WLINK®

Industrial M2M
5G/4G/3G Router

The M2M, IoT Specialist

CONTENTS

About Wlink

Shenzhen Wlink Technology Co., Limited has been a leading telecommunication equipment provider, specializing in the design and manufacture of Industrial 4G / 3G / 2G devices for Internet of Thing and M2M, thanks to the strong management and R&D team who have more than 10 years of experience in wireless M2M field, enable Wlink provide a range of innovative industrial mobile connectivity equipment, OEM Service, packaged products for wireless data, military and government M2M project.

In the past years, Adhere to the principle of high quality product with competitive price, high rate investment on R&D, and reliable after-sales, Wlink has built up mutual trust between the company and its clients from 60 countries, as well as communication channel with the telecom Industrial. We have the aspiration to become the most competitive provider in the cellular and wireless terminal equipment industry and better service to help our most valued customers get into market fast with wireless device and application.

Vision

Professional,Efficiency,Innovation,Quality,Win-Win

Mission

Focus on M2M, create a splendid and easier life for our most valued Customer

Professional Pre-sales and After-sales Service

Wlink technology and developments are based on solid experience in the art of M2M industrial 4G/3G communication. Our experience covers solution that are used worldwide in a large number of successful products in industrial and other M2M fields.

Products Range

*Industrial 4G+ / 4G / 3G Cellular Router

R100 Series: 1xLAN, 1xRS-232

R200 series: 1 x LAN, 1 x LAN / WAN

R520 series: 4 x LAN, 1 x WAN, 1 x RS-232

R210 series: 2 x LAN, 1 x RS232, 3 x I/O

R220 series: OpenWrt, 2xLAN, 1 x WAN, 1xRS-232, 3xI/O

G500 Gigabit series: 4xGbE, 1xRS-232, 3xI/O,1xUSB, 1xSD slot

G510 Gigabit series: 4xGbE, 1xRS-232, 3xI/O

*Industrial Serial to IP 4G/3G/2G Modem (called DTU as well)

D80 series: 2G/3G/4G Network optional, RS232/485/TTL interface optional

D82 series: 2G/3G/4G network optional, 1xRS232, 1xRS485

D83 series: NB-IoT / CAT-M1 network, single serial port or dual serial port

* Industrial 4G/3G cellular Modem

M300 series: 3G/4G USB Modem

M100 series: 3G/4G Serial Modem

*Industrial 4G/3G/2G RTU(Remote Data Unit)

RT600 series: 3G/4G RTU

RT620 series: 3G/4G Powerful RTU

*WLINK M2M Management Platform

Platform For router

Platform For Wi-Fi hotspot

Platform for RTU

Product Road Map

R100 Series

R100 series is the mobile broadband router, small, compact and hardened mechanical design, ideal for the application where space is critical factors, such as retails, Kiosk and telemetry etc.

- Industrial, compact, flexible and low cost
- High data speed via 4G or 3G network
- Strong electromagnetic interference Resistance
- Support Serial to IP data transfer
- Low Cost
- Centralized manageable
- 1x LAN,1x RS-232

R520 Series

R520 is the typical 4G / 3G cellular router that allows you to access and share high-speed mobile internet for distributed enterprise or other Industry. Industrial, secure and high reliable.

- Industrial robust design and compact metal housing
- High data speed via 4G or 3G network
- MIMO provides better performance and stability
- WAN port support PPPoE, static IP, DHCP client
- Dual SIM redundant optional
- GPS tracking optional
- Centralized manageable
- 4x LAN, 1xWAN/LAN, 1x RS-232

R200 Series

R200 is the industrial grade, secure and reliable 4G/3G router, it designs for professional application such as ATM, Video surveillance.
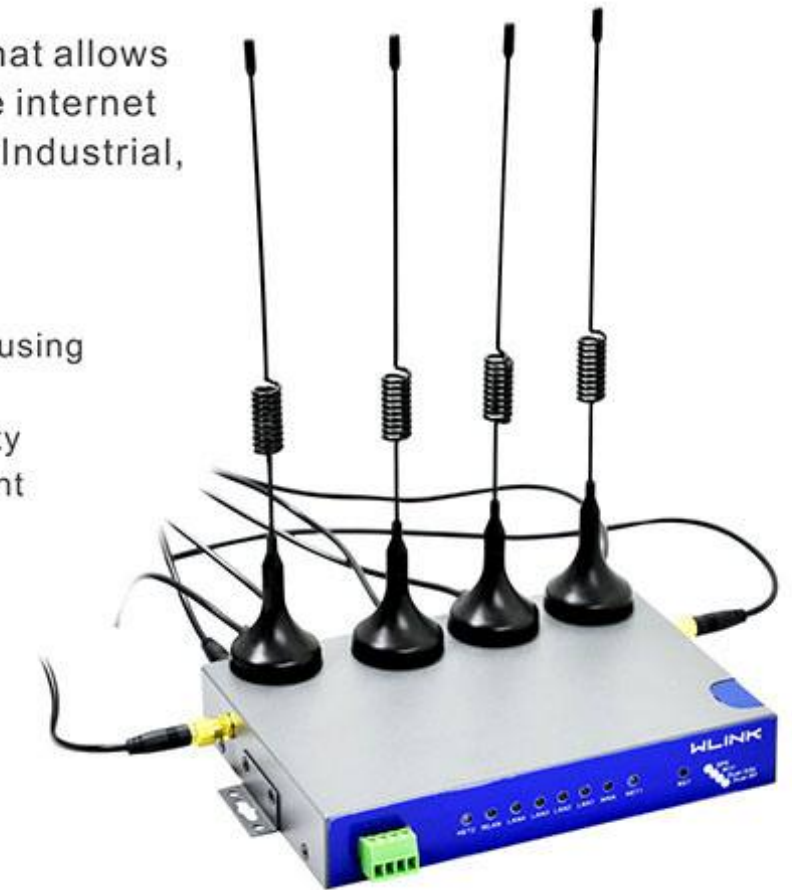
- Industrial, secure and high reliable
- High data speed via 4G or 3G network
- Secure data transactions with advanced VPN options
- Advanced dynamic routing, security and firewall features
- GPS tracking optional
- Centralized manageable
- 1x LAN, 1xLAN/WAN

R210 Series

R210 Series is the Intelligent 4G / 3G router designed for critical infrastructure, M2M, IoT and industrial applications.

