



## Nebula FWA710

### 5G NR Outdoor Router

The Nebula FWA710 5G NR Outdoor Router supports 5G NR technology while at the same time remaining full compatibility with 4G networks. With 5G Sub-6 carrier aggregation, this mobile router delivers premium fixed wireless access broadband with high-speed connectivity, enhanced network security and flexible deployment options to residential, business and enterprise users.

The plug-and-play router reduces deployment time & costs with subscriber self-installation, enables broadband Internet ready to days from weeks. The Nebula FWA710 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\* with SA/NSA dual-mode.

### Benefits

#### Remote Management Anywhere with Nebula

Thanks to Nebula Cloud Center (NCC), which is the best solution to overcome the challenges for remote management or monitoring for mobile routers in cellular networks. No need additional service or support from ISPs or to lease additional DSL landline for remote access. Nebula Cloud management enables remote management anywhere!



Datasheet [Nebula FWA710](#)



Remote Management via Nebula Cloud without additional fixed line



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



Supports NebulaFlex: work in standalone or Nebula cloud mode as needed



Bridge and router modes, IPv4/IPv6 dual stack



Standard 802.3af/at 2.5GbE PoE



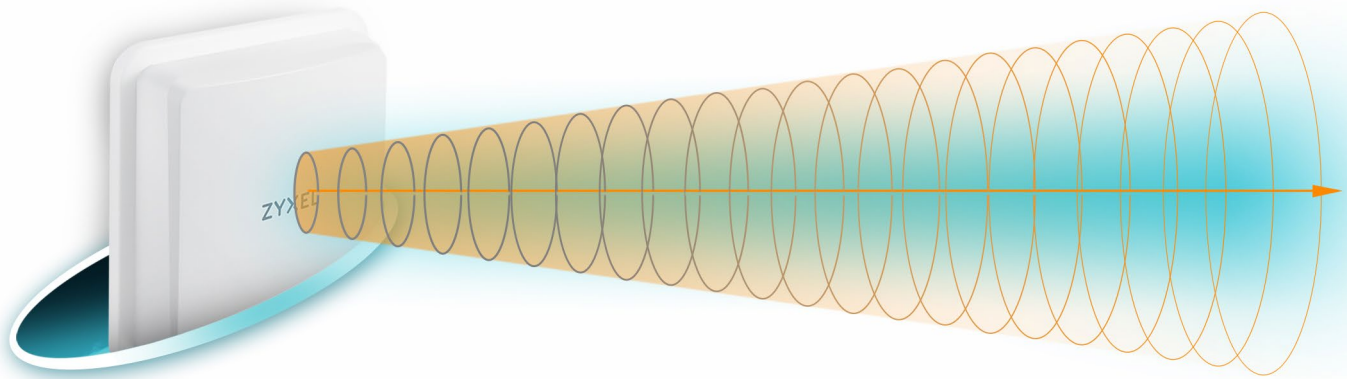
IP68 hardened enclosure with industrial grade components



nebula

## High-gain 4G/5G Antenna for Optimized Signal Coverage

Equipped with 4x4 MIMO high-gain antennas of up to 9 dBi per element, the Nebula FWA710 can better receive 5G signal, even in remote regions where 5G signal is weak or under a near non-line-of-sight deployment scenario. Better donor signal quality, faster cellular data speed. Choose the Nebula FWA710, experience 5G NR powerful performance today.



## Environmental Durability

With IP68-compliant K.21 6 KV/300 A lightning protection, the Nebula FWA710 guarantees high-quality connections, a longer device life despite the weather and natural challenges. The Nebula FWA710 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.

## Multi-scenario 5G FWA Application

Equipped with a 2.5 Gigabit Ethernet port, the Nebula FWA710 outdoor router can be connected to a host of devices with Ethernet cables, making it possible to be deployed in varied wired or wireless devices to fulfill varied scenarios.

