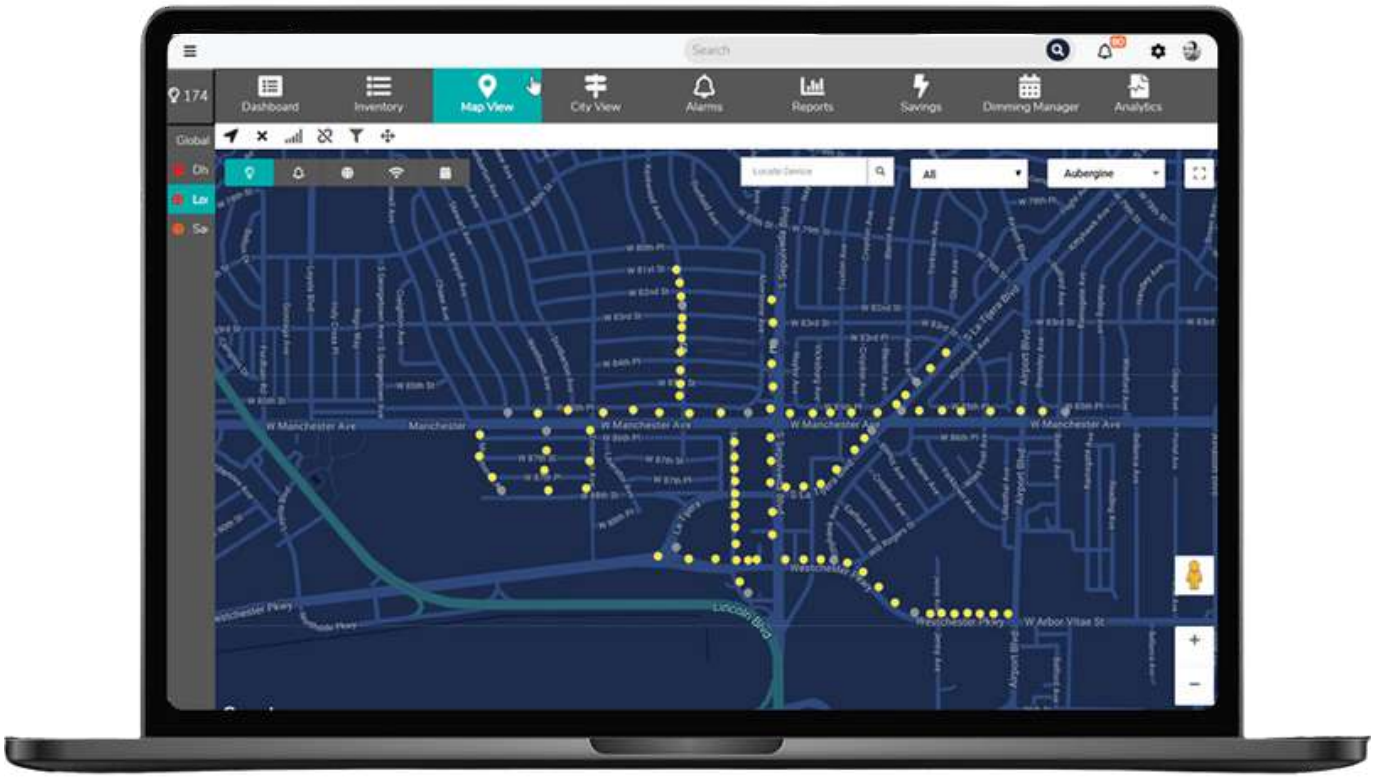
SYSTEM STRUCTURE

The system consists of advanced software and hardware communication systems, including control center, wireless communication network, wireless Lora Gateway/Base, and LoRa Node controller.

The distance between the LoRa Node controller and LoRa Gateway/Base is 3-5km, and each LoRa Gateway/Base can control up to 500 LoRa Node controllers/street lights.

The central control software will pass control commands to the LoRa Gateway/Base via the Ethernet or GPRS/3G/4G wireless network. The LoRa Gateway/Base will then send information to the LoRa Node controller to execute the commands.