- Industrial robust design, heat endurance and radiation ability
- High data speed via 4G or 3G network
- Ultra security, VPN: PPTP, L2TP, GPE, IPsec VPN
- DIN Rail Mount for Industry
- Redundant Dual SIM, 4G MIMO
- GPS Optional
- Centralized manageable
- 1xLAN, 1xLAN/WAN, 1x RJ45 Console, 3xI/O, 1xRS-232

R510 Series

R510 Series is the Intelligent 4G / 3G router designed for critical infrastructure, M2M, IoT and industrial applications.

- Industrial robust design, heat endurance and radiation ability
- High data speed via 4G or 3G network
- Ultra security, VPN: PPTP, L2TP, GPE, IPsec VPN
- DIN Rail Mount for Industrial
- Redundant Dual SIM, 4G MIMO
- GPS Optional
- Centralized manageable
- 4xLAN, 1x RJ45 Console, 3xI/O, 1xRS-232

G500 Gigabit Series

G500 4G / 3G Router is the rugged and powerful Gigabit router, caters for transportation and mobile deployments such as bus WiFi, WiFi on board and other Public transport.

- Industrial robust, heavy-duty metal enclosure and connectors
- High data speed via 4G or 3G network
- ARM Cortex A9 Dual Core, 800MHz CPU
- Simultaneous Dual-Band 802.11n&ac Wi-Fi
- GPS Optional
- Expansible Storage Optional
- Centralized manageable
- 4x GbE, 1x RJ45 Console, 3x I/O, 1xRS-232, 1x USB 2.0, 1x SD slot

R220 Series

R220 is the 4G / 3G router with OpenWrt OS, OpenWrt provides minimal firmware with support for add-on packages.

- Industrial rugged and compact metal housing
- High data speed via 4G or 3G mobile network
- OpenWrt OS for add-on package
- Atheros AR9344, 533MHz CPU
- Shock and vibration resistant
- 2xLAN, 1x WAN, 1x RS-232

G510 Gigabit Series

G510 is innovative industrial Powerful 4G LTE Router with Gigabit Ethernet, 802.11 b/g/n/ac, Hardware can be upgraded to compatible with 4G+/5G.

- Industrial robust, heavy-duty metal enclosure and connectors
- ARM Cortex A7 Core, 900MHz CPU
- Ultra high speed 4G LTE(Cat4/Cat6/Cat11) network
- Simultaneous Dual-Band 802.11n&ac Wi-Fi
- Hardware Compatible with coming 5G
- Expansible Storage Optional
- 4xGbE, 1xRS-232, 3x I/O

Specfication	R100 Series	R200 Series	R520 Series	R210 Series
Image				
System Firmware	WLINK			
Basic Features	Industrial robust design and compact metal housing Strong electromagnetic interference Resistance , Heat endurane and radiation ability Always online, reboot automatically if disconnected to ensure continual connection Built-in watch dog, Multi-link detection LCP/ICMP/flow/heartbeat check, ensure network usability Web/CLI/SSH/Management platform support, easy configure Static route and RIPv2/OSPF dynamic route SNMP network management, NTP support			
Optional Network Type	FDD-LTE/TDD-LTE 4G (Cat 3: DL 100Mbps, UL 50Mbps, Cat4: DL 150Mbps, UL 50Mbps, Cat6: DL 300Mbps, UL 50Mbps) DC-HSPA+ DL 42Mbps / HSPA+ 21Mbps DC-HSPA+ DL 42Mbps / HSPA+ 21Mbps GSM/GPRS/EDGE			
Ethernet Port	10/100M			
WiFi	——	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n
	——	150Mbps	150Mbps	150/300Mbps
VPN	IPsec, PPTP, L2T P, GRE, OpenVPN			
Interface	1x LAN 1x RS-232/RS-485	2x LAN (1x LAN, 1x WAN configurable)	1x WAN/LAN 4x LAN 1x RS-232	1x LAN, 1x WAN/LAN 3x I/O 1x RS-232
SIM Slot	One	One	One / Two	Two
Dimension (mm)	78.5 x 59 x 23.5	103x 73.5x 25.5	176 x 105 x 25	102 x 100 x 42
Unit Weight	150g	300g	510g	350g
Mount Type	Desktop Wall Mount DIN Rail Mount	Desktop Wall Mount	Desktop Wall Mount	Desktop Wall Mount DIN Rail Mount
Power Supply	7.5 - 32VDC			
Operation Temperature	-30 ~ 70 degree			
Store Temperature	-40 ~ 85 degree			
Relative humidity	<95% (non-condensing)			

