



## NR7102

### 5G NR Outdoor Router

The Zyxel NR7102 5G NR Outdoor Router supports 5G NR technology while at the same time remaining full compatibility with 4G networks. This makes NR7102 the best choice for operators who are looking for 5G NR FWA solutions to deliver high-capacity, premium broadband services with high-speed connectivity, enhanced network security and deployment flexibility.

### Benefits

#### Lightning-fast internet connectivity for SA/NSA dual-mode

The Zyxel NR7102 has 5G NR DL speeds of up to 5 Gbps\* and 4G LTE DL speeds of up to 2 Gbps\*. The wide spectrum bandwidth improves network performance for premium and time-sensitive connectivity services.

#### Strengthen your competitive edge with Fixed Wireless Access (FWA)

Deploying NR7102 as part of FWA allows you to extend your 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.

#### SA/NSA dual-mode compliance

The Standalone (SA) and Non-Standalone (NSA) compliant architecture of NR7102 improves your operational efficiency during 5G migration, accelerating your 5G service rollouts.



3GPP Rel. 15 5G NR, up to 5 Gbps/650 Mbps (DL/UL) with the support of NSA & SA mode



DL 4x4 MIMO, 6 built-in high-gain 4G/5G antennas of up to 9 dBi per element



Standard 802.3af/at 2.5G PoE compatible PD



Bridge and router modes, IPv4/IPv6 dual stack



Remote management via TR-069 (TR-181/TR-098 data model and TR-143 speed test) and HTTP/HTTPS/web GUI



IP68 hardened enclosure with industrial grade components



Zyxel Air app (iOS and Android)



Remote firmware upgrade

## Remote management and upgrade

Firmware Over-The-Air (FOTA) enables remote firmware upgrades for the NR7102. The built-in remote management features reduce service expenses, all while enhancing customer satisfaction. Service providers can process network configuration, monitoring, diagnostics, and bandwidth management - all remotely from customer support office located anywhere.

## Easy installation with Zyxel Air

The NR7102 comes with a flexible table stand, pole, wall, or window mounting kit and a subscriber app - Zyxel Air. The intuitive user interface of Zyxel Air provides the necessary assistance from device setup to routine management. You can minimize service calls during the installation process while enhancing a satisfying user experience.



## High-gain 4G/5G antenna for optimized signal coverage

Equipped with 4x4 MIMO high-gain antennas of up to 9dBi per element, the NR7102 can work under a near non-line-of-sight deployment scenario. Service providers can ensure optimized signal coverage.

## Environmental durability

With IP68-compliant K.21 6 KV/300 A lightning protection, the NR7102 guarantees high-quality connections, a longer device lifespan despite the extreme weather and environmental conditions. The NR7102 can operate within a wide range of temperature and humidity, which supports your 5G service in a wide territory.

## Specifications

### System specifications

#### IP networking

- Supports IPv4/IPv6 dual stack (NDP IPv6)
- DHCP server
- Supports ICMP
- Virtual Private Network (VPN) pass-through
- Multiple APNs with VLAN mapping

#### NAT

- Supports NAT/NAPT
- Supports DMZ
- Supports port forwarding
- Supports port triggering
- Supports ALG
- Supports NAT enable/disable

#### Routing

- Supports router or bridge mode
- Supports dynamic DNS for first APN
- Supports remote management under bridge mode
- Static/dynamic routing settings, RIP 1 & 2

#### IP firewall

- Firewall can be enabled or disabled via GUI
- DoS attack prevention
- Supports SPI
- Application-level firewall
- Filters LAN MAC address
- Filters LAN IP address
- Filters URLs

#### Management

- Supports local/remote device management and firmware upgrade via TR-069, and web GUI
- APN management
- PIN/PUK management
- MQTT monitoring
- Network selection
- Network preference
- Operating frequency band selection
- Supports UPnP IGD
- Supports SSH with key access
- Supports Zyxel Air app (iOS and Android) for easy installation and local management only
- TR-069 management with TR-181/TR-098 data model

