



HOPERF Matter Solution

Lei Sun







IoT Module

Signal Chain

HOPERF Matter Product Line Overview





Oct 2022

Jan 2023

Feb 2024

June 2024

2025

1、Matter 1.0 Released

- Matter 1.0 released
- Highly paid close attention to overseas market demand

2. Matter product line established

- The software development team comes from the Silicon Labs technical team
- Definitely technologyoriented software custom development services
- Join CSA Alliance
- Join Thread Group

3. Multiple Matter solutions launched

- 4 standard Thread/Wi-Fi modules
- DAC certificate issuance capability
- Mature mass production tools and solutions

4. Enhance influence in the Matter industry

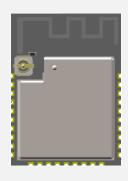
- Join CSA Member Group China
- Participate in CSA MOD/MDC
 Actively participate in CMGC
 activities

5. Rich experience in custom software development

- PIR Sensor
- Window covering
- Window covering controller
- LED driver
- Thermostat
- Fan & Light
- Switch, socket
- Door lock
-

Matter Product Development Process













Hardware Module

- RF design and verification of hardware modules
- Experienced RF hardware engineers required
- Expensive RF test equipment is required
- Passed FCC/CE certifications

Software Development

- Involving multiple wireless protocols such as Matter/Thread/BLE/Wi-Fi, development difficulty increases sharply
- Setting up a development environment is complex and time-consuming
- · It is difficult to debug technical problems

Matter Certification

- Comprehensive planning and product
 Matter certification are required
- Don't understand the Matter certification and testing process
- Matter certification pre-testing and failure analysis is difficult

Manufacturing

- The requirements for Matter security are unclear
- The management of DAC certificates and private keys is complex
- The process of burning DAC certificate is cumbersome
- QR code management is complex

HOPERF Matter Module



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HM-MT2401

HM-MT2401B

HM-MT2401C

HM-MT2401 EVB Kit

HM-MT5801

HM-MT5801 EVB Kit

- Silicon Labs MG24
- Mesh networking has good stability
- Battery-powered
- Products with good profits pursue performance and quality
- High-end market

- ASR 5822 Soc
- Star network
- Power supply
- Cost-sensitive products
- Mid and low-end markets

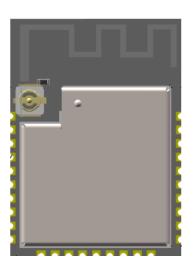
HOPERF Matter Module

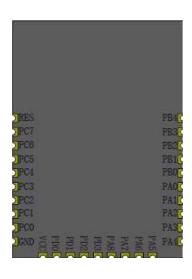


Module	HM-MT2401	HM-MT2401B	HM-MT2401C	HM-MT5801
Protocol type	pe Matter over Thread Matter		Matter over Thread	Matter over Wi-Fi
Chip type	MG24	MG24	MG24	ASR582x
Security Level (Optional)	Secure High	Secure High	Secure High	-
Antenna type	PCB/external antenna	PCB/external antenna	external antenna	PCB/external antenna
Transmit power	19.5 dBm	10 dBm	10 dBm	20 dBm
Dimensions (mm)	15.8 x 22 x 2.6	15.8 x 22 x 2.6	10 x 12.7 x 2.6	15.8 x 20.3 x 2.6
Voltage	1.8-3.6V	1.8-3.6V	1.8-3.6V	3.0-3.6V
Flash size	1536KB	1536KB	1536KB	4MB
External Flash (Optional)	2/4/8 MB	2/4/8 MB	2/4/8 MB	-
RAM size	256KB	256KB	256KB	352KB
Product type applied	Electricians, lighting, Sensors, thermostats, Curtain motor, etc.	Electricians, lighting, Sensors, thermostats, Curtain motor, etc.	Electricians, lighting, Sensors, thermostats, Curtain motor, etc.	Electricians, lighting, Sensors, Curtain motor, etc



