



NR5331

5G NR Indoor Router

The Zyxel NR5331 5G NR Indoor Router supports the latest Sub-6 GHz 5G NR technology while at the same time remaining full compatibility with 4G networks. The NR5331 is ideal for 5G NR FWA deployment. Service providers can deliver premium broadband services with high speed and capacity across customers' homes or workplaces through the latest Wi-Fi 7 interfaces with easy refurbishment design.

Benefits

Lightning-fast internet connectivity

Supports a broad range of spectrum with 5G NR speeds up to 7.01 Gbps/ 2.5 Gbps* (DL/UL) and 4G LTE DL speeds of up to 1.6 Gbps*, the NR5331 helps service providers raise network performance. Compliant with both Standalone (SA) and Non-Standalone (NSA) architecture, the NR5331 facilitates your deployment during 5G migration for faster FWA service rollouts.

Wi-Fi 7 certified for premium performance and coverage

Wi-Fi 7 (802.11be) certified, the NR5331 supports up to 7.2 Gbps* and features 4096-QAM, giving your subscribers an ultra-fast, low-latency, and highly reliable Wi-Fi experience. Additionally, Multi-Link Operation (MLO) optimizes reliability and maximizes data speed through the aggregation of multiple bands, further enhancing the overall performance of the network.



3GPP Rel. 16 5G NR Sub-6 GHz DL 4x4CA, up to 7 Gbps/ 2.5 Gbps (DL/UL) with NSA & SA mode



Wi-Fi 7 (11be) BE7200, 4x4 + 4x4 for superior performance and coverage



DL 4x4 MIMO, built-in 4 high-performance 4G/5G Antennas



Remote management via TR-369/TR-069 (TR-181/TR-143), HTTP/web GUI, and FTP



Remote firmware upgrade (FOTA)



Wi-Fi management with Zyxel One



Circular economy product design



Multiple WANs to ensure network connection reliability

Strengthen your competitive edge with Fixed Wireless Access (FWA)

Deploying NR5331 as part of FWA allows you to extend your 4G/5G service coverage into subscribers' homes and workplaces without extra wire infrastructure. This secures the TCOs and increases business revenue by supporting a larger number of subscribers with a premium fixed-grade connection.

Wi-Fi management with Zyxel One™

The NR5331 is fully compatible with the Zyxel One app, enabling optimal product placement and delivering a seamless, reliable Wi-Fi experience across home and office environments. Its intuitive interface simplifies installation, seamless eSIM*** activation and streamlines network management, helping reduce operational complexity and service calls while improving overall customer satisfaction.



Remote management and upgrade

Through the 4G/5G radio interface, the NR5331 supports TR-369, remote GUI, and FTP to be fully configurable. Firmware Over-The-Air (FOTA) support enables remote firmware upgrades and troubleshooting through events triggered by the operators.

Commitment to sustainability

The NR5331 is built with 100% recycled plastics**** and features an easily removable case, simplifying refurbishment to extend its lifespan. Its packaging is designed with recycled paper and printed using VOC-free vegetable oil ink, minimizing waste and harmful substances while eliminating single-use plastics.

Specifications

System specifications

IP networking

- Supports IPv4/IPv6 dual stack (NDP IPv6)
- DHCP Client/server
- Virtual Private Network (VPN) pass-through
- Supports NAT/NAPT
- Supports DMZ
- Multiple APNs
- Supports port forwarding

Routing

- Supports bridge and router modes
- Supports remote management under bridge mode
- Static/dynamic route setting

IP firewall

- DoS attack detection
- Supports SPI
- Application-level firewall (LAN to WAN such as FTP, HTTP, Telnet, Ping)
- Filters LAN MAC address
- Filters LAN IP address

Management

- Supports local/remote device management and firmware upgrade via TR-369, TR-069, and web GUI
- PIN/PUK management
- APN management
- Operating frequency band selection
- Supports UPnP IGD

- Supports web server API to support APPs
- Supports Zyxel app (iOS and Android) for easy installation and local management
- Supports current and historical power consumption monitoring
- Supports dynamic power saving management**

WLAN feature

- Auto channel selection
- Wi-Fi Protected Setup (WPS)
- Wi-Fi Multimedia (WMM)
- Wi-Fi-enabled devices: up to 64
- Security: none, WPA2-Personal, WPA/WPA2, WPA3
- MAC address filtering with 64 addresses supported
- Multiple SSIDs/hide SSIDs
- WLAN scheduling