R510 Series	G520 Series	G500 Series	G510 Series	R220 Series
WLINK				OpenWrt OS
Industrial robust design and compact metal housing Strong electromagnetic interference Resistance , Heat endurane and radiation ability Always online, reboot automatically if disconnected to ensure continual connection Built-in watch dog, Multi-link detection LCP/ICMP/flow/heartbeat check, ensure network usability Web/CLI/SSH/Management platform support, easy configure Static route and RIPv2/OSPF dynamic route SNMP network management, NTP support				N/A
FDD-LTE/TDD-LTE 4G (Cat 3: DL 100Mbps, UL 50Mbps, Cat4: DL 150Mbps, UL 50Mbps, Cat6: DL 300Mbps, UL 50Mbps) DC-HSPA+ DL 42Mbps / HSPA+ 21Mbps DC-HSPA+ DL 42Mbps / HSPA+ 21Mbps GSM/GPRS/EDGE				
10/100M	1000M			10/100M
802.11 b/g/n	802.11 b/g/n 802.11 a/c	802.11 b/g/n 802.11 a/c	802.11 b/g/n 802.11 a/c	802.11 b/g/n
150/300Mbps	max 866Mbps	max 1166Mbps	max 866Mbps	300Mbps
IPsec, PPTP, L2T P, GRE, OpenVPN				N/A
4x LAN 3x I/O 1x RS-232	1x WAN/LAN 4x LAN 1x RS-232	4x LAN, 3x I/O , 1x RS-232, 1x USB 1x External SD Slot	4x GbE 3x I/O 1x RS-232	2x LAN 1x WAN 3x I/O 1x RS-232
Two	One/Two	Two	Two	Two
132 x 112 x 44	176 x 105 x 25	220 x 150 x 45	132 x 112 x 44	102 x 100 x 42
400g	510g	600g	400g	350g
Desktop Wall Mount DIN Rail Mount	Desktop Wall Mount	Desktop Wall Mount	Desktop Wall Mount DIN Rail Mount	Desktop Wall Mount DIN Rail Mount
7.5 - 32VDC				
-30 ~ 70 degree				
-40 ~ 85 degree				
<95% (non-condensing)				

The rugged D8x series DTU (Data Terminal Unit) is Industrial Serial to IP cellular modem (called as DTU as well) which convert the serial data (RS232/485/TTL) into IP data and then transfer to data center through 4G/3G/NB-IoT/CAT-M1/2G mobile network.

D80 Series

- Always online, automatically attaches mobile network or redials when offline
- Embedded M2M 4G/3G/EDGE/GPRS Cellular module
- PPP, TCP/UDP Protocol
- Parameters configuration and remote management
- Support transparent data transmission
- 1x RS-232/485/TTL interface optional

D82 Series

- Always online, automatically attaches mobile network or redials when offline
- Embedded M2M 4G/3G/EDGE/GPRS Cellular module
- PPP, TCP/UDP Protocol
- Parameters configuration and remote management
- Support transparent data transmission
- 1x RS-232, 1xRS-485, Terminal block connector

D83 Series

- NB-IoT/CAT-M1 network optional
- Low Power Consumption
- Wide Coverage Area
- Numerous and Powerful Nodes Connections
- Friendly configuration tool
- Single Port and Dual Port option

M100

Wlink M100 family industrial 3G/4G cellular Modem with RS-232 /RS-485 Serial port is the modem that provides SMS and dial-up function by 2G/3G/4G Cellular network catering for industrial application requirement.

- Industrial Class Design for M2M/IoT Application
- 4G/3G/2G Network Optional
- Support standard RS232/RS485 interface
- AT Command Supported
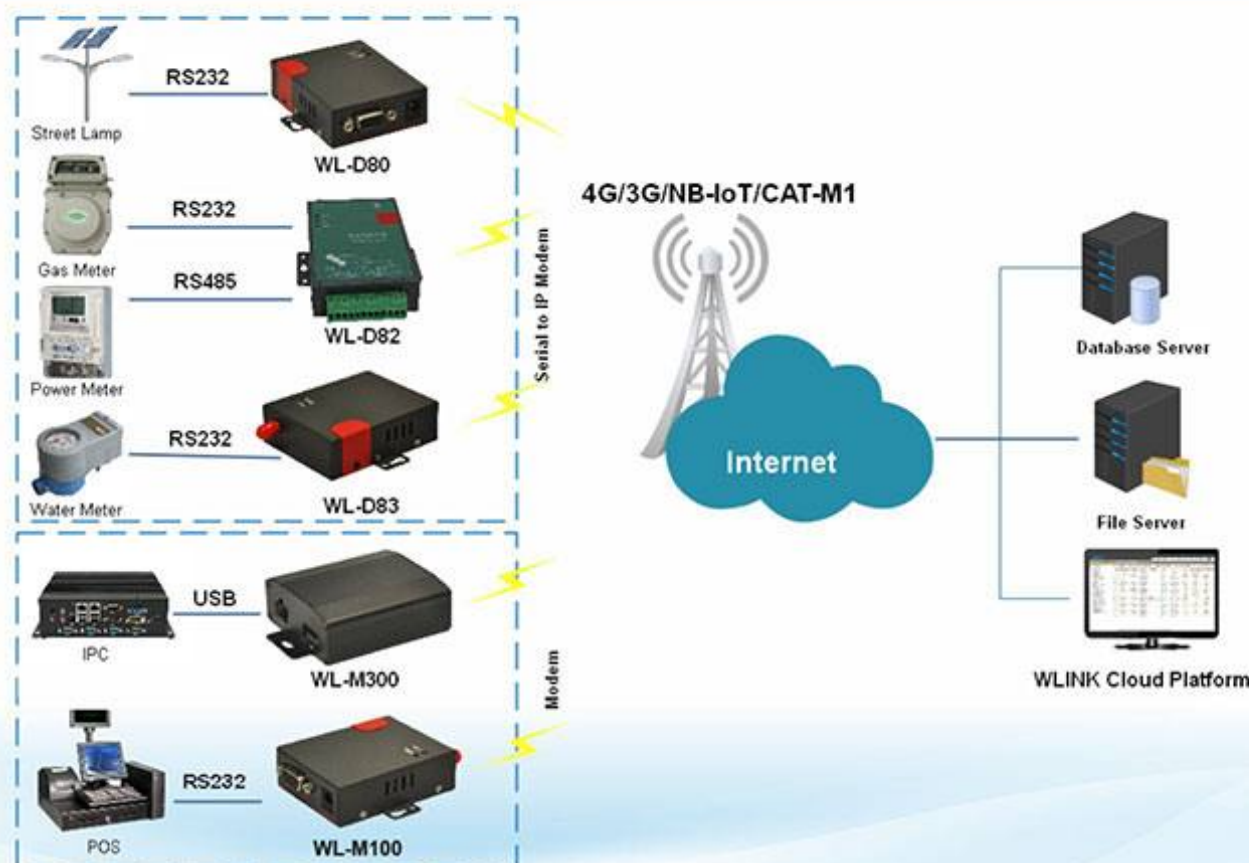- Flexibility and Convenience
- Stability and Reliability

