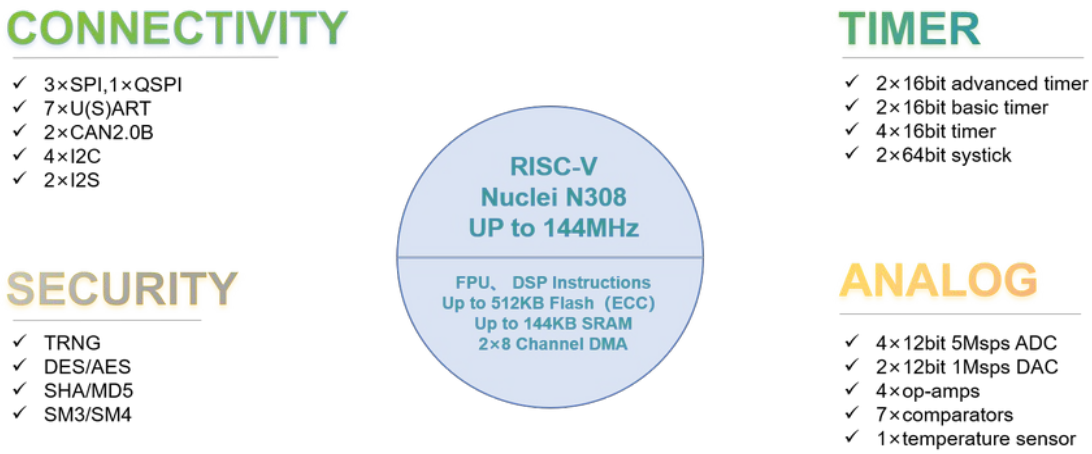
The CM32M433R MCU

Original post: https://www.rvmcu.com/quickstart-show-id-13.html

1. Chip introduction

The CM32M4xxR series chips are the first low-power and large-capacity microcontrollers based on RISC-V architecture launched by China Mobile Xinsheng Technology. This series of MCUs has the characteristics of high performance, high reliability, high security, and low power consumption, and can be widely used in smart door locks, IoT gateways, interactive panels, measurement and control terminals, student education, consumer electronics and other related fields.



- Core: Nuclei N308 (RV32IMACFP)
- Main frequency: 144MHz
- Memory: built-in 512KB Flash, 144KB SRAM
- Operating voltage: 1.8V ~ 3.6V
- Built-in cryptographic algorithm hardware acceleration engine
- Peripheral Resources: timers (General Purpose Timer, Advanced Timer, Basic Timer), SPI, I2S, QSPI, I2C, USART, UART, CAN, ADC, DAC, TSC, GPIO

2. Related documents

- CM32M433R reference manual: https://www.rvmcu.com/app/quickstart/skins/default/doc/CM32M4xxR-user-guide-V1.4.pdf
- CM32M433R data sheet: https://www.rvmcu.com/app/quickstart/skins/default/doc/CM32M4xxR-datasheet-V1.4.pdf
- Quick start guide: https://www.xinshengcmiot.cn/xinsheng/static/file_20220301115957.pdf

- Nuclei Instruction Set Architecture Manual: https://doc.nucleisys.com/nuclei_spec/
- Nuclei N300 series processor core data book: https://www.nucleisys.com/upload/file/2020/02/1582893657-2424.pdf
- Other documents available at: https://user.nucleisys.com/ (registration required)
- Development tools: https://nucleisys.com/download.php

3. Purchase links

Retail purchase

Taobao: https://item.taobao.com/item.htm?id=677606472384

Volume Purchase

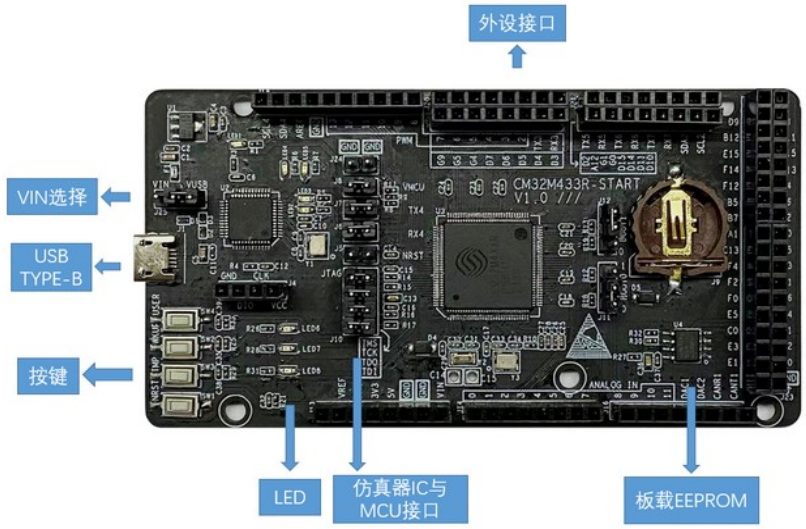
Contact: Manager Han
Tel: +86 18111213896
E-mail: hanyongchao@cmiot.chinamobile.com

The CM32M433R-START development board

Original post: https://www.rvmcu.com/quickstart-show-id-14.html

1. Introduction

CM32M433R-START is a RISC-V development board based on China Mobile's CM32M433R MCU. It features an on-board emulator and Arduino-compatible female headers.



CM32M433R-START development board features:

- Microcontroller: CM32M433R
  - Core: Nuclei N308 (RV32IMACFP)
  - Main frequency: 144MHz
  - Memory: 512KB Flash, 144KB SRAM
  - Working voltage: 1.8~3.6V
  - Peripheral resources: Timers (4 general-purpose timers, 2 advanced timers, 2 basic timers) SPI3, I2S2, QSPI1, I2C4, UART4, CAN2, ADC2, DAC2
- Power supply mode: USB or 5V DC external power supply
- Size: 10.1*5.3cm
- Peripherals and interfaces:
  - USB Micro-B interface: download, debug, power supply
  - Arduino-compatible standard single row 2.54mm female headers
  - JTAG interface: MCU and debugger can be separated to work independently
  - Reset button
  - 3 user buttons
  - 3 user LED

2. Related documents

Introduction to the CM32M433R: see previous chapter

CM32M433R-START development board schematic:
https://www.rvmcu.com/app/quickstart/skins/default/doc/cm32m433r-start-sch.pdf

CM32M433R-START development board user manual:
https://www.rvmcu.com/app/quickstart/skins/default/doc/CM32M433R-START-User-Manual-V1.pdf

3. Purchase links

Taobao: https://item.taobao.com/item.htm?id=671656606437

Aliexpress: https://www.aliexpress.com/item/1005004333840765.html