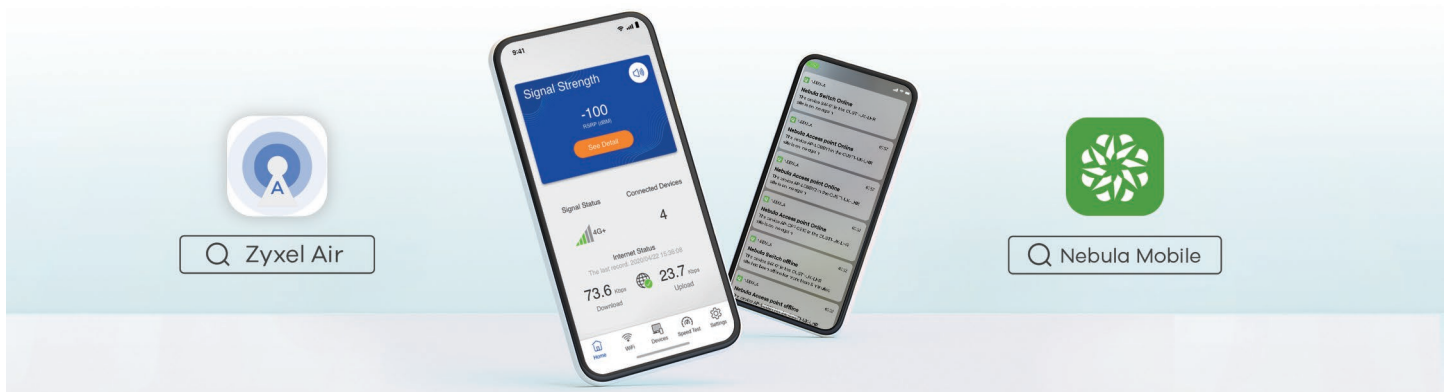


## Easy and Instant Installation

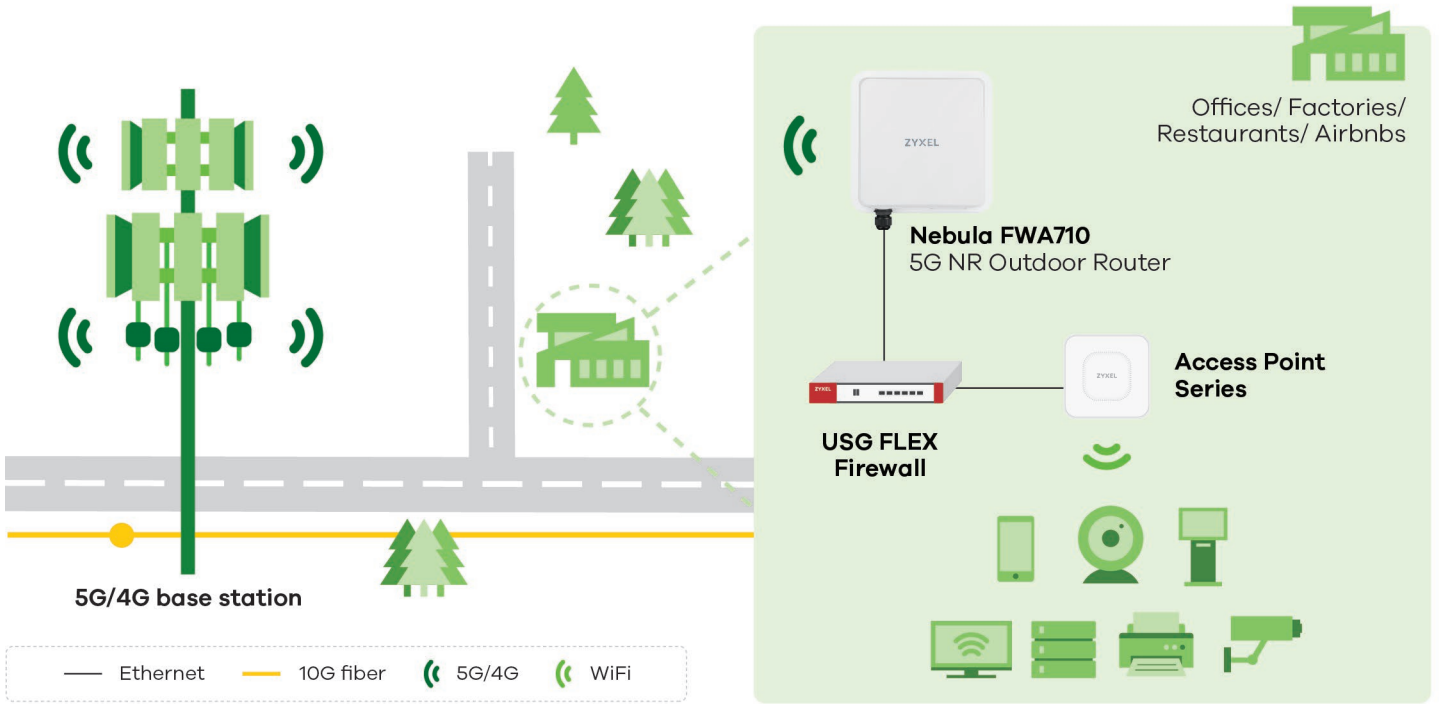
To find the best signal spot for installation, you just need to use a smartphone or tablet to connect to Nebula FWA710's WiFi network and follow its configuration instruction on the free "Zyxel Air" app. You can minimize service calls during the installation process while enhancing a satisfying user experience.

