Sub-1GHz soc transceiver

User Manual

Model: CMT2391F128-EQR

Sales Territory: Globe

Product Type: Module

Document Encoding: 20240117

Approved by CMOSTEK	
Chrcked	Approvrd

Please send the original back to us after you have approved and signed.

Approved by customer		
Comments	Approvrd by	Company's seal
Customer's Name:		

REVISION HISTORY

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
REV1	2024.1.17	CMT2391F128-EQR.Rev1	ALL	First Issued	Liao

Content

1. CRITICAL MATERIALS of Module

The table is for reference only, specific to prevail in kind.

NAME	TYPE	BRAND	BACKUP
crystal	32MHz±10 ppm, SMD， SMD3225， 10050059	**EPSON**	
antenna	433±10 MHz， SMA/J， 101.5±2，50Ω， Black, 10050060	**GERBOLE**	
chip	CMT2391F128-EQR， QFN68 7X7, 10530015	**CMOSTEK**	

2. CONFIGURATION & GENERAL PRECAUTIONS

- Relative humidity: ≤ 80%.
- Storage temperature: -40~85°C.
- Operation temperature: -40~85°C.

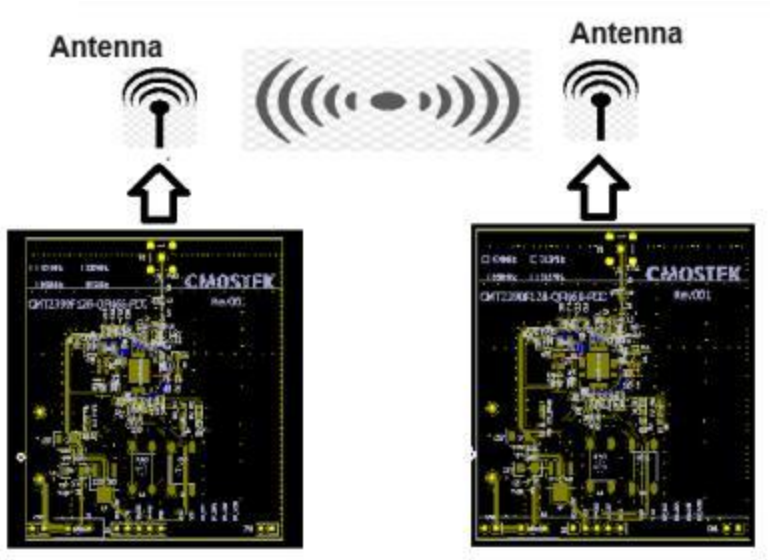
3. DESCRIPTION

a) The following is an describes to the module

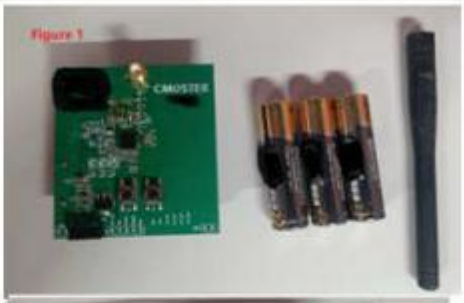
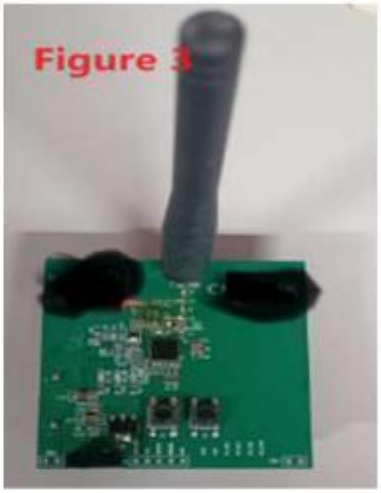
The CMOS TEK module is an ultra-low power RF transceiver used in wireless data transmission communication technology, which can be used for interactive data transmission such as one-to-one or one to many. The module only consists of four parts: antenna, chip, power supply, and communication protocol.

CMOSTEK module can actively transmit or passively receive radio signal demodulation output data information through user configuration peripheral circuit or device, and can also output to external circuit or device by command mode through protocol.