M303

M303 family industrial 3G/4G cellular Modem with USB interface is the modem that provides SMS and dial-up function by 2G/3G/4G Cellular network cater for industrial application requirement.

- Industrial Class Design for M2M/IoT Application
- 4G/3G/2G Network Optional
- Support standard USB 2.0 interface
- AT Command Supported
- Flexibility and Convenience
- Stability and Reliability

Specfication	D80	D82	D83	M100	M303
Image					
Operation System	μC/OS II			N/A	
Basic Features	convert the serial data into IP data and transfter to data center			send data by AT command	
Network Type	4G/3G/2G	4G/3G/2G	NB-IoT/CAT-M1	4G/3G/2G	4G/3G
Dial-up mode	Auto	Auto	Auto	By AT Command	By AT Command
SMS	√	√	√	√	√
AT Command				√	√
TCP/UDP Client	√	√	√	√	√
Interface	1xRS232 / RS485	1x RS232 1x Rs485	1xRS232 / RS485	1xRS232 / RS485	1x USB 2.0 1xCON
SIM Slot	One				
Dimension (mm)	70.5 x 55 x 22	72.2 x 64x 25.5	70.5 x 55 x 22	70.5 x 55 x 22	73 x 64 x 26
Power Supply	5 ~ 32VDC	7.5 ~ 32VDC	5 ~ 32VDC	5 ~ 32VDC	5 ~ 32VDC

Typical Application

RTU (Remote Terminal Unit) is a cellular communication device installed at a remote location that collect data, codes the data into a format that is transmittable and transmit the data back to a central station or master, it is been developed especially for data collection and data transmission in IoT / M2M application.

RT600

- 2G/3G/4G/NB-IoT/CAT-M1
- 8MB Data Storage
- Built in Real-time Clock
- 2xAI, 2xDI, 1xRS485, 1xRS232
- GPS/BD/GNSS optional
- Programmable
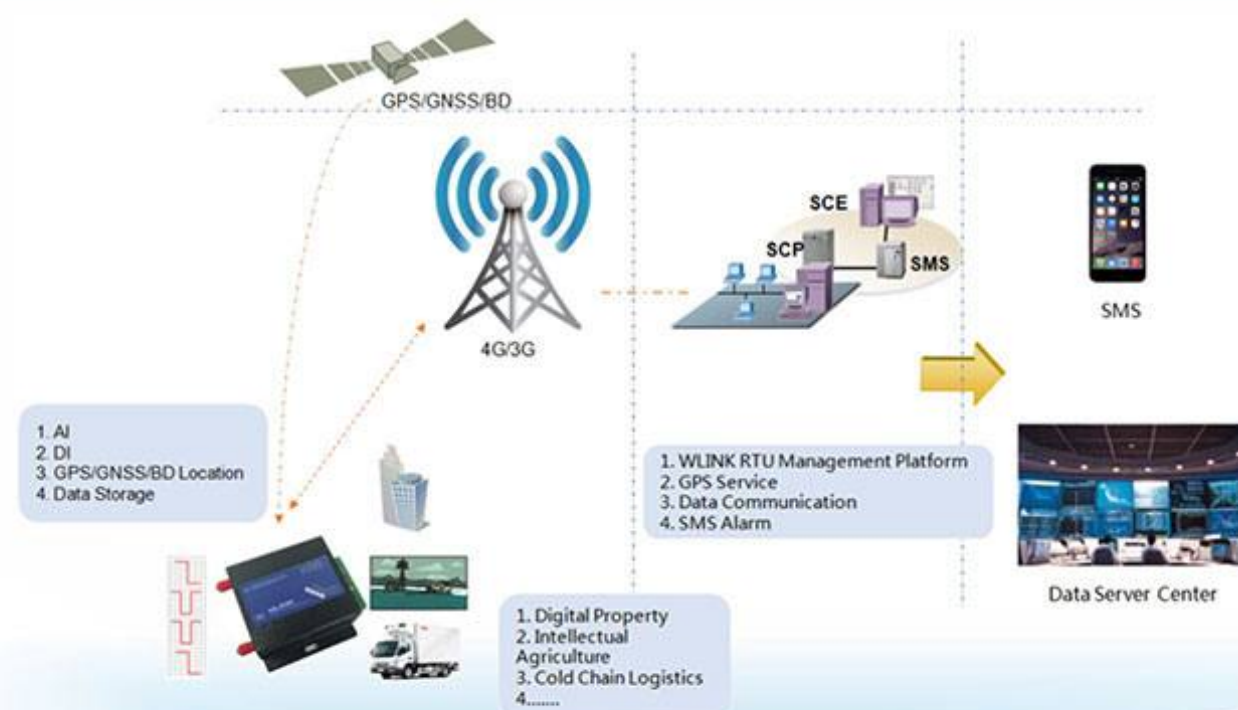- WLINK RTU Management Platform

