

Nokia WiFi Beacon 3.1

Wi-Fi 6 Beacon for the intelligent mesh network

The Nokia WiFi Beacon 3.1 extends the whole home Wi-Fi experience for broadband subscribers. This premium class Beacon supports Wi-Fi 6 and Wi-Fi EasyMesh™, to create a whole home coverage mesh network backhauled by wired Ethernet or Wi-Fi. This coverage can be expanded at any time by installing additional Wi-Fi EasyMesh-capable beacons to ensure seamless roaming throughout the home. The Beacon 3.1 includes the Nokia Corteca Device Software which ensures the best possible Wi-Fi performance. New value-add services (like cybersecurity) can be installed on the Beacon 3.1 using Linux Containers for additional revenue generation. The end-user experience with the intelligent self-organizing mesh system is enhanced by the service provider’s Wi-Fi management capabilities in the cloud and intuitive home user support using the Nokia WiFi Mobile App.

The Nokia WiFi Beacon 3.1 is a dual-band Wi-Fi 6 mesh system with Wi-Fi Alliance (WFA) certified Wi-Fi EasyMesh, enhanced by Nokia value added features. The Nokia WiFi Mesh Middleware creates a self-healing, self-optimizing network. It includes intelligent channel selection, band steering, client steering and backhaul management to provide the best Wi-Fi performance. As it is EasyMesh™ compliant, it provides interoperability and avoids vendor lock-in. When no dedicated gateway is in the network, the Nokia WiFi Beacon 3.1 will take the role of wireless router with access to the broadband network.

Optionally, the Nokia WiFi Beacon 3.1 can be managed by the Nokia Corteca Home Controller through the Broadband Forum’s User Services Platform (USP/TR-369). The Home Controller is a multi-vendor USP Controller. The associated Console presents help desk agents with a holistic view of the in-home network to assist them with



Nokia WiFi Beacon 3.1 (front view)



Nokia WiFi Beacon 3.1 (back view)

easy identification and instantaneous resolution of issues as well as offering recommendations for operator upsell opportunities. The Console also improves network operations with Wi-Fi optimization and monitoring through a high granularity of radio resource management (RRM) algorithms and reporting.

The Nokia WiFi Mobile App provides end-users with an intuitive and simplified interface for trouble-free management of their home network and Wi-Fi. It also provides advanced functions such as guest Wi-Fi management and parental controls.

Features

- Functions in either routed mode or bridged mode
- Dual-band concurrent Wi-Fi 6 AX3000, compatible with all earlier generations of Wi-Fi
- One 10/100/1000Base-T WAN interface
- Two 10/100/1000Base-T LAN interfaces
- EasyMesh enhanced by Nokia value added features
- Optimized for multicast video stream
- TR-069 and TR-369 Remote Management

Benefits

- Latest Wi-Fi 6 technology which is developed for faster, more reliable connections, smoother streaming and 4-times the device connection capacity of previous Wi-Fi standards.
- Self-healing, self-optimizing mesh network
- Seamless roaming for IEEE 802.11k/v capable and legacy clients
- Client steering, channel optimization
- High quality of service (QoS) video over Wi-Fi
- Ease of setup and user intuitive information

Technical specifications

Physical

- Height 168 mm (6.6 in)
- Diameter: 100 mm (3.9 in)
- Weight: 0.37 kg (0.80 lb)

Installation

- Desktop mounting

Operating environment

- Temperature: -5°C to 45°C (23°F to 113°F)
- Relative humidity: 5% to 95%, non-condensing

Power requirements

- Local powering with 12 V DC input (external AC/DC adapter)
- Power consumption: < 14 W

Ethernet interfaces

- One 10/100/1000Base-T interface with RJ-45 connector for WAN
- Two 10/100/1000Base-T interfaces with RJ-45 connector for LAN

WLAN interfaces

- Supports 2x2 802.11b/g/n/ax 2.4 GHz wireless LAN (WLAN) interface with support for a channel bandwidth of 20 and 40MHz
- Supports 2x2 802.11 a/n/ac/ax 5 GHz WLAN interface with support for a channel bandwidth of 20, 40, 80 and 160MHz
- Support Multi-User Multiple Input, Multiple Output (MU-MIMO)
- Support Multi-User Orthogonal Frequency Division Multiple Access (MU-OFDMA)
- Maximum effective isotropic radiated power (EIRP) on 2.4 GHz up to 2000 mW and on 5 GHz up to 1300 mW (dependent on hardware variant and local regulations)
- 64-bit and 128-bit Wired Equivalent Privacy (WEP) support



- Wi-Fi Protected Access (WPA) support including Pre-Shared Key (WPA-PSK), WPA2 and WPA3
- Media access control (MAC) filters

Router mode

- IPv4 and IPv6 connectivity: Dual stack, stateless and stateful auto-configuration, DHCPv6 prefix delegation
- Point-to-Point Protocol over Ethernet (PPPoE) and IP over Ethernet (IPoE)
- Network Address Translation (NAT), port forwarding, demilitarized zone (DMZ) and firewall
- Dynamic Host Configuration Protocol (DHCP), domain name system (DNS) proxy and dynamic domain name system (DDNS)
- Internet Group Management Protocol (IGMP) v2/v3 proxy
- Virtual private network (VPN) pass-through for Point-to-Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP) and IPSec
- Flexible video delivery options over Ethernet or wireless
- TR-069 and TR-369 Remote Management
- Support for Linux containers (LXC) and TR-157

Extender mode

- Forwarding IPv4 and IPv6 traffic
- VPN pass-through for PPTP, L2TP and IPSec

- IGMP v2/v3 snooping
- Flexible video delivery options over Ethernet or wireless
- TR-069 and TR-369 for remote management with Extensible Messaging and Presence Protocol (XMPP) support for management behind a NAT router

LED

- Simple and intuitive status indication by single, colored LED on the front side

Buttons

- Power on/off
- Wi-Fi Protected Setup (WPS)
- Device reset

Safety and electromagnetic interference (EMI)

- Protection of over voltage/current

Regulatory compliances

- UL 62368-1
- IEC 62368-1
- FCC
- CE
- RCM
- ISED
- Wi-Fi Alliance certified

About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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Document code: (October) CID213589