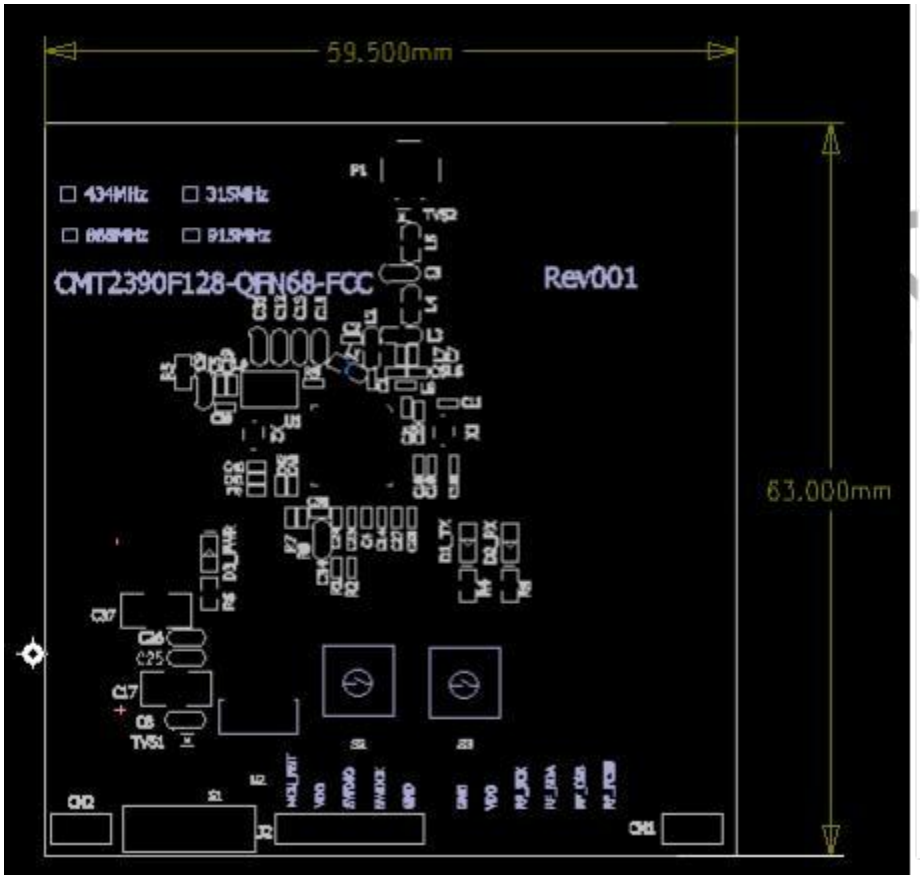
Customers can also customize the module size, function, IO port status, etc., according to their own needs



b) Installation instructions and follow the location below：

CMODTEK module AA battery*3 Antenna	1、Prepare the accessories according to the right picture 1； 2、Install the battery according to Figure 2 and pay attention to the polarity of the battery； 3、Install the antenna as shown in Figure 3 4、Open the S1 switch on the board, and the module enters the customized emission state.	  

4、MECHANICAL DIMENSION



5、 FCC regulatory compliance statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

§15.19 Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1). this device may not cause harmful interference.

(2). this device must accept any interference received, including interference that may cause undesired operation.

§15.21 Information to user

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure compliance statement

This Module complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. Country Code selection feature to be disabled for products marketed to the US/Canada. This device is intended only for OEM integrators under the following conditions:

(1). The antenna must be installed such that 20 cm is maintained between the antenna and users. (2). The transmitter module may not be co-located with any other transmitter or antenna.

As long as the two conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.

6、This device is intended only for OEM integrators under the following conditions:

1. The antenna must be installed such that 20 cm is maintained between theantenna and users.

2. The transmitter module may not be co-located with any other transmitter or antenna.As long as the two conditions above are met, additional transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end product for any additional compliance requirements required for the installed module.

7、Important Note:

In the event that these conditions cannot be met
(for example certain laptop
configurations or co-location with another transmitter), then the Federal Communications Commission of the U.S.Government (FCC) authorizations are no
longer considered valid and the FCC ID cannot be used on the final pro duct. In
these circumstances,the OEM integrator shall be responsible for re-evaluating the end-product (including the transmitter)
and obtaining a separate FCC authorization in the U.S.

8、OEM Integrators-End Product Labeling Considerations:

This transmitter module is authorized only for use in device where the an tenna may
be installed such that 20 cm may be maintained between the antenna an d users.
The final end product must be labeled in a visible area with the following:”Contains,FCC ID:2BE2UCMT2391F128”.The grantee' s FCC ID can be
used only when all FCC compliance requirements are met.

9、OEM Integrators - End Product Manual Provided to the End User:

The OEM integrator shall not provide information to the end user regard ing how to install or remove this RF module in end produc user manual . The end user manual

must include all required regulatory information and warnings as outli
ned in this document.

10、Caution!

Any changes or modifications not expressly approved by the party resp
onsible for compliance could void the user'
s authority to operate the equipment. The final end
product must be labelled in a visible area with the following:“
Contains FCC
ID:2BE2UCMT2391F128”.