## Hardware specifications

### 5G NR interface

- 3GPP Release 15 standard-compliant
- Supports both NSA and SA modes
- Supports frequencies: n1/n3/n5/n7/n8/n28/n38/n40/n41/n77/n78
- DL 4x4 MIMO: n1/n3/n5/n7/n20/n28/n38/n40/n41/n77/n78
- UL 2x2 MIMO: n41/n77/n78
- Data rates\*:
  - 5G NSA: DL 5.0Gbps\*; UL 650Mbps\*
  - 5G SA: DL 4.2Gbps\*; UL 900Mbps\*
- 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 2 (26 dBm) for n41/n77/n78
  - Class 3 (23 dBm) for n1/n3/n5/n7/n8/n20/n38/n40

### 4G LTE interface

- 3GPP UE Category 20 standard-compliant
- Supports frequencies:
  - LTE-FDD: B1/B3/B5/B7/B8/B20/B28
  - LTE-TDD: B38/B40/B41/B42/B43
- DL 4x4 MIMO: B1/B3/B7/B38/B40/B41/B42/B43
- Peak data rates: DL 2.0 Gbps; UL 200 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) for FDD/TDD bands

### 5G/4G antennas

- Four embedded directional antennas
  - Ultra-high band: up to 9 dBi peak gain
  - High band and middle band: up to 8 dBi peak gain
  - Low band: up to 4 dBi peak gain

### GPS/GNSS interface

- One Embedded GPS/GNSS antenna
- Supports GPS/Galileo/QZSS (L1/E1)
- Supports GLONASS/BeiDou
- Supports Positioning Information

### WiFi AP features (ODU)

- 802.11 n/g/b, 2.4 GHz, N300\*\*
- Hidden SSID
- MAC address filtering
- Two embedded antennas

### Hardware interface

- One 2.5GbE RJ-45 PoE LAN port
- LED indicators
  - Power/internet/WiFi status
  - Signal strength
- One 3FF format Micro SIM card slot
- One reboot/reset to default button

### Power consumption

- Standard 802.3af/at 2.5G Power over Ethernet
- Power consumption at PoE: < 16 W

### Physical specifications

- Item dimensions (LxWxH):  
255 x 256 x 58 mm  
(10.04" x 10.08" x 2.28")
- Item weight: 1112 g (2.45 lb.)
- Packing dimensions (WxDxH):  
280 x 360 x 108 mm  
(11.02" x 14.17" x 4.25")
- Packing weight: 2498 g (5.51 lb.)

### Environmental specifications

#### Operating environment

- Temperature:  
-40°C to 60°C (-40°F to 140°F)
- Humidity:  
5% to 95% RH (non-condensing)

#### Storage environment

- Temperature:  
-40°C to 65°C (-40°F to 149°F)
- Humidity:  
5% to 95% RH (non-condensing)

### Ingress protection rating

- IP68

### Lightning protection

- K.21 enhanced mode, 6 KV

### Wind load testing

- GR 487 issue 4 (2013) standard complaint
- Beaufort scale level 16 wind force  
wind speed 53.6 m/sec (~193km/h)

