

Model: UT-9155-Q6

(Product Name: 5G & WiFi-6 Intelligent Wireless Access Router (CPE))

User Manual

1. Overview

5G & WiFi-6 Intelligent Wireless Access Router (CPE), developed on a brand new hardware platform to meet the increasing demand for mobile terminals and IoT nodes, greatly improving users' wireless internet experience.

The CPE is fully compatible with NSA/SA dual-mode and complies with the telecommunications product access standards of the Ministry of Industry and Information Technology. It provides up to gigabit-level air fiber access capabilities to meet the transmission bandwidth requirements of VR/AR/4GK/8K online video streaming.

Thanks to the latest 802.11ax WiFi6 technology platform, a single CPE can cover 200 square meters and provide better wireless signals and network bandwidth. It provides future-proof secure technologies, higher network efficiency, faster Wi-Fi speed, wider coverage, and better network experiences for users.

2. Major Functions & Features

- **5G cellular network access**

Integrated with the Qualcomm Snapdragon SDX62 baseband, providing excellent 5G network access capabilities. It supports true 5G standards for full network coverage and access to gigabit internet with just a SIM card

- **WiFi6 (802.11ax) Enhanced Technology**

OFDMA and DL MU-MIMO technology provide a more stable and faster wireless transmission channel, synchronously scheduling multiple users to transmit and receive data in parallel, reducing network latency and improving network utilization efficiency.

- **More spatial streams and greater capacity**

Four spatial streams on dual frequencies, with a bandwidth of up to 1800Mbps (600+1200), allowing you to enjoy worry-free UHD streaming videos and real-time online gaming. It also provides more access capabilities for mobile terminals, meeting the full-scene access requirements of the future rich nodes of smart homes

- **Seamless roaming in a hybrid backhaul**

You can freely choose the MESH networking mode through wired and wireless backhaul to meet the simple deployment requirements in a variety of indoor scenarios. At the same time, the seamless roaming function ensures that you get a more stable wireless connection while on the move.

- **5G Network**

5G Module: Qualcomm® Snapdragon™ X62 Modem-RF System

5G Network Modes: SA (standalone), NSA (non-standalone)

5G NSA Bands: n38/n41/n77/n78/n79

5G SA Bands: n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79

5G Protocol: 3GPP Release 16

5G SA Speed: 2.1Gbps/900Mbps (up to ISPs)

5G NSA Speed: 2.5Gbps/650Mbps (up to ISPs)

Antenna Type: External 5G/4G main diversity antennas

- **4G Network**

LTE Category: Down Cat 16/ UP Cat 18

LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32/B66/B71

LTE-TDD: B34/B38/B39/B40/B41/B42/B43/B48

LTE Down 4x4 MIMO: B1/B2/B3/B4/B7/B25/B30/B32/B34/B38/B39/B40/B41/B42/B43/B48/B66

WCDMA: B1/B2/B3/B4/B5/B8/B19

LTE : Down 1.0 Gbps; UP 200 Mbps

- **WiFi**

Wireless RF: #1: 600Mbps @ 2.4GHz; #2: 1200Mbps @ 5.0-5.8GHz

Modulation and Coding Scheme Technology: 1024-QAM / OFDMA

Peak Connection Performance: Not less than 100 terminals

Wi-Fi Standards: WiFi6 backward compatible with WiFi5

Antenna Type: External 4 high-performance Wi-Fi antennas.

