

HUAWEI ENTERPRISE ICT SOLUTIONS **A BETTER WAY**

Huawei Connected City Solution

enterprise.huawei.com

HUAWEI TECHNOLOGIES CO., LTD.



Streetlight, A Huge Consumer of Electricity



Traditional HPSL
(High Pressure Sodium Lamp)

Typical Power

400W

Consumption/day
(12h working time/day)

4.8kWh

Electric Charge/year
(0.14USD/kWh)

245USD!



New LED Lamp

150W

1.8kWh

92USD!

Electric Charge is much higher than cost of streetlight itself

Huawei i-Lighting Solution Overview

*AC-IoT: Agile Controller-IoT,
Huawei IoT Platform



Streetlight
Management
System

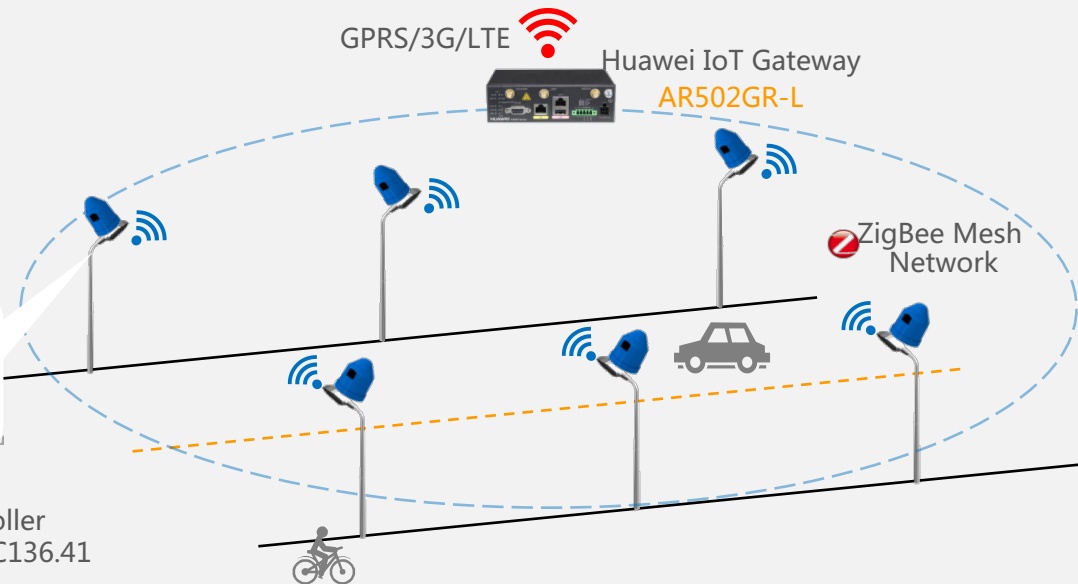
GP/RS/3G/LTE



Huawei IoT Gateway
AR502GR-L



Streetlight controller
comply to ANSI C136.41

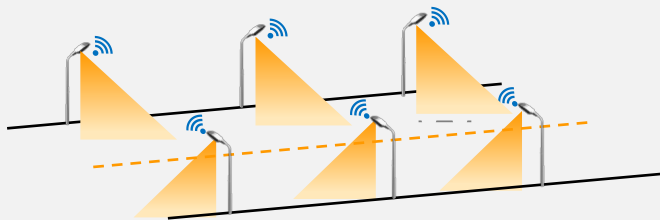


Huawei Solution

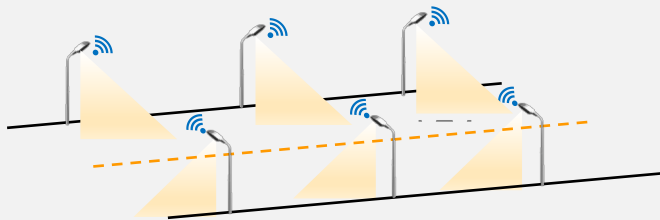
- Dimming controller for each LED light, dimming or switch control
- Comply to ANSI C136.41 standard, easy deployment
- Control streetlights according to brightness/time schedule, reduce power consumption
- ZigBee mesh networking, expand max distance
- Industrial level design device for harsh environment

