



HOPPER 4G+

AX3000 Mesh Wi-Fi 6 4G+ Modem Router with 2 SIM Slots, a 5-Port Gigabit Smart Switch and Multifunctional USB 3.0 Port

- Fast 4G+ Internet anywhere, up to 300 Mbps
- Enjoy 24/7 connectivity with gigabit broadband and automatic dual-SIM mobile switching
- Advanced Mesh Wi-Fi with seamless roaming and network segmentation for home, children, IoT devices, and guests
- Stay protected with cybersecurity features and parental controls
- Prioritise traffic with IntelliQoS – for gaming, streaming, and work
- Use as a network file server and personal cloud with a USB drive

Unique Whole Home and Mesh Wi-Fi Capabilities

Wi-Fi is a core essential of the modern home. Keenetic routers deliver reliable, continuous and secure Wi-Fi throughout your home. Starting from one main Keenetic router, as your demand grows, you can add Keenetics as Wi-Fi extenders to grow from a single node system to a centrally managed multi-node Whole-Home Wi-Fi System. Wi-Fi System configuration can be optimized depending on your personal performance and usage requirements through leveraging existing Ethernet wiring to connect extenders or using wireless Mesh connections. The multi-node Keenetic Wi-Fi System will ensure seamless roaming throughout your home regardless of its structure and dimensions.

Detachable External 4G Antennas

Bundled with external high-gain 4G antennas, Keenetic offers fast mobile internet access. For long distances from the base station or challenging terrain, you can connect a MIMO directional outdoor antenna (purchased separately) via durable, low-loss SMA connectors.

Smart Home and IoT-Ready

Keenetic Mesh Wi-Fi Routers' superb coverage, uninterrupted connections and enhanced security make them ready for tomorrow's fully-connected home and business environments. Connected devices suffer virus and other criminal attacks – Keenetic routers have advanced Network Segmentation and Cloud-based cyberthreat protection to stop infection and prevent Spyware on any device in your Keenetic network. Using the

IntelliQoS application prioritization feature, Keenetic users can prioritize, throttle or block individual applications to ensure bufferless streaming and fast, lag-free, gaming, and be confident that their work from home experience will be uninterrupted.

Continuous Reliable Internet

Your Keenetic gives you the freedom to use more than one ISP regardless of the connection types and service packages you have signed up for. A real stand out feature of your Keenetic is the capacity to connect easily to multiple ISPs simultaneously for failover and load balancing using built-in 4G+, Gigabit Ethernet, and Wi-Fi links. If you experience a break in service from an ISP, your Keenetic router will automatically and seamlessly switch to a different working ISP so your smart home will stay smart 24/7.

Robust Cyberthreat Protection

Your Keenetic comes with security options preconfigured for safe operation in the home, right out of the box. Like no other home router Keenetic deploys bank-grade digital HTTPS certificates to secure device management sessions, offers network segmentation to isolate and guard the traffic of smart home IoT gadgets, and performs fully automatic regular software updates to maintain constant market-leading levels of security, reliability, performance.

Parental Control Tools

Keenetic has cloud-based Content Filtering and Ad Blocking options from AdGuard, CleanBrowsing, Cloudflare, CONTROL D, NextDNS, OpenDNS, Quad9 and SafeDNS. Undesirable images or information, time-stealing games, and social media as well as aggressive round the clock marketing can all be managed and kept out of your family life. Each member of your family has an individual content filtering profile and scheduling function – only allowing Internet access when you choose. With one click, you can control your children's Internet usage.

Powerful Network Storage & Personal Cloud

Connect an external USB disk to a Keenetic router to enable a network server to process backups and remote file sharing with your family or co-workers. Keenetic offers the simplicity of fully automated network backups using macOS Time Machine or Windows File History applications simultaneously. Download Station and Media Server router applications transform Keenetic with a connected USB drive into a centralized entertainment server to enjoy up to 4K media streaming to your Smart TV. Personal Cloud enables easy access to all your files, even from your mobile devices.

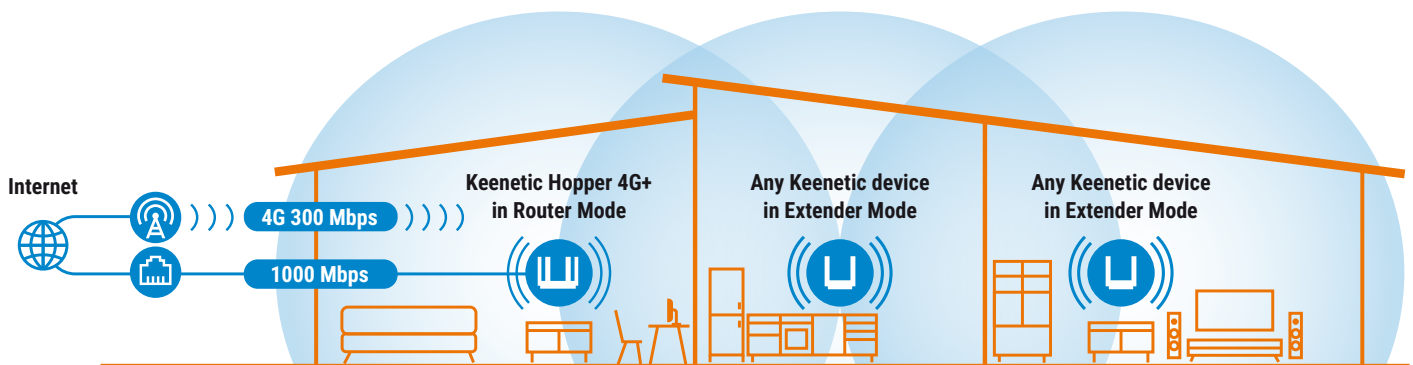
Fully Capable for Complex Business Needs