Hardware specifications

5G NR interface

- 3GPP Release 16 standard-compliant
- Supports both NSA and SA modes
 - FDD: n1/n3/n7/n8/n20/n28
 - TDD: n38/n40/n41/n75/n77/n78
- Supports DL 4x4 MIMO: n1/n3/n7/n28/n38/n40/n41/n75/n77/n78
- Supports UL 2x2 MIMO: n1/n38/n40/n41/n77/n78
- Supports 3Tx UL transmission on selected TDD (n77/n78) bands
- Data rates:
 - 5G SA: DL 7.01 Gbps; UL 2.5 Gbps*
 - 5G NSA: DL 5.67 Gbps; UL 1.46 Gbps*
- Supports DL modulation QPSK, 16-QAM, 64-QAM, and 256-QAM
- Supports UL modulation QPSK, 16-QAM, 64-QAM, and 256-QAM
- Supports two TS9 ports for cellular UHB

4G LTE interface

- 3GPP UE Category DL Category 19/UL Category 18 standard-compliant
- Supports frequencies:
 - FDD: B1/B3/B5/B7/B8/B20/B28/B32
 - TDD: B38/B40/B41/B42/B43
- Supports DL 4x4 MIMO: B1/B3/B7/B28/B32/B38/B40/B41/B42/B43
- Peak data rates:
 - Max. DL 1.6 Gbps/UL 211 Mbps*
- Supports DL modulation QPSK, 16-QAM, 64-QAM, and 256-QAM
- Supports UL modulation QPSK, 16-QAM, 64-QAM, and 256-QAM

Wi-Fi air Interface

- Wireless standard: IEEE 802.11b/g/n/a/ac/ax/be
- Wireless speeds:
 - Link rates up to 7,200 Mbps* for 802.11be DBDC
- Internal Wi-Fi antenna:
 - Dual-band & concurrent 4x4 + 4x4
- Wi-Fi antenna gain:
 - ≤ 3 dBi for 2.4 GHz
 - ≤ 4 dBi for 5 GHz

5G/4G antennas

- Four embedded omni-directional antennas
- Antenna spec (Peak gain)
 - 600 MHz ~ 960 MHz: ≤ 2.4 dBi
 - 1.4 GHz ~ 2.7 GHz: ≤ 5.1 dBi
 - 3.3 GHz ~ 4.2 GHz: ≥ 8 dBi

Hardware interface

- One 100/1000/2500 Mbps Ethernet WAN/LAN port
- Three 100/1000 Mbps Ethernet LAN ports
- LED indicators:
 - Power indication
 - 5G/4G Signal strength
 - Internet connection status
 - Wi-Fi/WPS status
- One 4FF nano SIM card slot with push-push type SIM tray
- One power on/off button
- One WPS/Wi-Fi on/off button
- One reset button
- One USB type-C for PD power input and troubleshooting

Power consumption

- 36 Watt (peak)

Physical specifications

- Item dimensions (LxWxH): 154 x 107 x 227.5 mm (6.06" x 4.21" x 8.96")
- Item weight: 989 g (2.18 lb.)
- Packing dimensions (LxWxH): 360 x 180 x 115 mm (14.17" x 7.09" x 4.53")
- Packing weight: 1627 g (3.59 lb.)

Environmental specifications

Operating environment

- Temperature: 0°C to 40°C (32°F to 104°F)
- Humidity: 0% to 90% RH (non-condensing)

Storage environment

- Temperature: -30°C to 70°C (-22°F to 158°F)
- Humidity: 0% to 95% (non-condensing)

