



NR7103

5G NR Outdoor Router

The Zyxel NR7103 5G NR Outdoor Router supports 5G NR technology while at the same time remaining full compatibility with 4G networks. This makes NR7103 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 with SA/NSA dual-mode

The Zyxel NR7103 supports 5G NR speeds of up to 4.67 Gbps/2.5 Gbps (DL/UL) and 4G LTE DL speeds of up to 1.6 Gbps*. The wide spectrum bandwidth improves network performance for premium and time-sensitive connectivity services. The Standalone (SA) and Non-Standalone (NSA) compliant architecture of NR7103 improves your operational efficiency during 5G migration, accelerating your 5G service rollouts.

Strengthen your competitive edge with Fixed Wireless Access (FWA)

Deploying NR7103 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.



3GPP Rel. 15 5G NR Sub-6 GHz DL 2xCA, up to 4.67 Gbps/2.5 Gbps (DL/UL) with 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 2.5GbE PoE



Bridge and router modes, IPv4/IPv6 dual stack



Remote management via TR-069 (TR-181 and TR-143 speed test), HTTP and web GUI



IP68 hardened enclosure with industrial grade components



Zyxel Air app (iOS and Android)



Remote firmware upgrade

Remote management and upgrade

Through the 5G/4G radio interface, the NR7103 supports TR-069, MQTT and remote GUI that simplifies remote configuration, software upgrade and management and therefore improves operators' cost effectiveness and increases customer satisfaction. Thanks to TR-143 remote throughput testing, the trouble shooting can be performed remotely with better efficiency. Additional support TR-069 to the latest TR-181 issue-2 data model also enhances service providers' visibility on subscriber LAN networks for improved customer assistance.

Easy installation with Zyxel Air

The NR7103 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 9 dBi per element, the NR7103 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 Zyxel NR7103 guarantees high-quality connections, a longer device life despite the weather and natural challenges. The NR7103 can operate within a wide range of temperature and humidity, which supports your service deployed in urban, sub-urban, and some rural area close to serving base stations.

Specifications

System specifications

IP networking

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

NAT

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

Routing

- Supports router mode or bridge (IP pass-through) 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 detection
- Supports SPI
- Application-level firewall
- Filters LAN MAC address (black/white list)
- Filters LAN IP address
- Filters URLs

Management

- Supports local/remote device management (HTTP, HTTPS)/Web GUI and firmware upgrade
- Supports TR-069 remote firmware upgrade management with TR-181 data model
- APN management
- PIN/PUK management
- MQTT monitoring
- Network selection
- Network preference
- Operating frequency band selection
- SSH (local and remote SSH access)
- Supports UPnP IGD
- Supports remote throughput testing by TR-143
- Supports Zyxel Air app (iOS and Android) for easy installation and local management

Hardware specifications

5G NR interface

- 3GPP Release 15 standard-compliant Sub-6 GHz
- Supports both NSA and SA modes
- Supports frequencies:
 - FDD: n1, n3, n7, n8, n20, n28
 - TDD: n38, n40, n41, n77, n78
- Data rates:
 - 5G SA: DL 4.67 Gbps*; UL: 2.5 Gbps*
 - 5G NSA: DL 3.74 Gbps*; UL: 1.46 Gbps*
- Supports DL modulation QPSK, 16QAM, 64QAM, 256QAM
- Supports UL modulation QPSK, 16QAM, 64QAM, 256QAM
- Output power:
 - Class 2 (26 dBm) for n41/n78
 - Class 3 (23 dBm) for for all bands

4G LTE interface

- 3GPP UE Category 19 standard-compliant
- Supports frequencies:
 - LTE-FDD: B1/B3/B5/B7/B8/B20/B28
 - LTE-TDD: B38/B40/B41/B42/B43
- Supports DL modulation QPSK, 16QAM, 64QAM, 256QAM
- Supports UL modulation QPSK, 16QAM, 64QAM, 256QAM
- 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: up to 8 dBi peak gain
 - Low band: up to 5 dBi peak gain

WiFi interface**

- 802.11 b/g/n, 2.4 GHz, 300 Mbps
- Wireless omni antennas:
 - WiFi 2.4 GHz: 2x2 internal antennas, up to 2 dBi

Hardware interface

- One 2.5GbE, 10/100/1000/2500 BaseT -TX Auto Rate, Auto Duplex
- Two LED indicators for:
 - 5G/4G signal strength
 - Device status
- One 3FF Micro SIM card
- One reset to default button

Power consumption

- Power consumption at PoE: < 15 W (est.)

Physical specifications

- Item dimensions (WxDxH): 255 x 256 x 58 mm (10.04" x 10.08" x 2.28")
- Item weight: 1112 g (2.452 lb.)
- Package dimensions (WxDxH): 368 x 287 x 111 mm (14.49" x 11.30" x 4.37")
- Package weight: 2517 g (5.549 lb.)

