

## 5G WiFi6 1800M Wireless Router 5G-CPE1801K



5G-CPE1801K is a high-performance 5G WiFi6 wireless router customized for low-latency and high-speed data transmission scenarios. It integrates 3G/4G/5G, 5G NSA/SA independent networking, LTE carrier aggregation, PCI & band locking, resident mode selection, ESIM/plug-in card switching, dual-band 802.11ax 1800m WiFi, 10/100/1000 M adaptive network port (2LAN/WAN),

Features such as 5G + broadband dual-line backup, flow control, MESH networking, fast roaming between multiple devices, IPv6, VPN, SMS, SNMP and TR069 platform centralized management. It provides faster speed, more stable connection and wider coverage, which can meet the needs of high-speed data transmission of families and enterprises, and is suitable for high-speed Internet access scenarios such as mobile office, family Internet access, small and micro enterprises, short-term rent sharing, commodity stores, exhibition sites, etc.

### Product

#### Full industrial design, stable and reliable

All industrial components design, metal shell, protection grade up to IP30; The anti-electromagnetic interference capability meets the requirements of YD/T968-2010 Requirements and Methods of Measurement for Electromagnetic Compatibility of Telecommunication Terminal Equipment; The overvoltage and overcurrent protection shall meet the requirements of YD/T 993-2006 Technical Requirements and Experimental Methods for Protection against Lightning of Telecommunication Terminal Equipment on simulated lightning impulse, power line induction, power line contact and other indicators, and shall have the protection capability of common mode 6 KV and differential mode 1.5K V; The surge damage prevention capability shall meet the Technical Requirements and Test Methods for Overvoltage and Overcurrent Protection and Basic Environmental Adaptability of Access Network Equipment (YD/T1082-2011). Enhanced cooling + air duct optimization, no longer downtime due to heating problems in hot summer, fully guarantee the real-time, long-term, stable and efficient transmission of user network data, and enhance user experience.

#### HNAT fast forwarding

Combined with the hardware and software optimization of HNAT, the wired bidirectional forwarding performance can reach 2Gbps, which greatly improves the data forwarding capability of the equipment, ensures the real-time linear forwarding of user data, reduces the network delay, and improves the network transmission efficiency and user experience.

#### Support multi-standard communication mode

3G/4G/5G Netcom, 5G supports NSA and SA network architecture, supports 5G NR Sub 6, FDD-LTE, TDD-LTE, WCDMA and other long-distance communication modes, and 5G downlink supports 4X4 MIMO. The theoretical maximum downlink speed of the module can reach 2.2Gbps; LTE downlink supports 2X2 MIMO, and the theoretical maximum downlink speed of the module can reach 600Mbps.

#### Support ESIM/plug-in card switching and SMS function

Built-in ESIM chip and external plug-in card software switching, support free SMS function, while maintaining efficient 5G Internet communication, there is no need to worry about missing all kinds of SMS information.

#### Gigabit Ethernet interface, WiFi 6 1800m wireless access

With the high-performance network wireless processor of MediaTek, while providing 10/100/1000M adaptive network transmission, it can provide 2.4G 573Mbps + 5.8G 1201Mbps wireless access speed, support 1024Qam ultra-high-speed access, and support OFDMA high-density user access. Support BSS Color spatial multiplexing; None

Barrier transmission distance of about 50 meters, independent professional power amplifier and low noise amplifier, stable and smooth with 128 machines, no stutter, no drop.

### **Support MESH networking and fast roaming**

Support MESH networking between multiple devices and MESH networking between 5G router and WiFi6 router, so as to realize 5G high-speed access, MESH multi-point coverage, expand WiFi coverage, and support fast roaming between devices.

### **Flexible networking, never dropped**

Support 3G/4G/5G network access of China Mobile, China Unicom, China Telecom and China Netcom, support APN/VPDN private network card and wired broadband network access; provide wireless broadband and wired broadband online at the same time, and multi-network intelligent switching backup function; With DDNS, port mapping, DMZ and VPN functions, it can realize the function of fast networking in different places.

### **Simple setup and easy access to the Internet**

Built-in quick setup wizard guides customers through easy Internet access configuration without much expertise.

### **Multiple security strategies to ensure network data security at all times**

Support WPA, WPA2, WPA3, WPS wireless security access, support SSID hiding, guest network, black and white list, ALG, MAC address filtering, IP filtering, URL filtering, parental control, DDOS to effectively protect network security and ensure user data security at all times.

