ZYXEL
COMMUNICATIONS

NR5307
5G NR Indoor Router

The Zyxel NR5307 5G NR Indoor Router supports the latest Sub-6 GHz 5G NR technology while remaining fully compatible with 4G networks. The NR5307 is ideal for 5G NR FWA deployment, allowing service providers to deliver premium broadband services with high speed and capacity to customers' homes or workplaces through Wi-Fi 6 and soon also Wi-Fi 7. Furthermore the housing is made of 100%* PCR and designed for easy refurbishment.

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

AX 802.11 — Wi-Fi 6 (11ax) 4x4+4x4 for superior performance and coverage while being future-ready for Wi-Fi 7

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

Zyxel MPro Mesh® Solutions (compliant with EasyMesh R6 standards)

FOTA — Remote firmware upgrade (FOTA)

Remote management via TR-069/TR-369/TR-098/ TR-143, HTTP/web GUI, and FTP

Power monitoring and energy-saving features for sustainable product design

2.5GbE LAN ports for optimized bandwidth utilization

Zyxel One (iOS and Android)

Housing made of 100%* Post Consumer Recycled plastics and FSC certified packaging***

Wi Fi 6 CERTIFIED™

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 power monitoring & energy saving
- Supports local/remote device management and firmware upgrade via TR-069, TR-369 and web GUI
- PIN/PUK management
- APN management
- Operating frequency band selection
- CLI/SSH (local and remote SSH access)
- Supports UPnP IGD
- Supports web server API to support APPs
- Supports Zyxel One (iOS and Android) for easy installation and local management

WLAN feature
- Auto channel selection
- Wi-Fi Protected Setup (WPS)
- Wi-Fi Multimedia (WMM)
- Wi-Fi-enabled devices: up to 64
- Security: WPA2-PSK, WPA3-SAE, WPA2-PSK/WPA3-SAE
- MAC address filtering with 64 address 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/n5/n7/n8/n20/n28
  - TDD: n38/n40/n41/n75/n77/n78
- Supports DL 4×4 MIMO: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/n77/n78
- 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
- Output power:
  - Class 1.5: 29 dBm +2/-3 dBm for n41/n77/n78
  - Class 2: 26 dBm +2/-3 dBm for n41/n77/n78
  - Class 3: 23 dBm ±2 dBm all other 5G NR bands

4G LTE interface
- 3GPP Release 16 standard-compliant
- Supports frequencies:
  - FDD: B1/B3/B5/B7/B8/B20/B28/B32
  - TDD: B38/B40/B41/B42/B43
- Supports DL 4×4 MIMO: B1/B3/B5/B7/B8/B20/B28/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
- Output power:
  - Class 3: 23 dBm ±2 dBm all other LTE bands
  - Class 2: 26 dBm +2/-3 dBm for B41

Wi-Fi air Interface
- Wireless standard: IEEE 802.11b/g/n/a/ac/ax
- Wireless speeds:
  - Link rates up to 7,200 Mbps** for 802.11be DBDC
  - Link rates up to 6,000 Mbps** for 802.11ax 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)
  - 700 MHz ~ 960 MHz: ≤3 dBi
  - 1.4 GHz ~ 2.7G Hz: 6 dBi
  - 3.3 GHz ~ 4.2 GHz: 7 dBi

Hardware interface
- Two 100/1000/2500 Mbps Ethernet RJ-45 LAN ports
- LED indicators:
  - Power indication
  - Signal strength
  - Internet connection status
  - Wi-Fi/WPC 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

eSIM
- The hardware supports eSIM, with additional software development required to activate this functionality****

Power Adapter
- USB-C, 15V/3A, EU pin

Physical specifications
- Item dimensions (WxDxH): 117 x 130 x 217 mm (4.61" x 5.12" x 8.54")
- Item weight: 989 g (2.18 lb.)
- Packing dimensions (WxDxH): 126 x 154 x 287 mm (4.96" x 6.06" x 11.30")
- Packing weight: 1527 g (3.37 lb.)

Environmental specifications

Operating environment
- Temperature: -10°C to 40°C (14°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
- Wi-Fi 6 Alliance (WFA) certification
- EasyMesh Certification

