Speakers

Louis Tao

Business Development Manager,
Europe

Taylor Liao

Senior Field Application Engineer,
Europe

CONTENTS

InHand Networks

01

Scenarios of Business Internet

Trends of Business Internet

Multi-Cloud Workload

Business increasingly migrated from locally to public or private clouds

Hybrid Workplace

Working locations are being flexible

Business Continuity

Enterprises are seeking resilience of networking

Complex Security

Increasingly complex environments require more for security

New Technologies of Business Internet

5G

Excellent user experience with high speed, low latency, and better connection

SD-WAN

Flexible and low-cost control of the network by transferring the traffic management burden from physical devices to software

NaaS

Saves time for deploying and maintaining self-owned networking infrastructure

SASE

Secure Access Service Edge. SD-WAN local security features combined with cloud-centric security offer more comprehensive protection

| Challenges

01	02	03	04	05	06
Access to Internet	**Network Stability**	**IT Unified Management**	**Wireless Network Services**	**Cyber Security**	**IT Costs**
• Speedy expansion of chains • Hybrid offices becoming popular • Remote work increasingly preferred • Multiple terminals are interconnected in branch offices	• Business increasingly managed in the cloud • Critical applications • Applications for remote working	• Quick and mass deployment • Quick troubleshooting • Unified IT strategies • Traffic priorities to critical business and applications • Greater efficiency	• Customer Wi-Fi in stores • Office employees connecting multiple terminals to Wi-Fi	• Network security in hybrid offices • Complexity in wireless networks • Sensitive data (e.g. transactions) • Remote access to intranet resources	• Demand for more flexible networking solutions • Cost of broadband and dedicated lines • Costs of network deployment and maintenance

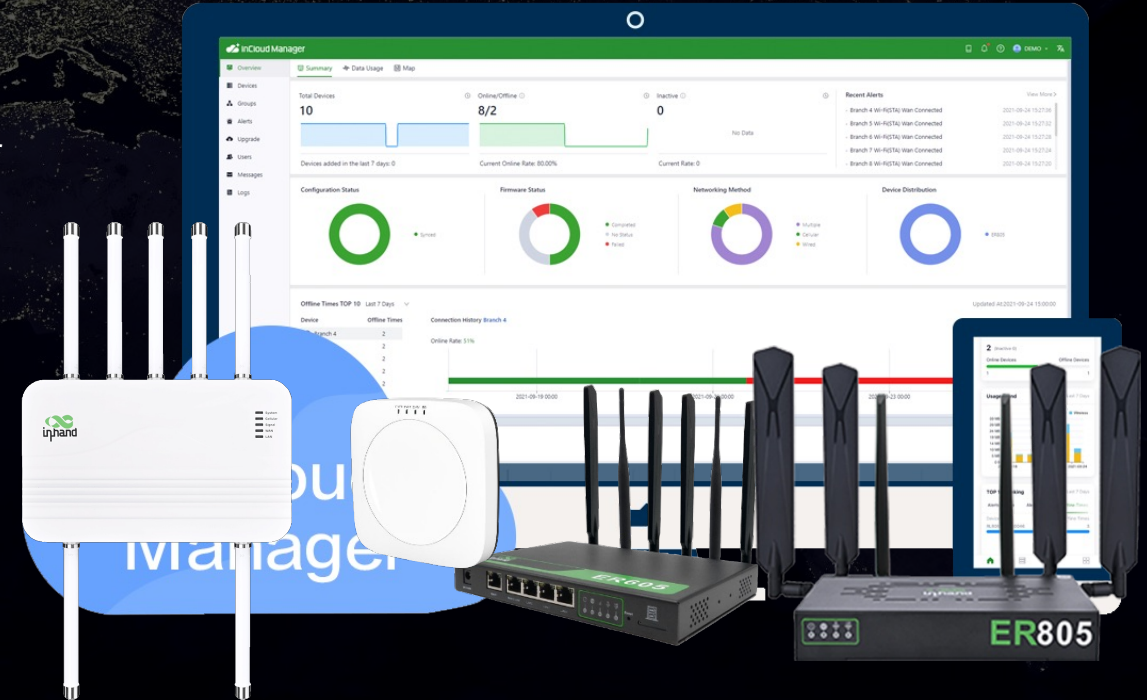# Business Internet Solutions

Cloud-Managed Networking Solution

InHand Networks

The InHand Cloud-Managed Networking Solution, including edge routers, Wi-Fi AP, 5G outdoor unit, and InCloud Manager SaaS, offers fast, secure, simple, and convenient networking services, creates unlimited possibilities for business growth.

✓ Cloud-Managed ✓ IT Improved ✓ Deployment Simplified ✓ Experience Optimized
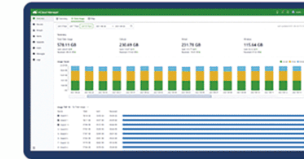
Cloud-Managed Networking Solution

InHand Networks
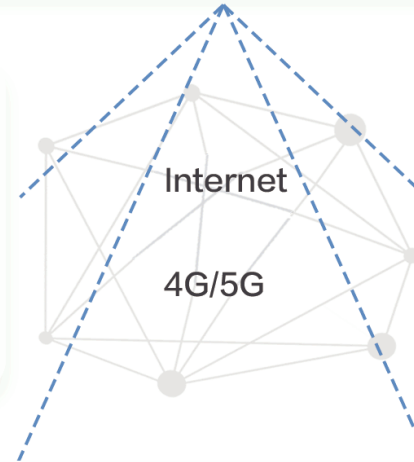
InCloud Manager

Visualized Cloud
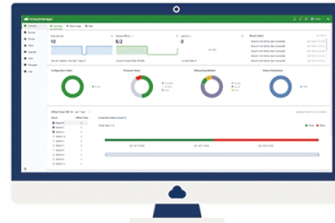
Full Lifecycle

Network Visualization

Application Insights

Store Branches
- 4G/5G cellular networks
- Link failover
- High performance
- Network fault diagnostics
- Zero-touch deployment
- Centralized management

Internet

4G/5G

Enterprise
- SD-WAN
- Network security
- Traffic & data analysis
- Network visualization
- Intelligent operation
- Unified management

Hardware

5G Outdoor Unit

ER605
5G Edge Router

ER805
5G Edge Router

Coming soon

Wi-Fi 6 AP

Six Core Values, One-Stop Management

InHand Networks

Flexible Access Network

Convenient network, and multiple networking methods, enabling the digital store business.