Matter over Thread module HM-MT2401













Important features of modules

- Based on Silicon Labs' latest MG24 Soc
- Support low power consumption
- The maximum transmit power is 19.5 dBm
- Rich peripherals, including 26 GPIO
- Internal Integrated 1.5 MB Flash and 256 KB RAM
- Support OTA upgrade using internal Flash
- Supports PCB antenna and external IPEX antenna interface

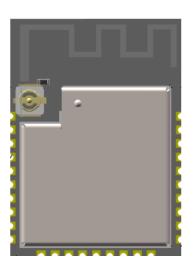
Potential target customers

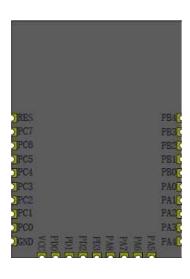
- Long distance and strong stability
- The module integrates a rich set of peripherals and uses SoC mode to develop Matter products

Potential target market



Matter over Thread module **HM-MT2401B**













Important features of modules

- Based on Silicon Labs' latest MG24 Soc
- Ultra low power consumption
- The maximum transmit power is 10 dBm
- Rich peripherals, including 26 GPIO
- Internal Integrated 1.5 MB Flash and 256 KB RAM
- Support OTA upgrade using internal Flash
- Supports PCB antenna and external IPEX antenna interface

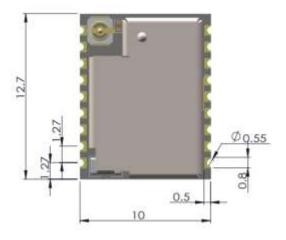
Potential target customers

- Long distance and strong stability
- The module integrates a rich set of peripherals and use SoC mode to develop Matter products

Potential target market



Matter over Thread module **HM-MT2401**C











Important features of modules

- Based on Silicon Labs' latest MG24 Soc
- Ultra low power consumption
- Extra small size
- The maximum transmit power is 10dBm
- Internal Integrated 1.5MB Flash and 256KB RAM
- Support OTA upgrade using internal Flash

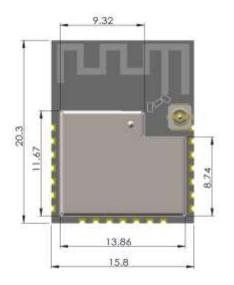
Potential target customers

- Battery powered, small size, pursuit of ultimate low power consumption
- Base this mode (module connected to other MCU by serial port) to develop Matter products

Potential target market



Matter over Wi-Fi module HM-MT5801











Important features of modules

- Based on ASR582 Soc
- The maximum transmit power is 20 dBm
- Internal Integrated 4 MB Flash and 352 KB RAM
- Rich peripherals, including 15 GPIO
- Support OTA upgrade using internal Flash
- Supports PCB antenna and external IPEX antenna interface

Potential target customers

- Conventional power supply equipment, pursuing the ultimate cost performance
- Base this mode (module connected to other MCU by serial port) to develop Matter products

Potential target market

Matter Module Roadmap



Matter over Thread Module

Matter over CERTIFIED COMPONENT

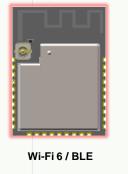
HM-MT2401 HM-MT2401C

MATTER AD CERTIFIED HM-MT2401C

Matter over Wi-Fi Module









Module Selection Guide



Module Model	Protocol	Standard (Default)	Enhanced Security (Optional)	External Flash (Optional)	Custom Hardware Module (Optional)
HM-MT2401	Thread/BLE	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	
HM-MT2401B	Thread/BLE	$\sqrt{}$	$\sqrt{}$		Module size, antenna type, chip model, special needs customization, etc.
HM-MT2401C	Thread/BLE	$\sqrt{}$	$\sqrt{}$	\checkmark	
HM-MT5801	Wi-Fi/BLE	$\sqrt{}$	-	-	

