3onedata
Reliable Connections



# ICPE3300-C61 Series

## DIN-Rail/Wall Mounting
## Industrial 5G CPE

- Support 1 Gigabit copper port (WAN/LAN) port, 4 Gigabit copper ports (LAN), 4 5G antenna interfaces, 2 combined 2.4/5.8G antenna interfaces, 1 RS-485/232 port, and 2 SIM card slots.
- Serial port supports multiple operating modes like TCP Server, TCP Client, UDP Server, UDP Client, etc.
- Support 5G NR cellular wireless network, compatible with 3G/4G all networks
- Support Wi-Fi 6, AX3000, and dual-band (2.4GHz & 5.8GHz).
- Support 9~36VDC power input
- Support -40~75℃ wide operating temperature range

Industrial Grade

+75℃
-40℃

5G

2.4G
5G

IP40

# Introduction

ICPE3300-C61 series products are industrial 5G CPE. The product supports 5G SA/NSA networking, full compatibility with 3G/4G/5G networks, and IEEE 802.11a/b/g/n/ac/ax standards. With Wi-Fi 6 delivering dual-band (2.4/5.8GHz) connectivity, it enables ultra-fast transmission speeds of up to 2975Mbps. The product provides multiple interfaces including Gigabit copper ports, 5G antennas, combined 2.4/5.8GHz antennas, SIM card slots, and RS-485/232 ports. It supports dual-SIM fast switching, as well as redundant backup modes such as 5G & Wi-Fi and 5G & wired connections, ensuring stable on-site data transmission.

Network management system supports multiple software functions, like 3G/4G/5G Cellular WAN, WAN Setting, ICMP Link Test, Link Backup, Dynamic Domain Name, Routing Table Setting, Port Forwarding, Port Redirection, DMZ Setting, UPnP Setting, VRRP, RIP, OSPF, SNMP, Static DHCP, DHCP Client, QoS, SLA, Track, frequency locking, cell locking, network slicing, URLLC, and 5G LAN, etc. It also supports firewall functions, such as IP Filtering, MAC Filtering, URL Filtering and Keyword Filtering and VPN tunneling functions including GRE, IPSec, PPTP, L2TP and OpenVPN. In serial server mode, each serial port supports 4 TCP or UDP session connections and multiple modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client. Network management system could bring you great user experience through its friendly interface design and easy and convenient operation.

RESET button can realize device reboot and one-key factory default restoration. Hardware adopts fanless, low power consumption, wide temperature and voltage design and has passed rigorous industrial standard tests, which can adapt to the industrial scene environment with harsh requirements for EMC. The device can be widely applied in industrial scenarios such as warehouse logistics, automated storage/retrieval systems (AS/RS), smart production lines, battery swap stations, and intelligent inspection, enabling terminal equipment to achieve 5G remote access applications.

# Features and Benefits

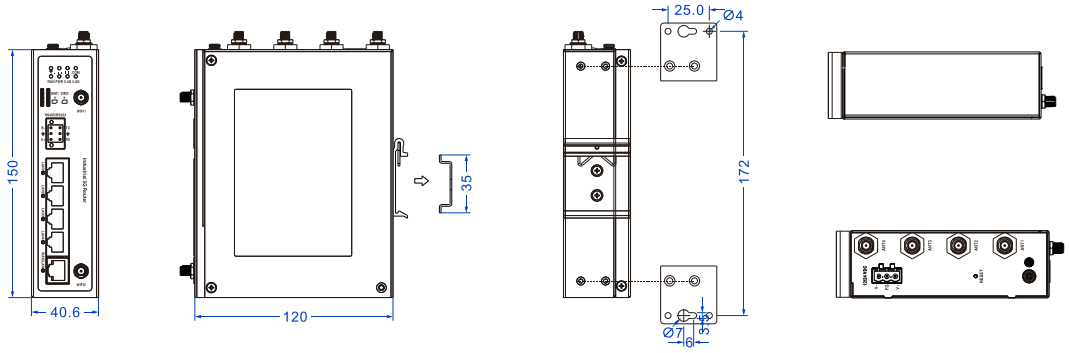
- Support high-speed wireless connection, the transmission speed of 2.4GHz can reach up to 575Mbps, the transmission speed of 5.8GHz can reach up to 2400Mbps
- Support 2 dual-band (2.4/5.8GHz) omnidirectional antennas and 4 5G Sub-6GHz omnidirectional antennas.
- Support redundant backup of dual SIM cards, embedded 5G wireless communication module, compatible with 3G/4G/5G Cellular network
- WAN port supports PPPoE dialing, obtaining IP by DHCP, static IP and WAN to LAN mode
- Support DMZ isolation zone, establishing a buffer zone between non-secure system and security system
- Support network firewall, which can implement filtering and forwarding of IP, MAC, URL, keyword, etc.