High Availability

Worry-free network experience, Stable network for the digital business escort.

SD-WAN

Intelligent link, real-time detection of network quality, rapid inter-branch networking.
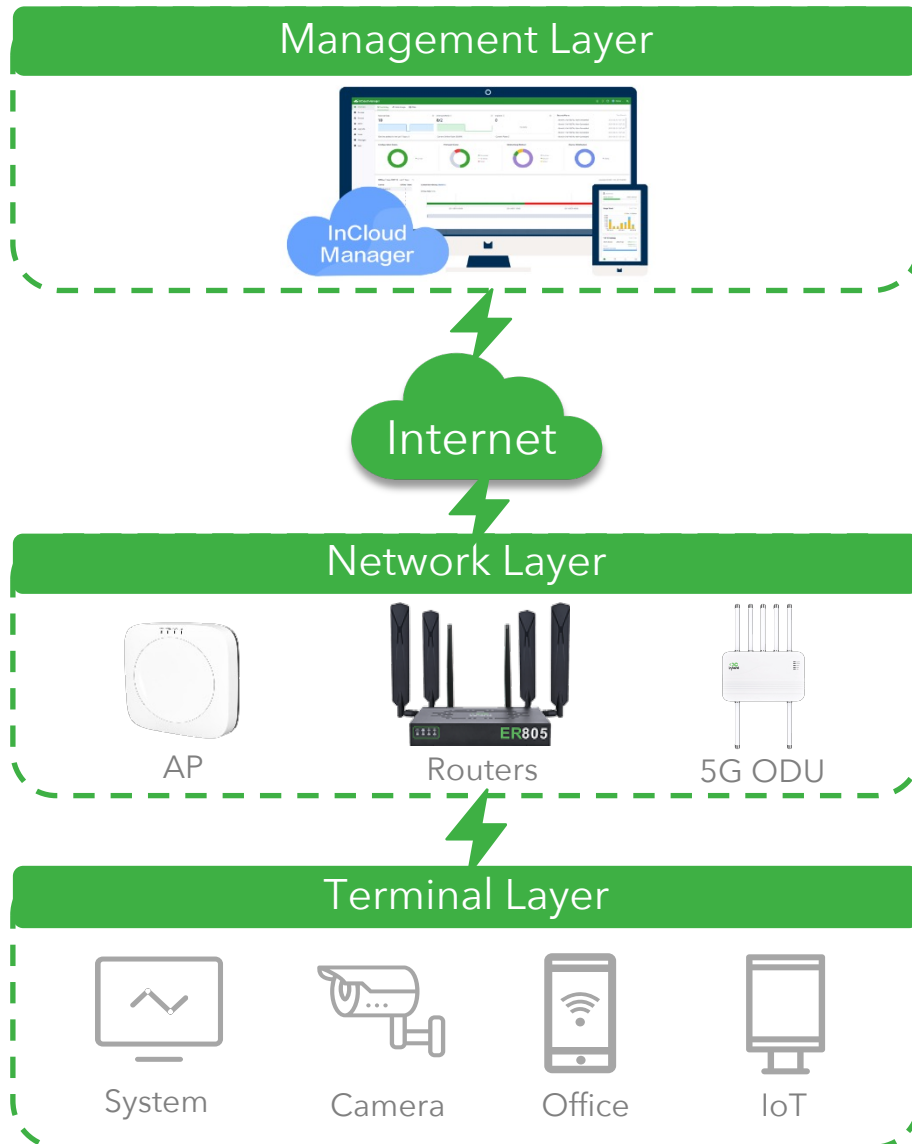
IT Unified Management

Visual and centralized portal, support business development always and everywhere.

Wireless Network Services

Manageable visitor network, Improve the customers experience.

Reduced Cost

Refined NetOps, and new SD-WAN technology enhance the IT efficiency and reduce cost.

