LCR201

5G Indoor CPE

Sub6G

3GPP R15

WiFi6

LCR201 is a highly advanced Sub-6G 5G NR indoor multi-service product solution specifically designed to meet integrated data needs for residential,   business and enterprise users. The product supports advanced Gigabit   networking functionalities. It enables wide service coverage and provides high data throughput and networking features to customers who needs easy broadband access.

KEY FEATURES

- ➢ 5G NR and LTE-A Cat20 Dual mode

- ➢ Wi-Fi 6 Supports 802.11ax, OFDMA, and MU-MIMO. Maximum 1.8Gbit/s throughputs

- ➢ Support both NSA and SA modes

- ➢ Worldwide Sub-6 5G and LTE-A coverage

- ➢ Built-in high gain wide bandwidth antennas

- ➢ Wi-Fi SON support

- ➢ Support two Gigabit Ethernet ports

- ➢ Powerful software features, support NAT, Bridge and Route mode

- ➢ IPv4&IPv6 and Multiple PDN support

- ➢ Built-in VPN and L2/L3 GRE client support

- ➢ WEB, TR069 and SNMP-based device management

HARDWARE SPECIFICATIONS

Cellular Bands:

Variant for Europe/Asia

5G NR: n41/n77/n78/n79/n1/n3/n5/n7/n8/n20/n28/n38/n40

LTE-FDD: B1/B3/B5/B7/B8/B18/B19/B20/B26/B28/B32

LTE-TDD: B34/B38/39/B40/B41/B42

WCDMA: B1/B3/B5/B6/B8/B19

Variant for North America

5G NR: n2/n5/n7/n12/n25/n41/n48/n66/n71/n77/n78

LTE-FDD: B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B29/B30/B66/B71

LTE-TDD: B41/B48

LAA: B46

WCDMA: B2/B4/B5

Cellular Data throughput

Downlink:

➢ 5G/NR sub-6: 1.8Gbps (100MHz 4x4, DL-256QAM)

➢ LTE: 2.4Gbps (DL-MIMO 4x4, DL 256QAM,6CA)

Uplink:

➢ 5G/NR sub-6: up to ~662Mbps (100MHz; UL-256QAM; UL-MIMO 2x2)

➢ LTE: ~316Mbps (UL-256QAM)[1]

Tx/Rx

2Tx/6Rx

Transmit Power

Class 3 (23±2dBm)

Cellular Antennas

Antenna	Frequency Range	Gain	VSWR	Direction
ANT1~2 (LTE)	600MHz ~ 5000MHz	617~960: 2dBi 1452~2690: 4dBi 3400~3800: 6dBi 4400~5000: 6dBi	<3	directional
ANT3~4 (LTE)	1700MHz ~ 5000MHz	1700~2690: 4dBi 4400~5000: 6dBi	<3	directional
ANT5~6 (5G Sub-6)	2496MHz ~ 5000MHz	3300~4200: 5dBi 4400~5000: 6dBi	<3	directional

Chipset

➢ Host CPU: IPQ6018, Quad-A53 @ 1.8GHz

➢ Baseband: Qualcomm SDX55

Storage

• Flash: 4Gb

• RAM: 4Gb

Wi-Fi

➢ Wi-Fi support: 802.11b/g//n/ac/ax, Wi-Fi SON support

➢ 4 Wi-Fi antennas, dual frequency

LCR201 Datasheet

Antenna	Frequency Range	Gain	VSWR	Direction
ANT1~4	2400MHz ~ 2485MHz 5100-5875MHZ	2400~2485: 2.5dBi 5100~5875: 2.5dBi	<2.5	Omni

Interfaces

➢   2 xRJ45 Gigabit Ethernet port

➢   1 x Nano SIM Slot (4FF)

➢   1 x Reset/Restore Button

➢   1 x DC Power Jack

LED indicator

➢   1 x Power

➢   1 x Wi-Fi

➢   1 x 4G tri-color

➢   1 x 5Gtri-color

Power supply

➢   Input: 100~240V AC, 12V 3A DC

Dimension

➢   115mmx121mmx260mm

Weight

➢   <2000g

Humidity

➢   5% to 95%

Temperature

➢   Operating: 0℃~45℃;

