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

GB/T 7262.1-1993

Replacing GB/T 7262-2009

**Technical requirement and equipment arrangement for highway
communication
(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.

This document replaces GB/T 7262-2009 "Technical Requirements and Equipment Configuration for Highway Communication". Compared with GB/T 7262-2009, except for the following.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The definition of highway communication networks has been changed (see 3.1.1, 2009 version 3.1.1);
 - b) Added terms and definitions for public communication networks (see 3.1.2);
 - c) The abbreviations "PDH" and "SONET" have been removed (see section 3.2 of the 2009 edition);
 - d) Added abbreviations "BITS", "FEC", "GE", "LPR", "MLM", "ODU", "OTU", "PRC", "PTN", "SIP", and "SLM".
- "SP", "STP", "UPS", and "VSAT" (see 3.2);
- e) The hierarchy and composition of the highway communication network have been

changed (see 4.1 and 4.2, 2009 edition of 4.1 and 4.2);

f) The basic networking requirements have been changed (see 5.1, 5.1.2 in the 2009 version);

g) The general requirements for emergency communication systems have been removed (see 5.1.3 in the 2009 edition);

h) The network structure of the highway communication network was changed (see 5.2, 5.1.1 in the 2009 edition);

i) The general requirements for fiber optic digital transmission systems have been removed (see 5.2.1 in the 2009 edition);

j) The nominal operating wavelength and fiber requirements have been changed (see 5.3.1.1, 5.2.2.1 in the 2009 version);

k) The requirements for error performance, jitter, and drift performance of SDH digital transmission systems have been changed (see 5.3.1.4, 5.2.4 in the 2009 version);

l) Technical requirements for PTN and OTN optical cable lines have been added (see 5.3.2 and 5.3.3);

m) The technical requirements for SDH optical interface parameters have been changed (see 5.3.4.1.1, 5.7.2 in the 2009 version);

(n) Added parameter requirements for PTN and OTN optical interfaces (see 5.3.4.1.2 and 5.3.4.1.3);

o) The SDH optical interface classification has been changed (see 5.3.4.2.1, version 5.7.3.1 of 2009);

p) Added PTN optical interface classification and OTN optical interface classification (see 5.3.4.2.2 and 5.3.4.2.3);

q) The digital synchronization network interface and its basic requirements have been changed (see 5.4.1.5, version 5.6.5 in 2009);

r) The technical requirements for digital synchronization network performance indicators have been changed (see 5.4.1.6, 5.6.6 in the 2009 version);

s) The technical requirements for the synchronization link have been changed (see 5.4.1.7, 5.6.7 in the 2009 version);

t) The clock reliability description has been changed (see 5.4.1.8, 5.6.8 in the 2009 version);

u) Added technical requirements for the public signaling network (see 5.4.2);

v) The technical requirements for SDH network management systems have been removed

(see section 5.2.5 of the 2009 version);

w) Added technical requirements for network management networks (see 5.4.3);

x) The technical requirements for transmission indicators of the voice switching system have been changed (see 5.5.1.3, 5.3.3 in the 2009 version);

y) Added technical requirements for image and data services (see 5.5.2 and 5.5.3);

z) The technical requirements for access network systems have been removed (see section 5.4 of the 2009 edition);

aa) The technical requirements for the electrical interface have been changed (see 5.5.4.1, 5.7.1 in the 2009 version);

bb) The Ethernet interface technical requirements have been changed (see 5.5.4.2, version 5.7.4 of 2009);

(cc) The technical requirements for the access network interface have been removed (see 5.7.7 in the 2009 version);

(dd) The technical requirements for the communication pipeline have been changed (see 5.6.1, 5.8 in the 2009 version);

(ee) Added technical requirements for communication power supplies (see 5.6.2);

(ff) Added technical requirements for optical fibers and cables (see 5.6.3);

(gg) Changed the communication method of highway emergency communication facilities (see 5.6.4, 5.9 in the 2019 version);

(hh) PTN and OTN transmission equipment, as well as softswitch equipment, have been added and configured in the primary highway communication network center and the secondary highway communication network.

Relevant technical requirements for information network centers and highway level 3 communication network centers (see 6.2.1.2, 6.2.2.2 and 6.2.3.2);

i) Added configuration of communication network node equipment at all levels and Appendix B (see 6.3 and Appendix B).

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 and is under the jurisdiction of the Ministry of Transport of the People's Republic of China.

1 Scope

This document specifies the basic regulations, technical requirements, and equipment configuration requirements for the planning, design, and networking of highway communication networks.

This document applies to the construction and reconstruction of highway communication 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.

GB/T 7611-2016 Characteristics of Bit Rate Electrical Interfaces for Digital Networks GB/T 19516 Wired Emergency Telephone System for Highways GB/T 20185-2006 Technical requirements for optical interfaces of synchronous digital architecture equipment and systems GB 50373 Standard for Design of Communication Pipelines and Channels GB/T 51117-2015 Technical Specification for Digital Synchronization Network Engineering GB/T 51242-2017 Specification for Engineering Design of Synchronous Digital Hierarchy (SDH) Fiber Optic Transmission Systems GB/T 51398-2019 Technical Standard for Optical Transport Network (OTN) GD/J116-2020 Technical Requirements and Measurement Methods for Wavelength Division Multiplexing System Equipment YD/T 1099-2013 Technical Requirements for Ethernet Switches YD/T 1299-2016 Technical Requirements for Performance of Synchronous Digital Hierarchy (SDH) Networks. Jitter and Drift YD/T 2374-2011 General Technical Requirements for Packet Transport Networks (PTN) YD/T 2397-2012 Technical Requirements for Packet Transport Network (PTN) Equipment YD5076-2014 Design Specification for Fixed Telephone Switching Network YD/T 5139-2019 Design Specification for Wired Access Network Equipment Installation Engineering (tocalfibreandcable) clocks(SEC)]