Access to Internet

Management Layer

InCloud Manager

Internet

Network Layer

AP

Routers
ER805

5G ODU

Terminal Layer

System

Camera

Office

IoT

Challenge: With varying scenarios of business branches and increasing demand for connectivity, how to ensure Internet access?
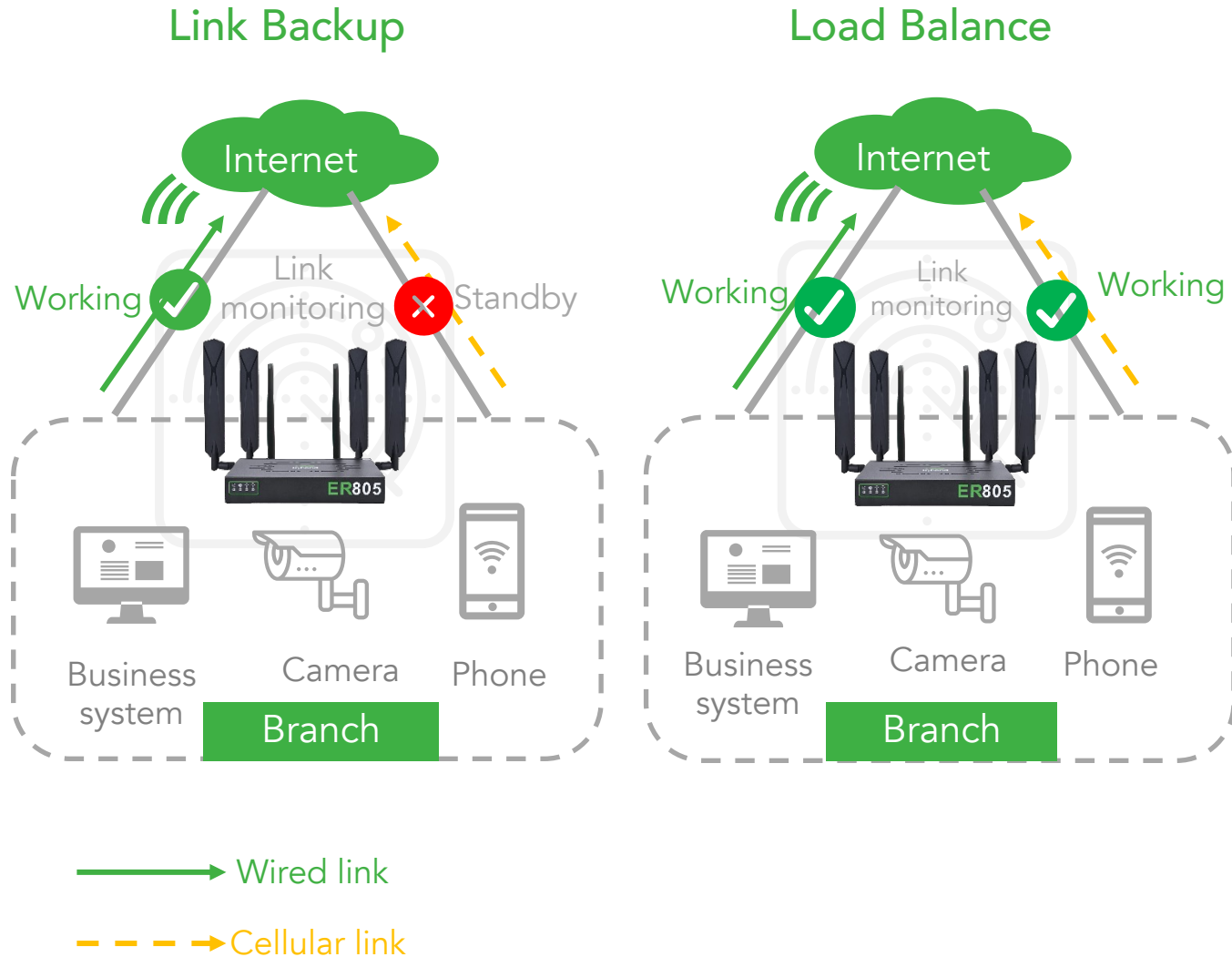
Highly cost-effective networking equipment

- Multiple devices for varying branch sizes
- Available concurrently with wired, cellular and Wi-Fi
- Flexibly adaptable to various scenarios

Zero-touch Deployment

- Cloud-based integrated design: easy deployment, lower costs, faster expansion
- Efficient deployment: simplified operations, reduced costs
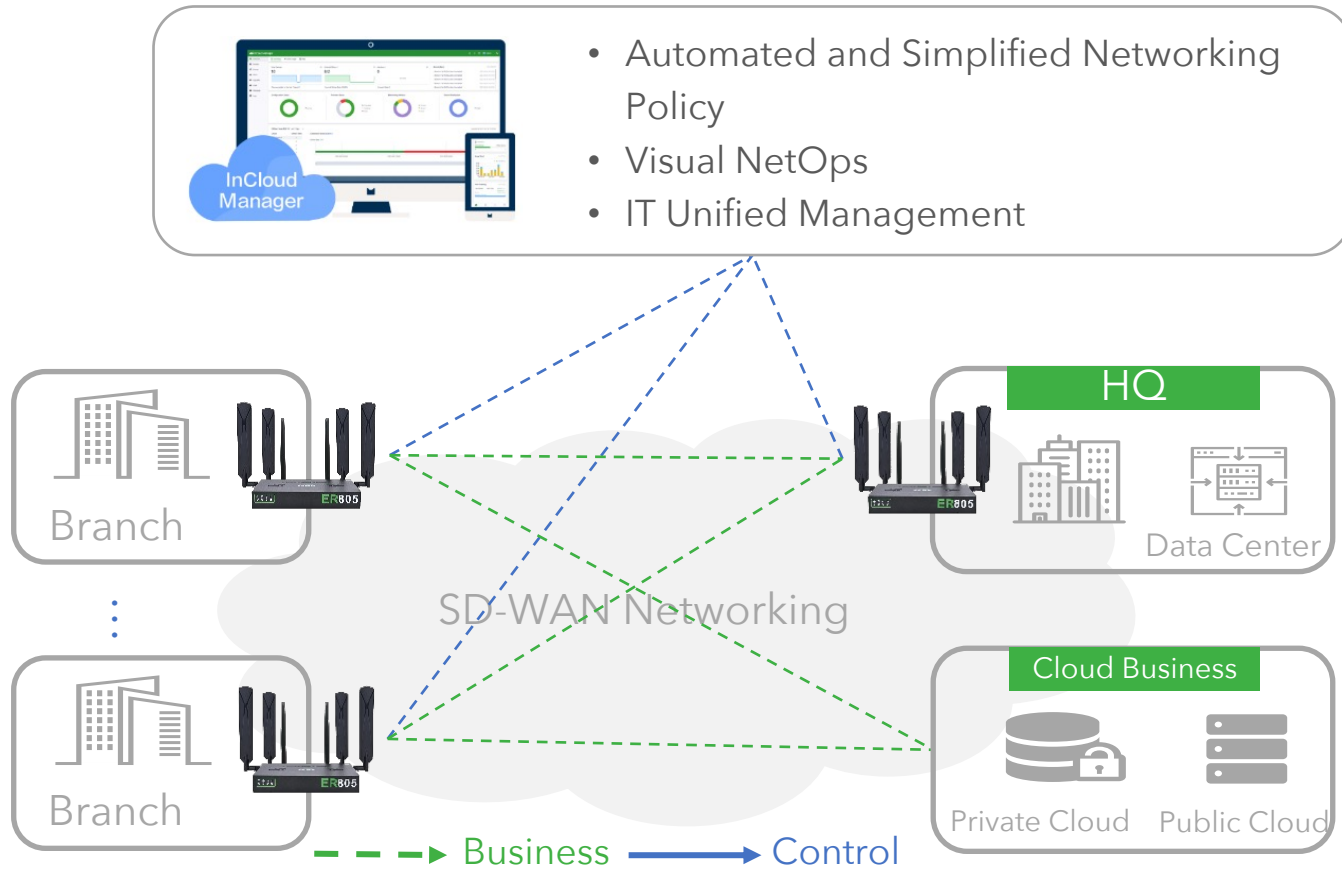- Easier collaboration: offline configuration, smooth IT/OT collaboration

