

[Home](#) > [Standards](#)
> IEEE Standard for Information technology-Local and metropolitan area networks-
[Specific requirements-Part 11: Wireless LAN Medium Access Control \(MAC\) and Physical
Layer \(PHY\) Specifications - Amendment 8: Medium Access Control \(MAC\) Quality of
Service Enhancements](#)

ecnnology--Local and metropolitan area networks- Specific

This amendment defines the medium access control (MAC) procedures to support local area network (LAN) applications with quality of service (QoS) requirements. The procedures include the transport of voice, audio, and video over IEEE 802.11 wireless LANs (WLANs).

Sponsor Committee	C/LAN/MAN - LAN/MAN Standards Committee	
	Learn More About C/LAN/MAN - LAN/MAN Standards Committee (http://www.ieee802.org/)	
Status	Superseded Standard	
PAR Approval	2001-05-30 (https://development.standards.ieee.org/myproject-web/public/view.html#pardetail/401)	
Board Approval	2005-09-22	
History	ANSI Approved:	2006-02-09
	Published:	2005-11-11



WORKING GROUP DETAILS

Society	IEEE Computer Society Learn More About IEEE Computer Society (http://www.computer.org)
Sponsor Committee	C/LAN/MAN - LAN/MAN Standards Committee Learn More About C/LAN/MAN - LAN/MAN Standards Committee (http://www.ieee802.org/)
Working Group	802.11 WG - Wireless LAN Working Group
IEEE Program Manager	Christy Bahn Contact Christy Bahn (mailto:c.bahn@ieee.org)
Working Group Chair	Robert Stacey

OTHER ACTIVITIES FROM THIS WORKING GROUP

Active Projects	Active Standards	Superseded Standards	Inactive-Withdrawn Standards	Inactive-Reserved Standards
-----------------	------------------	----------------------	------------------------------	-----------------------------

Current projects that have been authorized by the IEEE SA Standards Board to develop a standard.

P802.11

**IEEE Draft Standard for
Information Technology --
Telecommunications and
Information Exchange Between
Systems Local and
Metropolitan Area Networks --
Specific Requirements - Part
11: Wireless Local Area
Network (LAN) Medium Access
Control (MAC) and Physical
Layer (PHY) Specifications**

Technical corrections and clarifications to IEEE Std 802.11 for wireless local area networks (WLANs) as well as enhancements to the existing medium access control (MAC) and physical layer (PHY) functions are specified in this revision. Amendments 1 to xxx published in 2020 and xxx have also been incorporated into this revision.

Learn More About P802.11

(<https://standards.ieee.org/ieee/802.11/10548>)

P802.11be

IEEE Draft Standard for Information technology-- Telecommunications and information exchange between systems Local and metropolitan area networks-- Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Extremely High Throughput (EHT)

This amendment defines standardized modifications to both the IEEE Std 802.11 physical layers (PHY) and the Medium Access Control Layer (MAC) that enable at least one mode of operation capable of supporting a maximum throughput of at least 30 Gbps, as measured at the MAC data service access point (SAP), with carrier frequency operation between 1 and 7.250 GHz while ensuring backward compatibility and coexistence with legacy IEEE Std 802.11 compliant devices operating in the 2.4 GHz, 5 GHz, and 6 GHz bands. This amendment defines at least one

mode of operation capable of improved worst case latency and jitter.

Learn More About P802.11be

(<https://standards.ieee.org/ieee/802.11be/7516>)

P802.11bf

IEEE Draft Standard for Information Technology -- Telecommunications and Information Exchange Between Systems Local and Metropolitan Area Networks -- Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications - Amendment 4: Enhancements for Wireless Local Area Network (WLAN) Sensing

This amendment defines modifications to the IEEE 802.11 medium access control (MAC); the physical layer (PHY) service interface of High Efficiency (HE) and Extremely High Throughput (EHT) PHYs; and to the Directional Multi Gigabit (DMG) and enhanced DMG (EDMG) PHYs to enhance Wireless Local Area Network (LAN) sensing operation in license-exempt frequency bands between 1 GHz and 7.125 GHz and above 45 GHz.