Package contents

- EU plug Type-C PD 45 W power adaptor

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

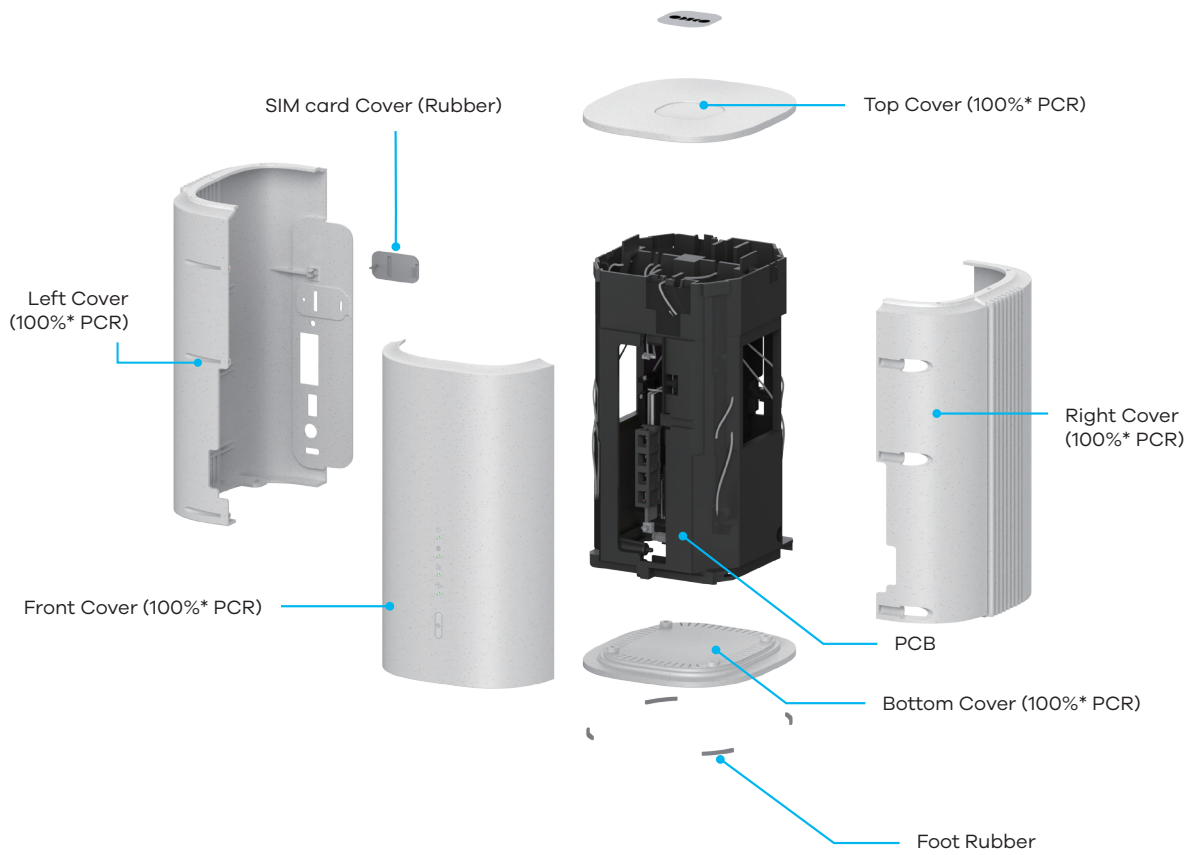** The maximum data rates is a theoretical value. The actual data rates depend on the network environment.

*** NR5307 gift box and carton are FSC-certified. The PCR percentage for the gift box is 100% and for the carton (with 6 devices) is 93.5%.

**** Software development is free of charge. Schedule to be agreed between the parties at least 6 months before ODIDO planned launch.
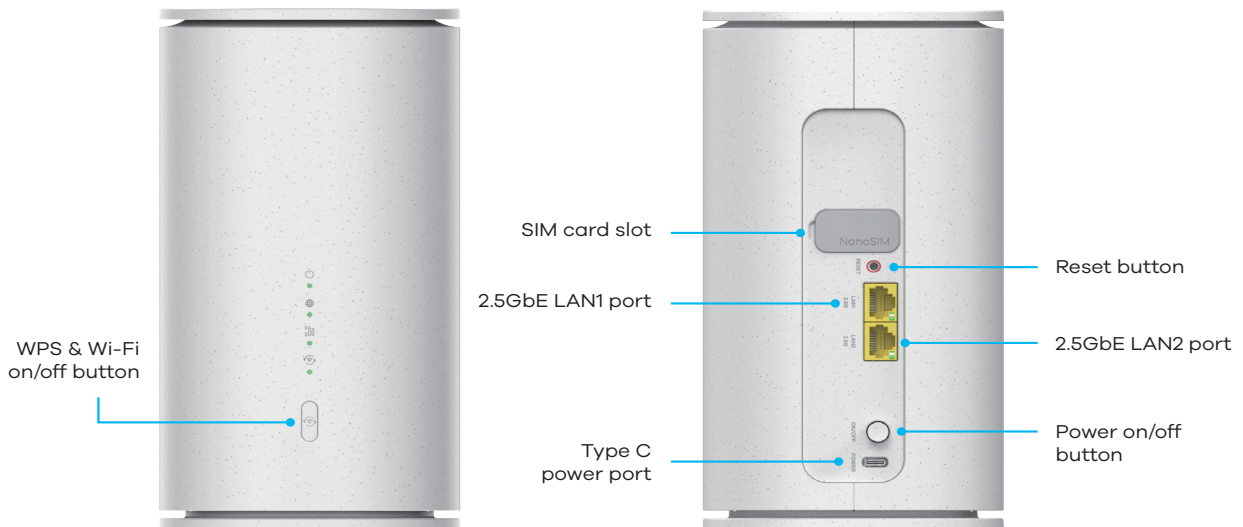
Power consumption table

Operational states	Power consumption	Remark
Idle	7.3 W	System power on with SIM card
Network Standby (Full port)	13.1 W	Full port condition: LAN + WAN + 2.4G + 5G + 5G NR 20 dB (all link no traffic)
Active	28.1 W	Test condition: • 5G NR: +15 dBm • LTE: +15 dBm • NR to Wi-Fi 5G_Iperf UDP: 350 Mbps • NR to Wi-Fi 2G_Iperf UDP: 100 Mbps • NR to LAN2_Iperf UDP: 500 Mbps • LAN 1 to Wi-Fi 5G_Iperf UDP: 150 Mbps • LAN 1 to NR_Iperf UDP: 40 Mbps • USB: 1000mA Load

Easy refurbishment design

SIM card Cover (Rubber)

Top Cover (100%* PCR)

Left Cover
(100%* PCR)

Right Cover
(100%* PCR)

Front Cover (100%* PCR)

PCB

Bottom Cover (100%* PCR)

Foot Rubber

Hardware description

SIM card slot

Reset button

2.5GbE LAN1 port

NanoSIM

2.5GbE LAN2 port

WPS & Wi-Fi
on/off button

Type C
power port

Power on/off
button

Please note that all specifications are subject to change without prior notice.

17/07/24 V3.0

Datasheet NR5307 for Odido