Network Availability

Link Backup

Internet

Working ✓   Link monitoring   ✗ Standby

ER805

Business system   Camera   Phone

Branch

Load Balance

Internet

Working ✓   Link monitoring   ✓ Working

ER805

Business system   Camera   Phone

Branch

→ Wired link

⇢ Cellular link

Challenge: How to maintain network stability and ensure critical business?

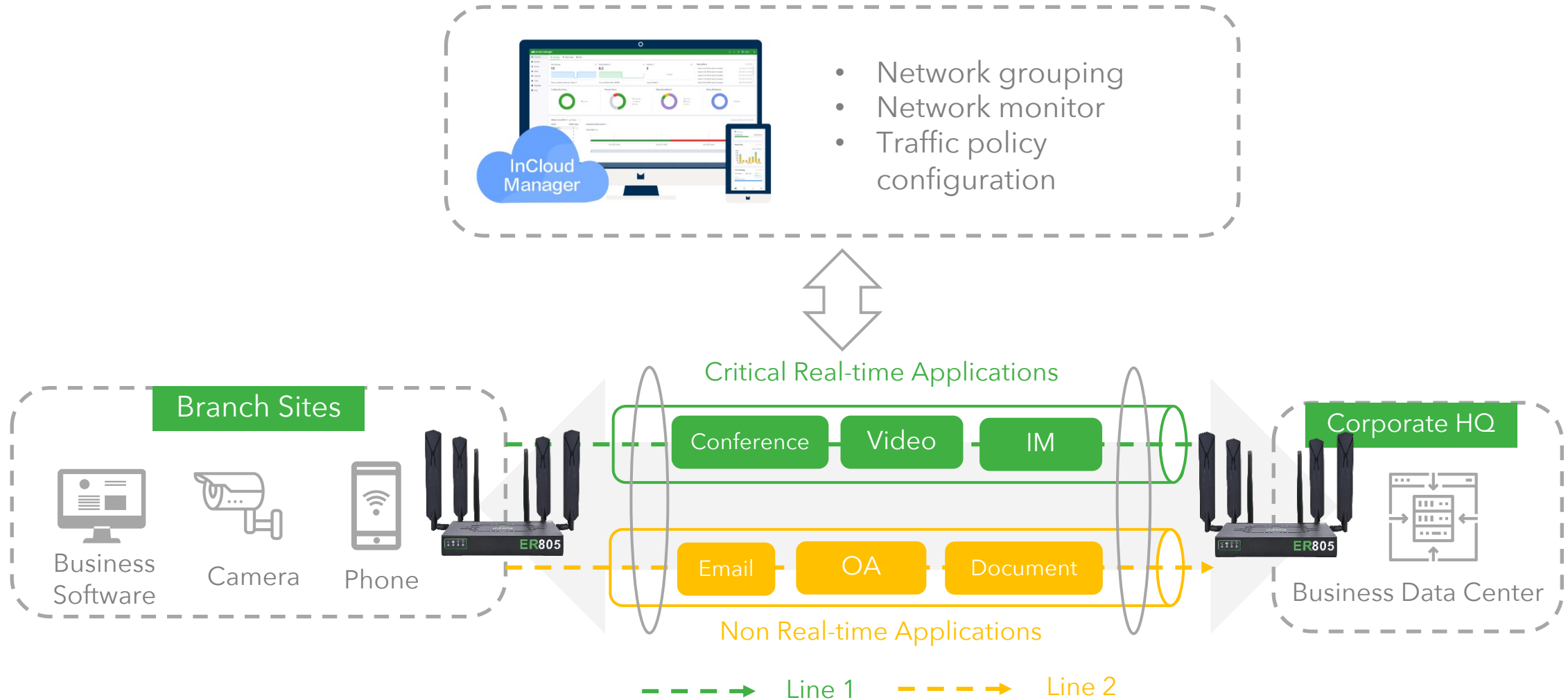## Highly available "always on" redundant links

