

3KM Outdoor Wireless Bridge

Model: HC503



Simple Introduction

HC503 is a high-performance enterprise-class outdoor bridge product that supports 802.11ac technology in the 5G band. The unique tube matching technology can easily complete the pairing of point-to-point and point-to-multipoint (within 8 points) devices without computer configuration. 5G 802.11ac wireless processing speed up to 300Mbps. The power supply mode is flexible, supporting 24V PoE network cable power supply and 12V 1A DC local power supply. The power supply distance of network cable can reach 50-70 meters (related to the network cable material). The outdoor IP65 water-proof, rain-proof, dust-proof and sun-proof enclosure design is adopted to easily adapt to various harsh outdoor environments. Built-in 14dBi high-gain, wide-angle directional plate antenna, easy and fast installation. It has the characteristics of high performance, high gain, high receiving sensitivity and high bandwidth, which greatly enhances the wireless transmission performance and stability, Wi-Fi distance up to 3km.

Hardware Feature

* High cost-effective hardware configuration

Enterprise-class host chip with industrial-grade circuit design supports IEEE802.11a/n/ac protocol, which can provide 300Mbps wireless access speed and 10/100Mbps Ethernet switching processing speed. Excellent anti-high and low temperature design fully guarantees that user network data can be transmitted in real time, long-term, stable and high performance in extreme environment to enhance user experience.

*** Powerful wireless transmission capability**

High power and high receiving sensitivity circuit design with high gain directional plate antenna greatly enhances the distance of wireless transmission and improves the performance and stability of wireless transmission.

*** Simple and efficient setup**

No computer to setup, easy to dial the code and adjust the master and slave device digital tube to the same value to complete the point-to-point, point-to-multipoint (within 8 points) pairing work.

*** Flexible power supply**

HC503 not only support the power supply method of PoE remote network cable power supply, but also supports the power supply method of 12V 1A DC local connection power supply to meet the needs of various scenarios, reduce the construction cost and choose the power supply method flexibly.

*** ABS waterproof, dust proof and sunscreen shell, temperature adaptive and board protective**

HC503 with ABS waterproof, dust proof and sunscreen shell, avoid the damage from dust, thunderstorm weather. Meantime, it adaptive to various environment, the working temperature can be normal at -40°C to 55°C. Suit for any country, with flexible and simple installation method, with wall hanging, holding rod fixed installation method, on the basis of not affecting the original design, greatly reducing the construction difficulty of the construction personnel, improve the construction efficiency.

Software Feature

*** Simple overview of equipment**

WEB browser to log into the device to view the connection system status, bridge status, interface status

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information in real time, a simple and clear interface, so that users know the device work status in real time.

* Simple quick setup & powerful wireless optimization

Users do not need to know too much about wireless, no need too much professional knowledge, a few simple steps to achieve point-to-point, point-to-multipoint (up to 8 points) device pairing. Wireless optimization can be completed with simple settings, easily improving link transmission quality and usage.

* Always protect the user's network security

The device bridging signals all adopt advanced WPA-PSK & WPA2-PSK encryption policy, which masks the bridging signals by default to protect users' network from hackers' attacks at all times and ensure users' data security.

* Simple and efficient system configuration functions

Access password change, restore factory configuration, local upgrade, simple and straightforward functions allow you to easily complete the system setup of your device and improve its robustness.

Product Datasheet

| Product Parameter | |
|-------------------------|---|
| Hardware Feature | |
| Model | HC503 |
| Chipset | High Performance Enterprise Chipset AR9344 |
| Main frequency | 580MHz MIPS® 24KEc™ CPU |
| Wireless technology | 5G:450M 802.11a/n/ac 1T1R |
| Memory | 64MByte DDR2 |
| Flash | 8MB |
| Network interface | 2*10/100Mbps Auto adaptiveRJ45 port |
| Button | 1*Tube button/Resetbutton, Short press on the digital tube to display the value |

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| | plus one, press for 5 seconds will recovery to factory setting Master-slave dipswitch: master for access point mode, slave for client mode |
| Indicator | Power, LAN1, LAN2, Wifi Signal Strength |
| Power | 24V 0.5A PoE power adapter DC 12V 1A(optional) Power consumption<10W |
| Workingenvironment | Temperature: -30°C to +55°C (working), -40°C to +70°C (storage) Humidity (non-condensing): 10% to 90% (working), 5% to 95% (storage)) |
| Antenna | Built-in high gain 14dBi directional panel antenna (horizontal wave half-angle 60°, vertical wave half-angle 15°) |

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| RF Characteristics | |
| Frequency range | ISM band: 4.900GHz ~ 5.850GHz |
| Wifichannel | 5G: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165 |
| Modulation method | OFDM = BPSK,QPSK,16-QAM,64-QAM,256-QAM;DSSS = DBPSK,DQPSK,CCK |
| Outputpower | 11a @54M:20±2dB, @6M:23±2Db 11n 20MHz: @MCS9:20±2dB, @MCS0:23±2dB 11n 40MHz: @MCS9:20±2dB, @MCS0:23±2dB 11ac 40MHz @MCS9:20±2dB, @MCS0:23±2dB 11ac 80MHz @MCS9:20±2dB, @MCS0:23±2Db |
| Reception sensitivity | 11a: < -72dbm@54Mbps, < -89dbm@6Mbps 11n 20MHz: < -71dbm@MCS8, < -89dbm@MCS0 11ac 40MHz: < -66dbm@MCS9, < -84dbm@MCS0 11ac 80MHz: < -63dBm@MCS9 < -81dBm@MCS0 |
| EVM | 802.11n: ≤-28 dB 802.11a: ≤-25 dB |
| Frequency Deviation | < ±20ppm |

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| Software Feature | |
| Working mode | Master AP (bridge access point), slave AP (bridge client), switch by dip switch |
| Networking method | Point-to-point, point-to-multipoint (up to 8 points) |

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| Bridge Configuration | <p>Wireless mode: Bridge access point, bridge client switching</p> <p>Bridge access point.</p> <p>Bridge SSID, encryption method (WPA2-PSK, WPA-PSK, no encryption), bridge password, wireless protocol</p> <p>Wireless bandwidth, wireless channel, wireless power (100%, 75%, 50%, 25%, 10%, 5%)</p> <p>Bridge client.</p> <p>Bridge SSID, encryption method (WPA2-PSK, WPA-PSK, no encryption), bridge password,</p> <p>MAC address lock at the other end, wireless channel, wireless power (100%, 75%, 50%, 25%, 10%, 5%)</p> |
| Network | Static IP/Dynamic IP |
| System | Login password change, recovery factory setting, local upgrade |