With your Keenetic, you can take advantage of affordable business-class performance, security, and reliability. Keenetics are perfect for home offices and teleworkers, smaller offices and businesses like most retailers, medical and dental offices, real estate agencies, and small hospitality providers, including bars and restaurants. Keenetic delivers easy to use genuine business-class features on a multi-node Wi-Fi System offering many advantages:

- Uninterrupted connectivity with built-in redundancy and load balancing;
- Heightened employee productivity through continuous access and comprehensive protection from hackers, viruses, and other threats;
- Secure connectivity for branch offices, road warriors, and telecommuters using Virtual Private Networking (VPN) technology;
- Protection against information leaks employing traffic and network resources segmentation;
- Improved customer engagement and sales opportunities through the ability to offer free Wi-Fi to your visitors with several built-in hotspot options;
- The built-in Keenetic remote management and monitoring option offers cloud-based multi-site remote monitoring and management for continuous control.

Friendly, Easy to Use App

By pairing your Keenetic device to the Keenetic App, you can manage your multi-node Mesh Wi-Fi System, including multiple locations, from anywhere in the world. Within minutes, you can control home networks, see connected and registered devices, and enable securely isolated Wi-Fi for your guests. Setting up weekly schedules for members of your family, monitoring their Internet activity, managing content restrictions or pausing the Internet from the palm of your hand could not be simpler.



Key features

- Model number: KN-2312
- CPU: MT7981B 1300 MHz, dual core
- RAM: 512 MB DDR4
- Flash memory, Dual Image: 256 MB
- Wi-Fi 2.4 + 5 GHz
- Wi-Fi class: AX3000
- Wi-Fi antennas: 3 total
- 2.4 GHz: 2 dual-band external
- 5 GHz: 2 dual-band external, 1 internal
- Wi-Fi client capacity: Up to 256 in 2.4 & 5 GHz (shared)
- Ethernet ports: 5 × 1 Gbps
- Link aggregation: Static (ports 1+2, 3+4)
- WPS/Wi-Fi button
- FN button
- USB ports: 1 × USB 3.0
- 3G/4G connection: Built-in ASR1828 LTE modem
- Telephony support: VoIP with Keenetic Linear (sold separately)
- Mesh Wi-Fi System
- DFS support: Zero Wait DFS (ch. 52–64), Standard DFS (ch. 100–140)

Performance

- 2.4 GHz Wi-Fi network: 574 Mbps* (802.11ax) 2T × 2R: 2SS, 40 MHz
- 5 GHz Wi-Fi network: 2402 Mbps* (802.11ax) 3T × 3R: 2SS, 160 MHz
- IPoE/PPPoE routing: Up to 1800 Mbps in duplex
- L2TP/PPTP routing: Up to 900 Mbps
- WireGuard throughput: Up to 460 Mbps
- Reading from a USB drive: Up to 110 MB/s (USB 3.0)

Mobile network

- Supports 4G
- Supports 3G
- Maximum network speed: Up to 300 Mbps (Cat.6)
- Detachable mobile antennas with SMA connectors: 2 × 4 dBi
- SIM card slot: 2 × nano-SIM
- SMS receiving/sending
- USSD request support
- Supported bands: FDD-LTE B1/B3/B5/B7/B8/B20/B28/B32 (2100/1800/850/2600/900/800/700/1500 MHz) TDD-LTE B38/B40/B41 (2600/2300/2500 MHz); HSPA+/HSDPA/HSUPA/WCDMA B1/B5/B8 (2100/850/900 MHz).

