

Nokia FastMile 5G High Gain Receiver

5G16-A

The Nokia FastMile 5G High Gain Receiver (5G16-A) is designed to help operators capitalize on the growing 5G market. The device is elegant, blending well in residential environments and is easy to deploy and can connect wirelessly to the mobile network. It can be mounted on a wall or pole. With extensive carrier aggregation between supported bands, the Nokia FastMile 5G High Gain Receiver (5G16-A) improves performance and reliability by pooling all resources in the available 4G and 5G bands.

The device is equipped with high gain directional antenna for bands at frequency range 1700 to 4200 MHz. The device has up to 18 dB antenna gain at 3300 to 4200 MHz range, up to 16.4 dB antenna gain at 2300 to 2700 MHz range, and up to 15 dB antenna gain at 1700 to 2200 MHz range. Furthermore, the device has four highly efficient lower gain antenna covering the low band frequency range 600 to 900 MHz. The high antenna gain accompanied with advanced 3GPP rel 16 modem technology and implementation of several advanced radio features makes the Nokia FastMile 5G Receiver ideal choice for rural and suburban deployments where high throughput to long distances is needed. Device can be mounted flat on a wall or on a pole and is simple to install and uses a mobile application to help the subscriber select the right side of the home with the best radio reception. The device is compatible with any residential gateway: paired with Nokia's in-home Wi-Fi solution, it ensures a seamless ultra-broadband experience in every corner of the home.



Wall-mounted



Pole-mounted

Features

- 3GPP Release 16 compliant
- 5G NR and 4G LTE WAN connections
- Based on MediaTek T830 modem chipset solution for FWA
- High gain directional antenna up to 18dBi
- Support for multiple APNs (8x) and 5G network slicing
- Dynamic spectrum sharing (DSS)

Benefits

- Delivers Gigabit home broadband services with 5G new radio and 4G LTE
- Supports:
 - bridge and routed mode configurations
 - GPS L1 and Bluetooth 5.0 up to 300 MHz 5G bandwidth
- Size and gain optimized for rural and suburban densities (up to 18dBi gain)
- High spectral efficiency lowers RAN costs

Technical specifications

Connectivity interfaces

- Physical:
 - 1 x 2.5 Gigabit Ethernet (GE) LAN port
 - Bluetooth 5.0
- Slot for nano SIM card

Network termination

- 5G New Radio (NR) 3GPP Release 16
- 4G/Long Term Evolution (LTE)
- SIM-tray slot (size: 4FF/nano)

5G NR

- 3GPP Release 16 – 5G NR
 - NSA: Option 3X, Option 3A, Option 3
 - SA: Option 2
- Supported 5G NR radio bands:
 - Sub 6 GHz (FDD): n2, n5, n7, n12, n25, n26, n66, n71
 - Sub 6 GHz (TDD): n38, n41, n48 CBRS, n77 C-band and DoD, n78

4G LTE

- LTE UE category: DL19 / UL18
- Supported LTE radio bands:
 - FDD: B2, B4, B5, B7, B12, B13, B25, B26, B66, B71
 - TDD: B38, B41, B42, B43, B48 CBRS

Radio capabilities

- LTE UL 2CA
- DL 4x4 MIMO at all bands, including the low bands (n5, n12, n71, B12, B13, B26, B71)
- LTE/NR Modulation: 256 QAM (DL) / 256 QAM (UL)
- Sounding Reference Signal antenna switching at NR TDD bands
- Transmit antenna switching at NR and LTE TDD bands
- UL 2x2 MIMO at NR TDD bands
- Power class 1.5** at n41 and n77
- Power class 2** at LTE B38, B41, NR n38, n41, n77, n78
- Extensive EN-DC/NR CA for NAM region
- DL NR FR1 (3T), FR1 (1F + 2T), FR1 (2T), FR1 (1F + 1T)
- UL NR FR1 2CA support
- Bands n46, n70, B29 are PCB ready (*)

* Can be offered as optional band; not be included in the first release

** Implementation of PC1.5 and PC2 are subject to regional EIRP regulatory compliance

** HW ready to support n78 power class 1.5

Antenna capabilities

- High gain antenna implementation covering 1700-4200 MHz range
- Antenna gain up to 18 dB at 3300-4200 MHz
- Antenna gain up to 16.4 dB at 2300-2700
- Antenna gain up to 15 dB at 1700-2200 MHz
- Four omni-directional antennas for low bands 617-900 MHz
- Swivel:
 - Horizontal: -33° downtilt to +33° uptilt
 - Vertical: -24° downtilt to +33° uptilt

Security

- Adheres to strict Nokia Design for Security standards

Data Forwarding

- Support for Multiple APNs
- Bridge and Route mode support
- Supports B2C and B2B data forwarding scenarios for residential and enterprise customers

Mounting options

- Wall and pole mounting options
- Auxiliary mounting accessories including common bracket system for wall and pole mount and mounting hoops for pole mount
- Nokia PoE injector included
- Optional 10m flat cable that can be purchased separately

Operations, administrations and maintenance (OAM)

- Multicolor LED indicators for
 - signal strength indication
 - status
 - 5G/LTE RAT

- TR-069 and TR-181 with ACS access for remote device management
 - firmware upgrades
 - key performance indicator (KPI) management
- Support for TR-143
- Support for TR-369 on request
- WebUI:
 - Management and configuration of device
- Guided installation with Nokia Broadband Installer app
- Integrated with FastMile FWA Controller supporting point-of-sales, service fulfilment and guided install and service assurance and optimization functions

Physical

- Height: 400 mm (15.75 in)
- Width: 400 mm (15.75 in)
- Depth: 77 mm (3.03 in)
- Weight: 2500 g (5.5 lb)

Operating environment

- Temperature, ambient: -40°C to 55°C (-40°F to 131°F) without sun load
- Environmental: IP66

Power

- Max power consumption: ~ 15W
- PoE/PoE+ with grounded/shielded ethernet cable design
- Nokia PoE 15W Class I
- Can be powered by Nokia WiFi Beacon G6.2

Certification

- FCC
- IC
- ITU-T K.21
- IP66
- CBRS-CBSD Cat B



About Nokia

Nokia is a global leader in connectivity for the AI era. With expertise across fixed, mobile, and transport networks, powered by the innovation of Nokia Bell Labs, we're advancing connectivity to secure a brighter world.

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