
**Telecommunications and exchange
between information technology
systems — Requirements for local and
metropolitan area networks —**

Part 3:

Standard for Ethernet

**AMENDMENT 4: Physical layers and
management parameters for 50 Gb/s,
200 Gb/s, and 400 Gb/s operation over
single-mode fiber**

*Télécommunications et échange entre systèmes informatiques —
Exigences pour les réseaux locaux et métropolitains —*

Partie 3: Norme pour Ethernet

*AMENDEMENT 4: Couches physiques et paramètres de gestion pour
le fonctionnement à 50 Gb/s, 200 Gb/s et 400 Gb/s sur des fibres
unimodales*



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IEEE Std 802.3bt™-2018, and
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IEEE Standard for Ethernet

Amendment 4: Physical Layers and Management Parameters for 50 Gb/s, 200 Gb/s, and 400 Gb/s Operation over Single-Mode Fiber

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Abstract: This amendment to IEEE Std 802.3-2018 adds Physical Layer (PHY) specifications and management parameters for 50 Gb/s, 200 Gb/s, and 400 Gb/s operation over single-mode fiber with reaches of at least 40 km.

Keywords: 50 Gb/s Ethernet, 50GBASE-ER, 200 Gb/s Ethernet, 200GBASE-ER4, 400 Gb/s Ethernet, 400GBASE-ER8, amendment, EEE, Energy-Efficient Ethernet, Ethernet, FEC, forward error correction, IEEE 802.3™, IEEE 802.3cn™, PAM4, physical medium dependent sublayer, PMD sublayer, single-mode fiber, SMF

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