Scenario 1: Daily Switch & Dimming Control

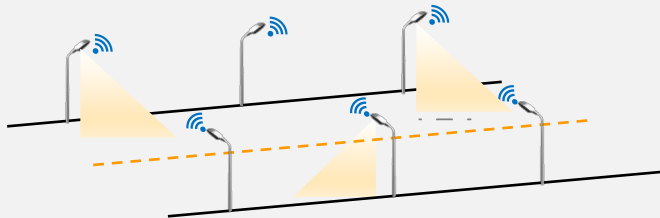
100% luminance
nightfall



50% luminance
late at night



50% luminance &
interval lighting
after midnight



Scenario Description

- ✓ Automatically calculate sunset/sunrise by longitude and latitude.
- ✓ Switch ON/OFF or adjust luminance based on setting schedule

Time from	Time to	Light output
Dusk	21:30	100%
21:30	00:00	75%
00:00	05:00	50%
05:00	06:00	75%
06:00	Dawn	100%

- ✓ Lighting on demand

Scenario 2: For Special Day and Place



Scenario Description

- Operator make strategy remaining all street lights open on Christmas Eve.
- When an accident happened, street lights near the place remain 100% brightness.
- Operator make difference strategy for street lights around your appointed locations

Scenario 3: When Bad Weather...



Traditional
Lights



Huawei
Solution

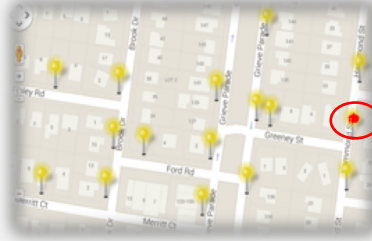
Scenario Description

- For traditional lights, still control lights based on original schedule when storm weather, or switch on manually
- For Huawei solution, streetlight controller integrate a brightness sensor inside, automatically switch on when insufficient luminance
- Improve safety and customer experience

Scenario 4: When the Failure Happens...