RT620

- 2G/3G/4G/NB-IoT/CAT-M1
- 8GB~128GB storage
- Built in Real-time clock
- 12xAI, 16xDI, 3xRS485, 1xRS232
- Two Replay
- Programmable
- Support WiFi
- GPS/BD/GNSS optional
- WLINK RTU Management Platform

Features	RT600	RT620
IO Port	2x AI (4~20mA) 2x DI (Dry connect)	12x AI (4~20mA), 16x DI (12XDry connect, 4x Wet connect) 2x Relay Channels
Serial Port	1x RS485 1x RS232	3x RS485 1x RS232
Storage	8MB	8GB ~ 128GB
Real Time Clock	Support	Support
Position	GPS/BD optional	N/A
Ethernet Port	N/A	1x WAN/LAN, 1xLAN
Wi-Fi	N/A	AP Mode
Gateway	N/A	Support
Module Encryption	N/A	USB extended
Network Type	4G/3G/2G	4G/3G/2G WAN Cable, Fixed IP DHCP, PPPOE
Protocol	Private	Private, MQTT + JSON
Alarm	Private protocol, SMS	Private protocol, MQTT + JSON
Programmable	Support	Support
Configuration	RS-232 + RTU Configuration Tool	WEB
Cloud Platform	Support	Support

Topology Diagram

Apply for R100, R200, R520, R210, R510, G500, G510.

WLINK M2M Management Platform is an industrial-grade centralized management and administration system catering for Wlink R100,R200,R520,R210,R510,G500,G510.

Thanks to the system, it is easy for the operator to monitor, configure, upgrade firmware and manage bulk Wlink router remot ely under the web of a private network.

Key Features

- Remote Monitoring
- Remote Configuration
- Remote Firmware Upgrade
- Advertising push
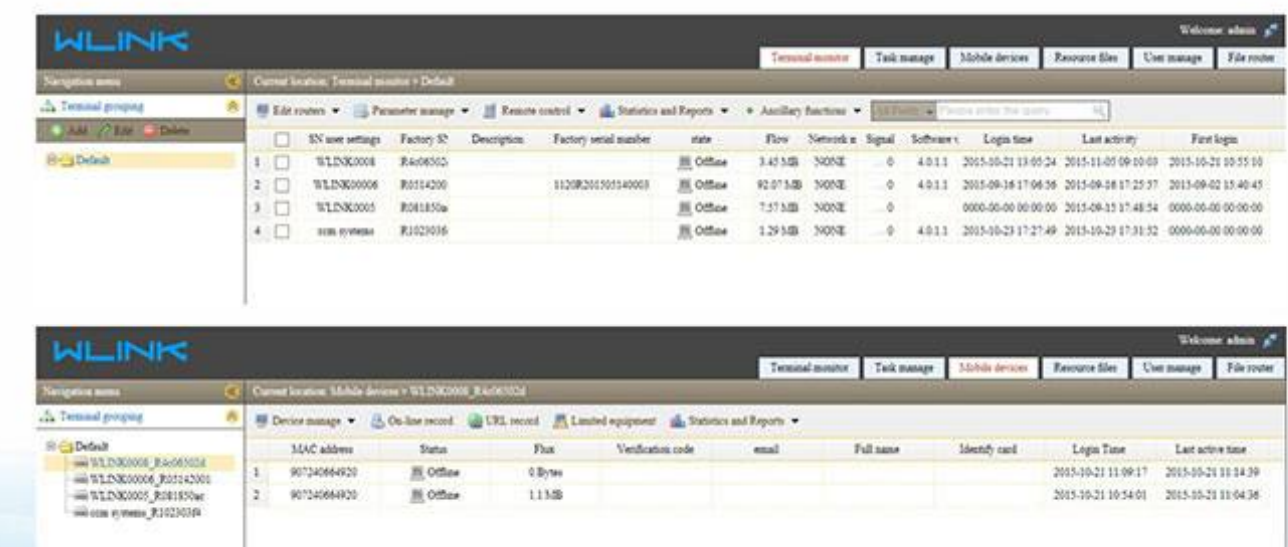- Max support Number of Devices: 100,000+
- Management: Web

