ICS 35.110
CCS L 79



# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# GB/T 46493.1-2025

## Internet of things - Logistics park - Part 1: General requirements for application system

物联网 物流园区 第1部分：应用系统通用要求

**Issued on: October 5, 2025** **Implemented on: May 1, 2026**

**Issued by: State Administration for Market Regulation;**
**Standardization Administration of the PRC**

# Table of Contents





## 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 is Part 1 of GB/T 46493 "Internet of Things Logistics Parks". GB/T 46493 has already published the following parts.

1.General Requirements for Application Systems;

2.Competency Assessment Model 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 National Information Technology Standardization Technical Committee (SAC/TC28). This document was drafted by: China Packaging Co., Ltd., State Grid Corporation of China, China Electronics Technology Standardization Institute, and State Grid Zhejiang Branch. State Grid Zhejiang Electric Power Co., Ltd., State Grid Zhejiang Electric Power Co., Ltd. Jiaxing Power Supply Company, State Grid Zhejiang Electric Power Co., Ltd. Wenzhou Power Supply Company University of Electronic Science and Technology of China, China Federation of Logistics and Purchasing, Xi'an Aerospace Automation Co., Ltd., Chongqing Institute of Quality and Standardization, Anshan Shandong Iron and Steel Group Co., Ltd., Shanghai Yixun Information Technology Co., Ltd., Hongtu Intelligent Logistics Co., Ltd., and Zhejiang Dahua Technology Co., Ltd. Limited Company, Tianjin Kunpeng Information Technology Co., Ltd., Hubei Commerce and Logistics Group Co., Ltd., Southwest Petroleum University, China Railway Materials and Trade Group Co., Ltd. Company, Shenzhen Panyueliang Innovation Technology Co., Ltd., Hubei Jiaotong Logistics Group Co., Ltd., Hangzhou Hikvision Digital Technology Co., Ltd. Wuhan Yangtze International Trade Group Co., Ltd., Suzhou Gebi Intelligent Technology Co., Ltd., China Construction Technology Group Co., Ltd., and China Telecom Consulting & Design Co., Ltd. Computer Research Institute Co., Ltd., Beijing Technology and Business University, China Mobile (Hangzhou) Information Technology Co., Ltd., China Mobile IoT Co., Ltd., Guizhou Fengmao Supply Chain Management Co., Ltd., Wuxi Internet of Things Industry Research Institute, Chongqing University of Posts and Telecommunications, Henan Dahe Shentong Cold Chain Logistics Co., Ltd., Chengdu Qin Sichuan Internet of Things Technology Co., Ltd., Wuchan Zhongda Logistics Investment Group Co., Ltd., Perception Data Chain (Wuxi) Technology Co., Ltd., Beijing Electric Xin Planning and Design Institute Co., Ltd., Zhejiang Lierda Internet of Things Technology Co., Ltd., Beijing University of Science and Technology, Beijing Interchain Spacetime Digital Technology Co., Ltd. The company, China Southern Power Grid Co., Ltd. Ultra-High Voltage Transmission Company, and Inspur Cloud Industrial Internet Co., Ltd. The main drafters of this document are. Song Kuiyun, Su Jingru, Yang Hong, Guo Yinghui, Shen Qixing, Shi Yutong, Li Xiaoyu, Tao Yi, Hou Haiyun, and Yu Nengchao. Kong Weisheng, Lü Zhong, Liu Ying, Li Yinglong, Zhang Ke, Zhou Yong, Zhang Xueqin, Huang Qun, Fu Genli, Wang Wen, Chen Yu, Cao Yijun, Fan Zesen, Wang Li Chen Siyuan, Yao Huachao, Li Qian, Li Linjing, Tang Huaikun, Zhang Liang, Wu Mingjuan, Zhang Yan, Yan Jun, Shao Hanshu, Sun Jian, He Mingke, Chen Shuyi, Shi Gantu Li Jiajing, Chen Xu, Zhang Xi, Wang Hao, Wang Qu, Chang Xuan, Wu Zhengshu, Wang Zhijun, Zhang Cheng, Fang Guiming, Cao Tingsheng, Wang Lu, Ye Shujun, Xu Chun Yang Deping, Zeng Tao, Pan Jin, Ding Zhen, Ding Fan, Bian Daikui, Zheng Desheng, Xie Minghao, Wang Dongliang, Wei Yulong, Lu Yapeng, Zhang Hui, Zhu Qiang, Ni Manyuan, Mei Zheng, Wu Jingle, Zhong Kai, Ye Le, Han Yan, Zheng Limin, Liang Yongzeng, Li Yanxia, Su Min, Jia Ling, Fu Meixia, Cui Tangshan, Qi Guangpeng, Shan Shitai.

To establish a coordinated, efficient, and systematic modern logistics standard system, and to standardize the application of Internet of Things (IoT) technology in logistics parks, the following measures are formulated. GB/T 46493 "Internet of Things Logistics Parks". GB/T 46493 provides guidance for the application of IoT in logistics parks by specifying the general system requirements and capability assessment models. The system design, deployment, and operation management of the application provide more convenient and standardized guidance for the application of IoT technology in logistics parks, supporting the development of IoT systems. The optimization and improvement of flow capacity is planned to consist of two parts.

1.General Requirements for Application Systems. The purpose is to establish the architecture of the IoT application system for logistics parks and to provide general requirements. The requirements are for system design, deployment, and operation management.

2.Capability Assessment Model. The purpose is to provide capability assessment items for the application of IoT technology in logistics parks, facilitating... Evaluate. Internet of Things Logistics Park Part



## 1 Scope

GB/T 46493.1-2025 is the Chinese national standard covering the connected logistics park - the gate and yard management, the vehicle and container identification, the dock scheduling and the warehouse systems, the sensors on the assets and the platform that ties them together. Part 1 of the series, first edition. In force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document outlines the architecture of an IoT application system for logistics parks, and specifies the sensing and control equipment for such systems. The general requirements cover five aspects. application platform, user interaction, communication network, and system security. This document applies to the design, deployment, operation, and management of IoT application systems in logistics parks.

## 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 18354 Logistics Terminology

GB/T 30332 Requirements for Warehouse Receipt Elements and Format

GB/T 33745 Internet of Things Terminology

GB/T 36951 Information Security Technology - Security Technical Requirements for Internet of Things Sensing Terminal Applications

GB/T 37025 Information Security Technology - Security Requirements for Data Transmission in the Internet of Things

GB/T 37093 Information Security Technology - Security Requirements for Internet of Things Sensing Layer Access to Communication Networks

GB/T 44459-2024 General Technical Requirements for Digitalization of Logistics Parks

GB/T 45728 Internet of Things (IoT) Swarm Intelligence Sensing Technology Architecture
WB/T 1138-2023 Intelligent Warehouse Management Standard

## 3 Terms and Definitions

The terms and definitions defined in GB/T 18354 and GB/T 33745 apply to this document.

4.Abbreviations The following abbreviations apply to this document. APP. Application software UWB. UltraWideband

## 5 System Architecture

The Logistics Park Internet of Things Application System (hereinafter referred to as the "Application System") applies Internet of Things (IoT) technology to the management, operation, and service of logistics parks. A comprehensive information system for services, which integrates the park's IoT infrastructure, various smart devices, sensors, communication networks and platforms to achieve [the following is unclear and likely incomplete. "to realize the comprehensive information system for services"]. Comprehensive perception, real-time monitoring, and intelligent scheduling of personnel, vehicles, goods, sites, facilities, and equipment within the logistics park.