- Load balance on multiple WANs

- Failover between wired WAN and 5G

- Flexible QoS and Access Control List

- Source IP routing policy

- MAC address filtering
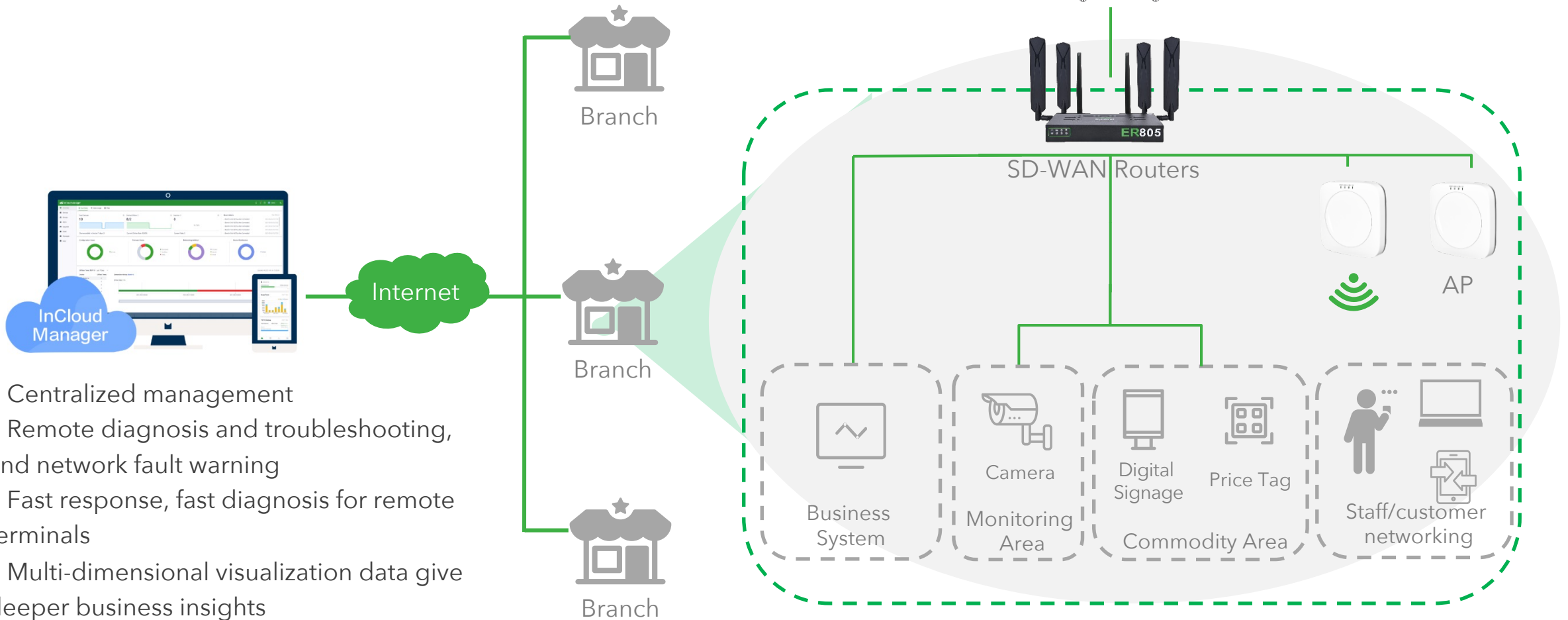
SD-WAN, smarter network management

InHand Networks

- Automated and Simplified Networking Policy
- Visual NetOps
- IT Unified Management

InCloud Manager

Branch

Branch

SD-WAN Networking

HQ

Data Center

Cloud Business

Private Cloud   Public Cloud

- - - ▶ Business   ——▶ Control

- Available with wired, cellular, and wireless links, seamless link switching, automatic failover

- Multi-dimensional data visualization for network insight and efficiency

- Simplified and efficient branch connectivity without network expertise, quick and easy network setup
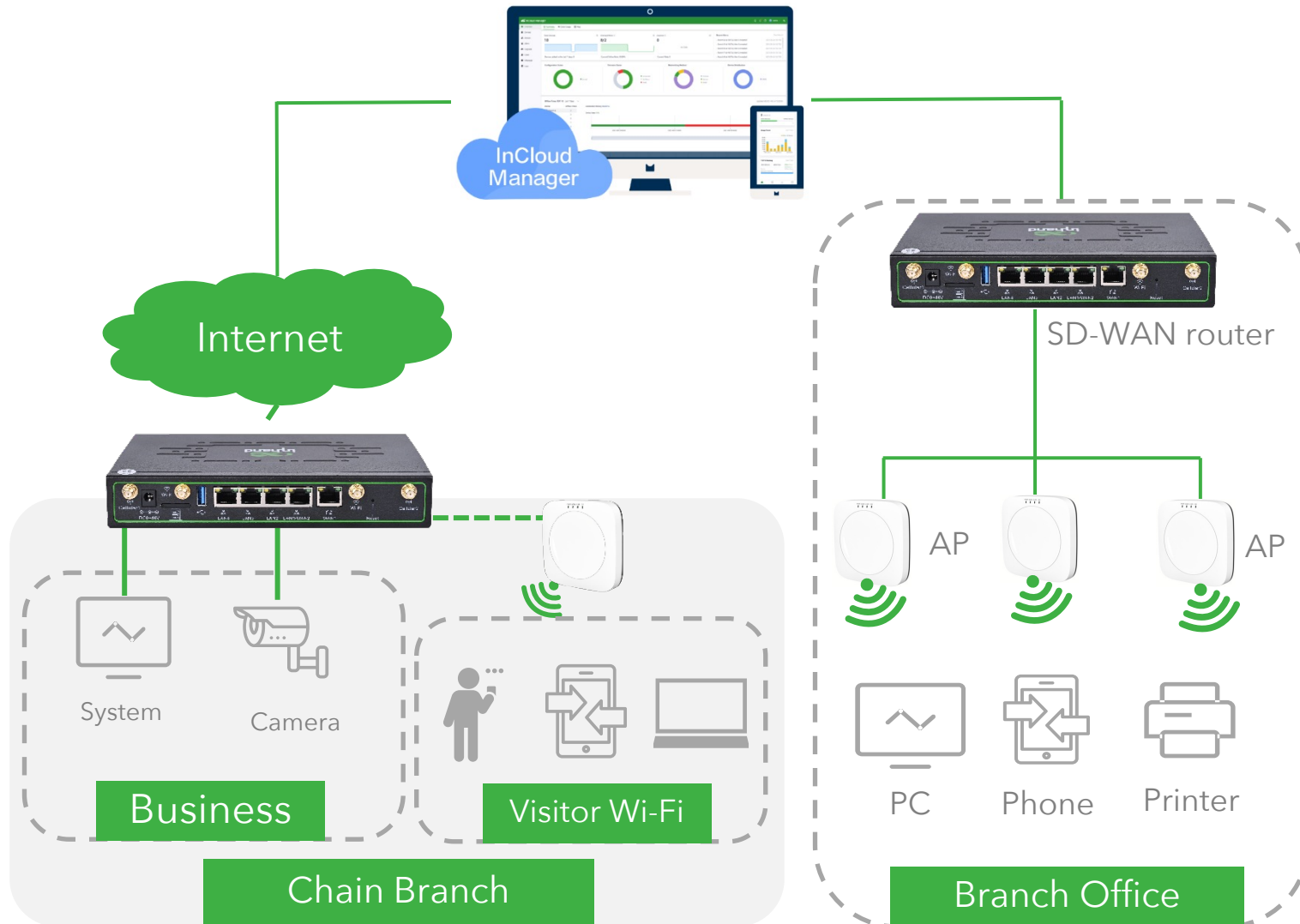
SD-WAN, smarter network management