➢   Storage: -40℃~70℃

EMC compliance

➢   EN 55022: 2006/A1: 2007 (CE&RE) Class B

➢ IEC61000-4-2 (ESD) Level 3

➢ IEC61000-4-3 (RS) Level 4

➢ IEC61000-4-4 (EFT) Level 4

➢ IEC61000-4-5 (Surge) Level 4

➢ IEC61000-4-6 (CS) Level 3

➢ IEC61000-4-8(M/S) Level 4

Environment compliance

➢ Cold: IEC 60068-2-1

➢ Dry heat: IEC 60068-2-2

➢ Damp heat cyclic: IEC 60068-2-30

➢ Change of temperature: IEC 60068-2-14

➢ Shock: IEC60068-2-27

➢ Free Fall: IEC60068-2-32

➢ Vibration: IEC60068-2-6

Certification/Compliance

➢ FCC and CE certification complied

➢ ROHS

➢ REACH

➢ WEEE

SOFTWARE SPECIFICATIONS

Data Service

➢ Supports four APNs (two for data, one for voice, and one for management)

➢ Supports Multi PDN

➢ Supports IPv4/6 dual stack

LAN

➢ VLAN 802.1Q

➢ DHCP Server, Client

➢ DNS and DNS proxy

➢ DMZ

➢ Multicast/Multicast Proxy

➢ MAC Address Filtering

➢ GPS broadcast to LAN

WLAN

➢ Compliance with IEEE 802.11a/b/g/n/ac/ax

➢ Maximum rate of up to 3.6 Gigabit/s

➢ Beam-forming

➢ MU-MIMO

➢ Short guard interval (GI) in 20 MHz, 40 MHz, 80 MHz, and 160 MHz modes

➢ Priority mapping and packet scheduling based on a Wi-Fi Multimedia (WMM) profile

➢ Automatic and manual rate adjustment

➢ WLAN channel management and channel rate adjustment

➢ Automatic channel scanning and interference avoidance

➢ Service set identifier (SSID) hiding

➢ WPS

➢ Encryption: WEP, AES, and TKIP + AES

➢ Security mode: Open, WPA2.0 PSK, WPA1.0/WPA2.0 PSK, WEP Shared Key (four keys at most)

MANAGEMENT

➢ Version management

✓ Image Checksum

✓ Active version and backup version

✓ Auto Rollback version when upgrade fails

➢ HTTP/FTP Auto Upgrade

➢ TR069

✓ Upload/Download the ACS specified file

✓ Download the configuration file

✓ Configure & Queries parameters

✓ Remote upgrade

- ✓ Remote debugging operations
- ✓ Cycle monitor
- ➢ SNMP
- ➢ Web UI, CLI
    - ✓ Different level of user login priority and different limitation and display
    - ✓ Encryption backup current settings and restore the backup settings
    - ✓ Export of current diagnosis results and operation logs
    - ✓ Statistics of LAN link status, transmit and receive traffic and up time
- ➢ SNMP
- ➢ Diagnostics
- ➢ USIM PIN management and card authentication

VPN and Routing

- ➢ Route Mode
- ➢ Bridge Mode
- ➢ NAT mode
- ➢ Static Route
- ➢ Port Mirror
- ➢ ARP
- ➢ IPv4, IPv6 and IPV4/IPv6 Dual Stack
- ➢ Port forwarding
- ➢ IPsec
- ➢ PPTP
- ➢ GRE Tunnel
- ➢ L2TPv2 and L2TPv3
- ➢ VPN pass-through

SECURITY

- ➢ Firewall
- ➢ MAC Address Filtering
- ➢ IP Address Filtering

- URL Filtering

- Access Control

- HTTPS Login from WAN

- Dos attach protection

- Hierarchical user management

Appendix-Delivers

- 1 x LCR201 Indoor CPE unit

- 1 x Power adapter

- 1 x 1M CAT6 Ethernet Cable

- 1 x Quick User Guide