Learn More About P802.11bf

(<https://standards.ieee.org/ieee/802.11bf/11574>)

P802.11bh

IEEE Draft Standard for Information Technology-- Telecommunications and Information Exchange Between Systems Local and Metropolitan Area Networks-- Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 1: Operation with Randomized and Changing MAC Addresses

This amendment specifies modifications to the IEEE Std 802.11 medium access control (MAC) sublayer mechanisms to preserve the existing services that might otherwise be restricted in environments where STAs in an extended service set (ESS) use randomized or changing MAC addresses, without affecting the privacy of the users corresponding to the STAs. User privacy includes exposure of trackable information to third parties or exposure of an individual's presence or behavior. This amendment introduces mechanisms to enable session continuity in the absence of unique MAC address-to-STA mapping. For STAs in an

ESS that use randomized or changing MAC addresses, this amendment preserves the ability to provide customer support, conduct network diagnostics and troubleshooting, and detect device arrival in a trusted environment

Learn More About P802.11bh

(<https://standards.ieee.org/ieee/802.11bh/10525>)

P802.11bi

Standard for Information Technology-- Telecommunications and Information Exchange Between Systems Local and Metropolitan Area Networks-- Specific requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhanced Service with Data Privacy Protection

This amendment specifies modifications to the IEEE Std 802.11 medium access control (MAC) specification to specify new mechanisms that address and improve user privacy.

Learn More About P802.11bi

(<https://standards.ieee.org/ieee/802.11bi/10526>)

P802.11bk

**Standard for Information
Technology--
Telecommunications and
Information Exchange between
Systems - Local and
Metropolitan Area Networks--
Specific Requirements - Part
11: Wireless LAN Medium
Access Control (MAC) and
Physical Layer (PHY)
Specifications Amendment:
320MHz Positioning**

This standard defines extensions to positioning mechanisms to support 320 MHz channel operation.

Learn More About P802.11bk

(<https://standards.ieee.org/ieee/802.11bk/11117>)

P802.11bn

**IEEE Standard for Information
Technology -
Telecommunications and
Information Exchange between
Systems - Local and
Metropolitan Area Networks -**

Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications - Amendment: Enhancements for Ultra High Reliability

This amendment defines modifications to both the IEEE Std 802.11 physical layer (PHY) and the IEEE Std 802.11 Medium Access Control (MAC). The amendment specifies enhancements for an Ultra High Reliability capability in a Wireless Local Area Network (WLAN). The Ultra High Reliability capability is defined for both an isolated Basic Service Set (BSS) and overlapping BSSs as:

- at least one mode of operation capable of increasing throughput by 25%, as measured at the MAC data service Access Point, in at least one Signal to Interference and Noise Ratio (SINR) level (Rate-vs-Range), compared to the Extremely High Throughput MAC/PHY operation, and
- at least one mode of operation capable of reducing latency by 25% for the 95th percentile of the latency distribution compared to the Extremely High Throughput MAC/PHY operation and
- at least one mode of operation capable of reducing MAC Protocol Data Unit (MPDU) loss by 25% compared to the Extremely High Throughput MAC/PHY operation for a given scenario, especially for transitions between BSSs.

This amendment provides a mechanism to reduce power consumption for Access Points (APs) (including mobile APs) and improved Peer-to-Peer (P2P) operation compared to the Extremely High Throughput MAC/PHY operation. This amendment applies

to carrier frequency operation between 1 GHz and 7.250 GHz. This amendment provides for backward compatibility and coexistence with legacy IEEE 802.11 devices in the 2.4 GHz, 5 GHz and 6 GHz unlicensed bands.

Learn More About P802.11bn

(<https://standards.ieee.org/ieee/802.11bn/11393>)

P802.11bp

IEEE Standard for Information Technology-- Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks-- Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Ambient Power Communication (AMP)

This amendment defines modifications to both the IEEE 802.11 Medium Access Control layer (MAC) and Physical Layers (PHY) to enable the operation of an Ambient Power communication (AMP) station (STA) that is powered using energy harvesting. Operation in sub-1 Gigahertz (GHz) and 2.4 GHz is defined. Specifically, at least one mode of data

communication in the sub-1 GHz band is defined and at least one mode of data communication in the 2.4 GHz band with the AMP communication access category (AC) being set to AC_BK (background) is defined. At least one mode of wireless power transfer in the sub-1 GHz band is defined to support RF energy harvesting. This amendment defines mechanisms for the coexistence of an AMP STA and deployed STAs compliant with IEEE Std 802.11™-2020 that operate in the same radio frequency band as the AMP STA.

Learn More About P802.11bp

(<https://standards.ieee.org/ieee/802.11bp/11592>)

© Copyright 2024 IEEE – All rights reserved. A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.