



RELIABLE IN-VEHICLE CONNECTIVITY

Transportation & Logistics Use Cases

Cold Chain Logistics Remote Monitoring Solution

Demands & Pain Points

- To meet the increasing need for cold chain transportation in e-commerce and enhance operational efficiency of cold chain vehicles, logistics companies must manage vehicles, monitor temperature, and track vehicle data in real-time.

Solution

The Robustel IIoT Gateway is connected to the controller of the cold chain truck via an RS-232 serial port. The gateway collects operational status data from the controller in real time, compresses the data and uploads it to the management platform via 4G LTE cellular wireless network. Based on the data reported by the gateway, the management platform realizes efficient, convenient and reliable overall management of the vehicle.

Stable Connection

Robustel IIoT Gateway provides cellular network wireless networking, uninterrupted data transmission for various networking scenarios.

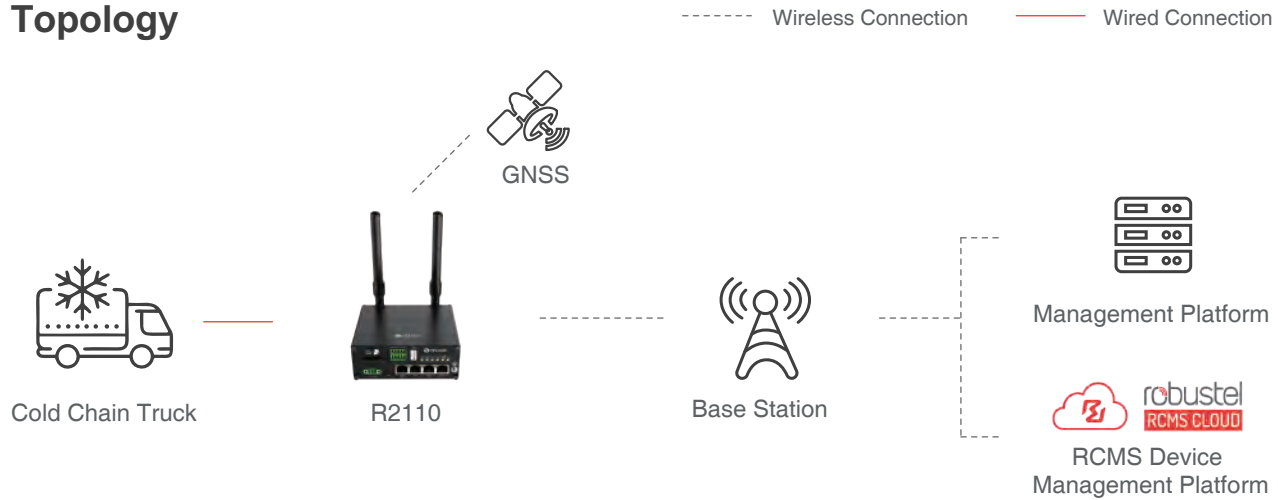
High Reliability

The device has passed rigorous tests to ensure it can withstand harsh environmental impacts and ensure stable data transmission.

Integrated Management

Robustel's RCMS platform enables simultaneous management of multiple devices, reducing the time spent managing them.

Topology



Advantages



Robust Industrial Design

Robustel's quality products have industrial housing for reliability in any conditions, and protect against humidity, dust, vibration and EMC.



ACC Support

Optional support for vehicle accessory (ACC) power supplies with ignition sense.



Serial Ports & Digital IO Onboard

Support for legacy serial devices with RS232/RS485 interfaces provides maximum flexibility when used as a Modbus RTU interface, with IO for status indication and control.



Vehicle Certification

Achieved the “E-mark” certification, proving its suitability for use in both private and commercial vehicles.

Recommended Product



R2110

Bus Passenger Wi-Fi Solution

Demands & Pain Points

- Demand for seamless connectivity: Transportation companies require a next-generation passenger Wi-Fi system that delivers reliable, high-speed connectivity throughout the journey to meet the expectations of tech-savvy travelers.
- Improved passenger experience: Providing fast and stable internet access allows passengers to stay connected and entertained during their journey, leading to increased customer satisfaction and loyalty.
- Data collection and analytics: Transportation companies seek a Wi-Fi system that captures passenger data for analysis, enabling insights to personalize offerings, optimize services, and improve operational efficiency.