- Support DHCP server, which can be used for distributing IP address with different strategies
- Support multicast transparent transmission to realize transparent transmission of multicast data between WAN and LAN
- Support DDNS function, user can access server through domain names
- Support dual-SIM fast switching and redundant backup modes (5G/Wi-Fi & 5G/wired) to ensure stable on-site data transmission.
- Support VPN encryption protocols like GRE, PPTP, L2TP, IPSEC and OpenVPN, which can ensure the privacy and integrity of data and prevent replay attack
- Support port forwarding, port redirection functions and so on, which can realize address translation
- VRRP, RIP, OSPF could implement dynamic router configuration
- Support QoS policy to limit the rate of IP or MAC addresses in specified range
- WMM can achieve better transmission quality of voice, video, and other applications in wireless networks
- Support system log, ping test and route tracking, user can conduct network diagnosis and troubleshooting.
- Serial application can realize immediate networking of serial devices and support virtual COM and TCP/UDP network connection
- Support serial port 300bps-115200bps line speed non-blocking communication
- Support multiple serial port modes like RealCom, TCP Server, TCP Client, UDP Server, UDP Client, etc.

# Dimension

Unit: mm

- ICPE3300-C61-LV、ICPE3300-C61-EA-LV




# Specification

| | |
|---|---|
| Standard & Protocol | IEEE802.3 for 10Base-TX<br>IEEE802.3u for 100Base-TX<br>IEEE 802.3ab for 1000Base-TX<br>IEEE802.11a/b/g/n/ac/ax for WLAN<br>IEEE802.11i for wireless security<br>IEEE802.11r for fast roaming<br>IEEE802.11e for WMM<br>3GPP Rel-15/-16 for 5G NR (CN version)<br>3GPP Rel-15 for 5G NR (EA version)<br>3GPP Rel-14 for 4G LTX<br>3GPP Rel-8 for 3G WCDMA |
| WAN Mode | ● Link backup (access to Internet by WAN network or 5G dialing, WAN supports DHCP/static IP/PPPoE dialing/WAN to LAN)<br>● Wi-Fi & Cellular Wireless Roaming (Wireless Roaming or 5G Dial-up Internet Access) |
| Cellular Network | 5G/4G/3G cellular network, network type 5G NR/LTE FDD/ LTE TDD/ WCDMA |
| WLAN | WAP/WAP2/WAP3 personal/enterprise edition encryption mode, hidden wireless SSID, wireless user isolation, wireless transmission power adjustment, maximum user limit, packet segmentation and RTS threshold, China/US wireless channel, WMM |
| Management | Mobile network detection, local area network, dynamic domain name, UPnP settings, static DHCP, QoS, log management, device alias, access settings, timed restart, backup and recovery, log management, firmware upgrade, system log, serial settings, frequency locking, cell locking, network slicing, URLLC, and 5G LAN.<br>(Only the CN version supports 5G LAN and URLLC) |
| Security Policy | IP Filtering, MAC Filtering, URL Filtering, Keyword Filtering, Port Forwarding, Port Redirection, DMZ Settings, SLA, Track |
| VPN Tunnel | GRE, PPTP Client/Server, L2TP Client/Server, IPSec, OpenVPN Client |
| Multicast | Multicast NAT |
| Troubleshooting | Ping test, route tracing |
| Routing Technique | VRRP, RIP, OSPF, SNMP, routing table settings |
| Time Management | NTP Client |