Installation Hardware Requirement

- Pentium IV or above
- 1 GHz CPU (1.5 GHz recommended)
- 1 GB RAM (2 GB recommended)
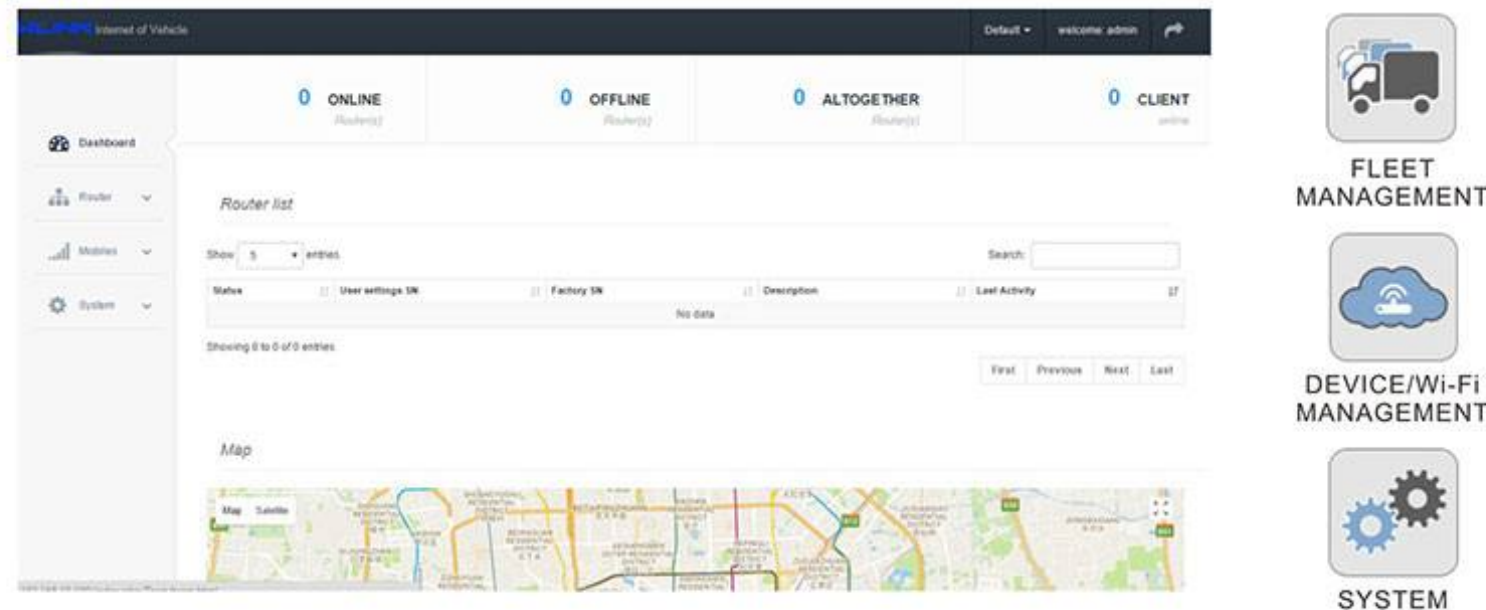- 10 GB disk space
- 10/100M Network Interface

Installation Software Requirement

- O/S: Windows, Linux
- Apache 2.2, MySQL 5.5, PHP 5.4 or above
- Browser: IE 6.0 or above, Chrome

WLINK WiFi Service Management Platform is cloud based device management, monitoring, and reporting tool designed specifically for monitoring and managing the WLINK router which are used in WiFi hotspots on buses, Yachts, Motohomes and Caravans etc.

Additionally, with the GPS-enable Router, the platform provides you real-time location of you fleet.

FLEET MANAGEMENT

DEVICE/Wi-Fi MANAGEMENT

SYSTEM

Fleet Management

• Locate
• Track
• Monitor

Real-Time Monitoring and Device Management

• Device Dashboard
• Bandwidth Monitoring
• Client Overview
• Statistics and Report