Solution

The bus provides on-board power supply access, and the Robustel IIoT Gateway is connected to the Internet through a cellular network. It provides high-speed Wi-Fi access services for bus passengers through 2.4 GHz or 5 GHz Wi-Fi. The bus company management platform can understand the device's Internet access information and cellular data consumption in real time through the RCMS device management platform.

Intelligent Switching

RobustOS link management function detects network connections in real time and quickly switches to another backup network link, reducing network connection interruption time.

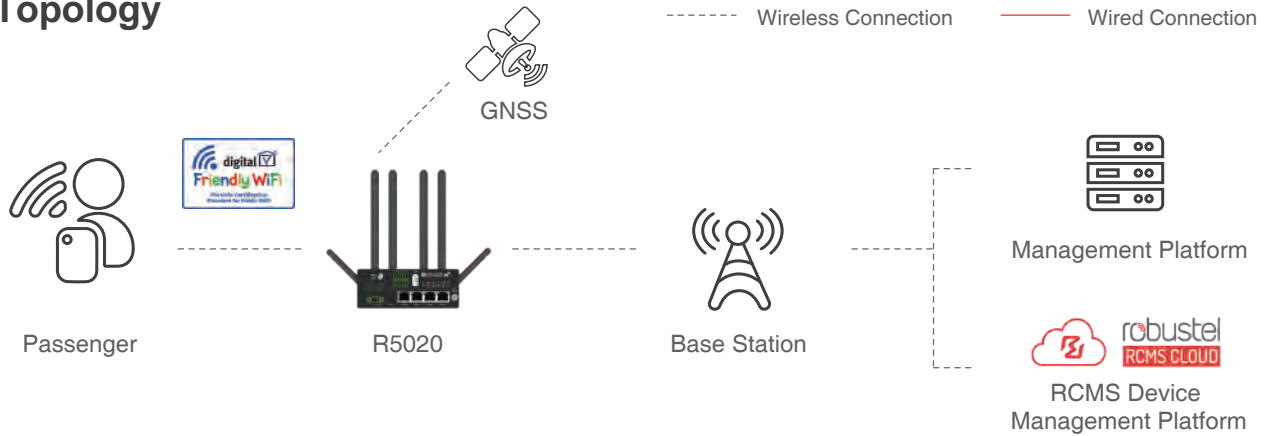
Content Filtering

Robustel have integrated with www.cleanbrowsing.org to provide a powerful, flexible and very cost-effective content filtering service, awarded the "Friendly Wi-Fi" seal of approval.


Remote Operation and Maintenance


RCMS device management platform provides fast real-time monitoring, remote diagnosis, enabling equipment maintenance work to be completed without visiting the site.


Topology




Advantages

- 
Flexible 802.11 Wi-Fi Services

Robustel routers offer Wi-Fi client, AP and dual modes, with advanced onboard firewall.
- 
High-speed Connection

Robustel's 5G routers support 5G Release 16 with fast DL/UL speeds in NSA/SA modes. 4G+ Carrier Aggregation ensures fast connections without 5G.
- 
Vehicle Certification

Achieved the "E-mark" certification, proving its suitability for use in both private and commercial vehicles.
- 
Free Router Management Platform

RCMS router management platform manages SIMs and routers at scale. Free basic version, advanced features on PAYG - compelling commercially.

Recommended Product



R5020

Autonomous Shuttle Bus Networking Solution

Demands & Pain Points

- The future of transportation lies in autonomous driving, which relies heavily on fast, stable, and reliable data connections. Such connections are essential for autonomous driving solution providers to collect real-time operational data. This valuable data provides support for continuous iteration and improvement of automated driving algorithms.
- Efficient network management ensures minimal downtime, reduces support costs, and contributes to a seamless passenger experience. Additionally, the ability to centrally manage the network allows for easier scalability and future expansion of services.

Solution

The camera, LiDAR, radar, and other sensors are connected to the bus controller, which in turn is connected to the Robustel 5G IoT Router using an Ethernet cable. The data from these sensors is then forwarded by the router through a high-speed 5G cellular network to the management platform. Through the RCMS platform, the real-time location of devices can be displayed, providing autonomous driving companies with effective data support for the management of autonomous shuttle buses.

