ANYLINK-UAV Wireless Video & Data Link Module

Pioneering Wireless Video Transmission, Ushering in a New Era of Data Links for Unmanned Systems with ultra-low latency and high reliability.

ANYMESH Communication Technology

LAUNCH DATE: JUNE 2026

Agenda

01 About Us
Corporate profile & strength: Wanlan’ s development history, core team and comprehensive technical advantages.

02 Product Family
AnyLink product series delivers integrated UAV video & data wireless link solutions covering 5–300km, for diverse mission needs.

03 Product Deep Dive
In-depth analysis of 5 major product lines, with a comparative summary of key core parameters, performance metrics and use cases.

04 Core Technologies
Analysis of self-developed core algorithms and patented technologies, highlighting low latency, high concurrency, and robust anti-interference capabilities.

05 Application Fields
Wide-ranging UAV industry scenarios including UAV swarm control, industrial robot inspection, public safety, and environmental monitoring.

06 Contact Us
Acquire complete product materials, customized solutions, and professional cooperation support for your business requirements.

01 About Wanlan Communications (ANYMESH)

Beijing Wanlantuo Communication Technology Co., Ltd. (Brand: Wanlan Communications / ANYMESH) is a national certified High-tech Enterprise based in Beijing’ s Zhongguancun Hongfu Science Park. We specialize in cutting-edge wireless communication R&D and innovation, with a core focus on wireless ad-hoc networking technologies and fully domestic software-defined radio (SDR) platforms, driving industry advancement through independent innovation.

Corporate Profile & Brand Positioning

With "Wanlan Communications / ANYMESH" as our core brand, we focus on deep technological innovation and solid product implementation in wireless communications. Committed to building an industry benchmark, we integrate cutting-edge R&D capabilities with practical application scenarios to deliver reliable, high-performance communication solutions.

Product Layout & Full-Chain Services

We provide integrated full-industry-chain solutions covering core algorithm R&D, high-performance hardware manufacturing, market sales, and comprehensive technical services. Our end-to-end capabilities enable us to meet diverse, multi-scenario communication demands across professional and industrial sectors with tailored, efficient support.

01 About Wanlan Communications (ANYMESH)

Full Self-Developed System

Fully independent controllable core technologies covering bottom hardware architecture, upper protocol stacks and application software, forming a complete intellectual property moat to ensure absolute security and autonomy.

SDR Software Radio Platform

Based on cutting-edge Software Defined Radio technology, we break through the limitations of traditional dedicated hardware, delivering high flexibility and strong scalability to adapt to evolving communication requirements.

Ad-hoc Mesh Networking

Build infrastructure-free multi-hop self-organized networks with automatic node networking and self-repair capabilities. This guarantees stable, uninterrupted connectivity even in complex, base station-free environments.

“Wireless Video Transmission, Lead the Industry with Wanlan”

This slogan debuted at the 10th China (Beijing) Military Intelligent Technology Equipment Expo in 2025, demonstrating our technical strength and brand ambition in wireless communications.

01 Authoritative Certifications

Wanlan Communications is not only a technology innovator but also a strict adherent to quality and compliance standards. We hold multiple national and industry authoritative certifications to ensure our products meet the highest standards of performance, reliability and security.

National High-tech Enterprise Certificate

Recognized for our core independent intellectual property rights and R&D capabilities, solidifying our leading position in technological innovation.

Radio Transmission Equipment Type Approval

Obtained national radio management authority certification, ensuring full compliance with spectrum regulations and signal stability.

GJB Military Equipment Quality Management System

Certified to meet the stringent quality requirements of military-grade equipment, ensuring extreme reliability and security in critical environments.

Utility Model Patent Certificates

Secured patents for key structural and functional innovations, protecting our unique technical solutions and product advantages.

ISO9001 Quality Management System Certificate

Established a complete and standardized quality management process, covering the entire lifecycle from design and production to service delivery.

Computer Software Copyright Registrations

Exclusive copyrights for core control and management software, ensuring the originality and security of our system algorithms.

02 AnyLink Product Family Overview

AnyLink is a dedicated wireless video & data link product line under Wanlan Communications (ANYMESH), tailor-made for UAV scenarios. It addresses communication pain points in complex environments, delivering ultra-long-range, highly reliable networked integrated aerial communication solutions that redefine UAV operation communication standards.