HOPERF Matter Customer Service Model



Service Model 1



Service Model 2



Service Model 3



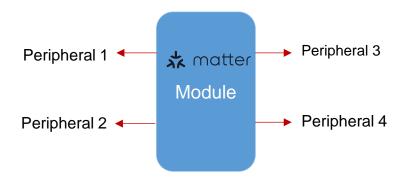
Service Model 4



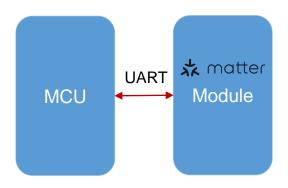
development service

HOPERF Matter Development Service





Example: SoC Mode



Example: Serial communication mode



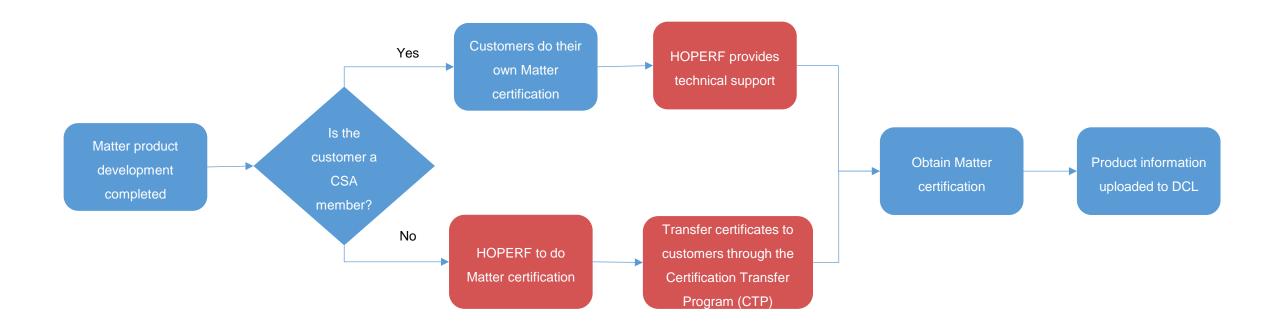
HOPERF Matter Certification Service





Bring Credibility to Your Product

Certification shows interoperability with respective certified products. Show the market your commitment to quality.



HOPERF Matter Manufacturing Tool





- Mature and stable Matter mass production solution
- Matter manufacturing tool
 - Designed by HOPERF
 - DAC certificate burning
 - CD certificate burning
 - Configure network parameter burning
 - Matter firmware burning
 - Bootloader burning
 - QR Code Print









Matter/Zigbee PIR Dual Protocol Product

- Customer is Fortune Global 500
- Extremely complex function
- Lots of customized functions
- High safety requirements
- High power consumption requirements
- High test requirements

Achieve the project successfully

- Completed the project on time(nearly 8 months)
- Customers highly recognize professional ability
- Awarded "Technical Collaboration Award"

Advantages of HOPERF Matter Solution



01

Professional technical team

- In-depth understanding of Matter protocol
- · Very familiar with the Silicon Labs platform
- Rich experience in Matter certification and mass production



Keep up with Matter Standard

- Keep an eye on the evolution and iteration of Matter standards
- Early involved in hot technologies like Aliro/NFC
- Technology sharing in CMGC Matter interest group



03

Stable supply chain system

- More than ten years of stable cooperation with upstream chip manufacturers
- With the module production plant, the quality and effectiveness can be controlled
- · Efficient modular automated production test pipeline





Why Choose HOPERF Matter?





Hardware Module





Matter Software Development Service

The first echelon of Matter solution manufacturers

Provide a complete set of software and hardware solutions to truly assist customers launch Matter product



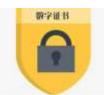
Matter Certification Pre-test





Factory Manufacturing





DAC certificate issuance



Formidable R&D capabilities

HOPERF boasts a Matter R&D team composed of top experts in the industry, equipped with extensive experience and expertise in Matter software development and innovative technologies.



Diverse collaboration models

HOPERF offers a tailored one-stop solution, including hardware modules, Matter software development, DAC certificates, and certification testing, to meet diverse customer needs.



Agile production capabilities

HOPERF has an agile module mass production process, responding promptly to customer needs with efficient solutions. Comprehensive technical support is provided to ensure the smooth deployment of Matter products.



THANKS

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