### **Free VPN support for remote network resource sharing**

PPTP and L2TP VPN client connection modes are supported, and a private network is established on the public network, so that devices are interconnected on the public network, various requirements of users for remote access to intranet resources are met, and remote network resource sharing is realized.

### **Cloud management service, easy batch management**

Built-in SNMP/TR069 cloud management platform, easy access to the platform, to achieve centralized management of routers and Internet of Things devices and subsequent secondary development.

### **Multiple status statistics, always know the working status of the equipment**

Built-in flow statistics, support flow package settings, easy to understand the monthly flow usage; Multi-state working indicator light, real-time working log view, always know the working status of the equipment.

### **Non-stop product function update and performance optimization**

Adhering to the spirit of craftsmen, the R & D team has been constantly updating its functions to meet the needs of various network environments simply and efficiently. Careful performance optimization ensures the best quality network products and improves the user experience.

Product parameters	
Hardware configuration	
Lord Cor Piece e	MTK7621A + MT7905DAN + MT7975DN High-Performance Enterprise-Class Chip QUECTEL 5G RM500U-CN High Performance 5G Module
Main frequency	Dual Core Quad Thread 880MHz
Wireless technology	2.4G WiFi 2 * 2 802.11 B/G/n/ax (theoretical maximum speed of 573Mbps) 5.8G WiFi 2 * 2 802.11 a/n/AC/ax (theoretical maximum speed of 1201Mbps) 1024 QAM ultra-high speed access rate, OFDMA ultra-high density user access MU-MIMO/MU-OFDMA uplink/downlink BSS Color spatial multiplexing Space-Time Block Code (STBC), Low Density Parity Check (LDPC), Beamformer TX/RX Energy saving: single antenna standby technology, dynamic MIMO power saving technology, enhanced automatic power saving transmission technology, packet-by-packet power control technology, etc.
Flash memory	Nand Flash1GB
Memory	256MB
Device interface	WAN 10/100/100/1000Mbps Adaptive Network Interface * 1 LAN 10/100/100Mbps Adaptive Network Interface * 2 USB2.0 Interface * 1 Nano SIM card (4FF)
God Line	External WiFi 2.4G 5dBi Glue Stick Antenna * 2 External WiFi 5G 5dBi Glue Stick Antenna * 2 External 3G/4G/5G 5dBi Glue Stick Antenna * 4
Power source	DC 12V 2A
Press Key	1 POWER power button, short press to power on after power on, long press for more than 2 seconds to power off One RESET button, press and hold it for 3 seconds to restart, and restore the factory settings for more than 3 seconds 1 WPS key
Indicator light	PWR, WiFi, 5G, 4G, network port indicator
Dimensions/weight	292X152X36.5mm, about 1.1KG with antenna
Operating/storage temperatures	-10℃~45℃/-20℃~70℃
Operating/storage humidity	5% ~ 95% (non-condensing)
WiFi features	

Frequency range	ISM band: 2.400 GHz ~ 2.4835 GHz
	5.180GHz ~ 5.825GHz
Channel distribution	2.4G: 1、2、3、4、5、6、7、8、9、10、11、12、13 5.8G: 36、40、44、48、52、56、60、64、149、153、157、161、165
Modulation mode	OFDM: BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, CCK@5.5/11Mbps MIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Output Power	2.4G: 11b: 20dBm ± 1dBm@11Mbps 11g: 19dBm ± 1dBm@54Mbps 11n (HT20) : 18dBm ± 1dBm@MCS7 11n (HT40) : 18dBm ± 1dBm@MCS7 11ax (HESU40) :15dBm ± 1dBm@MCS11 5.8G: 11a: 18dBm ± 1dBm@54Mbps 11n (VHT-40) : 16.5dBm ± 1dBm@MCS9 11ac (VHT-80) : 16dBm ± 1dBm@MCS9 11ax (HE-SU80) :15dBm± 1dBm@MCS11
Receive sensitivity	2.4G: 11b: ≤-90dbm@11Mbps; 11g: ≤- 78dbm@ 54Mbps; 11n (HT20) : ≤ -76dBm@MCS7; 11n (HT40) : ≤ -72dBm@MCS7; 11ax (HESU40) : ≤ -62dBm@MCS11 5.8G: 11a: ≤ -78dBm@54Mbps 11n (VHT40) : ≤ -65dBm@MCS9 11ac (VHT80) : ≤ -62dBm@MCS9 11ax: (HESU80) : ≤ -58dBm@MCS11

