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YD

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

YD/T 3834.2-2023

Quantum Key Distribution (QKD) System Technical Requirements - Part 2: QKD System Based on Gaussian Modulated Coherent State Protocol

量子密钥分发（QKD）系统技术要求 第2部分：基于高斯调制相干态协议的 QKD 系统

(English Translation)

Issued on: July 28, 2023 **Implemented on: November 1, 2023**

Issued by: Ministry of Industry and Information Technology

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https://chinastandards.org/standards/yd-t-3834-2-2023

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1 Foreword

YD/T 3834.2-2023 was issued by Ministry of Industry and Information Technology on 28 July 2023 and has been in force since 1 November 2023.

It is one of 2 parts of the YD/T 3834 series.

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.

2 Scope Preview

This standard specifies the technical requirements for QKD systems based on Gaussian modulation coherent state protocols using optical fiber channel transmission, mainly including system classification, system models and reference points, system parameter requirements, QKD equipment technical requirements, combiner/demultiplexer technical requirements, optical paths Switch technical requirements, other system requirements, power supply voltage tolerance range and network element management technical requirements, etc. This standard applies to the development, use and management of QKD systems based on Gaussian modulation coherent state protocols using optical fiber channel transmission.

YD/T 3834.2-2023 falls under ICS 33.180, in the field of telecommunications.

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

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

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

Other parts of this standard:

YD/T 3834.1-2021 - Quantum key distribution (QKD) system technical requirements - Part 1: QKD system based on decoy state BB84 protocol

Standards on related subjects:

YD/T 2554.1-2013 - Plastic optical fiber connector - Part 1: Type LC

GB/T 9771.1-2008 - Single-mode optical fibres for telecommunication -- Part 1: Characteristics of a dispersion unshifted single-mode optical fibre

GB/T 18480-2001 - Specification for submarine optical fiber cables

YD/T 3831.3-2025 - Integrated coherent transmit-receive optical sub-assembly - Part 3: 800Gb/s

YD/T 3835.2-2023 - Quantum Key Distribution (QKD) System Test Method - Part 2: QKD System Based on Gaussian Modulated Coherent State Protocol

5 Classification and status

International classification (ICS): 33.180

Chinese Standard Classification (CCS): M 33

Prefix YD/T: recommended standard.

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