InHand Networks

InCloud Manager

- Network grouping
- Network monitor
- Traffic policy configuration

Critical Real-time Applications

Conference | Video | IM

Branch Sites

Business Software | Camera | Phone

ER805

Corporate HQ

Business Data Center

Non Real-time Applications

Email | OA | Document

ER805

- - - ► Line 1   - - - ► Line 2

IT Unified Management

Challenge: How to improve efficiency with centralized management?

5G Outdoor Unit

SD-WAN Routers

ER805

Internet

InCloud Manager

Branch

Branch

Branch

AP

Business System

Camera Monitoring Area

Digital Signage

Price Tag

Commodity Area

Staff/customer networking

- Centralized management
- Remote diagnosis and troubleshooting, and network fault warning
- Fast response, fast diagnosis for remote terminals
- Multi-dimensional visualization data give deeper business insights

Wireless Network Services

InHand Networks

InCloud Manager

Internet

SD-WAN router

AP

AP

System   Camera

Business

Visitor Wi-Fi

Chain Branch

PC   Phone   Printer

Branch Office

Challenge: How to build more powerful Wi-Fi and connect more devices?

Excellent Wi-Fi network service: AP & Routers

- Powerful dual-band gigabit Wi-Fi 5/6 coverage
- Seamless Wi-Fi roaming
- Wi-Fi encryption and authentication

Unified Wi-Fi network managed by InCloud Manager

- Unified portal Service authentication
- Visitor information collection
- Wi-Fi hotspot visualization (on roadmap)

Reduced IT Costs

Deployment Costs

- Plug-and-play devices, a cloud-hosted platform
- Automated network architecture, no need to change existing networks
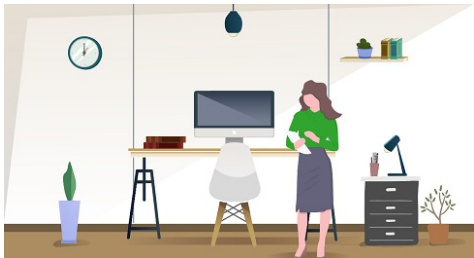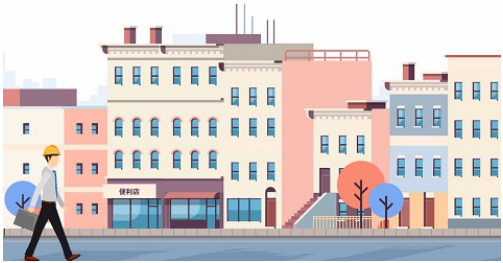
NetOps Costs

- Distributed sites centralized managed in the cloud, reducing travel costs
- Visualized interface improves network management efficiency
- Easier troubleshooting reduces maintenance costs

Internet Fees

- Cost-effective traffic charges
- Cost-effective network devices

Cloud-Managed 5G SD-WAN Edge Routers

InHand Networks

ER805

For medium-sized branches:

Access capacity:
- Firewall throughput: 600M bps
- VPN throughput: 200Mbps
- User access volume: 100-150

Networking capabilities:
- 5G/4G
- 5 * Gigabit Ethernet
- Wi-Fi 5, dual-band Gigabit

ER605

For smaller sized branches:

Access capacity:
- Firewall throughput: 450M bps
- VPN throughput: 100Mbps
- User access volume: 50 to 100

Networking capabilities:
- 5G/4G Cellular
- 5 * Gigabit Ethernet
- Wi-Fi 5, dual-band Gigabit

5G Outdoor Unit

InHand Networks

High performance 5G/4G

DL : 4.76Gbps , UL: 1.25Gbps
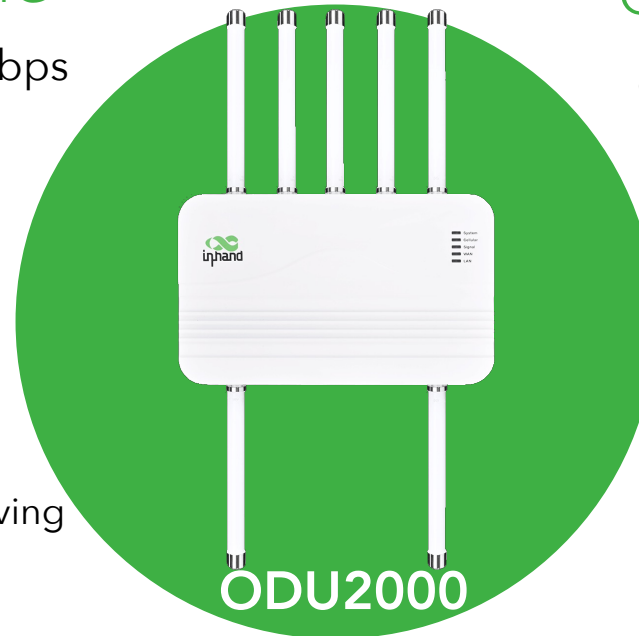
Throughput: 2 Gbps
Number of access users: 200