CORE POSITIONING

A professional-grade, fully integrated video and data transmission solution engineered exclusively for unmanned aerial vehicle systems.

PRODUCT SLOGAN

"Wireless Video Transmission, Lead the Industry with Wanlan" — setting new benchmarks for stable, long-range UAV connectivity.

Integrated Video & Data

Seamlessly synchronizes the transmission of high-definition video and critical flight control data over a single wireless link for unified management.

Mesh Ad-hoc Networking

Operates without dependency on a central base station, forming a self-organizing, self-healing network for flexible and resilient communications.

BVLOS Communication

Breaks through visual line-of-sight limitations, enabling stable and secure long-distance data transmission for extended mission ranges.

High-Bandwidth: Supports 4K HD video streaming with low latency for critical operations.

Anti-Interference: Utilizes advanced modulation tech to withstand harsh electromagnetic environments.

02 AnyLink: Our Revolutionary Solution

Longer Range

Break distance barriers with stable transmission from 5km up to an impressive 300km, redefining the limits of wireless connectivity.

Higher Speed

Deliver up to 50 Mbps transmission rate for seamless, lag-free HD video streaming and large data file transfer in real time.

Higher Stability

Boast outstanding anti-interference performance and rock-solid link stability, ensuring reliable connections in complex electromagnetic environments.

Smarter Networking

Intelligently supports Ad-hoc mesh networking and dynamic routing algorithms, enabling automatic path optimization and self-healing for uninterrupted communication.

Lighter Weight

Offers diversified product options ranging from 14g to 600g with ultra-lightweight, compact designs, minimizing payload impact on drones, robots, and portable platforms.

02 AnyLink: Technology Driven, Connecting the Future

SDR Software Radio Platform
Deep integration of SDR + FPGA + ADC modules, featuring fully independent and controllable core technologies to ensure technological autonomy and scalability.

High-Performance Hardware Platform
Built on a high-performance FPGA software radio architecture, it delivers superior hardware flexibility, supporting rapid iterative updates and functional expansion for future applications.

Multi-Band Flexible Adaptation
Achieves full coverage of L(1.4G), U(600M), and S(2.4G) frequency bands, enabling seamless adaptation to diverse communication scenarios and environmental requirements.

Flexible Ad-hoc Networking Capability
Supports diverse networking modes including point-to-point, star topology, and advanced mesh networking, ensuring reliable connectivity in dynamic and unstructured environments.

2T2R MIMO Technology
Utilizes advanced multi-antenna transceiving technology to effectively counteract multipath fading, significantly improving signal stability and communication quality in complex environments.

High-Power Ultra-Long-Range Transmission
Offers configurable multi-power options from 0.5W up to 2×10W, ensuring stable, ultra-long-distance communication even in remote or challenging terrains.

SDR Core Hardware Engine: Integrated advanced RF front-end and FPGA processing units to build a reconfigurable open hardware foundation for robust, future-proof connectivity.

03 Full Product Matrix Deep Dive

AnyLink product family forms a 5-series full-scenario matrix, delivering a one-stop customizable wireless data link solution covering micro embedded modules to long-range high-power products, ensuring adaptability to every operational scenario.

Standard Series

Mainstream balanced performance flagship, ideal for general-purpose applications requiring stable and consistent wireless connectivity.

J30J Rectangular Connector

Equipped with rugged industrial-grade connectors, enabling reliable and secure integration in harsh environmental conditions.

Micro Series

Engineered for ultra-light and compact platforms, offering minimized footprint without compromising on core data link performance.

Narrowband Data Link Series

Specializes in ultra-long-range control and telemetry transmission, perfect for scenarios demanding extended operational coverage.

ULS Tri-Band Series

Delivers ultimate anti-interference performance with tri-band frequency hopping technology, ensuring stable links in dense signal environments.

03 Standard Series Products

The Standard Series is our mainstream balanced performance flagship, perfectly matching real-time video & control scenarios for most industrial UAVs and unmanned vehicles, delivering reliable, stable, and efficient wireless communication solutions.

AnyLink-UAV205WL/21WL (2×0.5W ~ 2×1W)

Optimized for small UAV platforms with a lightweight, compact and cost-effective design, providing essential wireless connectivity for entry-level industrial applications.

AnyLink-UAV22WL (2×2W)

The balanced mainstream model tailored for medium-sized UAVs, striking the perfect blend of power, range and thermal efficiency for versatile field operations.

