



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

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**Technical requirements for broadband customer networking
based on public telecommunication network - Optical camera
communications**

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Foreword

This standard is one of a series of broadband customer network standards based on public telecommunication networks. This series of standards consists of the following standards.

---Broadband customer network networking technology based on public telecommunication network requires communication and integration of high-speed visible light communication

(GB/T 38832-

2020);

---Broadband customer network networking technology based on public telecommunication networks requires power line networking (GB/T 33854-2017);

---Broadband customer network networking technology based on public telecommunications networks requires wired networking of common media;

---Broadband customer network networking technology based on public telecommunication networks requires networking based on coaxial cables.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to refer to ITU-TG.9992 "Indoor optical camera communication transceiver system architecture, physical layer and data

According to the "Link Layer Specification", the degree of consistency with ITU-TG.9992 is non-equivalent.

1 Scope

This standard specifies the system architecture and reference model, physical layer (PHY) and data link layer of a visible light imaging communication (OCC) transceiver

(DLL) specification.

This standard applies to OCC equipment under the broadband customer network environment based on the public telecommunications network, and the private telecommunications network can also be used as a reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

IEEE802.3-2008 Information Technology Special Requirements Part 3.Carrier Sense Multiple Access with Collision Detection (CSMA/

CD) method and physical layer specification

[Standardforinformationtechnology-Specificrequirements-Part 3.Carrier

sensemultipleaccesswithcolisiondetection(CSMA/CD)accessmethodandphysicallayerspecifica-

tions]

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Aliendomain

Any non-visible light imaging communication network node group connected to the same medium or working in a very close range.

Note. The bridging function to the external domain and the coordination function with the external domain in order to avoid mutual interference are not within the scope of this standard.

3.2

Domain

A visible light imaging communication network, including the domain master node and all those nodes registered to the same domain master node.

Note. In the scope of this standard, the use of the term "domain" without a qualifier refers to the "visible light imaging communication network domain". Other qualifiers can be used for "domain".

3.3

Domain management node domainmaster; DM

A node that supports the domain master function of managing (coordinating) all other nodes in the same domain (that is, allocating bandwidth resources and managing priority). area

Only one active domain master node is allowed in, and all nodes in the domain are managed (coordinated) by a single domain master node.

3.4

Endpointnode

Distinguish between domain master node function and non-domain master node function, or used to distinguish one-way broadcast node function and non-one-way broadcast node function.

3.5

Global management node globalmaster; GM

Provides coordination functions between different domains (e.g., communication resources, the strategy of the domain master), and can also be transmitted by a remote management

system (e.g.,

Broadband Forum CPEWAN Management Protocol) initiated management functions to support broadband access.

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