- **Router Switching**

Mobile Network (5G/4G) Access (Supports Private Network)

Gigabit Ethernet Access

Cascading Technology: MESH+Hybrid Networking

2.4G/5Ghz WiFi Adaptive

Advanced Firewall

MAC Address Filtering

WiFi Encryption Authentication

VPN Tunnel/VPN Passthrough

IPV4/IPV6

Webpage/App Management

Firmware Upgrade

TR069

3. Hardware specification

| | |
|---------------------------------|--|
| Product Model | UT-9155-Q6 |
| CPU | MT7621AT+X62 |
| Flash | 16MB |
| RAM | 2Gb |
| WiFi Frequency Bands | 2.4G&5G |
| WiFi Standards | 2.4G:802.11b/g/n /ax 2T2R MIMO, 5.8GHz: 802.11a/n/ac/ax 2T2R MIMO |
| WiFi Speed | 2.4GHz :600Mbps ,5GHz :1200Mbps |
| 5G Standards | 3GPP Release 16 NSA/SA operation, Sub-6 GHz |
| 5G Network modes | NSA/SA |
| 5G/4G Data rates | 5G SA Transmission Speed:2.1Gbps/900Mbps (up to ISPs) 5G NSA Transmission Speed:2.5Gbps/650Mbps (up to ISPs) LTE : Down 1.0 Gbps; UP 200 Mbps |
| 5G Supported frequency bands | 5G NR NSA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 5G NR SA n1/n2/n3/n5/n7/n8/n12/n20/n25/n28/n38/n40/n41/n48*/n66/n71/n77/n78/n79 MIMO Downlink: 4 × 4 MIMO on n1/n2/n3/n7/n25/n38/n40/n41/n48/n66/n77/n78/n79 Uplink: 2 × 2 MIMO on n41 |
| 4G&3G Supported frequency bands | LTE Category Downlink Cat 16/ Uplink Cat 18 LTE-FDD B1/B2/B3/B4/B5/B7/B8/B12/B13/B14/B17/B18/B19/B20/B25/B26/B28/B29/B30/B32 /B66/B71 LTE-TDD B34/B38/B39/B40/B41/B42/B43/B48 LAA B46 (Support 2 × 2 MIMO) Downlink 4 × 4 MIMO B1/B2/B3/B4/B7/B25/B30/B32/B34/B38/39/B40/B41/B42/B43/B48/B66 WCDMA B1/B2/B3/B4/B5/B6/B8/B19 |
| 5G/WiFi Standards | 5G: GMSK/8PSK/BPSK/QPSK/16QAM/64QAM/256QAM WIFI: 1024-QAM / OFDMA |

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|--------------------|---------------------------|--|----|----------|----------|----------|----------|
| WiFi Video Metrics | 2.4G | Formats and channels | | Ant0(DB) | Ant1(DB) | | |
| | | 80.211B | | 20 | 20 | | |
| | | 80.211G | | 19 | 19 | | |
| | | 80.211N20 | | 19 | 19 | | |
| | | 80.211N40 | | 18 | 18 | | |
| | | 80.211AX20 | | 18 | 18 | | |
| | | 80.211AX40 | | 18 | 18 | | |
| | 5G | Formats and channels | | Ant0(DB) | Ant1(DB) | Ant2(DB) | Ant3(DB) |
| | | 11a54M | | 20 | 20 | | |
| | | 11n20MCS0 | | 20 | 20 | | |
| | | 11n20MCS7 | | 20 | 20 | | |
| | | 11n40MCS0 | | 20 | 20 | | |
| | | 11n40MCS7 | | 19 | 19 | | |
| | | 11ac20MCS0 | | 20 | 20 | | |
| | | 11ac20MCS8 | | 19 | 19 | | |
| | | 11ac40MCS0 | | 19 | 19 | | |
| | | 11ac40MCS9 | | 18 | 18 | | |
| | | 11ac80MCS0 | | 19 | 19 | | |
| | | 11ac80MCS9 | | 18 | 18 | | |
| | | 11ax20MCS0 | | 19 | 19 | | |
| | | 11ax20MCS11 | | 17.5 | 17.5 | | |
| | | 11ax40MCS0 | | 19 | 19 | | |
| | | 11ax40MCS11 | | 18 | 18 | | |
| | | 11ax80MCS0 | | 19 | 19 | | |
| | 11ax80MCS11 | | 17 | 17 | | | |
| | WiFi Receiver Sensitivity | <p>2.4G: 11X HE20: -70dBm@MCS11, -80dBm@MCS0. 11X HE40: -70dBm@MCS11, -80dBm@MCS0. 11n HT20: -70dBm@MCS7, -80dBm@MCS0. 11n HT40: -70dBm@MCS7, -78dBm@MCS0. 11g: -68dBm@54Mbps, -82dBm@6Mbps. 11b: -70dBm@11Mbps, -85dBm@1Mbps.</p> <p>5.8G: 11a: -72dBm@54Mbps, -85dBm@6Mbps. 11nHT20: -75dBm@MCS7, -85dBm@MCS0. 11nHT40: -75dBm@MCS7, -88dBm@MCS0 11ac HT80: -65dBm@MCS9 11aX HT80: -65dBm@MCS11</p> | | | | | |