AnyLink-UAV24WL (2×4W)

A medium-power long-range solution for professional industrial scenarios, ensuring stable transmission over extended distances in complex environmental conditions.

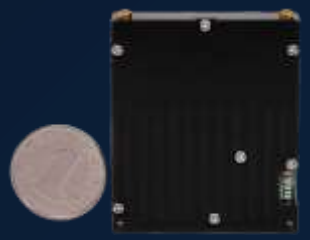
AnyLink-UAV210WL (2×10W)

The ultra-high-power flagship model engineered to break through communication distance limits, supporting ultra-long-range missions in the most challenging and remote environments.

03 Standard Series Core Parameter Table

UAV205WL/21WL

Compact & Lightweight (2×1W)



- Output Power:0.5-1W / ch
- Max Range:15 – 30 km
- Rate: 28/50Mbps | Weight: ⩽45g

UAV24WL

Medium Power & Extended Range (2×4W)

- Output Power:4W / ch
- Max Range:100 km
- Rate: 28/50Mbps | Weight: ⩽250g

UAV210WL

High Power & Long-Haul Flagship (2×10W)

- Output Power:10W / ch
- Max Range:200 km
- Rate: 28/50Mbps | Weight: ⩽550g

Unified High-Speed Transmission: All models support up to 50Mbps data rates for seamless HD video & telemetry.

03 J30J Rectangular Connector Version

Mainstream data link for all unmanned platforms, balancing performance and integration with rugged, reliable J30J connectors to meet diverse operational requirements across scenarios.

Light Embedded Model

UAV205WL-J30J / 21WL-J30J (2×1W)

Optimized for small unmanned platforms, delivering a reliable 15–30km communication range with ultra-lightweight integration.

Medium-Power Balanced Model

UAV22WL-J30J / 24WL-J30J (2×4W)

Strikes a perfect balance between power and size, achieving a 100km range with advanced networking and anti-interference capabilities.

High-Power Long-Range Model

UAV210WL-J30J (2×10W)

Engineered for large-scale missions, this rugged unit delivers an exceptional 200km range for critical long-distance operations.

CORE VALUE:Ruggedized J30J connectors ensure industrial-grade reliability, while modular design enables seamless integration across all unmanned system platforms.

03 J30J Series Parameter & Scenario Introduction

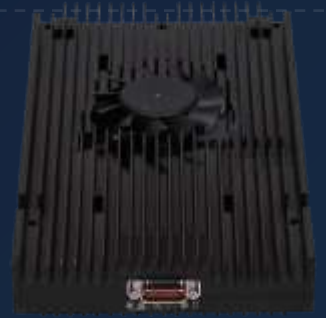
UAV205/21WL (J30J)

A light embedded model weighing only 155g, optimized for agile deployment. It delivers stable 30km HD video transmission, ideal for small unmanned aerial vehicles and compact mobile platforms.

UAV24WL (J30J)

The balanced performance core model, featuring 100km reliable two-way communication. It excels in medium-range industrial monitoring and data relay scenarios, offering a perfect blend of range and stability.

UAV210WL (J30J)

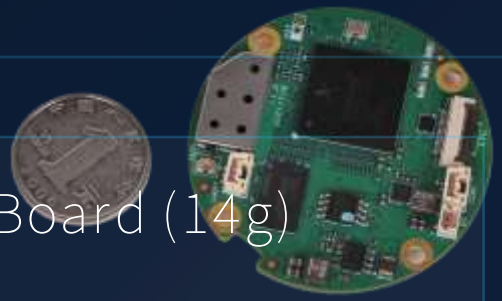


The high-power flagship model with 200km ultra-long-range video transmission. Engineered for extreme outdoor and large-area survey missions, ensuring uninterrupted connectivity even in complex electromagnetic environments.

The series adopts rugged, reliable J30J rectangular connectors for easy plugging and stable connection. Engineered to withstand high vibration and impact in industrial scenarios, it ensures consistent performance in harsh outdoor and industrial environments.