Wireless network

- Seamless roaming 802.11k/r/v
- MU-MIMO
- Airtime Fairness
- Beamforming
- OFDMA
- Pre-configured Wi-Fi protection
- WEP, WPA-PSK
- WPA2-PSK, WPA2-Enterprise
- WPA3-PSK, WPA3-Enterprise, OWE
- Multiple Wi-Fi networks: Up to 7
- Access control by MAC address
- Wi-Fi Multimedia (WMM)

Features and protocols

- IPoE, PPPoE, PPTP, L2TP, 802.1x
- Multi-WAN
- Policy routing
- Internet connection backup
- Ping Check connectivity monitor
- PPPoE/PPTP/L2TP pass-through
- VLAN IEEE 802.1Q
- Routing table (DHCP/Manual)
- IntelliQoS
- DHCP (client/server)
- IPv6 Dual Stack
- NAT
- IGMP
- UDP to HTTP proxy
- UPnP
- Manual port forwarding
- SPI firewall with protection against DoS attacks
- PPTP (client/server)
- L2TP over IPSec client/server
- OpenVPN client/server
- SSTP client/server
- Ethernet-over-IP, IP-IP, GRE
- IPsec VPN (client/server)
- WireGuard
- Dynamic DNS client
- Direct or cloud access via KeenDNS
- HTTPS security for access via KeenDNS
- Cloudflare DNS
- SafeDNS parental control
- AdGuard ad blocker
- Traffic statistics per client
- Bandwidth limit per client
- Access schedule per client or interface
- Guest hotspot with authentication (Captive Portal)

USB applications

- Mobile broadband modem support
- RAS, NDIS, CDC-Ethernet, QMI support
- File server and personal cloud
- FAT, FAT32, exFAT, NTFS, EXT2, EXT3, EXT4, HFS+ support
- CIFS/SMB
- AFP
- FTP, SFTP
- WebDAV
- Time Machine, File History support
- OPKG packages
- Download Station
- File server
- Media server
- Print server **

Troubleshooting and management

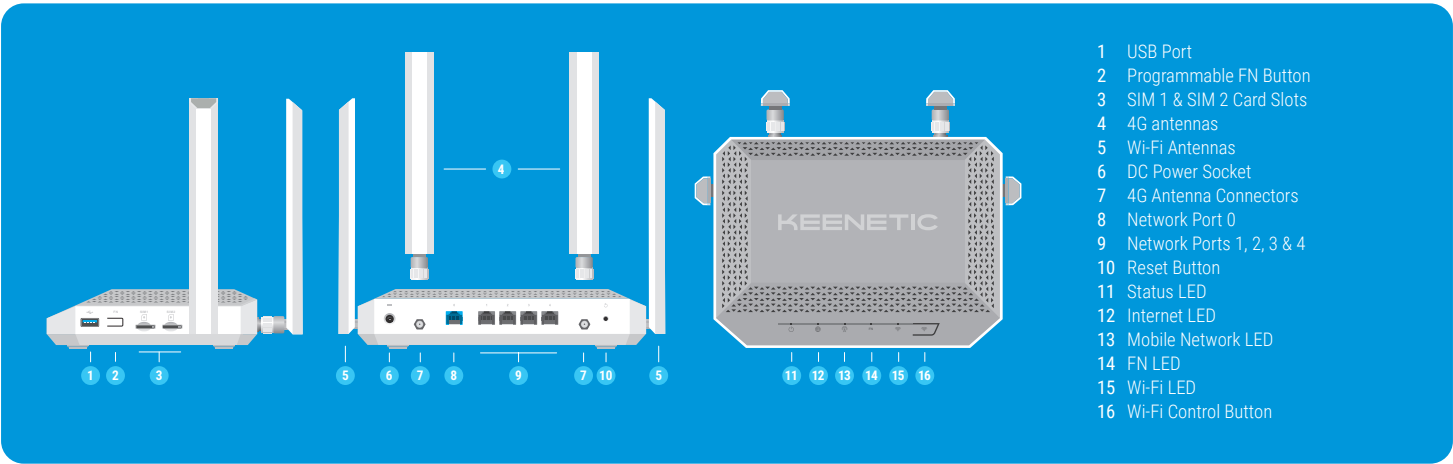
- Cloud-based Remote Network Monitoring and Management
- Mobile app for Android and iOS
- Web Interface with the Initial Setup Wizard and HTTPS security
- Command Line (CLI) via TELNET/SSH
- An option to control from external network
- Backup and restore configuration
- Automatic OS updates
- System event logging

Physical specifications and environment requirements

- Device dimensions excluding antenna, w x d x h: 217 mm x 159 mm x 45 mm
- Device weight: 600g
- Operating temperature: 0–40 °C
- Operating humidity: 20–95% non-condensing
- Power supply voltage: 100–240 V 50/60 Hz

Package contents

- Device
- 4G antennas
- Power adapter: 12 V 2 A
- Ethernet cable
- Quick start guide



Ordering Information

Model name	Part number	Short description
Keenetic Hopper 4G+ (KN-2312)	KN-2312-01-EU	AX3000 Mesh Wi-Fi 6 4G+ Modem Router with 2 SIM Slots, a 5-Port Gigabit Smart Switch and Multifunctional USB 3.0 Port

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*Actual data throughput will vary and may be reduced by equipment features and settings, the number of client devices on the network, obstacles to signal propagation, the presence of other wireless networks, and radio interference ** Except for GDI models