



# Wi-Fi HaLow Outdoor Gateway ARFHL-OD

Outdoor Router, Long-Range,  
Unmatched Coverage.

For more information, please visit  
<https://www.asiarf.com/>



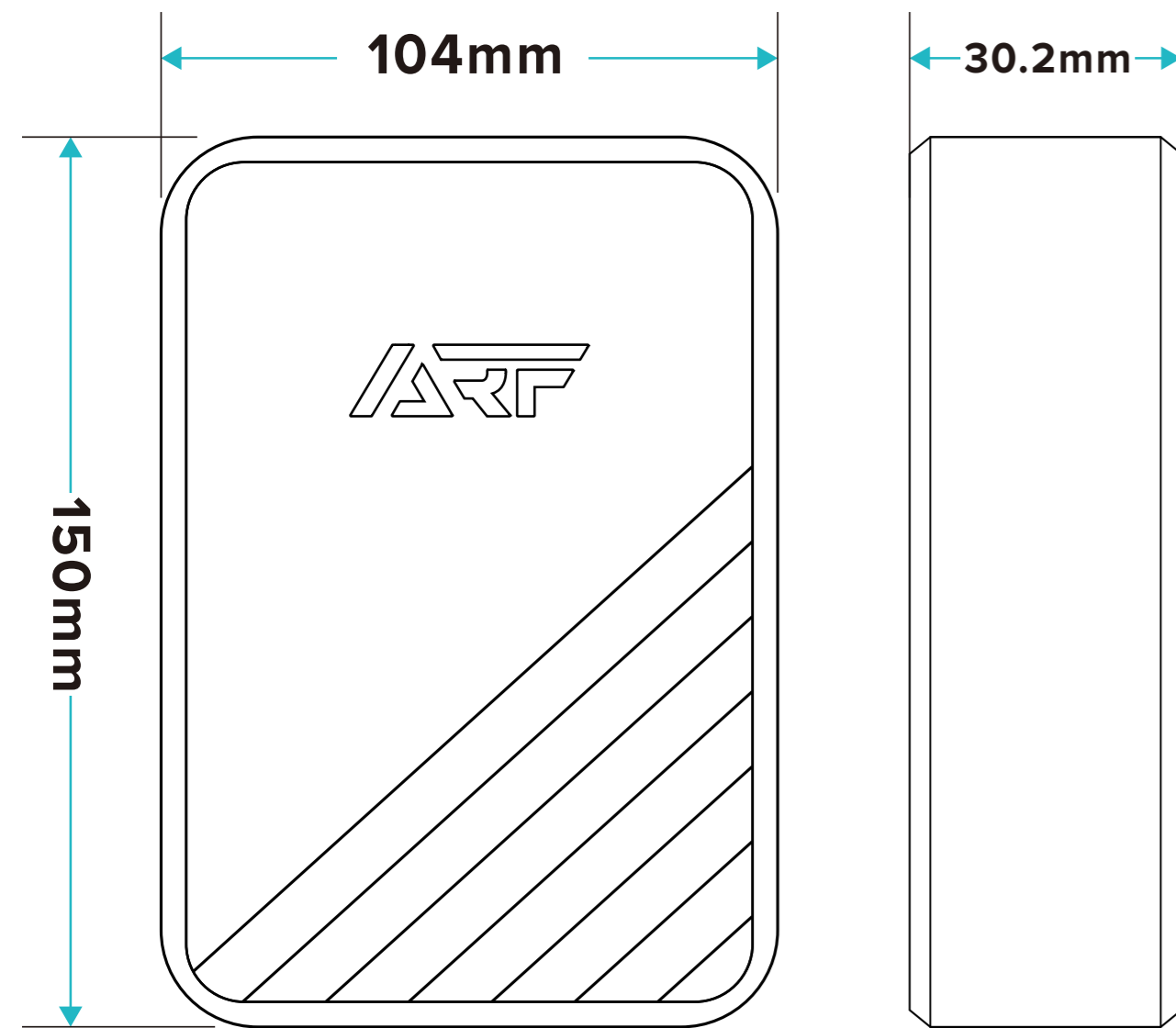
## SPECIFICATIONS | HARDWARE FEATURES

Chipset	Mediatek MT7628AN, MM6108
System Memory	DDR2 512Mbit (64MB)
NOR Flash	128Mbit (16MB)
Wireless / Wi-Fi 4	2T2R Mode 802.11n 20MHz/40MHz 802.11b/g
Frequency Range	2.412 ~ 2.484GHz (subject to local regulations) USA, Canada (FCC):11 channels (2.412GHz~2.462GHz) Europe (CE): 13 channels (2.412GHz~2.472GHz) Japan(TELEC): 14 channels (2.412GHz~2.472GHz, 2.484MHz)
Data Rate	802.11n: up to 300Mbps 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
Wireless / Wi-Fi HaLow	
Frequency Range	850MHz ~ 950MHz (subject to local regulations)
Data Rate	Single-stream max data rate of 32.5 Mbps (MCS=7, 64-QAM, 8MHz channel, 4 μSec GI)
Interface	USB type-C 5V (optional) SMA plug *3. Reset button
Reset Buttons	1xReset Button
DC Power	5V 2A
Power consumption	<5W
Transmit Power	11n HT40 MCS7: +13 dBm 11b CCK: +18 dBm 11g OFDM: +15 dBm 11ah: +21 dBm (Typical) +/- 2dBm @MCS0 +18 dBm (Typical) +/- 2dBm @MCS7
Certification	FC, IC, CE, RCM, NCC
Environmental Temperature	Operating: -10°C to 60°C, Storage: -40°C to 85°C
Environmental Humidity, Non-Condensing	Operating: 5% to 95%, Storage: Max. 90%
Dimension (W x H x D) in mm	W104 x H150 x D45.8mm

## SPECIFICATIONS | SOFTWARE FEATURES

Network Features	IPv4/IPv6 DHCP Client/Relay/Server Dynamics DNS NTP Client DNS Cache/Proxy
