ZYXEL
NETWORKS

Nebula FWA70

Nebula 5G FWA Outdoor/Indoor Router

Designed with an IP55 weather-resistant enclosure, this solution is built to handle light rain, wind and everyday outdoor conditions. Perfect for delivering high-speed internet to remote or rural areas, it excels where wired connections are unreliable or unavailable.

By leveraging the power of the 5G network, it ensures fast, stable connectivity - whether used as a primary link for underserved regions or as a dependable backup solution when wired service falls short.

Benefits

Flexible installation. Compact design.
The FWA70 supports multiple mounting options** — place it on a desk, fix it on a wall, attach it to a window, or pole-mount it outdoors. Its compact footprint blends easily into any space while delivering high-performance 5G connectivity.

5G NR — 5G NR with up to 7 Gbps* download rate with NSA & SA mode

4 High gain 5G/4G directional antennas of up to 9 dBi

Extreme weather resistance

2.5GbE PoE LAN port
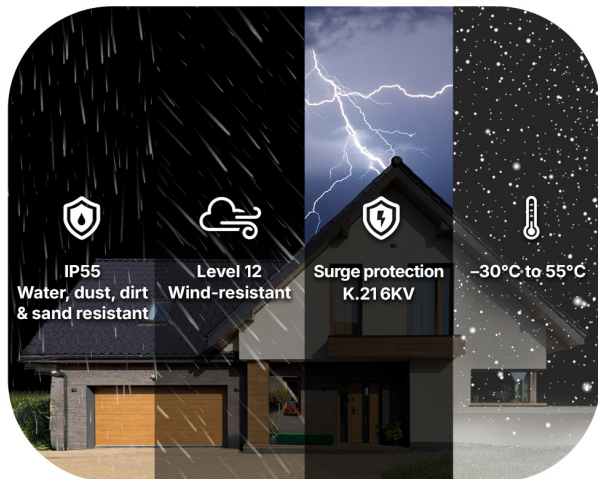
Signal optimizer app for finding the best 5G spot

Nebula cloud app for easy set up & management

nebula

5G connectivity built for real-world conditions

The FWA70 features IP55-rated dust and water protection, −30°C to 55°C operating temperature, K.21 6KV surge protection, and level 12 wind resistance. You can rely on stable performance even when the weather turns extreme.

Stay connected. Stay ahead.

Skip the wait and high costs of wired internet with the FWA70. Powered by 5G NR Sub-6 GHz, it delivers instant high-speed access with download rates of up to 7 Gbps*, supported by 4×4 MIMO high-gain directional antennas (up to 9 dBi per element) for stronger coverage and consistently stable performance.

IP55
Water, dust, dirt & sand resistant

Level 12
Wind-resistant

Surge protection
K.21 6KV

−30°C to 55°C

Fast setup. Smarter connectivity.