High-speed Connectivity

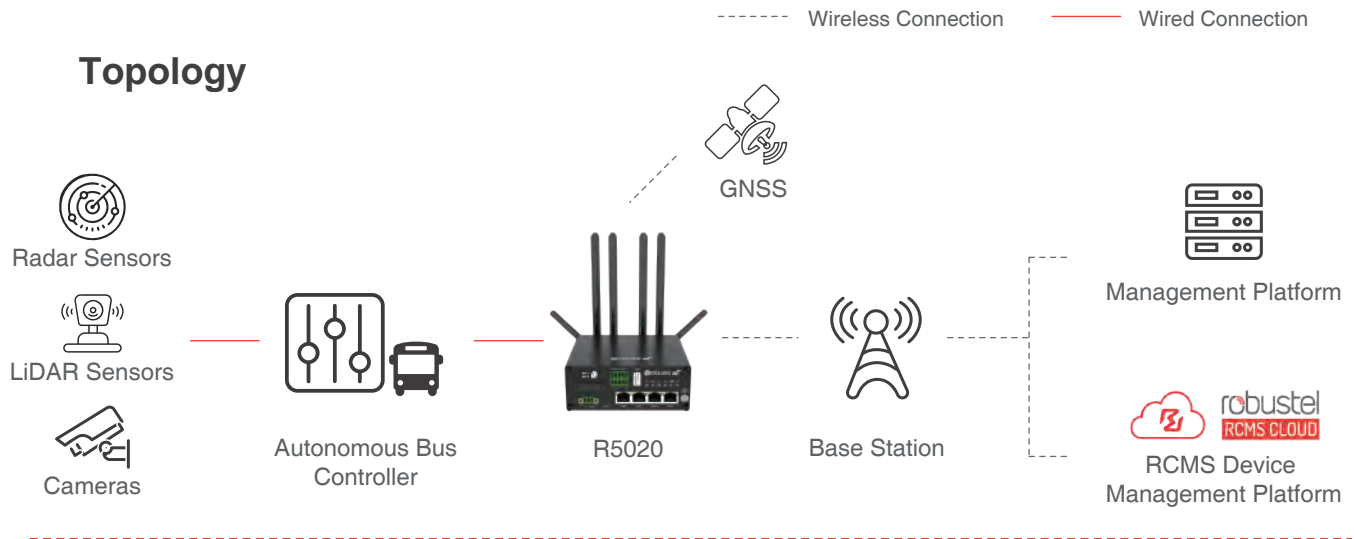
Offers flexible connectivity including 5G/4G/3G cellular networks, Wi-Fi, wired connections and link management function to ensure reliable, high-speed data transmission.

High Reliability


The device has passed rigorous tests to ensure it can withstand harsh environmental impacts and ensure stable data transmission.


Remote Operation and Maintenance


Robustel's RCMS device management platform provides remote, real-time monitoring and diagnosis, allowing maintenance staff to work off-site.




Advantages

 **Cellular Connection Keepalive** Robustel's cellular keepalive monitors and recovers from connectivity loss between routers and mobile networks.

 **High-speed Connection** Robustel's 5G routers support 5G Release 16 with fast DL/UL speeds in NSA/SA modes. 4G+ Carrier Aggregation ensures fast connections without 5G.

 **Vehicle Certification** Achieved the “E-mark” certification, proving its suitability for use in both private and commercial vehicles.

 **Free Router Management Platform** RCMS router management platform manages SIMs and routers at scale. Free basic version, advanced features on PAYG - compelling commercially.

Recommended Product



R5020



Company Overview

Company Introduction

Robustel is a cellular router & Gateway manufacturer specialising in 5G, 4G/LTE & LPWAN devices. Our products are used in smart cities, transportation, utilities, energy, Industrial IoT and many other applications to deliver robust and reliable connectivity.

Data Highlights

2 Million +

Connected
Terminals

100 +

Countries

10,000 +

Enterprise
Customers

11 +

Global Offices

Brand Philosophy

"Robustel" is composed of "Robust" and "Tel". "Robust" represents robustness in automation systems, which refers to the high reliability and robustness of the system, while "Tel" represents communication. Together, it means that Robustel provides highly reliable and robust communication products and systems in the industrial internet of things (IIoT). At a macro level, the people at Robustel are highly reliable and trustworthy, and the products and services they design must also be highly reliable.

Why Choose Robustel?



