Internet of Things WiFi Network Distribution Method PDF

In the era of the **Internet of Things**, the popularity of smart devices has made our lives more convenient. These devices, such as **smart door locks**, cameras, air purifiers, etc., all rely on Wi-Fi to achieve networking operations.

So, how do IoT devices connect to routers via Wi-Fi? This article will introduce you to seven ways of **Wi-Fi network** distribution in detail, so that you can understand the networking secrets of smart devices.

First, let's take a look at the two working modes of Wi-Fi: STA (Station) mode and AP (Access Point) mode. Home Wi-Fi routers usually work in AP mode, as wireless hotspots, to provide Wi-Fi connections for other devices.

Other devices such as wireless cameras, TVs, air conditioners, etc. work in STA mode and are connected to routers as wireless terminals. When performing Wi-Fi network distribution, the device will work in AP mode for a short time, allowing the mobile phone to connect and send

network distribution information, and then switch to STA mode to achieve connection with the router.

7 top IoT WiFi network distribution methods

Next, let's explore the seven solutions for Wi-Fi network configuration. Taking wireless network cameras as an example, we will explain the basic principles of each solution in detail:

Device hotspot network configuration

Device hotspot network configuration (dev-ap-config) is a common network configuration method. First, put the device in AP mode, connect the mobile phone to the device, and then send network configuration information to the device through the mobile phone to complete the connection between the device and the router. The specific process is as follows:

Mobile hotspot network configuration

Mobile hotspot network configuration (phone-ap-config) is similar to device hotspot network configuration, but the hotspot is created by the

mobile phone, and the mobile phone completes the connection with the router by sending network configuration information.

Bluetooth network configuration

Bluetooth network configuration (ble-config) uses low-power Bluetooth technology to transmit network configuration information, requiring the device and mobile phone to support Bluetooth function. Through Bluetooth connection, efficient network configuration is achieved.

Zero-configuration network configuration

Zero-configuration network configuration (zero-config) does not require users to enter network configuration information in the mobile phone APP, and uses the networked device to configure the new device for fast connection. This solution requires that both the main configuration and the to-be-configured device can send and receive 802.11 management frames.

One-click network configuration

One-click network configuration (smart-config) simplifies the network

configuration process. Users only need to enter Wi-Fi information in the APP, and the mobile phone sends the network configuration information through broadcasting. The connection is completed after the device receives it.

Router network configuration

In the router network configuration (router-config) mode, the router turns on a specific hotspot in the network configuration mode, obtains the network configuration information after the device is connected, and then the router switches to the regular hotspot to connect the device to the router.

Scan code network configuration

Scan code network configuration (webcam-config) requires the device to have a camera and QR code decoding capabilities, and completes the network configuration process by scanning the QR code.

In summary, there are various **Wi-Fi network** configuration methods, and each solution has its own characteristics and applicable scenarios. Understanding these 7 IoT WiFi network configuration methods will help

you better manage and operate smart devices and enjoy the convenient life brought by technology.

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