Streetlight Failure Detected



Alarm in the Control Center



Arrange the Efficient Maintenance Plan

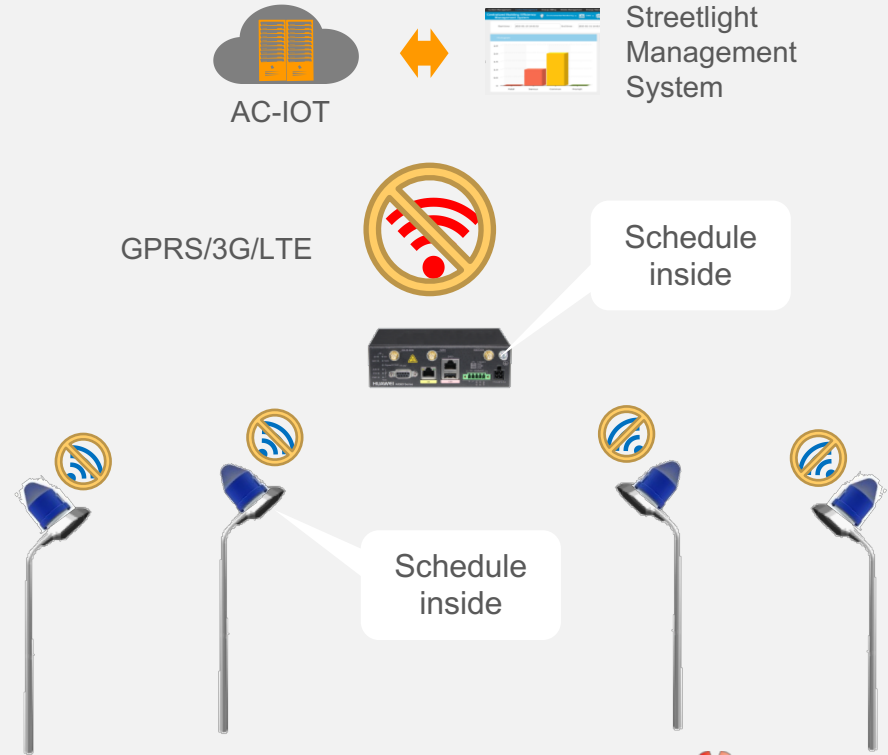


On-Site Repair

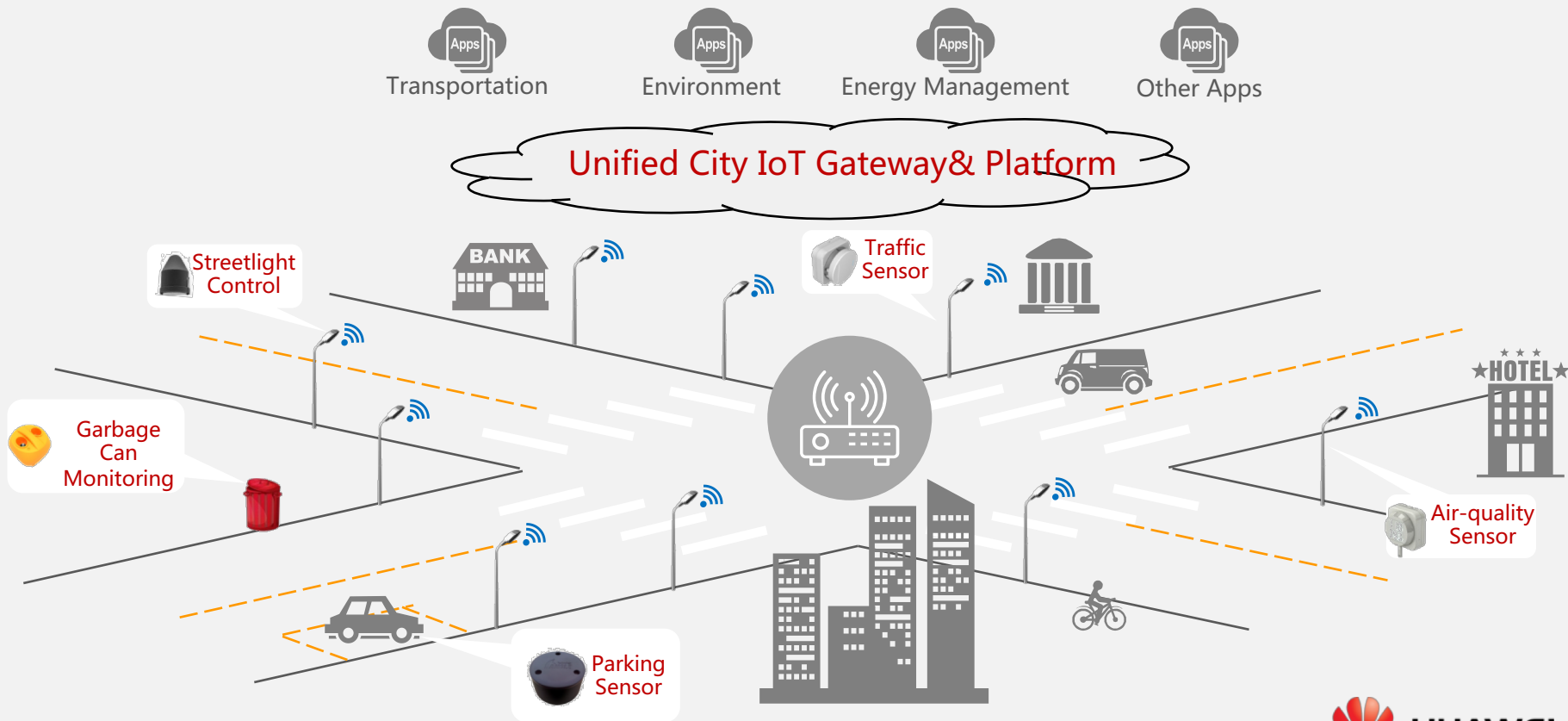
Scenario 5: When Lose Connection...