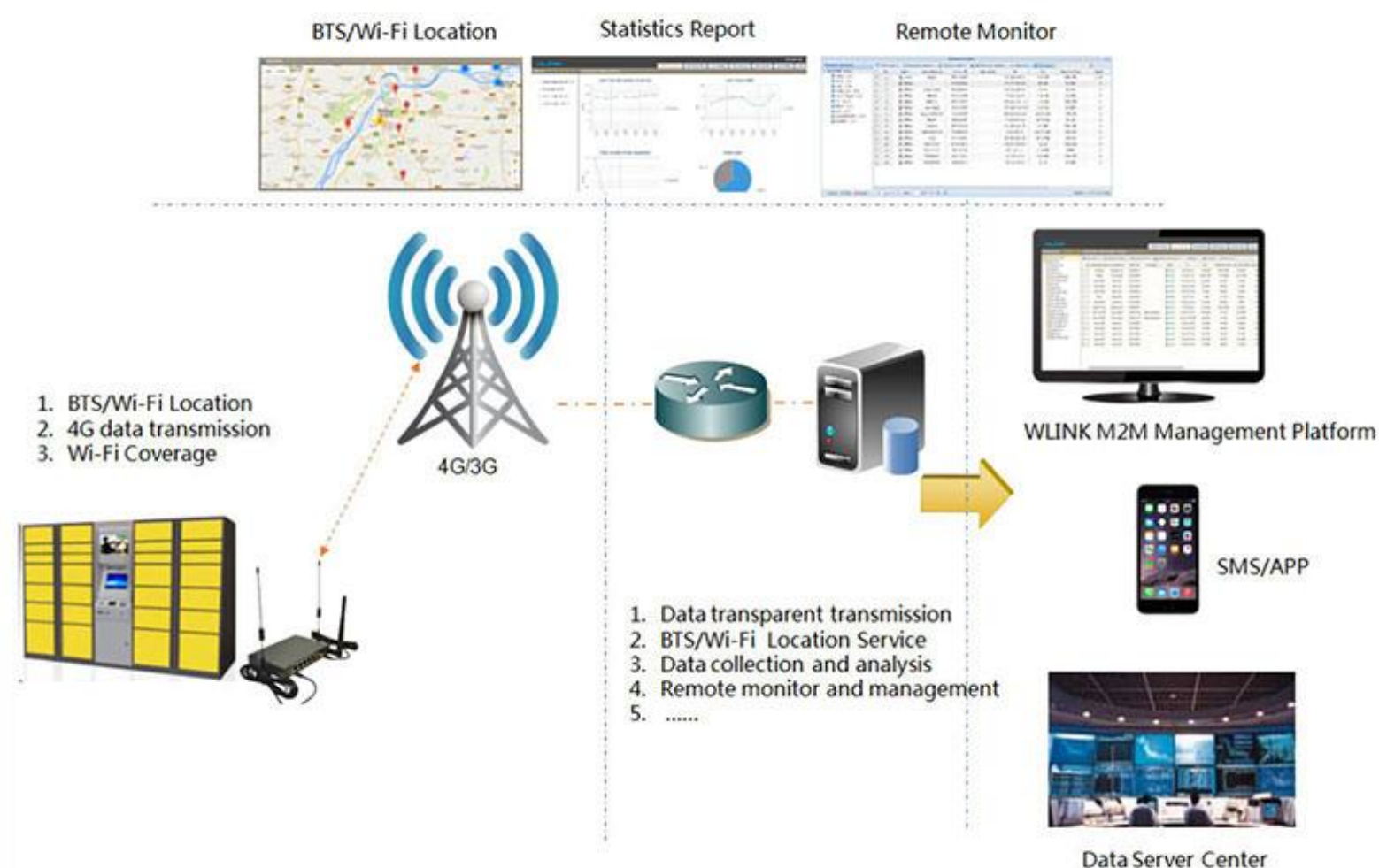## System

• Advertising
• User Group
• Task Log

WLINK Series Industrial Cellular Router Typical Application

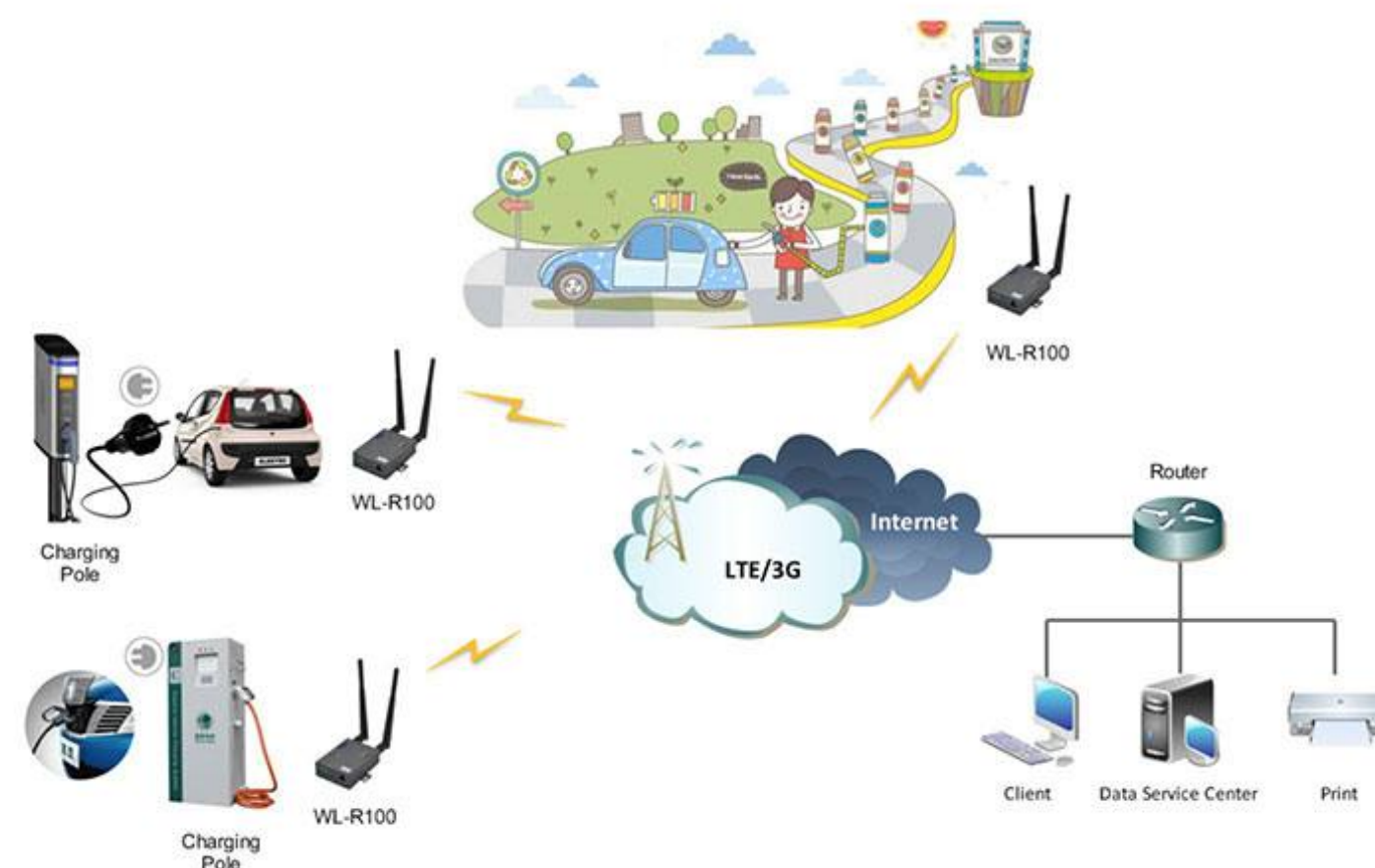| Energy	Digital Oil Field, Coal Mine, Solar, Smart Grid
Utilities	Video Surveillance , Smart City, Traffic, Street lighting, Public Safety, 4G Public hotspot, Environment monitoring ,LED Advertisement Distributing
Industrial	Remote Telemetry, Tanking Monitoring, Automation, Remote PLC, Remote AMR, Remote Monitoring and control
Retail	ATM, POS(Point-of-Sale), Vending Machine, Lottery Machine, Branch network, Digital Signage, Video Surveillance, failover between WAN&4G/3G
Transportation	Bus WiFi, WiFi on Board, Vehicle video surveillance, Fleet tracking and management, Bus Advertising

WLINK M2M Could Platform

4G Router in Smart Parcel Lockers IoT Solution

The main role for WLINK 4G router in Smart Locker application system is provide reliable mobile network connection. Small partial of the whole system, however, so important it is. Using WLINK 4G router, the package lockers can work at unmanned delivery destination. Each locker is equipped with a 4G router that provides connectivity and intelligence to permit/forbid access to lockers based on one-time-used code, carries backhaul traffic to the lockers operation center.