MAIN FUNCTIONS

1. Wider coverage and higher reliability with LoRaWan system.
2. Free of wiring, easy installation and reduced construction cost.
3. Real-time control&monitoring: remote on/off switches, status and electrical parameter query.
4. Automatic dimming function: automatic brightness adjustment according to the illuminance detection device, or pre-timed plan, or actual passing vehicles.
5. Fault alarming function.
6. Support Web client login management and mobile phone app.
7. Statistics feature - data collection and analysis of lamp lighting duration, fault duration and energy consumption.
8. Support GIS map, which can display the luminaire in the map real time.
9. Support access to temperature and humidity and PM2.5 detection.

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X5 SERIES

M2 SERIES

80,000 HOURS | MW MEAN WELL | ROHS | IK08 | IP65 | Warranty 5 YEARS Warranty | 24-500 VAC | Surge Protection

Features

- High strength aluminum alloy die-casting AL
- Stainless glass cover, high light transmittance
- Surface dusting process, outdoor protection against strong corrsion, easy to clean
- 3-PIN, 5-PIN, 7-PIN NEMA plug is optional, and can be extended by intelligent control
- 1-10V dimmable, time control
- Installation: rotating joint
- Simple structure design, reliable performance, easy maintenance, self-cleaning

X5 Parameters

Model	Power	Voltage	Efficiency	CRI	Dimension	Beam Angle
SW-X5-MINI	30W	AC100~277V	120~150lm/W	70/80	490x250x90	TYPE I , II, III, IV
SW-X5-S	50W	AC100~277V	120~150lm/W	70/80	530x250x80	TYPE I , II, III, IV
SW-X5-M	100W	AC100~277V	120~150lm/W	70/80	600x280x85	TYPE I , II, III, IV
SW-X5-L	150W	AC100~277V	120~150lm/W	70/80	695x335x95	TYPE I , II, III, IV
SW-X5-XL	200W	AC100~277V	120~150lm/W	70/80	695x335x95	TYPE I , II, III, IV
IP Level	CCT		Lifespan	Material	Temperature	Warranty
IP65	2700~6500K		>50,000hrs	ADC12	-40°C~60°C	5 years

M2 Parameters

Model	Power	Voltage	Efficiency	CRI	Dimension	Beam Angle
SW-M2-2M	100W	AC100~277V	110-150 lm/W	70/80	501x355x122	TYPE I , II, III, IV
SW-M2-3M	150W	AC100~277V	110-150 lm/W	70/80	581x355x122	TYPE I , II, III, IV
SW-M2-4M	200W	AC100~277V	110-150 lm/W	70/80	661x355x122	TYPE I , II, III, IV
SW-M2-5M	250W	AC100~277V	110-150 lm/W	70/80	741x355x122	TYPE I , II, III, IV
IP Level	CCT		Lifespan		Temperature	Warranty
IP66	2700~6500K		>50,000hrs		-40°C~60°C	5 years

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AIO SERIES

Features

- Integrated design, light and practical, easy to install, no need wiring
- Monocrystalline solar panel, LiFePO4 battery/Lithium battery
- LED modular thermal design
- PIR motion sensor, saving energy and extending LED life
- Multi-period intelligent working mode, light brightness for longer period
- Highly waterproof, rustproof, safe and reliable
- Intelligent systems for environmental monitoring

Parameters

Model	Power	Battery	LED Qty/Chip	Solar Panel	Dimension	Beam Angle
SW-AIO-15	15W	11.1V/8AH	40pcs/SMD3030	25W	688x300x43	70°x140°
SW-AIO-20	20W	11.1V/15AH	50pcs/SMD3030	35W	828x300x43	70°x140°
SW-AIO-30	30W	11.1V/21AH	50pcs/SMD3030	45W	1078x300x43	70°x140°
SW-AIO-40	40W	11.1V/24AH	96pcs/SMD3030	60W	1172x300x43	70°x140°
SW-AIO-50	50W	11.1V/33AH	96pcs/SMD3030	70W	1078x426x43	70°x140°
SW-AIO-60	60W	11.1V/42AH	144pcs/SMD3030	90W	1306x426x43	70°x140°
SW-AIO-80	80W	11.1V/58AH	144pcs/SMD3030	120W	1468x426x43	70°x140°
IP Level	CCT		CRI	Temperature		Warranty
IP65	2800~7000K		70/80	-20°C~60°C		2 years

