

802.11gTM

**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 4: Further Higher Data Rate Extension
in the 2.4 GHz Band**

IEEE Computer Society

Sponsored by the
LAN/MAN Standards Committee

This amendment is an approved IEEE
Standard. It will be incorporated into the
base standard in a future edition.



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(Amendment to IEEE Std 802.11TM, 1999 Edition (Reaff 2003)
as amended by

IEEE Stds 802.11aTM-1999, 802.11bTM-1999,
802.11bTM-1999/Cor 1-2001, and 802.11dTM-2001)

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Approved 12 June 2003

IEEE-SA Standards Board

Abstract: Changes and additions to IEEE Std 802.11, 1999 Edition, as amended by IEEE Stds 802.11a-1999, 802.11b-1999, 802.11b-1999/Cor 1-2001, and 802.11d-2001, are provided to support the further higher data rate extension for operation in the 2.4 GHz band.

Keywords: LAN, local area network, radio frequency, wireless

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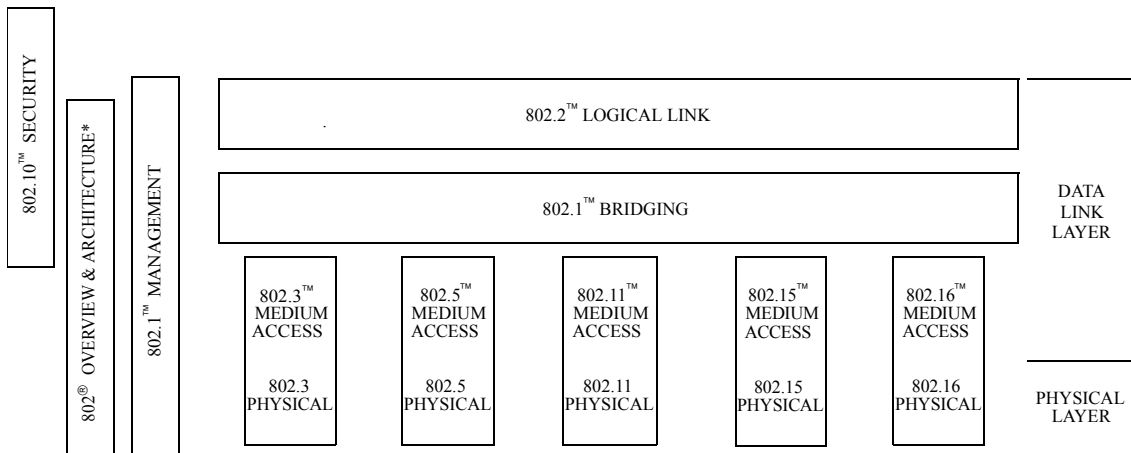
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Introduction

This introduction is not part of IEEE Std 802.11g-2003 (Amendment to IEEE Std 802.11, 1999 Edition, as amended by IEEE Std 802.11a-1999, 802.11b-1999, 802.11b-1999/Cor 1-2001, and 802.11d-2001), 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 4: Further Higher Data Rate Extension in the 2.4 GHz Band.

This amendment is part of a family of standards for local and metropolitan area networks. The relationship between the standard and other members of the family is shown below. (The numbers in the figure refer to IEEE standard designations.¹)



* Formerly IEEE Std 802.1A™.

This family of standards deals with the Physical and Data Link layers as defined by the International Organization for Standardization (ISO) Open Systems Interconnection (OSI) Basic Reference Model (ISO/IEC 7498-1: 1994). The access standards define five types of medium access technologies and associated physical media, each appropriate for particular applications or system objectives. Some access standards have been withdrawn and other types are under investigation.

The standards defining the technologies noted above are as follows:

- IEEE Std 802:² *Overview and Architecture.* This standard provides an overview to the family of IEEE 802 Standards.
- IEEE Std 802.1B™ and 802.1k™ [ISO/IEC 15802-2] *LAN/MAN Management.* Defines an OSI management-compatible architecture and services and protocol elements for use in a LAN/MAN environment for performing remote management.
- IEEE Std 802.1D™ *Media Access Control (MAC) Bridges.* Specifies an architecture and protocol for the interconnection of IEEE 802 LANs below the MAC service boundary.

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²The IEEE 802 Overview and Architecture Specification, originally known as IEEE Std 802.1A, has been renumbered as IEEE Std 802. This has been done to accommodate recognition of the base standard in a family of standards. References to IEEE Std 802.1A should be considered as references to IEEE Std 802.

- IEEE Std 802.1E™
[ISO/IEC 15802-4] *System Load Protocol*. Specifies a set of services and protocol for those aspects those aspects of management concerned with the loading of systems on IEEE 802 LANs.
- IEEE Std 802.1F™ *Common Definitions and Procedures for IEEE 802 Management Information*.
- IEEE Std 802.1G™
[ISO/IEC 15802-5]: *Remote Media Access Control (MAC) Bridging*. Specifies extensions for the interconnection, using non-LAN systems communication technologies, of geographically separated IEEE 802 LANs below the level of the logical link control protocol.
- IEEE Std 802.1H™
[ISO/IEC TR 11802-5] *Recommended Practice for Media Access Control (MAC) Bridging of Ethernet V2.0 in IEEE 802 Local Area Networks*.
- IEEE Std 802.1Q™ *Virtual Bridged Local Area Networks*. Defines an architecture for Virtual Bridged LANs, the services provided in Virtual Bridged LANs, and the protocols and algorithms involved in the provision of those services.
- IEEE Std 802.2
[ISO/IEC 8802-2] *Logical Link Control*.
- IEEE Std 802.3 *CSMA/CD Access Method and Physical Layer Specifications*.
- IEEE Std 802.5
[ISO/IEC 8802-5] *Token Ring Access Method and Physical Layer Specifications*.
- IEEE Std 802.10 *Standard for Interoperable LAN Security (SILS)*. Currently approved: Secure Data Exchange (SDE).
- IEEE Std 802.11
[ISO/IEC 8802-11] *Wireless LAN Medium Access Control (MAC) Sublayer and Physical Layer Specifications*.
- IEEE Std 802.15 *Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for: Wireless Personal Area Networks*.
- IEEE Std 802.16 *Air Interface for Fixed Broadband Wireless Access Systems*.

The reader of this standard is urged to become familiar with the complete family of standards.

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