2.5G Gigabit Ethernet

WAN/LAN , support PoE power receiving

Security Features

Firewall, DOS attack prevention, remote access control

ODU2000

Omnidirectional Antenna

6 external 5G cellular antenna design

Adapt to Harsh Outdoor Environments

IP67 , -30 ~ 70 degrees, die-casting aluminum shell, GPS

Wall-mounted, Pole-mounted

Adjustable installation angle

Cloud Management

Simplified and completely cloud-based management
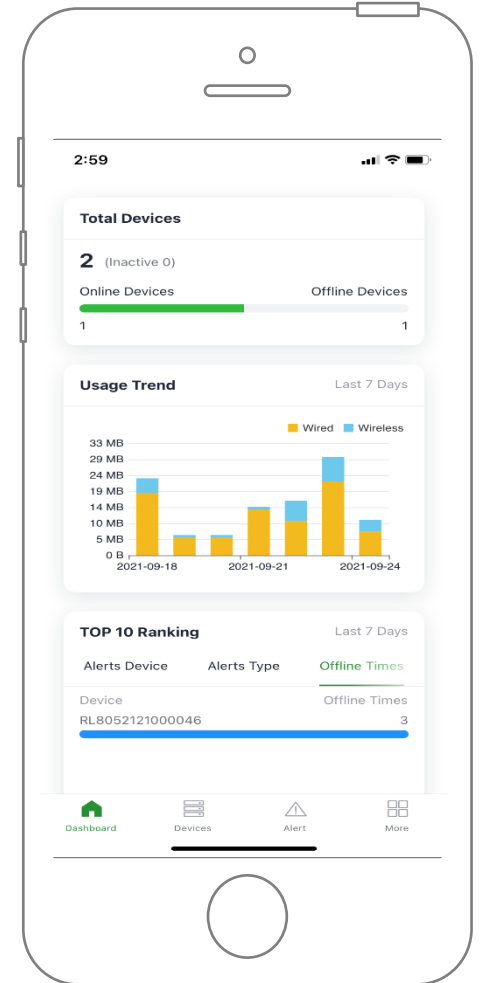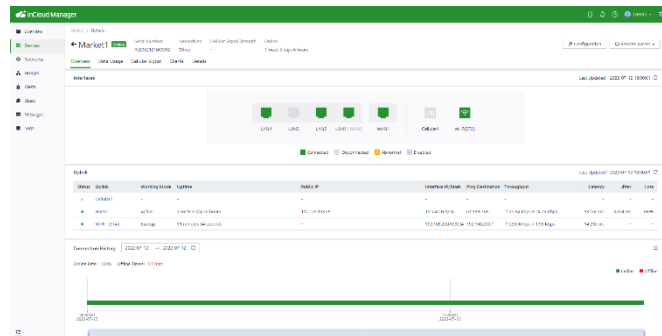
InCloud Manager SaaS

One-Stop devices, networks, and applications management portal

Simplify your deployment and network management

Improve your network access experience

Data visualization for better business analysis

Demo: InCloud Manager

InCloud Manager Demo

InHand Networks

01 Remote Monitoring

02 Remote Management

03 Networking Features

InCloud Manager Demo – Remote Monitoring

InHand Networks

Overview

- Visual global summary information
- Rich graphs

Network Monitoring

- Link information & quality
- Network quality
- Traffic status

Device Details

- Basic information
- License information
- Firmware and cellular module information
- Geolocation

Alerts

- Device reboot
- Cellular traffic threshold
- InCloud connection
- Link abnormal status
- SIM switch

InCloud Manager Demo – Remote Management

InHand Networks

Upgrade Firmware Remotely

- Batch upgrade
- Group upgrade
- Schedule an upgrade

Configure Remotely

- User-friendly GUI interface
- Web GUI configuration without complex command lines
- Batch configure
- Group configure

Account Management

- Multi-level organizations
- 4 user roles
- Internal and external accounts
- MFA: SMS, authenticator APP

InCloud Manager Demo – Networking Features

Cloud Connector

- Access to remote terminals to make maintenance, download programs and collect data
- Secure and stable channel based on OpenVPN

SD-WAN Network

- Interconnect branch business systems
- Simple configurations without professional network knowledge

Policy Routing & Traffic Shaping

- Multi-policy traffic shaping and policy routing ensures critical service networks are prioritized

Case Studies

Large Supermarket Chains

Background

📍 North America

🏪 Thousands of stores

☁️ Cellular backup link to existing wired network

🖥️ Remote maintenance from HQ
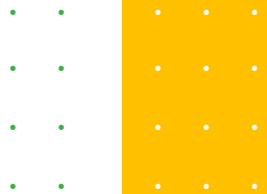
Challenges

