



wifi'ON

/softat
home



Keep calm and Wi-Fi on !

Ensure all devices at home always have the best wireless experience

Wi-Fi quality and connectivity have become central to enjoying any digital service.

In the home, broadband entertainment, TV services, Internet access as well as IoT now affect providers' NPS scores.

Customers expect consistent and secured wireless connectivity that can only be achieved through an operator-managed solution.

Wifi'ON delivers the best end-to-end Wi-Fi experience from any corner of the home thanks to key features enabled in the Home Gateway and in operators' managed devices such as Set Top Boxes, Wi-Fi extenders or Wi-Fi repeaters.

Wifi'ON provides Smart Wi-Fi connections thanks to an intelligent channel selection algorithm and instant steering mechanisms.

SoftAtHome Wifi'ON is smart enough to prioritize time-critical traffic such as voice, video or gaming.





Create a truly smart Wi-Fi from any corner of the home to really enjoy HD video, gaming or IoT

Stable and High Performance Wi-Fi

Connect as many devices as you like in your home using 2.4GHz or 5GHz Wi-Fi with a high level of performance and superior wireless experience.

Best in-Home Connectivity Experience

Benefit from an intelligent home network giving you the best connectivity experience whatever the device and the service. Get higher bandwidth and extend your in-home coverage seamlessly.

Video over Wi-Fi

No more cables. Connect your TV or your Set Top Box to the Wi-Fi network and enjoy TV, gaming or video on demand services from any corner of the home. Wifi'ON manages differentiated QoS.

Easy set-up

No configuration needed. Benefit from a truly unique mesh network, constantly optimized with smart algorithms Wifi'ON propagates a unique Wi-Fi SSID to all Access Points,

Clients Roaming

Benefit from ambient connectivity while you're moving in your Home. For example, enjoy a video conference from your smartphone while moving from one room to the other without any glitches or interruptions. Wifi'ON seamlessly steers your smartphone to the best Access Point in the home.

Wi-Fi IoT

Connect all IoT devices to a secure and reliable Wi-Fi network to enjoy security, energy, healthcare or comfort services.

Devices such as movement sensors, cameras, flood detectors, power switches and connected light bulbs all require a high level of Wi-Fi reliability.

QoS Monitoring

Benefit from an unmatched Wi-Fi Quality Of Experience thanks to the power of the Cloud.

All Wi-Fi parameters can be monitored and controlled from the Cloud thanks to the Eyes'ON product.

Mobile application

Thanks to the MySmartWiFi application, you can easily set-up your Smart Wi-Fi network at Home. You can optimize Access Point location, control, finetune and monitor all your Wi-Fi devices from your smartphone or tablet. Receive recommendations to improve your Wi-Fi Quality Of Experience.

Smart Access Point

Multi-device connectivity

- Wi-Fi 802.11b/g/n/ac/ax access point capabilities with high performances
- Wi-Fi dual band, dual concurrent 2.4GHz/5GHz
- Multiple SSID management
- Unified 2.4Ghz and 5GHz Wi-Fi home network
- Wi-Fi WPS push button and PIN code: simplified Wi-Fi device pairing process
- Wi-Fi Automatic pairing with NFC for mobile phones.
- Wi-Fi devices strength signal
- Wi-Fi security: WEP, WPA, WPA2 psk/tkip
- Wi-Fi hotspot 2.0 Access Point (AP): EAP SIM, 802.1x authentication
- MU-MIMO: router simultaneous communication with multiple devices

Wi-Fi interference and bandwidth management

- Wi-Fi SSID scanner and spectrum analyzer
- 2.4GHz/5GHz band steering: users QoE improvement by steering dual-band capable devices on the best band
- Self-learning steering: adaptation of the steering algorithm to each device's capabilities and previous behaviors
- Channel Selection Mechanism (CSM): Channel selection algorithm from SoftAtHome to select the less congested and higher capacity channel in real time
- Distributed CSM optimal home channels selection
- Wi-Fi DFS: use of full Wi-Fi high power channels including weather and radar channels
- DFS to DFS channel fast transition: moving from high power channel to another in minimum time with pre clearance process
- Airtime sharing mechanisms such as Intelligent Airtime Scheduling or Airtime Fairness
- Beamforming: focus the Wi-Fi signal (minimize surrounding signal interferences and increase signal strength for each device)