Scenario Description

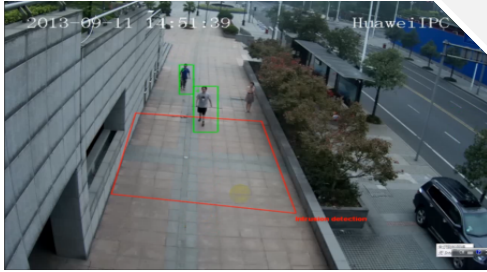
- Schedule can work offline in case IoT Gateway lose connection with management system.
- Greatly reduce effect of network failure
- Reduce the cost on wireless connection



Vision: From City Lighting, to City IoT



Smart Surveillance



Intrusion detection



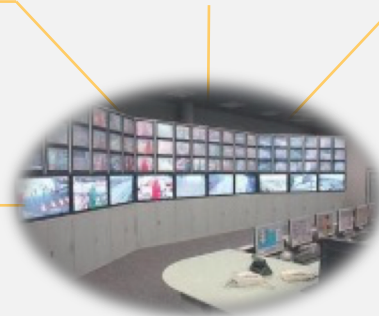
Suspect vehicle alarm



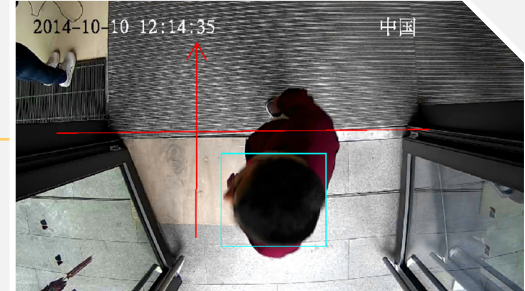
Abnormal crowd



Plate Number Identification

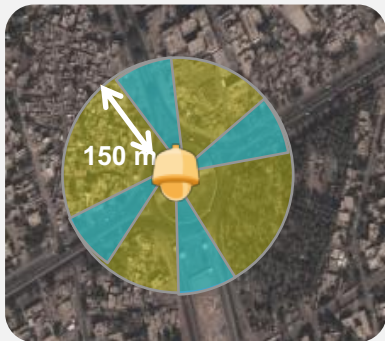


Unified monitoring platform

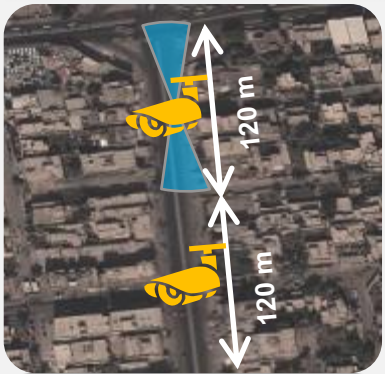


People counting

Smart Surveillance Scenario 1: Road



Road Sector



Road

Design principles

- Day/Night PTZ dome cameras provide comprehensive coverage.
- Low-illumination and WDR cameras enable real-time video surveillance in low-illuminated environments.
- Box cameras are deployed in road sectors in PON mode.

Recommended products

- Day/Night box camera
- Day/Night HD PTZ dome camera

Configuration example

- 4 day/night box cameras + 1 day/night HD PTZ dome camera for each road sector
- 2 day/night box camera in each 120 m road

Legend

PTZ dome camera

Box camera



Town square



City entrance



Check point



Street



Bridge

Smart Surveillance Scenario 2: Populated Area



Design principles

24/7 video surveillance for populated areas:

- Low-illumination HD cameras meet the service requirements in low-illuminated areas.
- Day/Night speed PTZ dome cameras allow flexible and large-scale coverage.

