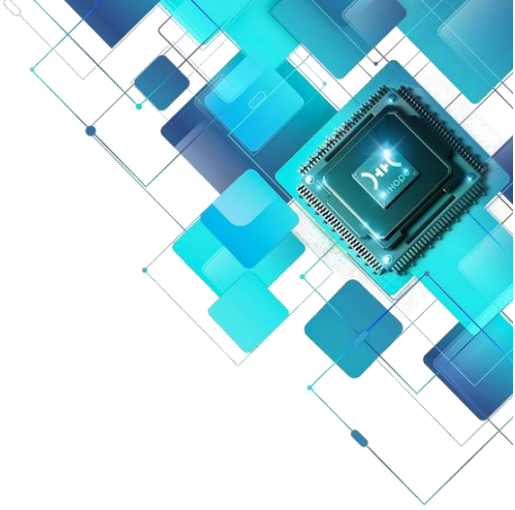
HOPERUN
Information Technology
潤和軟件



HH-D02 NearLink Development Board
Product manual

Document version: 02

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1 Overview

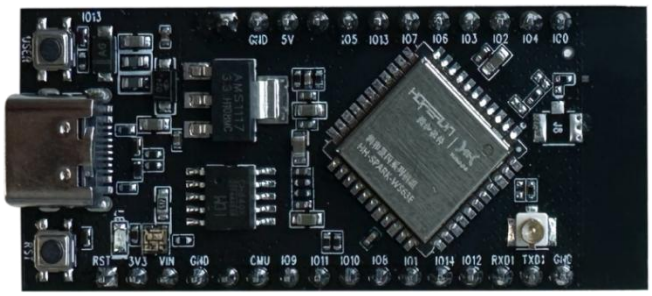

Figure 1-1 HH-D02 NearLink development board

HopeRun HH-D02 NearLink development board is a highly integrated 2.4GHz SoC Wi-Fi, BLE and SLE Combo chip development board that integrates IEEE802.11b/g/n/ax baseband and RF circuits. The RF circuit includes the power amplifier PA , low noise amplifier LNA, RF balun , antenna switch and power management modules, the motherboard adopts stamp hole interface, PCB on-board antenna, small size, rich external interfaces, easy to develop and integrate. It is suitable for IoT fields such as smart homes, smart wearables, medical monitoring, industrial testing, electric power and water conservancy, and smart agriculture.

2 Product Highlights

- **Flexible networking capabilities**

✧ Supports three networking methods: Wi-Fi/BLE/SLE

- **Complete network support**

✧ Support IP4/IPv6 network functions

✧ Support CoAP/MQTT/HTTP/JSON basic components

- **Powerful security engine**

✧ Supports multiple hardware encryption algorithms, secure storage, secure boot, and memory isolation features

- **Open operating system**

✧ Open operating system Oniro provides an open, efficient and secure system development and operating environment

3 Technical parameters

Table 3-1 HH-D02 NearLink development board technical parameters

Classification	describe
SoC	● Solution based on HiSilicon NearLink WS63E, highly integrated 2.4GHz SoC Wi-Fi, BLE and SLE Combo chip ● Integrated high-performance 32bit microprocessor, hardware security engine and rich peripheral interfaces, including SP1, OSPI, UART, I2C, PWM, GPIO and multi-channel ADC; the chip has built-in SRAM and Flash, can run independently, and supports Run programs on Flash
Operating system	● Supports Oniro and more
Communication ability	● Supports reliable communication algorithms such as TPC, automatic rate, and weak interference immunity in complex environments
Networking capabilities	● Supports three networking methods: Wi-Fi, BLE or SLE
Network capabilities	● Support IPv4/IPv6 network functions ● Support DHCPv4/DHCPv6 Client/Server ● Support DNS Client function ● Support mDNS function ● Support CoAP/MQTT/HTTP/JSON basic components
Security capabilities	● Hardware implementation of AES128/256 encryption and decryption algorithm ● Hardware implementation of HASH-SHA256 and HMAC_SHA256 algorithms ● Hardware implementation of RSA and ECC signature verification algorithms ● Hardware implements true random number generation, meeting FIPS140-2 random testing standards ● Hardware supports TLS/DTLS acceleration ● Hardware supports national secret algorithms SM2, SM3, SM4 ● Internally integrated EFUSE, supporting secure storage, secure boot, and hardware ID ● Internally integrated MPU features support memory isolation features

4 Packing list

Table 4-1 Packing list

serial number	content	quantity
1	HH-D02 NearLink Development Board	1
2	Type-C USB data cable	1