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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46569-2025

**Technical requirements for broadband customer networking based on
public telecommunication network - Unified high-speed wire-line based
home networking - Physical layer and data link layer**

基于公用电信网的宽带客户网络联网技术要求 通用介质的有线联网 物理层和数据链路层

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

GB/T 46569 Technical Requirements for Broadband Customer Networking Based on Public Telecommunications Networks. Physical Layer and Data Layer of Wired Networking Using General Media According to the standards GB/T 33854 "Technical Requirements for Broadband Customer Network Interconnection Based on Public Telecommunications Networks - Power Line Interconnection" and GB/T 38832, the network interconnection technology is based on the power line layer.

"Technical Requirements for Broadband Customer Network Connectivity Based on Public Telecommunications Networks. Integrated High-Speed Visible Light Communication" together constitute the framework for home broadband power.

The standard system for wired communication technology.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document is under the jurisdiction of the National Telecommunications Standardization Technical Committee (SAC/TC485).

1 Scope

This document specifies the system architecture and reference model for general-purpose medium wired networking technology, including the template, physical layer (PHY), and data link layer.

(DLL) requirements, etc.

This document applies to the design of general-purpose wired networking equipment in home network environments within broadband customer networks based on public telecommunications networks.

Design, development, and testing; for reference use in dedicated telecommunications networks.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ITU-T G.9962.2018 Specification for the management of Unified high-speed wire-line transceivers for home networking.

ITU-T G.9964.2011 High-speed universal medium wired home networking transceivers - Power spectral density specification (Unified high-speed) working transceivers) balance about earth) Bridges IEEE 802.3.2008 Information Technology Special Requirements Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/Specifications

3 Terms and Definitions

The following terms and definitions apply to this document.