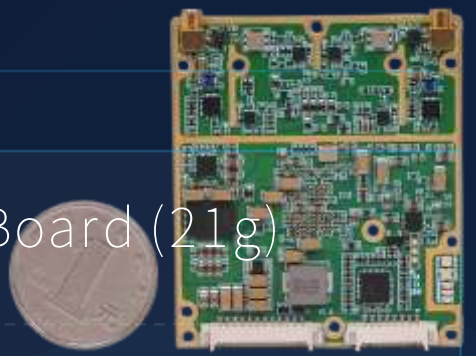
03 Micro Series – Built for Ultra-Light Platforms

Developed for small UAVs and robots with strict weight & space constraints, our board-level ultra-miniature products start at only 14g/21g. These compact modules redefine what’ s possible, delivering the mantra of “tiny size, massive performance” for cutting-edge lightweight applications.



500mW Circular Board (14g)

Engineered for micro-drones, this featherweight module delivers stable 5–10km video transmission with minimal power draw, ideal for tight payload limits.



1000mW Square Board (21g)

For more demanding long-range missions, this robust variant extends coverage to 10–20km, maintaining ultra-HD video quality even in challenging environments.

CORE VALUE: Integrating class-leading communication performance into an incredibly tiny footprint, empowering high-end, space-constrained robotics and UAV applications.

03 Micro Series Full Parameter Table

2.4GHz Circular (0.5W)

Platform:ASIC
Weight:~14g

Throughput:40Mbps
Range:5km

1.4GHz Circular (0.5W)

Platform:FPGA
Weight:~14g

Throughput:50Mbps
Range:5–10km

2.4GHz Square (1W)

Platform:ASIC
Weight:~21g

Throughput:50Mbps
Range:10km

1.4GHz Square (1W)

Platform:FPGA
Weight:~21g

Throughput:50Mbps
Range:10–20km

All models support Point-to-Point, Star, and Mesh Ad-hoc networking modes for versatile deployment.

03 Narrowband Data Link Series – Ultra-Long-Range Control

Optimized for scenarios requiring ultra-long control distance without HD video transmission, this series delivers reliable, low-latency connectivity for critical long-endurance missions and remote operations.

1W Lightweight Core Module (40g)

Engineered for portability and resilience, this compact unit maintains a stable 30km control link even in dense urban or forested complex environments, ideal for agile, small-platform deployments.

10W High-Power Enhanced Version (240g)

Built for extreme long-haul operations, the high-power transceiver achieves up to 300km ultra-long-range data transmission, ensuring uninterrupted command and telemetry for extended endurance flights and far-reaching monitoring tasks.

30km Stable Link| Reliable connectivity in obstructed areas

300km Ultra-Long Range| Redefining the limits of remote control

03 Narrowband Series Full Parameter Table

AnyLink-UAV1W-NL/NP

Communication Range
30 km

RF Transmit Power
1 W

Data Rate:900 Kbps

Module Weight:~40 g

AnyLink-UAV10W-NL/NP

BVLOS Coverage
300 km

RF Transmit Power
10 W

Data Rate:900 Kbps

Module Weight:~240 g

Unified Core Architecture & Networking: **Both models support Point-to-Point, Star, and Mesh Ad-hoc networking topologies, and are built on a high-performance FPGA software-defined radio (SDR) platform for flexible protocol customization and future upgrades.**

03 ULS Tri-Band Series – Ultimate Anti-Interference

The ultimate solution engineered for complex electromagnetic environments and high-reliability critical missions. It simultaneously operates on three independent frequency bands with seamless automatic channel switching, ensuring uncompromised connectivity even in the most hostile signal conditions.

ULS Basic Model (2×1W)

Delivers superior anti-interference performance for high-security scenarios, providing stable, encrypted communication over a 30km range with minimal signal loss.

ULS Long-Range Model (2×10W)

Designed for ultra-wide area networking, this model achieves up to 200km line-of-sight transmission, ideal for large-scale critical infrastructure and remote mission coverage.

KEY BENEFIT: Guaranteed mission-critical communication with zero interruptions, adaptive to dynamic and contested RF environments.

03 ULS Tri-Band Series Full Parameter Table

AnyLink-UAV21W-ULS

RF Power
2 × 1W

Max Range
30 km

Data Rate
28 / 50 Mbps

Device Weight
184 g

AnyLink-UAV210W-ULS

RF Power
2 × 10W

Max Range
200 km

Data Rate
28 / 50 Mbps

Device Weight
⩽ 600 g

Both models cover the VHF/L/S Tri-Band spectrum and support flexible Point-to-Multipoint (PtMP) and Mesh Ad-hoc networking architectures, delivering reliable, high-security data transmission for mission-critical scenarios.