Recommended products

- Day/Night low-illumination box camera
- Day/Night HD speed PTZ dome camera



Stadium



Office building



Market



Residential area

Legend

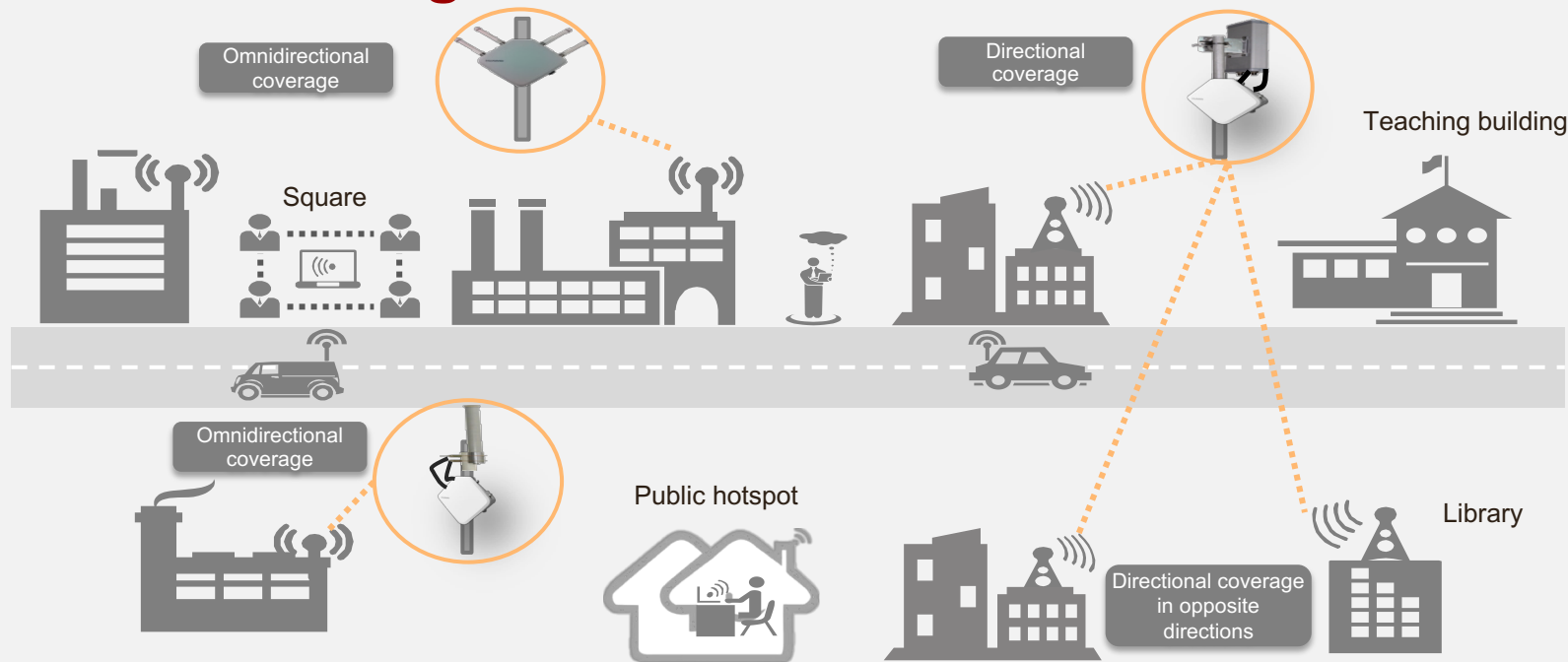
PTZ dome
camera



Box camera



Outdoor Coverage



Application Scenario

- Teaching buildings, dormitory buildings, libraries, squares, public hotspots, and pedestrian streets

