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Internet of Things based Acquisition System of Industrial Intelligent Bar Code for smart city applications

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Abstract

In order to improve the acquisition efficiency of bar code acquisition technology and the management efficiency of enterprises in the Internet of things, and bring more benefits to related enterprises, the barcode technology of perception layer in the Internet of things was added into the enterprise resource planning system, thus getting an effective and convenient barcode acquisition system. The research results show that the circuit board of the automatic barcode acquisition system studied here is based on the built-in barcode program and joined the enterprise resource planning system. It realizes the connection and integration of the two, which can not only run independently, but also simultaneously, to a large extent, playing its role. It can be seen that the integration of the barcode technology of the perception layer in Internet of things and the enterprise resource planning system can obtain a new industrial automatic barcode acquisition system. It can not only meet the requirements of barcode acquisition, but also improve the efficiency of barcode acquisition, which can be used for reference for manufacturing enterprises in terms of projects that produce according to the order.

Key words: Internet of Things, Bar Code Acquisition, Manufacturing, Enterprise Resource Planning System.

1. Introduction

With the continuous development of computer technology, bar code is widely used in various industries, and it has been popularized in many countries in the world. Especially in daily life, bar code technology is widely used to help people improving their work efficiency. Bar code technology mainly includes optical, mechanical, electrical, and computer technology. It collects some data quickly and transmits the information to the background system to prepare for the follow-up work. Bar code technology enables information to be quickly acquired and transmitted, helps solve the problem of real-time data acquisition in computer applications, and lays a solid foundation for the use and management of product information.

Especially in the Internet of Things (IoT), the application of IoT terminals in many fields requires faster access to information for the next operation. Typically, in the financial and logistics fields, timely access to information can obtain real-time data of objects, which not only improves the operational efficiency, but also ensures the economic benefits of enterprises or individual users.

In the process of information technology development, bar code technology and bar code system also break through more traditional technology and improve related functions. Finally, bar code can mark many information such as the country of production, manufacturer, name of business, date of production, book classification number, starting and ending point, category and date of mail, so it is widely used in commodity circulation, book management, postal management, financial management and other fields.

But at present, in the industrial field, many projects of manufacturing enterprises are written in order, so the demand for bar code acquisition system will be different. Thus, many manufacturing enterprises also use enterprise resource planning (ERP) system, which liberates human resources and realizes information management in many aspects. However, in technology, the bar code technology and ERP system have not been combined to solve the related problems. Therefore, considering the high efficiency and convenience of ERP system and the characteristics of simple bar code technology, fast data acquisition, large data acquisition capacity, stability and reliability, flexible use and low cost, these two technologies are combined. It not only can effectively improve the efficiency of bar code acquisition, but also can enable them to play their respective advantages independently in the face of different enterprises and solve the related problems, which can be used for reference in the production projects and management of manufacturing industry.