The FWA70 supports Nano SIM insertion for immediate 5G connectivity. Designed for homes, small offices, and prosumers, it features easy installation and high-performance operation. The 2.5mGig (multi-gig) PoE LAN port delivers both power and data over a single cable, while the Zyxel One app assists in identifying optimal signal placement. Nebula further simplifies setup, monitoring, and network management.
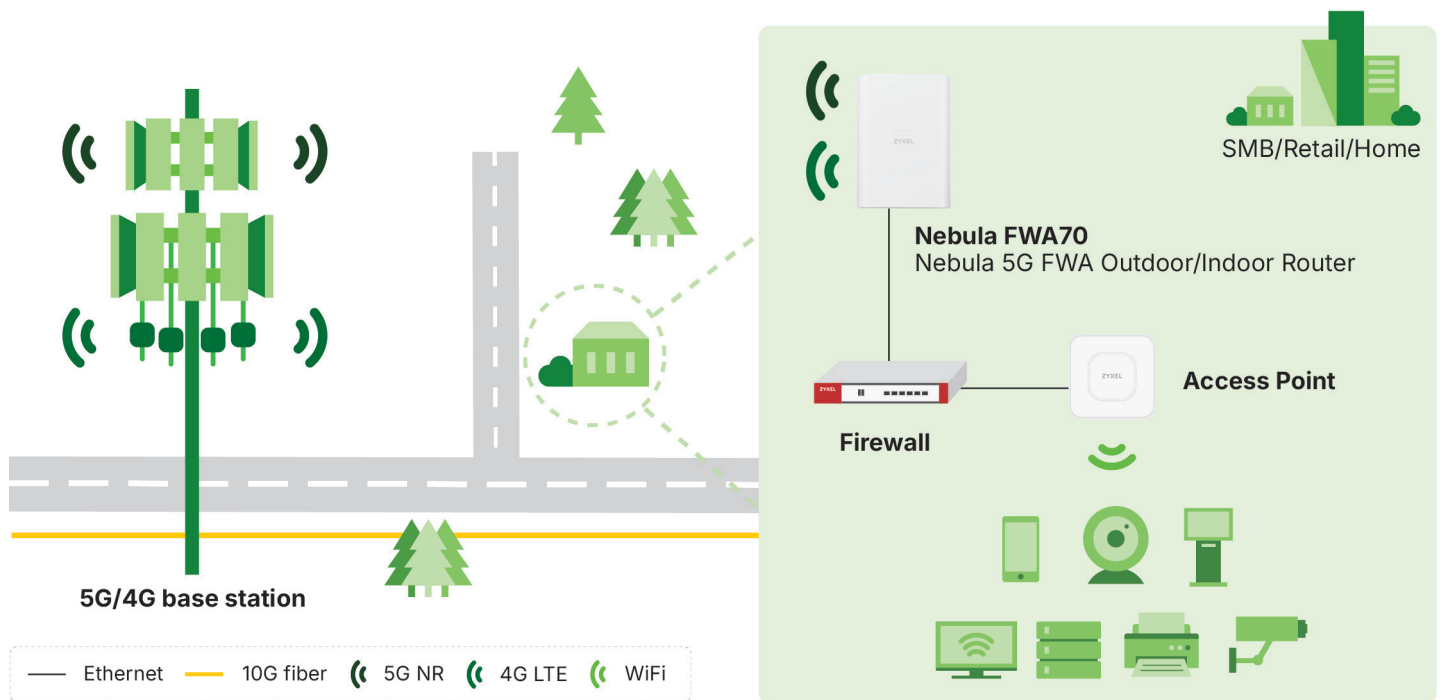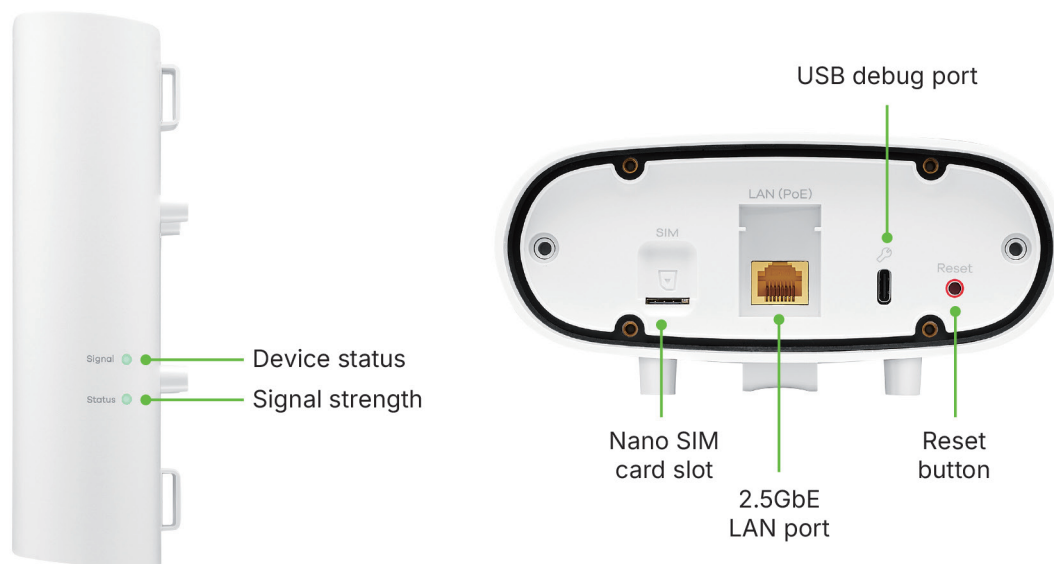
Sustainable by design

The FWA70 uses recycled paper packaging. Beyond packaging, we care about performance — and the planet. An advanced power-saving mode helps minimize energy waste, while consumption tracking via the Zyxel One app or web GUI empowers you to monitor and manage energy usage responsibly.