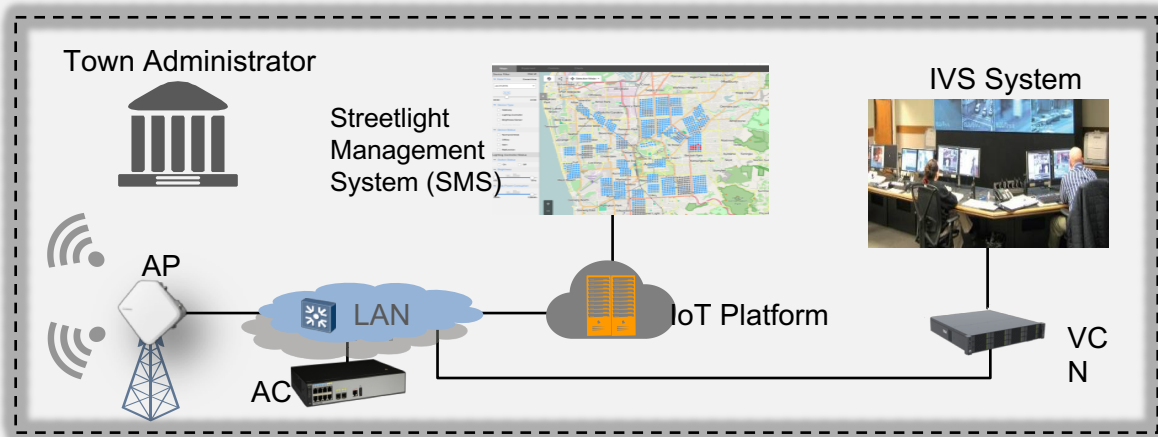
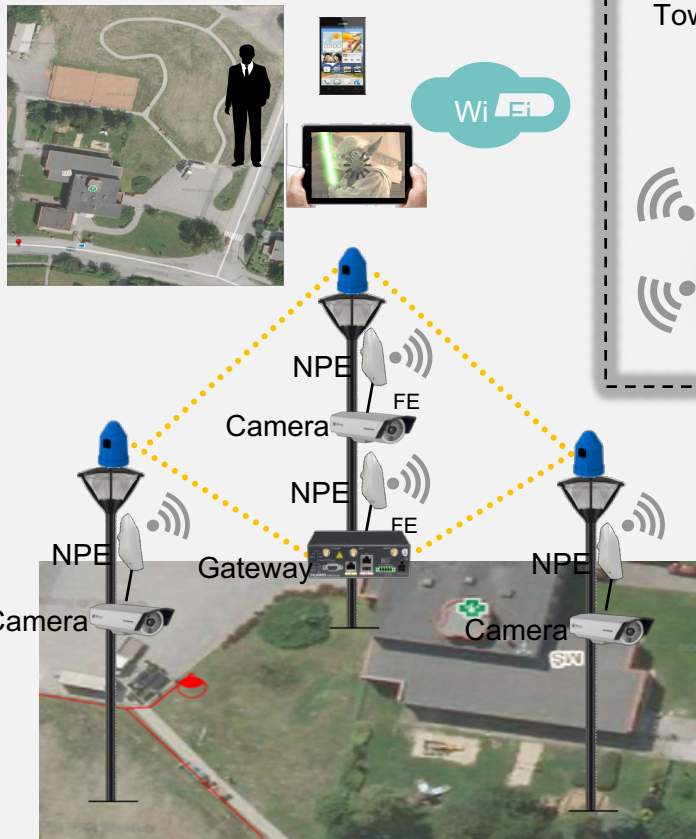
Highlight

- The AP has a built-in feeder, network interface, and AC power supply interface surge protector. No external surge protector is required.
- The AP is easy to install, which improves deployment efficiency and reduces workload.

Product Selection

- AP6510DN (PoE+ power supply)
- AP6610DN (AC power supply, uplink optical port)
- AP6510DN (PoE+ power supply)
- AP8030DN / AP8130DN (11ac)

Smart Town



Solution Description

- Smart lamp solution provide energy conservation for town's lamp.
- Intelligent video surveillance system provide safe town solution.
- WLAN network bears the communication for the smart lamp solution and safe town solution, as well as provides WiFi access for town residents.

Mobile Internet hotspots

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Bus (Public transport, tourism)



Subway



Bus station



Restaurant



How to provide convenient mobile Internet business?