03 Universal Product Selection Guide

Standard / J30J Series

Delivers balanced performance for mainstream scenarios, ideal for most general-purpose applications requiring reliable and consistent connectivity across a moderate range.

Micro Series

Engineered for ultra-small and ultra-light portable platforms, this series excels in compact installations where size and weight are critical constraints.

Narrowband Data Link Series

Features ultra-long control range with low-power transmission capabilities, making it perfect for extended missions where energy efficiency is paramount.

ULS Tri-Band Series

The top-tier choice for complex environments, offering superior anti-interference performance to maintain stable connectivity in signal-challenged areas.

04 Core Technologies: Outstanding Transmission Performance

Ultra-Long-Range

The flagship model supports a 200km line-of-sight transmission range, while the narrowband variant extends this capability to an impressive 300km, ensuring reliable connectivity across vast distances.

High-Speed & Low-Latency

Delivers a net data rate of up to 50 Mbps, providing sufficient bandwidth for stable, high-quality 4K HD video streaming and real-time data transmission with minimal delay.

Anti-Interference & Stability

Utilizes advanced 2T2R MIMO technology to effectively counteract signal fading and multipath propagation effects, ensuring robust link stability in complex electromagnetic environments.

These cutting-edge technologies collectively establish a robust foundation for mission-critical communication systems in diverse operational scenarios.

04 Core Technologies: Powerful Network Adaptability

ANYMESH

Ad-hoc Intelligent Mesh & Self-Healing

Achieves millisecond-level backup path switching to ensure uninterrupted connectivity, even when the primary communication link is disrupted or blocked.

Dynamic Routing & Multi-Hop Relay

Enables data to be delivered in a "hop-style" manner between nodes, effectively bypassing physical obstacles and significantly extending the network's coverage range.

ULS Tri-Band Intelligent Anti-Interference

Monitors channel quality in real time and automatically switches to the least interfered frequency band, guaranteeing stable transmission in complex electromagnetic environments.

This robust architecture ensures reliable, low-latency communication across diverse and challenging operational scenarios, setting a new benchmark for network resilience.

04 Core Technologies: Ultra-Lightweight & Low Power Consumption

Extreme Lightweight Design

Our highly integrated micro board modules weigh in at only 14 grams, achieving an industry-leading power-to-weight ratio and reducing payload burden significantly.

Industry-Leading Low Power

The micro modules operate with a peak power consumption of just 7W, drastically extending the mission runtime of battery-powered devices in the field.

Rich Standardized Interfaces

Seamlessly integrated with Ethernet, serial, and SBUS ports, our ecosystem ensures easy compatibility with mainstream flight controllers and sensors, cutting integration time.

Key Takeaway: The synergy of ultra-light weight and minimal power draw, paired with universal connectivity, defines our technology's edge in compact deployments.

04 Core Technologies: Comprehensive Features

ANYMESH

Large-Scale UAV Swarm Support

Achieves efficient and stable interconnection between formation nodes, ensuring low-latency data transmission and synchronized control for complex swarm flight operations.

Centerless Mesh Network Architecture

All nodes are peer-to-peer and equal, with automatic neighbor discovery and self-organizing networking capabilities, eliminating single points of failure for high reliability.

Multi-Mode Adaptive Topology

Intelligently adapts to Point-to-Point, Star, Chain Relay, and Mesh network structures, optimizing communication paths for diverse mission environments and scenarios.

Elastic Scalable Large-Scale Nodes

Seamlessly scales from small teams of 16 nodes up to large swarms of 256+ nodes, maintaining robust performance and stable connectivity throughout expansion.

04 Core Technologies: Physical Layer & Security

ANYMESH

Private Frequency Band (1350–1450MHz)

Operates on a dedicated frequency band with strong diffraction capabilities and minimal propagation loss, ensuring reliable signal transmission even in non-line-of-sight scenarios.

COFDM Modulation

Adopts Coded Orthogonal Frequency Division Multiplexing for outstanding anti-multipath and anti-blocking performance, guaranteeing stable communication in complex urban or industrial environments.

TDD Time Division Duplex

Employs time-division duplexing to maximize spectrum utilization efficiency while simplifying hardware architecture, reducing system complexity and operational costs significantly.

Financial-Grade Secure Encryption

Offers optional AES128, AES256, and SM4 encryption standards to ensure end-to-end data confidentiality, integrity, and authentication, meeting the strictest financial security requirements.