U1 SERIES

Features

- Universal voltage AC100~277V 50/60Hz
- Using high quality SMD3030 chips, High efficiency 110~130lm/w
- High power factor>0.9, Low THD driver
- Excellent optics design, greatly improve the light utilization and evenness
- Die-casting aluminum body, dustproof and waterproof ,IP65, IK09
- 5 years warranty, over 50,000 hours lifetime
- Available with 0-10V/PWM/DALi dimming mode

Parameters

Model	Power	Voltage	Efficiency	CRI	Dimension	Beam Angle
SW-U1-P100	100W	AC100~277V	110-130 lm/W	70/80	Ø280x150	TYPE I , II, III, IV
SW-U1-P150	150W	AC100~277V	110-130 lm/W	70/80	Ø340x165	TYPE I , II, III, IV
SW-U1-P200	200W	AC100~277V	110-130 lm/W	70/80	Ø400x180	TYPE I , II, III, IV
IP Level	CCT		Lifespan	Material	Temperature	Warranty
IP65	2700~6500K		>50,000hrs	ADC12	-40°C~60°C	5 years

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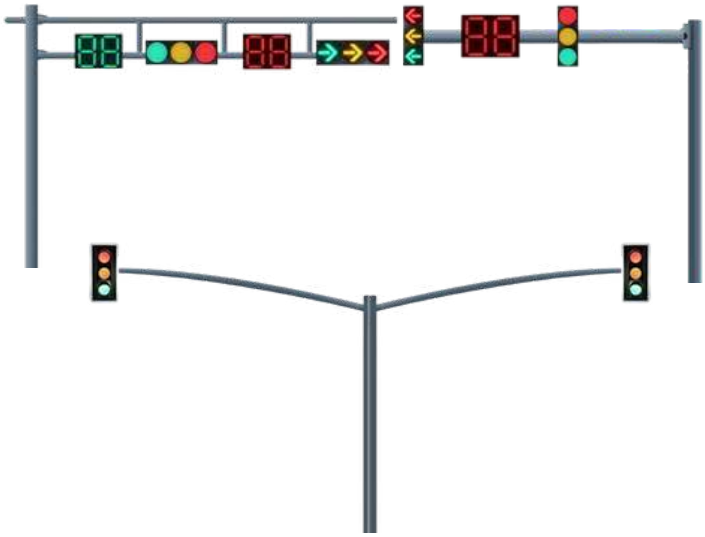

Features

- Comply with GB14887-2011 Chinese national standard product certification
- Comply with GB14887-2016 Chinese national standard installation specifications
- Comply with CE (EMC and LVD) EU product certification
- High quality steel of Q235 / Q345, various materials can be processed
- Application for urban road / highway installation

Parameters

Pole Type	Description
Upright	Height: 6-6.8m; Thickness: 5-10mm; Customization available
Mast Arm	Height: 6-14m; Thicknees: 4-8mm; Customization available
Surface Coating	Hot galvanizing or process coating; Powder colors optional:silver grey ; milky white ; black ; dark green ; etc.According to RAL code

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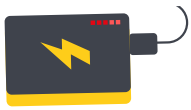
Intelligent Street Pole: The Ultimate Smart City Solution


Battery


W I F I

RFID


CCTV Camera

SOS


LED Display

(PGE-11X5) (PGE-10X5) (PGE-10X4) (PGE-10X6)

Smart Lighting Controlling System:

Remotely control (ON, OFF, dimming, data collecting, alarm, etc) in real time by computer, mobile phone, PC, PAD, support communication

Cameras & Surveillance System:

Monitor traffic, security lighting, public equipment through cameras & surveillance system on the pole.

