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ICS 33.040.20
CCS M30

YD

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

YD/T 6440-2025

General technical requirements of digital twin for Optical Transport Network (OTN)

光传送网（OTN）数字孪生总体技术要求

(English Translation)

Issued on: July 2, 2025 **Implemented on: November 1, 2025**

Issued by: Ministry of Industry and Information Technology

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1 Foreword

YD/T 6440-2025 was issued by Ministry of Industry and Information Technology on 2 July 2025 and has been in force since 1 November 2025.

The YD/T prefix marks a recommended standard. It is not law in itself: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it.

The document runs to 15 pages in English translation.

2 Scope Preview

This standard specifies the overall technical requirements for digital twins in optical transmission networks, including overall network architecture, system functional requirements, data layer, model layer, digital twin management, and interface protocol technology requirements. This standard applies to the development, testing, and planning of digital twin systems for optical transmission networks, as well as the development and testing of optical transmission network equipment supporting digital twin functions.

YD/T 6440-2025 falls under ICS 33.040.20, in the field of telecommunications.

This catalogue holds 3,420 other YD/T standards in that field.

In this catalogue, YD/T standards carry edition years from 1982 to 2026.

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3 About this standard

Sector: Telecommunication Industry Standard (Recommended)

Issued by: Ministry of Industry and Information Technology

English translation: about 15 pages (approximate)

4 Related standards

Standards on related subjects:

YD/T 3710-2020 - Test methods of message layer of LTE-based vehicular communication

YD/T 6447-2025 - Scenes and requirements of information telecommunication generic cabling system - Distributed building campus

YD/T 6439-2025 - Technical requirements for fine grain Optical Transport Network (fgOTN)

5 Classification and status

International classification (ICS): 33.040.20

Chinese Standard Classification (CCS): M 30

Prefix YD/T: recommended standard.

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