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| Wi-Fi Radio Frequency | 802.11b/g/n/ax: 2.412GHz~2.4835GHz<br>802.11a/n/ac/ax: 5.18GHz~5.825GHz<br>2.4G: 575Mbps<br>5.8G: 2400Mbps<br>RF power output: 20dBm<br>Modulation methods: DBPSK, DQPSK, CCK, OFDM, 16-QAM, 64-QAM, 256-QAM, 1024QAM |
| Wi-Fi Receiving Sensitivity | 802.11b: -86dBm@1Mbps, -80dBm@11Mbps<br>802.11g/a: -82dBm@6Mbps, -65dBm@54Mbps<br>802.11n: -82dBm@MCS0, -64dBm@MCS7<br>802.11ac: -82dBm@MCS0, -59dBm@MCS9<br>802.11ax: -82dBm@MCS0, -52dBm@MCS11 |
| Wi-Fi Transmitting Power | 802.11b: 27dBm@1Mbps, 20dBm@11Mbps<br>802.11g/a: 23dBm@6Mbps, 20dBm@54Mbps<br>802.11n: 23dBm@MCS0, 20dBm@MCS7<br>802.11ac: 23dBm@MCS0, 20dBm@MCS9<br>802.11ax: 23dBm@MCS0, 20dBm@MCS11 |
| 5G NR Operating Frequency Band | CN version:<br>5G NR: 3GPP Release 15/16; NSA/SA operation; Sub-6 GHz<br>5G NR NSA: n41/78/79<br>5G NR SA: n1/3/5/8/28A/41/77/78/79<br>DL 4×4 MIMO: n1/28A/41/77/78/79<br>UL 2×2 MIMO: n41/77/78/79<br>DL 2×2 MIMO: n3/5/8<br><br>EA version:<br>5G NR: 3GPP Release 15; NSA/SA operation; Sub-6 GHz<br>5G NR NSA: n1/3/7/28/38/40/41/77/78<br>5G NR SA: n1/3/5/7/8/20/28/38/40/41/66/77/78<br>DL 4×4 MIMO: n1/3/7/28/38/40/41/66/77/78<br>UL 2×2 MIMO: n38/40/41/77/78<br>DL 2×2 MIMO: n3/5/20 |
| 4G LTE Operating Frequency Band | CN version:<br>LTE Category: DL Cat12, UL Cat13<br>LTE-FDD: B1/3/5/8<br>LTE-TDD: B34/38/39/40/41<br>DL 2×2 MIMO: B1/3/5/8/34/38/39/40/41<br><br>EA version:<br>LTE Category: DL Cat12, UL Cat13<br>LTE-FDD: B1/2/3/4/5/7/8/20/28/66<br>LTE-TDD: B38/40/41<br>DL 2×2 MIMO: B1/2/3/4/5/7/8/20/28/38/40/41/66 |

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| WCDMA Operating Frequency Band | CN version: B1/5/8<br>EA version: B1/2/5/8 |
| Max Data Transfer Rate (DL, UL) | CN version:<br>5G SA Sub-6: DL 2Gbps; UL 1Gbps<br>5G NSA Sub-6: DL 2.2Gbps; UL 575Mbps<br>4G LTE: DL 600Mbps; UL 150Mbps<br>3G WCDMA: DL 42.2Mbps; UL 11Mbps<br><br>EA version:<br>5G SA Sub-6: DL 2Gbps; UL 1Gbps<br>5G NSA Sub-6: DL 2.6Gbps; UL 650Mbps<br>4G LTE: DL 600Mbps; UL 150Mbps<br>3G WCDMA: DL 42.2Mbps; UL 11Mbps |
| Interface | Gigabit copper port: 5 10/100/1000Base-T(X) self-adaptive RJ45 port (4 LAN ports + 1 WAN/LAN port), support automatic flow control, full/half duplex mode, MDI/MDI-X self-adaption<br>Antenna interface: 2 2.4G/5.8G antenna interfaces, RP-SMA-K(Female)<br>4 5G Sub-6G antenna interfaces, SMA-K(Female)<br>Serial port: 1 RS-485/232, adopt 2*3PIN 3.5mm pitch terminal blocks<br>SIM card slot: 2 Nano SIM card slots, redundant backup |
| Serial Port | Standard: EIA RS-232, RS-485<br>Quantity of serial port: 1 RS-485/232 2IN1 serial port<br>RS-232: RS232-RX, RS232-TX, GND<br>RS-485: RS485A+, RS485B-, GND<br>Baud rate: 300bps-115200bps<br>Data bit: 8bits<br>Parity bit: None, Even, Odd<br>Stop bit: 1bit, 2bit<br>Interface form: 2*3PIN 3.5mm pitch terminal blocks<br>Direction control: RS-485 direction adopts Automatic Data Direction Control (ADDC)<br>Load capacity: support 32-node polling environment<br>Transmission distance: RS-232, 15m; RS-485, 1200m<br>Work modes: Realcom, TCP Server, TCP Client, UDP Server, UDP Client |
| Power Supply | 9~36VDC, 3-Pin 5.08mm pitch terminal blocks |
| Indicator | Running indicator, Power indicator, 2.4G indicator, 5.8G indicator, interface indicator, 5G bridge signal strength indicator, serial port indicator |