05 Application Fields

AnyLink acts as the "neural center" for all unmanned platforms, delivering solid technical support for intelligent industrial upgrading. It bridges the gap between data, systems, and scenarios, empowering cross-sectoral innovation and sustainable development in the digital era.

National Defense & Security

Provides secure, low-latency data transmission for border surveillance, military unmanned systems, and strategic asset protection.

Industrial Inspection

Enables autonomous monitoring of high-risk industrial sites, pipelines, and manufacturing lines with AI-powered anomaly detection.

Resource Exploration

Supports deep-sea, underground, and remote area exploration by connecting unmanned vehicles and collecting precise environmental data.

Public Safety

Facilitates emergency response, urban security monitoring, and disaster rescue coordination through integrated IoT and AI systems.

Transportation

Optimizes traffic management, autonomous vehicle navigation, and logistics scheduling for safer, more efficient smart mobility.

Robotics Technology

Serves as the core brain for collaborative robots, humanoid robots, and service robots, enabling seamless inter-device communication.

05 Core Product User Value

BVLOS HD Video Transmission

Achieve over 100km+ stable HD video backhaul, ensuring clear and uninterrupted visual data transmission for long-range missions without latency issues.

Flight Safety Guarantee

"Flight control data priority" scheduling mechanism eliminates stuttering and out-of-control risks, securing the core command link in all flight scenarios.

Stable Connectivity in Complex Environments

Penetrates dense urban high-rises, mountain forests, and obstructed terrains, maintaining reliable signal integrity where traditional networks fail.

Networked Collaboration & Self-Healing Networks

Enables large-scale multi-node collaboration with auto-routing and self-healing capabilities, ensuring robust and resilient network operations at scale.

05 Core Product User Value

Easy Integration & Adaptation

Ultra-lightweight compact design enables seamless integration into diverse existing infrastructure environments with minimal spatial footprint.

Full IP Network Access

Directly connects to existing LAN/WAN systems, enabling unified network management and data transmission without additional protocol conversion.

Plug-and-Play Deployment

Comes with pre-configured optimal parameters for instant deployment, eliminating the need for complex on-site debugging and reducing setup time.

Cloud Remote O&M

Enables real-time remote monitoring, firmware upgrades, and centralized configuration management, ensuring system stability and lowering maintenance costs.

Our user-centric design philosophy delivers a comprehensive value proposition, combining seamless adaptability, unified connectivity, effortless setup, and intelligent remote management to empower efficient business operations.

05 Typical Real-World Application Scenarios

ANYMESH

UAV Inspection

Facilitates daily inspection of power transmission lines and oil/gas pipelines, ensuring early detection of potential hazards and efficient maintenance of critical infrastructure.

Emergency Rescue

Enables rapid construction of temporary communication links in disaster-stricken areas with damaged infrastructure, ensuring seamless command and rescue operations.

Border Patrol

Supports all-weather, real-time dynamic monitoring of national borders, providing comprehensive situational awareness and enhancing border security management capabilities.

Maritime Operations

Delivers reliable hydrological monitoring and marine environmental detection data, ensuring the safety of offshore operations and sustainable marine resource management.

Military & National Defense

Enables secure tactical communication and high-precision UAV swarm coordination, enhancing battlefield command efficiency and operational security for national defense.

Police Security & Urban Governance

Provides real-time aerial views for public security patrols and urban traffic control, optimizing emergency response and improving overall urban management efficiency.

Reasons to Choose AnyLink

Leading Technology

Built on cutting-edge SDR (Software Defined Radio) and advanced mesh networking technology, delivering superior wireless communication performance.

Complete Product Portfolio

A full-range equipment ecosystem, including base stations, terminals, and gateways, to meet diversified scenario demands across industries.

Stable & Reliable

Engineered with outstanding anti-interference capabilities and exceptional network robustness, ensuring uninterrupted connectivity in harsh environments.

Easy Integration

Features standardized, rich open interfaces (API/SDK) for rapid adaptation to existing systems, significantly reducing integration time and costs for seamless deployment.

Fully Self-Developed

Boasts full independent R&D capabilities with 100% controllable core technology, enabling agile iteration, fast customization, and long-term, secure technical support.

Join Hands with Wanlan, Create the Future Together

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“Driven by technological innovation, we deliver outstanding wireless communication solutions.”