- Wi-Fi WMM Powersave/uAPSD certification
- Transmit power configuration

Ubiquity

- Multiple chipsets brands support: Broadcom, Quantenna, RealTek, Intel and Qualcomm
- 802.11ac 4x4 Fast-bandwidth Access Point (AP)
- 802.11ac 8x8 Fast-bandwidth Access Point (AP)
- 802.11ax 4x4 Ultra-fast bandwidth Access Point (AP)

Smart Wi-Fi network

Client roaming

- Self-learning steering: adaptation of the steering algorithm to each device's capabilities and previous behaviors
- Wi-Fi 802.11k/v/r for client steering:
 - 802.11v: Roaming management
 - 802.11k: Neighbor reports, exposing APs list and information
 - 802.11r: Faster roaming

Flexibility

- Multiple nodes configurations
 - Client
 - Repeater (wireless connection to the network)
 - Extender (Ethernet connection to the network)
- Up to 5 extenders/repeaters in the home
- Multiple inter-nodes connections support
 - 2.4GHz
 - 5GHz
 - Ethernet
- Multiple topologies support such as Star or Daisy Chain
- Dynamic topology: real time nodes reconfiguration in case of environment changes
- Failover mechanism: find alternate connection paths in case of link or AP failure
- Topology best path selection (Ethernet, PLC, Wi-Fi)

Global Home Network Management

- Wi-Fi on/off scheduling management and propagation
- Guest Wi-Fi: enable temporary access to guest devices while securing LAN access
- Station management behind external AP or Ethernet switch: 4-Mac Address mode
- Wifi'ON secured and real-time communication protocol between Access Points
- IEEE 1905.1 protocol support: Wi-Fi credentials automatic propagation
- Compatibility with Wi-Fi certified EasyMesh™ Repeater Extenders

Smart video delivery

Video distribution over Wi-Fi

- IPTV over Wi-Fi QoS
- IPTV Multicast over Wi-Fi management: Multicast to Unicast
- Dynamic buffering depending on video quality: jitter variations over Wi-Fi compensation
- Wi-Fi protocol exchange optimization to protect IPTV (e.g. RTS/CTS to avoid collision)
- Video Multicast and Unicast support on repeaters
- Wi-Fi airtime optimization for IPTV optimization (Intelligent Airtime Scheduling)

Set Top Box – Home Gateway interactions

- Intelligent Wi-Fi standby mode: wake on WLAN and standby mode forcing
- Detection of WAN connection lost on the Home Gateway from the STB
- Wi-Fi scheduling: warn the user in case of pending shut down
- Flash Zapping over Wi-Fi: pre-decoding of 3 or more parallel streams to optimize Quality of Experience

Smart QoS

QoS enforcement

- Wi-Fi Multimedia (WMM) support
- 802.11e: traffic categorization and prioritization with Enhanced Distribution Coordination Function
- Distributed QoS

Cloud monitoring

- User Wi-Fi Quality of Experience (QoE) monitoring
- Wi-Fi Quality of Services (QoS) management
- Activation of QoS and QoE cloud monitoring with Eyes'ON Product
- Management and configuration of Eyes'ON agent using TR 69
- Wi-Fi QoS local map: MyHomeMap
- Parameter monitoring:
 - Wi-Fi scoring and KPIs per network, per home, per AP
 - Tx/Rx rates and errors, Tx opportunities, RSSI, interferences, Signal to Noise ratio
 - Number of devices per frequency band
 - Channels and DFS changes tracing and causes analysis
 - Packet statistics per interface
 - 2.4GHz band vs 5GHz band usage rate
 - 2.4GHz and 5GHz channels usage distribution
 - Number of band steers (global, per home, per AP and per station)
 - Number of client steers (global, per home, per AP and per station)
- Alerting and Notification on specific events
- Automatic smart periodic Reporting
- Geographical map for analysis and optimization of Access Point coexistence



/ KEY TAKEAWAYS



Stable, secure and high-performance Home Wi-Fi solution manageable by telecom operators.



Wifi'ON powers existing Home Gateways and Repeaters or Set Top Boxes to extend Wi-Fi coverage to all corners of the home.



SoftAtHome algorithms for intelligent in-home connectivity with client roaming, band steering and channel selection.



Time critical services such as video or gaming delivery over Wi-Fi.

For more information about SoftAtHome:

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