BTS/Wi-Fi Location   Statistics Report   Remote Monitor

1. BTS/Wi-Fi Location
2. 4G data transmission
3. Wi-Fi Coverage

4G/3G

WLINK M2M Management Platform

1. Data transparent transmission
2. BTS/Wi-Fi Location Service
3. Data collection and analysis
4. Remote monitor and management
5. ......

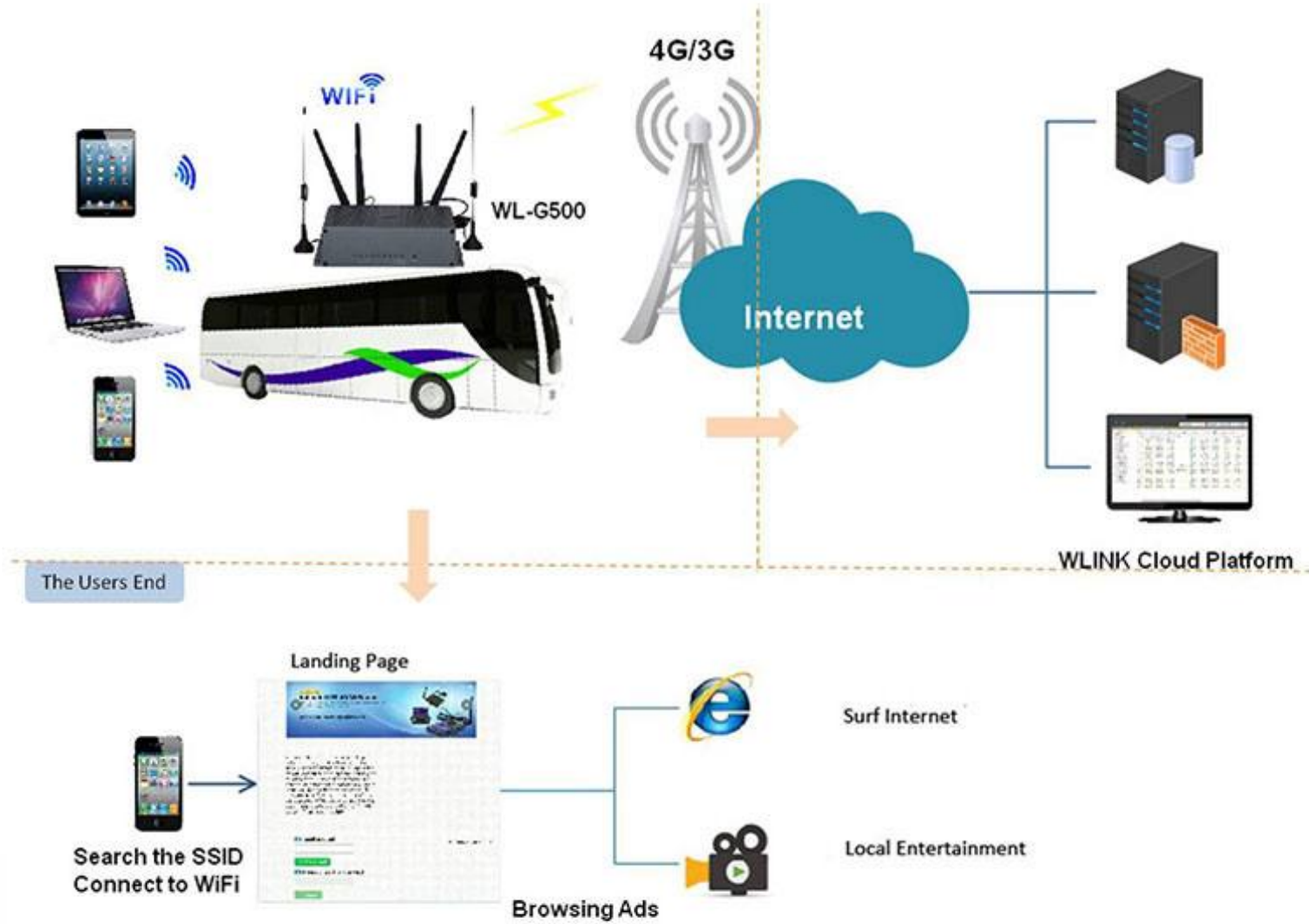SMS/APP

Data Server Center

Charging Piles Monitoring

WLINK 4G/3G router as a reliable network access to establish a reliable and stable network connection between charging piles and control center. It's easy to monitor each charging pile running status and guarantee charging pile safe and stable operation.Furthermore, the control center can also remotely manage charging pile service such as user authentication, user information transmission and payment procedures via 4G/3G network.

WL-R100

WL-R100

Charging Pole

LTE/3G

Internet

Router

Charging Pole

WL-R100

Client   Data Service Center   Print

For WiFi Bus / on Board Solution

Wlink cellular router provides passengers a meaningful on board Wi-Fi hotspot service to check email, surf the internet and local entertainment during their journey.

The WiFi bus solution with WLINK cellular router is reliable, manageable, simple to install and scalable, it is built to offer the greatest internet access in bus at the lowest cost.

The stable Wi‐Fi service works like any fixed hotspot in hotel, coffee shop or airport.