Wireless / Wi-Fi 4	Support Multiple SSID Security: WEP 64/128, TKIP, WPA, WPA2 mixed, 802.1x and 802.11i
Wireless / Wi-Fi HaLow	AP Mode/Client Mode Security: WPA3

# Superior HaLow Outdoor Router: Long-Range Connection, Unmatched Coverage



Wi-Fi HaLow Outdoor Gateway  
ARFHL-OD

Long range :  
**Sub-1GHz**

Greater Penetration :  
**10 times greater.**

Extended Range :  
**100 times overage.**

More Connections :  
**> 8,000 nodes**










- **Weather Resilience:** The device is designed with an Ingress Protection Rating, ensuring it can withstand harsh weather conditions such as high/low temperatures, humidity, and rain.
- **Extended Coverage:** This device boasts powerful signal propagation capabilities, ensuring the expansion of wireless network coverage and maintaining stable connectivity even in outdoor settings.
- **Strong Security:** With the implementation of WPA3, this device ensures robust and secure Wi-Fi connectivity, safeguarding user data and privacy from unauthorized access and potential threats.
- **Versatility:** The device offers multiple connectivity options, both wired and wireless, to cater to a wide range of devices and network environments.
- **PoE (Power over Ethernet) Support:** This feature allows the router to power connected devices, eliminating the need for separate power supplies and making the setup simpler.
- **Scalability:** Impressively, this device can reliably connect up to 8000 devices simultaneously, ensuring efficient and stable network performance even at scale.