Network Diagram



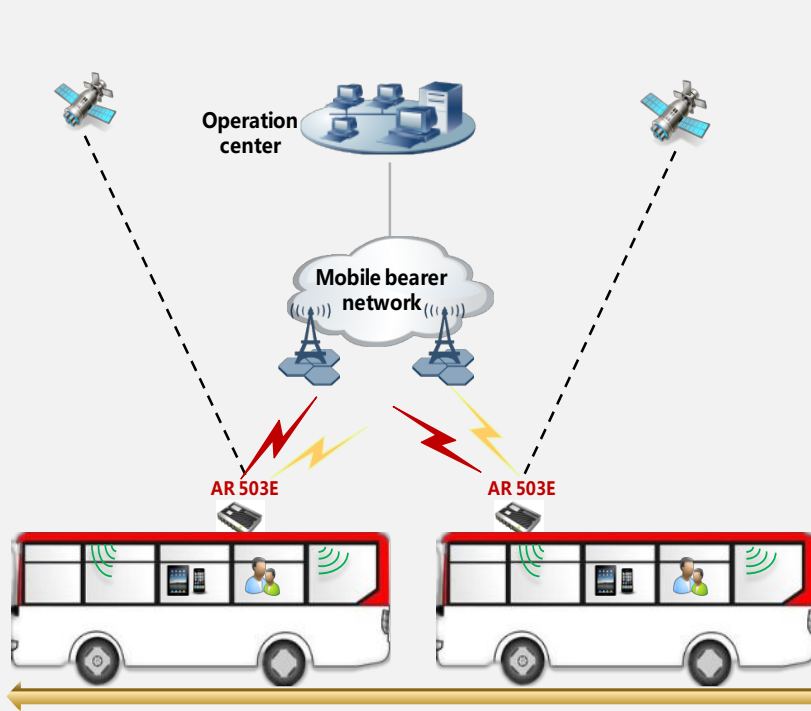
Description

- Built-in GPS in Wi-Fi device , it helps get location information real-timely.
- Push customized advertisements based on geographic information, while users login in the network by portal.
- Analysis user-based database. It helps push more targeted advertising, messages and other information.

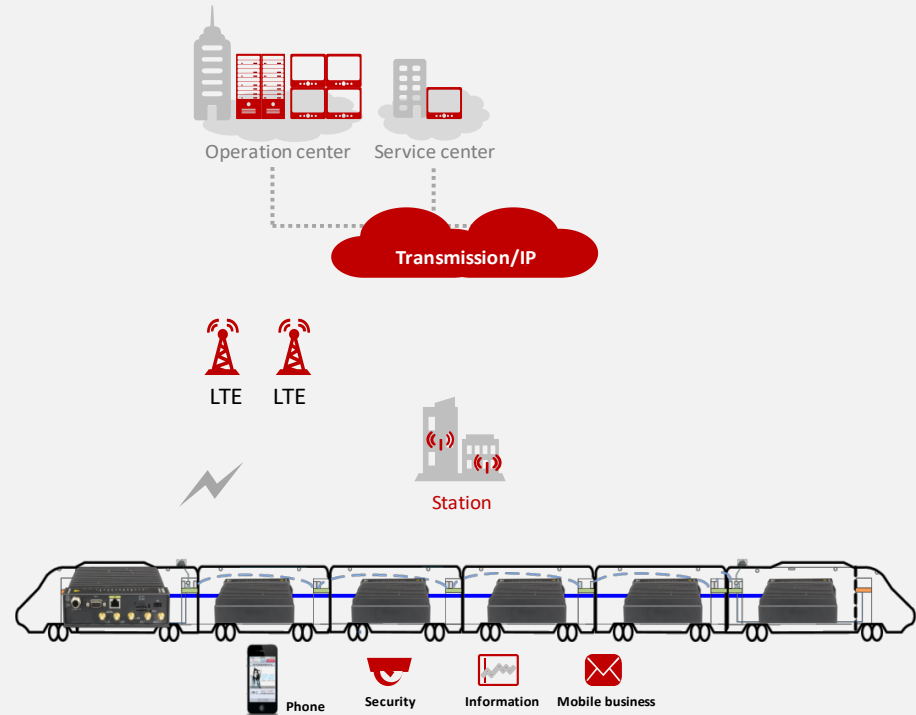
Business Value

- Push advertisements based on location information. It gets a better effect.
- Precise advertisements attract more businesses to join together. It helps increase revenue.

Smart Transport



City light solution = Smart bus station





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