



Shenzhen Huachuangyilian Electronics Co., Ltd.

5KM Outdoor Wireless Bridge

Model: HC505



Simple Introduction

The HC505 is a high performance enterprise outdoor bridge that works in the 5G band and supports 802.11ac technology. The unique digital tube pairing technology allows easy point-to-point and point-to-multipoint (up to 8 points) device pairing without the need for computer configuration. Gigabit + 100 Gigabit network interface, 5G 802.11ac MIMO technology wireless processing speed up to 900Mbps, flexible power supply, support 24V POE network cable power supply and 12V 1A DC local power supply, network cable power supply distance up to 50-70 meters (depending on network cable material). Designed with outdoor IP65 wind, rain, dust and sun protection grade housing, easily adapt to various harsh outdoor environments. Built-in 14dBi dual excitation plate antenna, easy and quick installation. With high performance, high gain, high reception sensitivity and high bandwidth, it greatly enhances the wireless transmission performance and stability, widely used in short and medium distance video transmission and data transmission.

Hardware Feature

* Supper Cost-effective Hardware Configuration

The enterprise-grade main control chip with industrial-grade circuit design supports IEEE802.11a/n/ac protocol, which provides 900Mbps wireless access speed and 1000Mbps+100Mbps Ethernet switching processing speed.



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The 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 environments to enhance user experience.

*** Powerful Wireless Transmission**

The use of high power and high reception sensitivity circuit design greatly enhances the distance of wireless transmission and improves the performance and stability of wireless transmission.

*** Simple and Efficient Pairing**

No need for network expertise, no computer operation, just dial the code and adjust the digital tubes of the master and slave devices to the same value to complete the point-to-point or point-to-multipoint (up to 8 points) pairing work.

*** Flexible Power Supply Options**

The equipment not only supports 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**

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



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* Simple overview of equipment

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

| Hardware Feature | |
|---------------------|--|
| Model | HC505 |
| Chipset | MTK7620A+7621E+IP1001M 900Mbps |
| Main Frequency | 580MHz MIPS® 24KEc™ |
| Wireless Technology | 5G:900M 802.11a/n/ac MIMO Technology |
| Memory | 64MByte DDR2 |
| Flash | 8MB |
| Interface | WAN:1*10/100/1000Mbps AdaptiveRJ45 port LAN:1*10/100Mbps Adaptive RJ45 port |



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| Button | 1*Digital switch/reset button, short press to add one to the digital display, long press for 15 seconds to restore factory settings |
| Indicator | Signal, LAN1/LAN2, Power Digital Tube |
| Power | 24V 1A Non-standard POE power supply DC 12V 1A, Power consumption<10W |
| Working Environment | 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 dual polarised high gain 14dBi directional panel antenna (horizontal wave half-angle 60°, vertical wave half-angle 60°) |

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| RF Characteristics | |
| RF Range | ISM band: 4.900GHz ~ 5.850GHz |
| Channel Distribution | 5G: 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161 |
| Modulation Method | OFDM=BPSK,QPSK,16-QAM,64-QAM, 256-QAM; DSSS = DBPSK,DQPSK,CCK |
| Output Power | 11a @54M:20±2dB, @6M:23±2Db 11n 20MHz: @MCS7:23±2dB, @MCS0:23±2dB 11n 40MHz: @MCS7:20±2dB, @MCS0:23±2dB 11ac 40MHz @MCS7:20±2dB, @MCS0:23±2dB 11ac 80MHz @MCS7:20±2dB, @MCS0:23±2Db |
| Reception Sensitivity | 11a: -65dbm@54Mbps, -81dbm@6Mbps 11n 20MHz: -64dbm@MCS7, -82dbm@MCS0 11ac 40MHz: -61dbm@MCS7, -79dbm@MCS0 11ac 80MHz: -58dBm@MCS7 -76dBm@MCS0 |
| EVM | 802.11n: ≤-28 dB 802.11a: ≤-25 dB |
| Frequency Deviation | < ±20ppm |

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| Software Feature | |
| Working Mode | Master AP, Slave AP (dial-up conversion) |
| Networking Methods | Point-to-point, point-to-multipoint (up to 8 points) |
| Management Style | WEB Management |



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| Network | Bridge: Static IP/Dynamic Acquisition Gateway: Static IP/Dynamic Acquisition/PPPoE |
| Wireless Management | Bridge Configuration / Advanced Configuration / WiFi Settings |
| System | Time zone time configuration, log in password change, backup/restore, reboot/timed reboot |
| System Updates | Web browser based local updates |