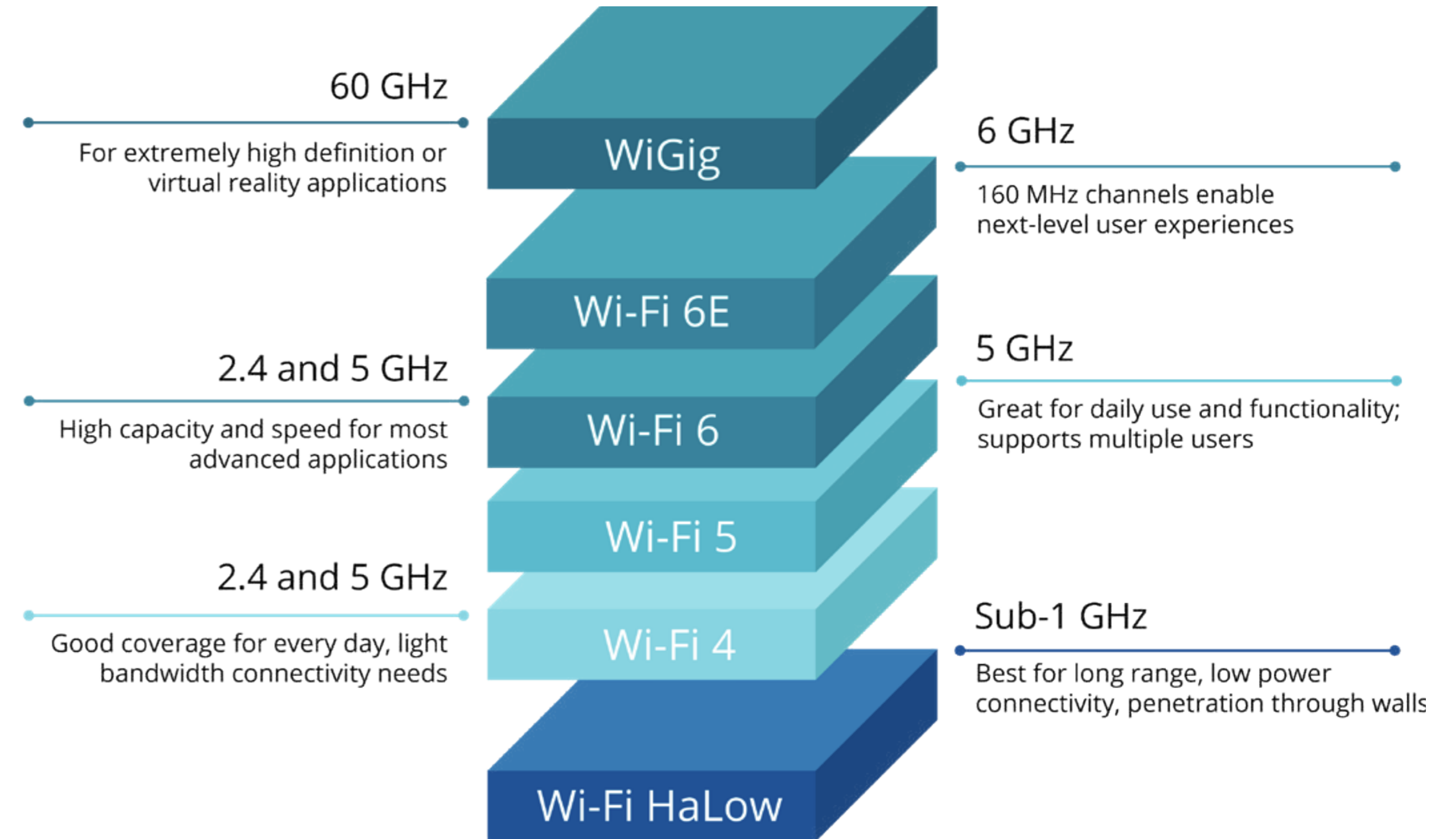
# Long range, Low power Wi-Fi® for IoT

## Wi-Fi HaLow Outdoor Gateway ARFHL-OD

Wi-Fi HaLow™ operates below 1GHz, providing long-range, low-power IoT connectivity. It's great for sensors, wearables, and challenging environments while coexisting with existing Wi-Fi networks. It complements other Wi-Fi technologies for efficient IoT connectivity.