🌐 Scattered stores without centralized IT management
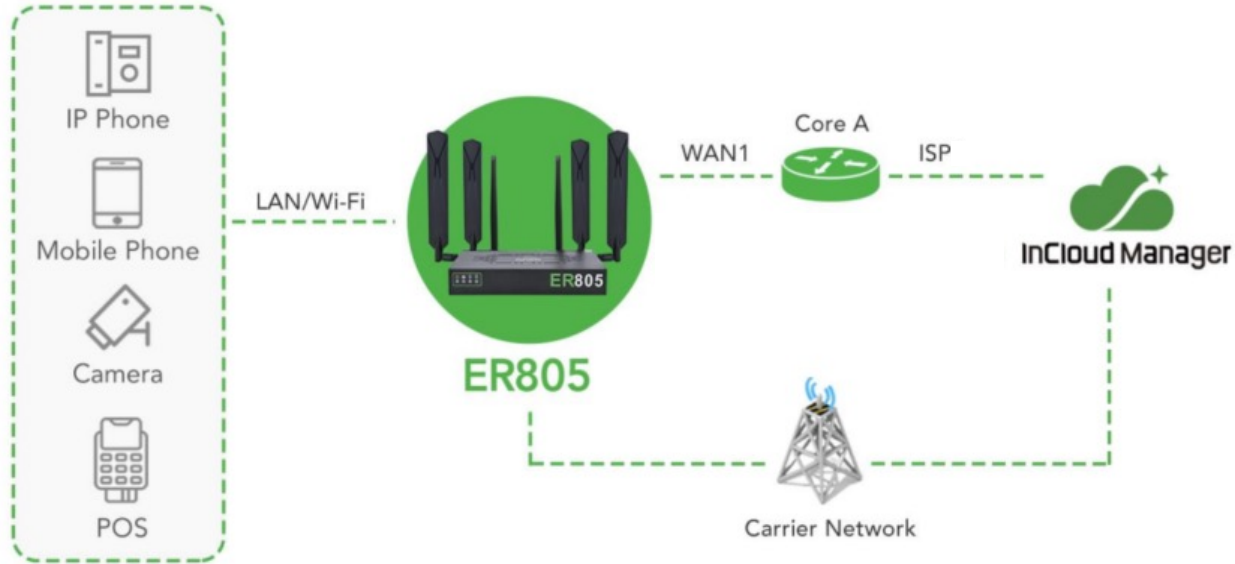
🔗 Difficulty in changing existing network architecture

📈 High IT maintenance costs

Large Supermarket Chains

- Devices in the store are connected to the ER805 through LAN or Wi-Fi
- When the primary wired link fails, the network will immediately switch to the cellular network.
- InCloud Manager provides a remote connection channel for remote access from HQ

Highlights

Easy deployment
Gigabit Ethernet, 5G, and Gigabit Wi-Fi available concurrently, easily integrate into current network and without changing existing architecture

High availability with 5G backup
High-speed 5G network as economical and convenient backup, making in-store connectivity more reliable

Easy Ops, reduced management costs
Centralized management and cloud connection services help manage on-site networks and devices without travel

Petrol Pumps

Background

📍 Middle East 🏪 100+ stations

Cellular backup link to existing fiber network for huge prospect traffic

Remote monitoring and maintenance

Challenges

🌐 Ultra-high demand for fast & reliable connectivity on 100+ stations during FIFA World Cup 2022

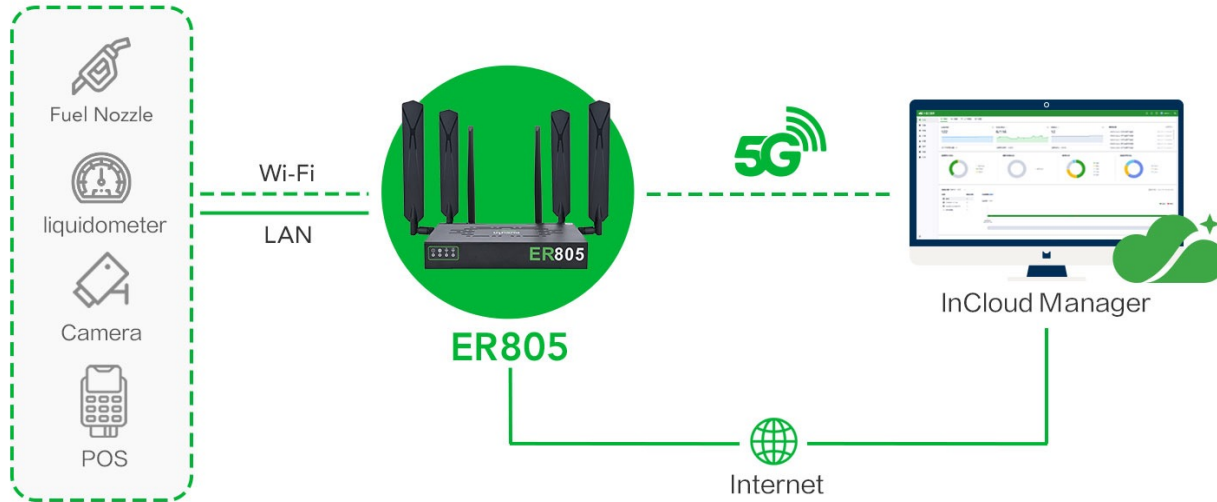Insufficient IT staff for on-site operation and maintenance

📈 Lack of high bandwidth for remote monitoring

وقود
WOQOD

Petrol Pumps

Fuel Nozzle

liquidometer

Camera

POS

Wi-Fi

LAN

ER805

5G

InCloud Manager

Internet

- Devices in the store are connected to the ER805 through LAN or Wi-Fi
- InCloud Manager provides a remote connection channel for remote access from HQ

Highlights

High speed
Gigabit Ethernet, 5G, and Gigabit Wi-Fi ensure uninterrupted high-speed connectivity

High availability
High-speed 5G network and multiple backup mechanisms make connectivity more reliable

Easy Ops, reduced management costs
Out-of-band management for devices behind the R805 through VPN and

Efficient management
Multi-dimensional visualization interfaces ease management

05

Q & A

Thanks

InHand Networks

Contact Us

louis.tao@inhandnetworks.com
taylor.liao@inhandnetworks.com
www.inhandnetworks.com