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Standard

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8802-1AS**

**Information technology —
Telecommunications and
information exchange between
systems — Local and metropolitan
area networks —**

**Part 1AS:
Timing and synchronization for
time-sensitive applications in
bridged local area networks**

**AMENDMENT 3: Hot standby and
clock drift error reduction**

*Technologies de l'information — Télécommunications et
échange d'information entre systèmes — Réseaux locaux et
métropolitains —*

*Partie 1AS: Temporisation et synchronisation pour les
applications sensibles au temps des réseaux locaux pontés*

*AMENDEMENT 3: Secours immédiat et réduction d'erreur de
dérive d'horloge*

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(Amendment to IEEE Std 802.1AS™-2020
as amended by IEEE Std 802.1AS™-2020/Cor 1-2021,
IEEE Std 802.1ASdr™-2024,
and IEEE Std 802.1ASdn™-2024)

**IEEE Standard for
Local and Metropolitan Area Networks—**

**Timing and Synchronization for
Time-Sensitive Applications**

**Amendment 3: Hot Standby and Clock
Drift Error Reduction**

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Developed by the

LAN/MAN Standards Committee
of the
IEEE Computer Society

Approved 26 September 2024

IEEE SA Standards Board

Abstract: This amendment to IEEE Std 802.1AS™-2020 specifies hot standby and addresses errors and omissions in the description of existing functionality.

Keywords: amendment, best timeTransmitter, frequency offset, Grandmaster Clock, Grandmaster PTP Instance, hot standby, IEEE 802.1AS™, IEEE 802.1ASdm™, phase offset, PTP End Instance, PTP Relay Instance, synchronization, syntonization, time-aware system

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Introduction

This introduction is not part of IEEE Std 802.1ASdm-2024, IEEE Standard for Local and Metropolitan Area Networks—Timing and Synchronization for Time-Sensitive Applications—Amendment 3: Hot Standby and Clock Drift Error Reduction.

The first edition of IEEE Std 802.1AS was published in 2011. A first corrigendum, IEEE Std 802.1AS™-2011/Cor 1-2013, provided technical and editorial corrections. A second corrigendum, IEEE Std 802.1AS™-2011/Cor 2-2015 provided additional technical and editorial corrections.

The second edition, IEEE Std 802.1AS-2020, added support for multiple gPTP domains, Common Mean Link Delay Service, external port configuration, and Fine Timing Measurement for 802.11 transport. Backward compatibility with IEEE Std 802.1AS-2011 was maintained. A corrigendum, IEEE Std 802.1AS-2020/Cor 1-2021, provides technical and editorial corrections.

This amendment to IEEE Std 802.1AS-2020 specifies hot standby and addresses errors and omissions in the description of existing functionality. Hot standby guards against the failure of a single Grandmaster PTP Instance or the failure of communication from that Grandmaster PTP Instance to a Clock Target.

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