Information Publishing System:

Display the advertisement, public information in words, pictures, videos by remote uploading, high efficient and convenient.

AC Charge Pile:

Offer more charging stations for new energy vehicles. make it easier for people travelling and speed up the popularization of new energy vehicles.

Mini Base station:

Wireless AP System:

Support WIFI host sport in city.

Weather Station System:

Collect and send data to monitoring center by concentrator, such as weather, temperature, humidity, lighting PM2.5, noise, rainfall, wind speed, etc.

DSRC/V2X Vehicle Monitoring System:

set up a smart traffic loT platform to promote traffic safety. improve traffic condition in bad weather. coordinate vehicles and optimize the traffic.

Emergency Call System:

Connect directly to command center, respond quickly to emergency public security affair and position it.

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Contact us

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- Automation Systems
- Solar & LED Systems
- Security Systems
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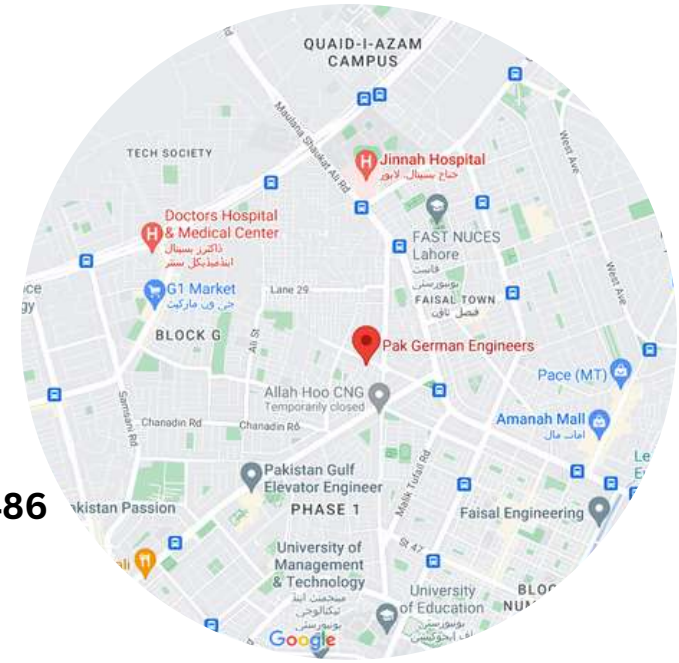

Islamabad office

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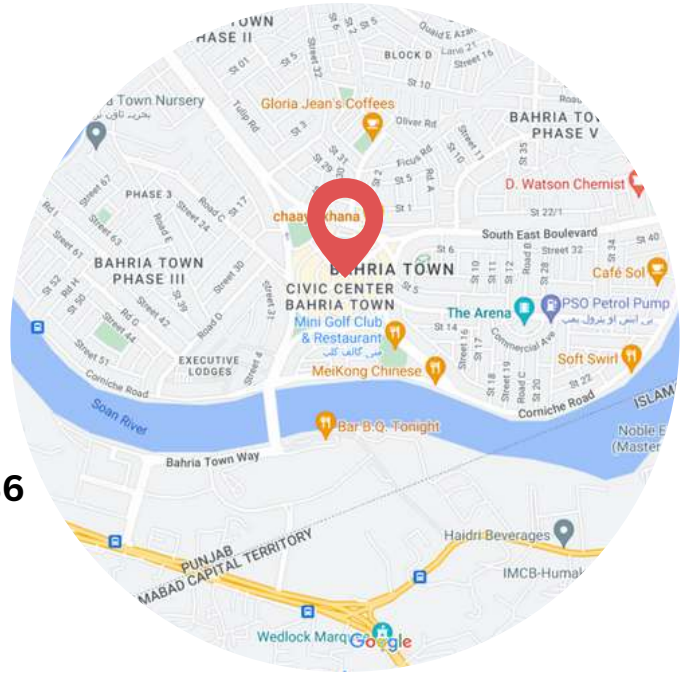

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