Application Diagram

—— Ethernet	—— 10G fiber	((5G NR	((4G LTE	((WiFi

5G/4G base station

Nebula FWA70
Nebula 5G FWA Outdoor/Indoor Router

SMB/Retail/Home

Firewall

Access Point

Interface Description

Device status

Signal strength

USB debug port

Nano SIM
card slot

2.5GbE
LAN port

Reset
button

LAN (PoE)

SIM

Reset

Specifications

System specifications

IP networking
• Supports IPv4/IPv6 dual stack (NDP IPv6)
• DHCP server
• ICMP supported
• Virtual Private Network (VPN) pass-through

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

Routing
• Supports router mode or bridge (IP pass-through) mode
• Supports dynamic DNS for first APN
• Supports remote management under bridge mode

IP firewall
• Firewall can be enabled or disabled via GUI DoS attack detection
• Supports SPI
• Application-level firewall
• Filters LAN MAC address
• 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
• Network selection
• Network preference
• Operating frequency band selection
• CLI/SSH (local and remote SSH access)
• Supports UPnP IGD
• Supports SSH with key access
• Supports remote throughput testing by TR-143
• Supports Zyxel One app (iOS and Android) for easy installation and local management
• Supports device azimuth information reporting
• Supports device power consumption reporting

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 for rest FDD/TDD 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 for rest FDD/TDD LTE bands
  ▪ Class 2: 26 dBm +2/-3 dBm for B41

5G/4G antennas
• Four embedded directional antennas
  ▪ Ultra-high band: up to 9 dBi peak gain
  ▪ High band: up to 7 dBi peak gain
  ▪ Middle band: up to 7 dBi peak gain
  ▪ Low band: up to 1 dBi peak gain

Hardware interface
• One 2.5GbE RJ-45 PoE LAN port
• One troubleshooting USB port
• Two LED indicators:
  ▪ Device status
  ▪ Signal strength
• One reset button
• One nano SIM card slot

Power consumption
• <15 W (peak)

Power specifications
• Standard IEEE 802.3af/at 2.5G PoE

Physical specifications
• Item dimensions (LxWxH): 150 × 68 × 200 mm (5.91″ x 2.68″ x 7.87″)
• Item weight: 660 g (1.46 lb.)
• Packing dimensions (LxWxH): 275 × 225 × 100 mm (10.83″ x 8.86″ x 3.94″)
• Packing weight: 1360 g (3 lb.)

Environmental specifications

Operating environment
• Temperature: -30°C to 55°C (-22°F to 131°F)
• Humidity: 5% to 95% RH (non-condensing)

Storage environment
• Temperature: -40°C to 70°C (-40°F to 158°F)
• Humidity: 5% to 95% (non-condensing)

Ingress protection rating
• IP55

Surge protection
• K.21 6KV/DM 1.5KV

Wind load testing for Pole mounting
• GR 487 issue 4 (2013) standard compliant
• Level 12 wind force
• Wind speeds 53.6 m/sec (~ 193 km/h)

Package contents
• Device
• Standard 802.3af/at 2.5G PoE injector
• 10m flat Ethernet cable white 8P8C
• 1.8 m Cat.6 Ethernet cable white 8P8C
• Flat cable gland
• Quick Start Guide
• DoC and safety warning
• Screws for wall mounting
• Hose clamps for pole mounting

Specifications

Certification

- CE
- UKCA
- WEEE
- HSF (Hazardous Substance Free)
- European Parliament and Council Directive 94/62/EC of December 20, 1994 on packaging and packaging

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

** Wall-mount and pole-mount kits are included. Other mounting accessories are available as optional extras.

Nebula FWA70 License Pack

Nebula provides flexible options to meet your needs, offering complimentary, enhanced, and advanced cloud networking solutions. Your chosen plan determines the level of service you receive from Nebula Cloud.

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

* Search "Nebula Control Center" (https://www.zyxel.com/products_services/NCC-Nebula Control-Center/subscribe-nebula) for more Nebula license plan.

Nebula Mobile App

Nebula Mobile

Zyxel One App

Zyxel One

For more product information, visit us on the web at www.zyxel.com

05/11/25

Datasheet Nebula FWA70