Environmental specifications

Ingress protection rating

- IP68

Lightning protection

- K.21 enhanced mode, 6 KV

Operating environment

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

Storage environment

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

Certification

- EN 62368-1
- EN 55032
- EN 55035
- EN 301 489-1/17/19/52
- EN 300 328
- EN 301 908-1/2/13/25
- EN 62311
- EN 303 413
- EN 50564

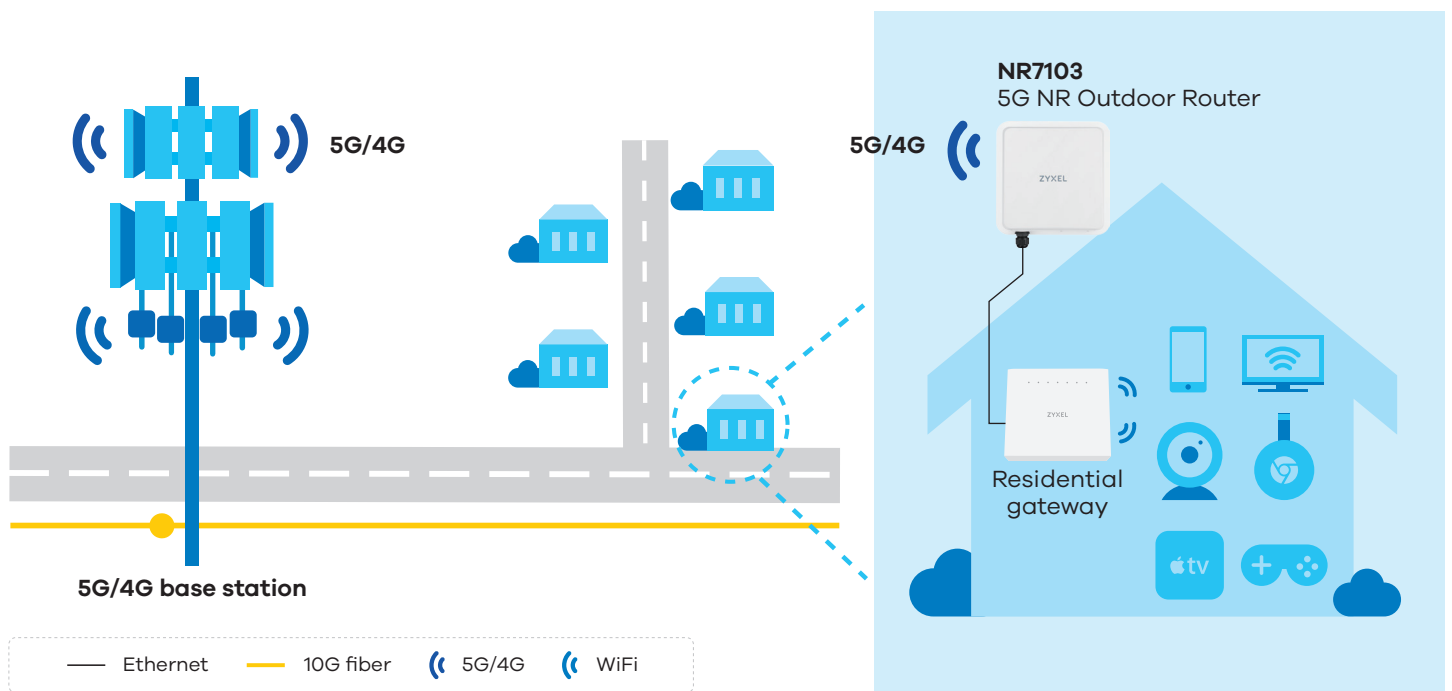
Package contents

- Standard 802.3af/at Power of Ethernet (PoE) injector
- 1.8 m Ethernet cable yellow 8P8C
- PG19 thread (cable gland)
- Quick Start Guide
- Warranty card
- DoC and safety warning
- Wall/pole mounting kit

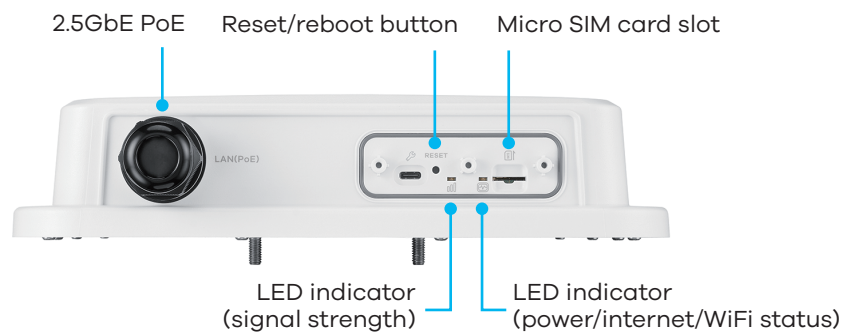
* The maximum data rate is a theoretical value. The actual data rate depends on the operator.

** 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>

Copyright © 2022 Zyxel and/or its affiliates. All rights reserved.
All specifications are subject to change without notice.



23/11/22