Certification

- CE
- UKCA
- RoHS

Package contents

- USB Type-C PD power adaptor
- Ethernet cable 2 m 8P8C
- Quick Start Guide

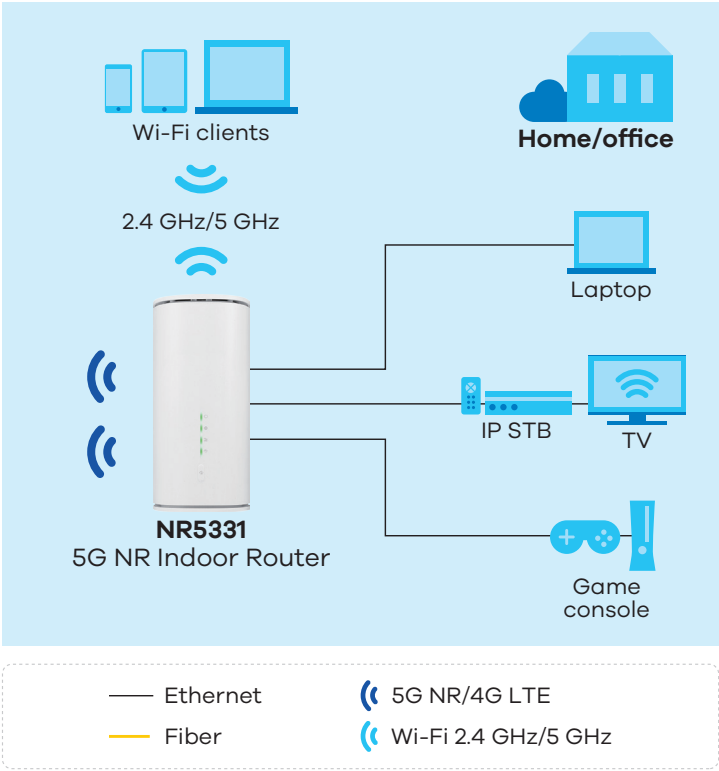
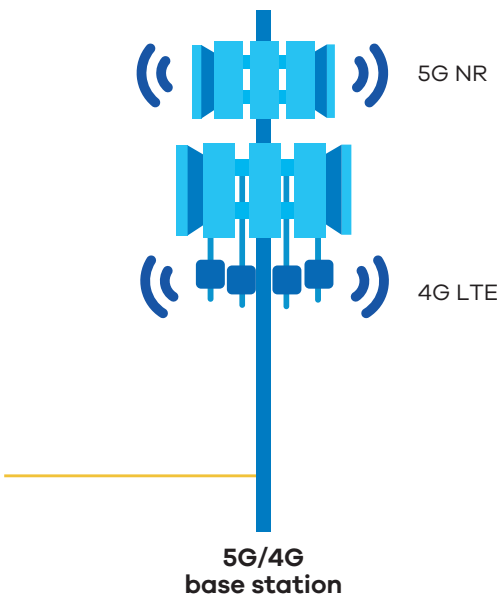
* The maximum data rate is a theoretical value; actual performance varies with the network environment.

** The dynamic power-saving mechanism will be supported in a later phase.

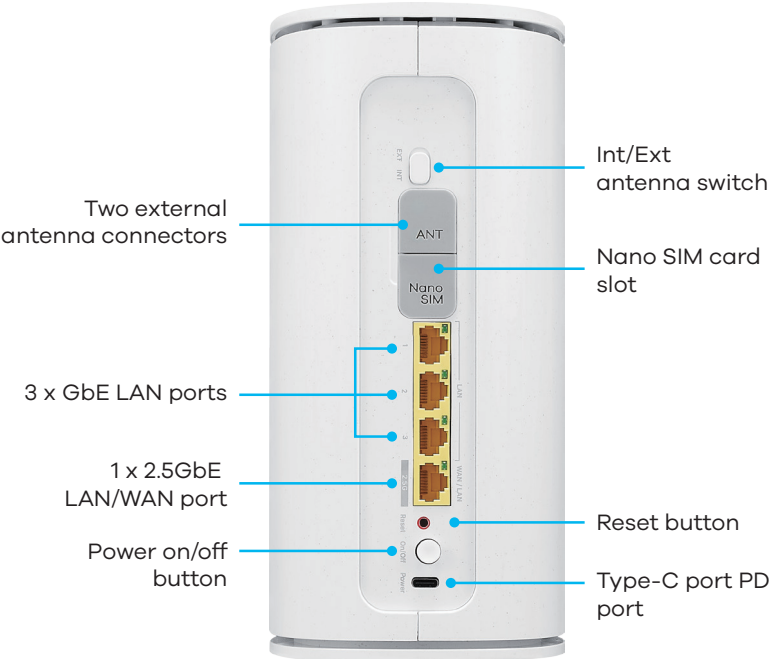
*** eSIM service is available upon customer request. Please contact us for more information on the availability.

**** 5% additives and solvents are necessary to be added to the recycled polymers to achieve the desired technical characteristics of the material.

Application diagram



Hardware description



For more product information, visit us on the web at <https://www.zyxel.com/service-provider>

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