Combination of
Hardware & Software

High-reliability industrial grade cellular routers & gateways at a very competitive price point.



Free Device
Platform

Free MS-Azure based device management platform with all products. Unique and powerful management features in advanced version.



Customization

In-house router OS development allows for fast customization and OEM branding.



Guaranteed
Security

Excellent Cybersecurity practices including independent penetration testing on all software components.



Globalization

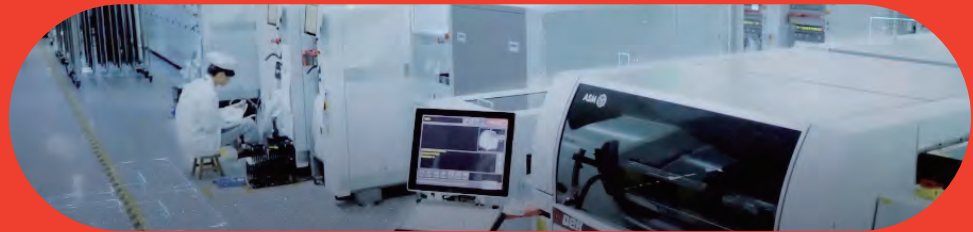
Supplying 100+ countries, with over 50 distribution partners to provide high quality localized service.

Turnkey Manufacturing Facilities

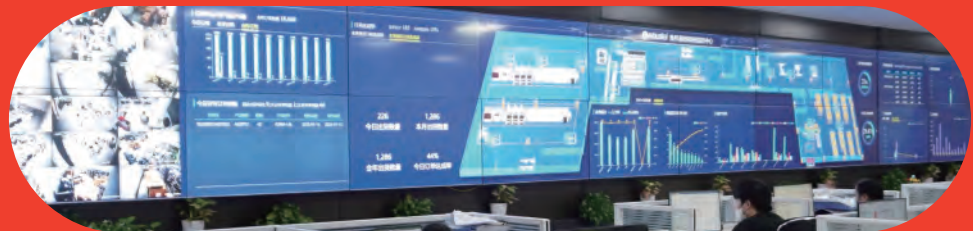
Robustel's "Smart Factory" was developed from the ground-up in 2018 with full software and hardware design capabilities. Robustel developed MES systems based on "lean production" idea, which created an intelligent infrastructure for a data-driven, green and flexible supply-chain. Also, multiple SMT lines give Robustel complete control over production scheduling and QA of the manufactured products. These facilities are regularly used to deliver fully or semi-bespoke OEM products along with simple EMS capabilities.

1

Intelligent
Automated
Production Line

**2**

Digital Twin
Screen

**3**

Digital
Process



Robustel Industrial IoT Product

Main Product

Industrial Wireless Communication Device

Edge Computing Gateway

Agriculture, Enterprise IT, Industrial IoT, Transport & Logistics, Smart Cities, Healthcare, Oil, Gas & Mining, Retail & Payments, Energy & Utilities, Environmental IoT

Make Things Connected

Typical Applications

Energy & Utilities

Managing the reading, collection and distribution of traditional and renewable resources for consumer and business use.



Smart Cities

Empowering councils and governments with connectivity for infrastructure, buildings, public spaces and traffic management.



Enterprise IT

Primary internet access or fixed line failover connectivity for distributed office, retail or branch environments.



Retail & Payments

Wireless Monitoring and Communications for ATMs, Vending Machines, Kiosks, Digital Signage and Point of Sale systems.



Transport & Logistics

In-Vehicle internet access for fleet management, logistics, public Wi-Fi, security and telematic data.



Industrial IoT

Monitoring & managing assets, equipment and infrastructure in manufacturing, warehousing and construction.



Oil, Gas & Mining

Employing remote control and management to improve safety and efficiency around the extraction of primary resources.



Agriculture

Using sensing & wireless technology to improve irrigation, fertilization, yield and more in agriculture and farming.



Environmental IoT

Environmental protection solutions for local conditions to realize intelligent environmental monitoring, disaster prevention and environmental compliance.



Healthcare

Powering remote diagnostics, telemedicine solutions through wireless communications.





Scan to Visit Robustel Website for
More Product Information

info@robustel.com
www.robustel.com



Follow Us
in LinkedIn

NOTE: Specifications are subject to change without notice.
Robustel has the final right to interpret the content.

Version: November 2023