### Certification

- CE

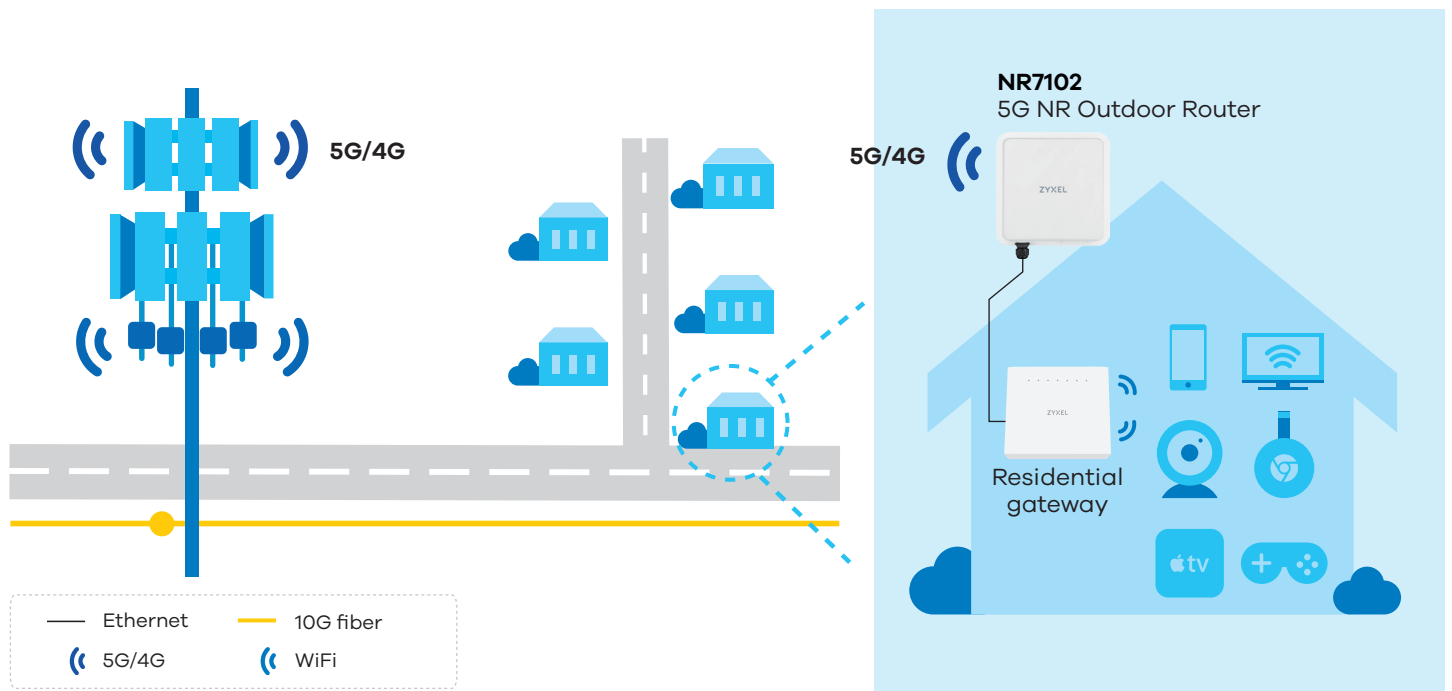
### Package contents

- Power over Ethernet PoE injector
- 1.8M Ethernet cable 8P8C
- PG19 thread (cable gland)
- Quick Start Guide
- Warranty card
- DoC and safety warning
- Wall/pole mounting kit

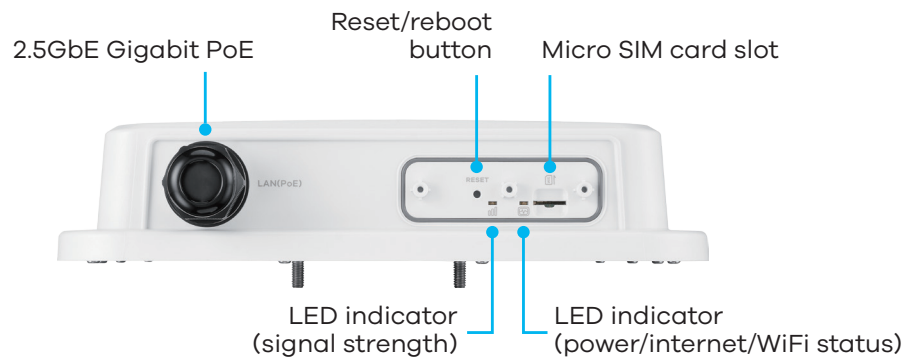
\* The maximum data rate is a theoretical value. The actual data rate depends on the operator.

\*\* WiFi interface is used for local management purposes only.

## Application diagram



## Hardware description



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

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