## Easy Remote Management with Nebula App

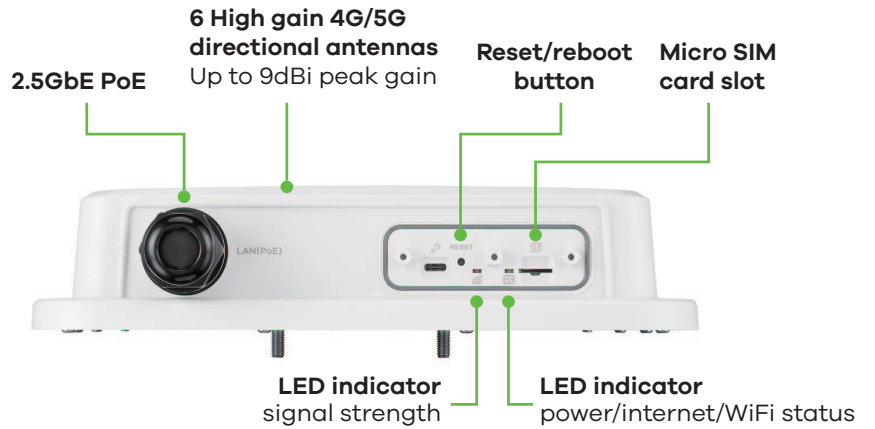
Nebula Cloud Management enables system integrators to easily remote manage through operator's mobile broadband network without leasing a DSL landline to resolve common Network Address Translation (NAT) issues in cellular networks. Scan a device QR code with Nebula Mobile App to register your device on Nebula, check the device status, and get an overview information.



## Application Diagram



## Interface Description



## Nebula FWA710 License Pack



nebula

Nebula offers flexible options that match your requirements, whether you are looking for a complimentary option giving you some peace of mind at no extra cost, more control over your network updates and visibility, or even the most advanced management of cloud networking, Nebula is here to help you. The plan you choose will determine the service level of Nebula Cloud. The Nebula FWA710 default bundled with one-year Nebula Pro Pack service.

Feature Name	Base Pack	Plus Pack	Pro Pack
<b>Unlimited Registration &amp; Central Management (Configuration, Monitoring, Dashboard, Location Map &amp; Floor Plan Visual) of Nebula Devices</b>	●	●	●
<b>Over-the-air Firmware Management</b>	●	●	●
<b>Admin Accounts per Organization (Full Access for Administration Rights)</b>	5	8	No Limit
<b>Advanced Firmware Scheduling (Org/Site/Device)</b>		●	●
<b>Automatic Network Topology (Visual and Actionable)</b>		●	●
<b>Email users and alert Notifications</b>		●	●
<b>Organizational User Audit / Change Logs</b>			●
<b>Configuration Backup/Restore</b>			●
<b>Priority Nebula Support Request (Direct NCC incl. Web Chat)</b>			●

\* Search [Nebula Control Center](#) for more Nebula license plan

## 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 (blacklist/whitelist)
- Filters LAN IP address
- Filters URLs

#### Management

- Supports local web GUI management (HTTP/HTTPS) and firmware upgrade
- Nebula Cloud Management
- Nebula mobile app (iOS and Android) for monitoring anytime anywhere
- 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 Zyxel Air app (iOS and Android) for easy installation and local management only

### Hardware specifications

#### 5G NR interface

- 3GPP Release 15 standard-compliant Sub-6 GHz

- Supports both NSA and SA modes
- Supports frequencies:
  - FDD: n1, n3, n5, 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, for device management only
- 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 socket
- 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

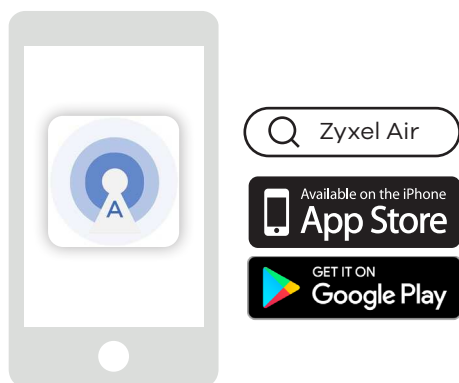
### Package contents

- 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.

## Zyxel Air App



## Nebula Mobile App



## Success Story



For more product information, visit us on the web at [www.zyxel.com](http://www.zyxel.com)

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