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|---|---|
| Power Consumption | No-load at 25℃: 5.67W@24VDC<br>Full-load at 25℃: 12.08W@24VDC<br>Full-load at 75℃: 13.15W@24VDC |
| Working Environment | Operating temperature: -40~75℃<br>Storage temperature: -40~85℃<br>Relative humidity: 5%~95% (no condensation) |
| Mechanical Structure | Housing: IP40 protection, metal<br>Installation: DIN-Rail/wall mounting<br>Dimension (W x H x D): 40.6mm×150mm×120mm<br>Weight: 0.852kg |
| Industrial Standard | IEC 61000-4-2 (ESD, electronic static discharge), Level 4<br>● Air discharge: ± 15kV<br>● Contact discharge: ±8kV<br><br>IEC 61000-4-4 (EFT, electrical fast transient), Level 4<br>● Power supply: ±4kV<br>● Ethernet interface: ±2kV<br><br>IEC 61000-4-5 (Surge), Level 4<br>● Power supply: common mode ±4kV, differential mode ±2kV<br>● Ethernet interface: ±4kV<br><br>Shock: IEC 60068-2-27<br>Free fall: IEC 60068-2-31<br>Vibration: IEC 60068-2-6 |
| Authentication | CE, FCC, RoHS, REACH, SRRC, IEC62443 |
| Warranty | 3 years |

# Ordering Information

| Model | Gigabit Copper Port | | Antenna Interface | | RS-485/232 | SIM Card Slot | Power Supply |
|---|---|---|---|---|---|---|---|
| | LAN | WAN/LAN | 2.4G/5.8G | 5G Sub-6G | | | |
| ICPE3300-C61-LV | 4 | 1 | 2 | 4 | 1 | 2 | 9~36VDC |
| ICPE3300-C61-EA-LV | 4 | 1 | 2 | 4 | 1 | 2 | 9~36VDC |

# Version Specification

| Model | Version | Applicable Area |
|---|---|---|
| ICPE3300-C61-LV | (CN version) | China |
| ICPE3300-C61-EA-LV | (EA version) | Europe, Middle East, Africa, Asia-Pacific, and Latin America |

# Accessory List

| Type | P/N | Gain (dBi) | Quantity (pcs) | Dimension (m) | Remark |
|---|---|---|---|---|---|
| 5G Sub-6G omnidirectional glue stick antenna | 3005040098 | 5 | 4 | — | Standard |
| 2.4/5.8G omnidirectional glue stick antenna | 3005040216 | 5 | 2 | — | Standard |
| SMA-J to SMA-K suction cup feeder | 3005040115 | — | 4 | 1.2 | Optional |
| SMA-J to SMA-K suction cup feeder | 3005040180 | — | 4 | 3 | Optional |
| RPSMA-J to RPSMA-K suction cup feeder | 3005040092 | — | 2 | 1.2 | Optional |
| RPSMA-J to RPSMA-K suction cup feeder | 3005040096 | — | 2 | 3 | Optional |

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