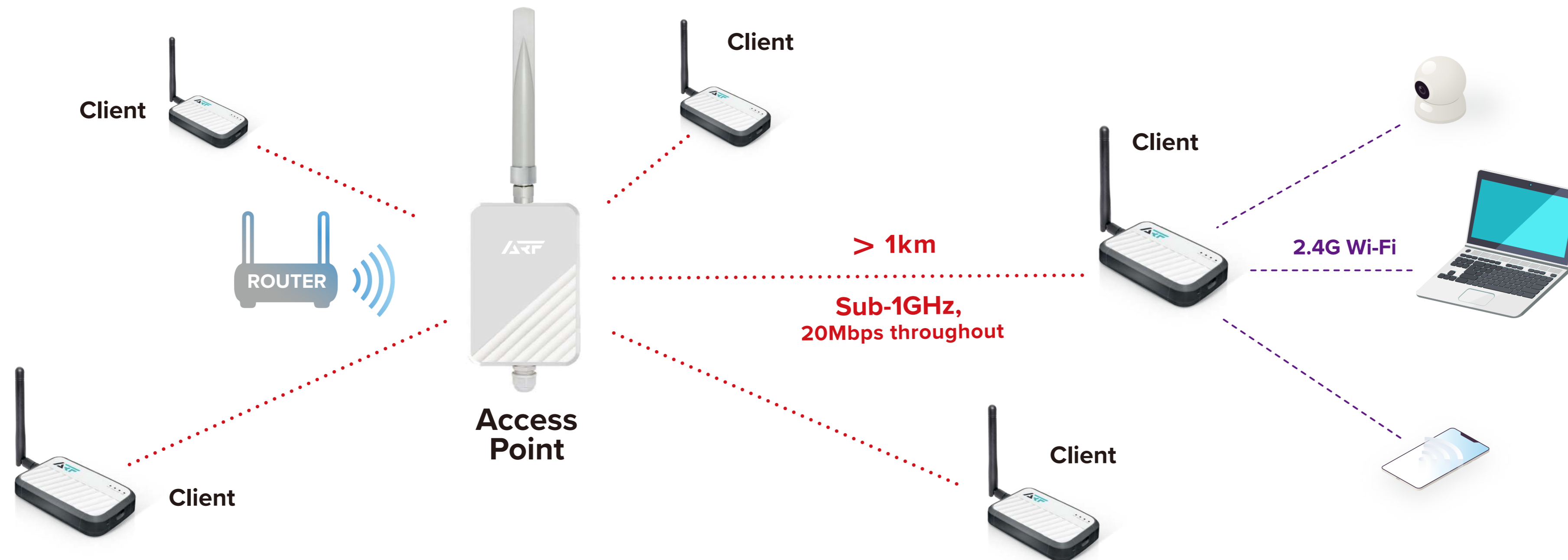
### Wi-Fi CERTIFIED HaLow™ for IoT

Features	Benefits
 Sub-1 GHz spectrum operation	 Long range: approximately 1 km
 Narrow band OFDM channels	 Penetration through walls and other obstacles
 Several device power saving modes	 Supports coin cell battery devices for months or years
 Native IP support	 No need for proprietary hubs or gateways
 Latest Wi-Fi® security	



# Star Topology Network

In its initial stages of deployment, the purpose of Wi-Fi HaLow is to be used in both indoor and outdoor scenarios where traditional Wi-Fi cannot cover, such as battery-powered monitoring systems, wireless cameras, and doorbells. It is also commonly used in large venues, where a single HaLow access point may replace many APs, eliminating redundant, complex mesh architectures, simplifying installation, and reducing total cost of ownership. In an increasingly automated world, many industries, including industrial automation, process control sensors, building automation, warehouses, and retail stores, need this technology to maintain connectivity everywhere.



# Applications in Energy & Environment



## Rural Internet Enhancement Solution

Reliable internet is vital for rural development and social inclusion. Our Rural Internet Enhancement Solution with Wi-Fi HaLow™ tech bridges the digital divide, empowering rural communities with enhanced connectivity.

### KEY APPLICATIONS:

- Bridging
- Connectivity
- Economic development
- Education
- Telehealth

### KEY BENEFITS:

- Extended reach
- Reliability
- Affordability
- Scalability
- Empowerment



## Agricultural IoT Device Solution

IoT tech transforms agriculture. Our Agricultural IoT Device Solution, with WiFi HaLow, boosts productivity, optimizes resources, and promotes sustainability for farmers.

### KEY APPLICATIONS:

- Agriculture
- Farming practices
- IoT devices
- Wireless connectivity
- Precision farming
- Livestock management
- Sustainable agriculture

### KEY BENEFITS:

- Efficiency
- Resource utilization
- Remote monitoring
- Precision farming
- Livestock tracking
- Data analytics
- Sustainable practices



## Energy Remote Sensor/Control Solution

Real-time monitoring tracks energy consumption for efficient management. Remote control allows real-time adjustments, reducing waste. The solution ensures reliability and scalability for diverse energy needs.

### KEY APPLICATIONS:

- Energy management
- Real-time monitoring
- Remote control
- Sustainability

### KEY BENEFITS:

- Efficient energy usage
- Energy consumption reduction
- Environmental sustainability
- Reliable connections
- Scalability
- Optimization recommendations

# Applications in Robotics, Healthcare & Automation



## Robotic automation

Robotics, powered by Wi-Fi HaLow™, transforms industries with automation and increased productivity. This low-power, long-range wireless tech enhances robots' capabilities and efficiency, revolutionizing automation.

### KEY APPLICATIONS:

- Robotics automation
- Industrial automation
- Power management
- Real-time monitoring

### KEY BENEFITS:

- Enhanced connectivity
- Improved efficiency
- Increased productivity
- Real-time monitoring and control
- Efficient power management
- Scalability
- Flexibility



## Healthcare Revolution

Wi-Fi HaLow™ revolutionizes healthcare by enhancing connectivity for better patient care, monitoring, and efficiency. This article explores its applications and benefits in the industry.

### KEY APPLICATIONS:

- Medical device connectivity
- Remote patient monitoring
- Operational efficiency
- Secure data transmission

### KEY BENEFITS:

- Enhanced patient care
- Timely interventions
- Streamlined workflows
- Real-time inventory management
- Automated equipment maintenance
- Data security and privacy
- Compliance with regulatory standards



## Industry 4.0

Wi-Fi HaLow™ revolutionizes factory automation, enabling seamless communication, real-time monitoring, and enhanced efficiency. This article explores its transformative impact on modern industrial operations.

### KEY APPLICATIONS:

- Industrial automation
- Manufacturing processes
- Asset management
- Remote monitoring
- Robotics integration

### KEY BENEFITS:

- Enhanced connectivity
- Real-time monitoring
- Improved efficiency
- Increased productivity
- Reduced downtime
- Cost reduction