Module characteristics	
Frequency band information	5G NR: 3GPP Release 15/Release 16 NSA/SA operation, Sub-6 GHz 5G NR NSA: n41/78/79

	<p><b>5G NR SA:</b> n1/28/41/77/78/79</p> <p>5G downlink 4X4 MIMO: N1/41/77/78/79</p> <p>LTE Category: downlink Cat 12, Uplink</p> <p>Cat13 LTE-FDD: B1/2/3/5/7/8/20/28 LTE-TDD: B34/38/39/40/41</p> <p>LTE Downlink 2X2 MIMO: B1/2/3/5/7/8/20/28/34/38/39/40/41</p> <p><b>UMTS WCDMA:</b> B1/2/5/8</p>
Data transfer rate (maximum)	<p>5G SA Sub-6: downlink 2 Gbps; Upstream 1 Gbps</p> <p>5G NSA Sub-6: Downlink 2.2 Gbps; Uplink 575 Mbps</p> <p>LTE: downlink 600 Mbps; Upstream 150 Mbps</p> <p>UMTS: downlink 42.2 Mbps; Upstream 11 Mbps</p>

Software features		
	Working mode	Route mode, bridge mode,
	Quantity of belt machine	128 people
	Management mode	Chinese WEB remote management/SNMP/support TR069 remote management and online upgrade
	Status	Internet status, routers, WiFi, primary network users, guest network users, LTE carrier aggregation
	Net      Network	<p>Ethernet: mode selection (routing mode, bridge mode), networking mode (broadband dial-up, dynamic IP, static IP), DNS (automatic acquisition, manual input), network status: connection type, Internet status</p> <p>Mobile connection: SIM (ESIM and external plug-in card) switching, mobile connection switch, data roaming, dialing mode (Tether dialing, NDIS dialing), network operator selection, PCI locking, network mode selection (automatic, 5G + SA, 5G + NSA, 4G, 3G), traffic setting, band locking</p> <p>LAN: LAN settings, DHCP address pool, guest network address pool</p>
	None      Line	<p>WiFi (dual-band integration, WiFi switch, SSID, encryption mode, WiFi password, wireless protocol, channel bandwidth, wireless channel, signal strength</p> <p>Black and white list, WPS, Mesh</p>
	Advanced network settings	<p>APN, IPV6, Guest Network, Parental Control, VPN Client, UPnP, DDNS, Network Tools, Hardware Transfer</p> <p>Send, SNMP</p>
	Text messages	Inbox, Outbox, Drafts Box
	Firewall	ALG, port mapping, DMZ settings, MAC filtering, IP filtering, NAT settings, DDos, URL filtering

Tube	Reason	<p>SNTP, PIN management, device information, traffic statistics, TR069, password modification, backup/upgrade, restart/recovery</p> <p>Bit, remote access, audit log, IP probe</p>
Setup Wizard		Quick Configuration Wizard
<b>Flashing light rule</b>		
Power		Connect the power supply and turn on the machine, and the Power light is always on in blue.
WiFi		<p>Only when 2.4G or 5G WiFi is turned on, the indicator light is green, and the indicator light flashes during data transmission. When 2.4G and 5G WiFi are turned on at the same time, the indicator light is always blue, and the indicator light flashes during data transmission.</p> <p>When 2.4G and 5G WiFi are turned off at the same time, the indicator light goes out.</p> <p>When the WPS is connected, the indicator light flashes blue and green alternately. After the WPS is connected, the indicator light returns to normal state.</p>
4G		<p>When the equipment is connected to the 4G network and the signal is good, the indicator light is always blue; When the signal is normal, the indicator light is green and on for a long time;</p> <p>When the signal is poor, the red indicator is on for a long time;</p> <p>When the card is inserted but there is no network, the indicator light flashes red;</p> <p>When the card is not inserted or connected to the 5G network, the indicator is off.</p>
5G		<p>When the equipment is connected to the 5G network and the signal is good, the indicator light is always blue; When the signal is normal, the indicator light is green and on for a long time;</p> <p>When the signal is poor, the red indicator is on for a long time;</p> <p>When the card is inserted but there is no network, the indicator light flashes red;</p> <p>When the card is not inserted or the 4G network is connected, the indicator is off.</p>
Network port indicator		<p>When the network port is connected, the yellow indicator light is on for a long time; when there is data transmission, the green indicator light flashes; When there is no data transmission, the green indicator light is on.</p> <p>When the network port is disconnected, the yellow and green indicator lights are off.</p>