| | |
|------------------------------|---|
| EVM | <p>802.11n@MCS7: ≤-30dB</p> <p>802.11g@54M: ≤-30dB</p> <p>802.11b@11M: ≤-15dB</p> <p>802.11a@54M: ≤-28dB</p> <p>802.11ac @MCS9: ≤-33dB</p> <p>802.11aX @MCS11: ≤-33dB</p> |
| Frequency deviation | ±20ppm |
| Dimensions | 108X108X216MM |
| Interfaces | <p>2*10/100M/1000 LAN</p> <p>1*10/100M/1000 WAN</p> <p>1*12V 2A DC Power Input</p> <p>1 Reset button</p> <p>1 Indicator light switch button</p> <p>1 SIM Interface</p> <p>1 MESH Pairing button</p> |
| Supported networking methods | MESH |
| Reset | Reset (Press and hold for 10 seconds while the device is in operation to reset it) |
| MESH | Pairing: Short press (blue network indicator light flashing) |
| LED indicators | Power, breathing light, 4G signal, 5G signal, WiFi signal |
| Power | <24W |
| Environment | <p>Operating temperature: -20°C to +50°C</p> <p>Storage temperature: -40°C to +70°C</p> <p>Humidity: 5% to 95% (non-condensing)</p> |
| Weight | 1.35KG (including color box accessories) |

4. Software features

| Software features | |
|----------------------------|---|
| IPV4 | Support for IPV4 network addresses |
| IPV6 | Support for IPV6 network addresses |
| Intelligent QOS | Support for QOS network optimization |
| Parental control | Support for network control of terminal devices |
| UPNP | Support |
| VPN | Supports L2TP VPN client Supports PPTP VPN client |
| APN | Support for manual APN settings |
| DDNS | Support for DDNS dynamic domain name setting |
| MESH | Support for company WiFi products to self-network |
| APP | Support for app management |
| TR069 | Support for TR069 remote management |
| WiFi Encryption method | Open WEP WPA2-PSK WPA3-SAE WPA/WPA2-PSK WPA2-PSK/WPA3-SAE |
| WiFi Dual-band integration | Support dual-band integration settings |
| Others | 5G network information display Data usage statistics Manual screen lock |

5. Appearance



6. Installation

1. Access the Internet via mobile network (5G/LTE), simply insert a carrier SIM card and power it on to enjoy high-speed internet access.



2. Access the Internet via Ethernet (through an ONT or other WAN-connected device).



7. Package contents

1. UT-9155-Q6 Product: 1 (standard configuration)
2. Power Adapter: 1 (standard configuration)
3. Quick Start Guide: 1 (standard configuration)

According to the IEEE standard 802.11 specification, there may be differences between actual data throughput and signal coverage capabilities. Network conditions and environmental factors, including network congestion, building materials, and electromagnetic environment, can affect wireless networks, resulting in low throughput and limited coverage range.

The product is only suitable for indoor use and provides a limited warranty service for the entire machine. Man-made damage is not covered by the warranty. If you have any product issues, please contact our company for technical support.