

Power Domain

MCU Pinout

BOOT

SWD_Debug

TriColor LED & IR LED

OpenMV Interface

Sensor MPU9250

Camera_OV7725

SD Card

Camera Interface

Power

Flash

The image displays 12 detailed circuit diagrams for the NXP MMRT105x microcontroller, organized into a 3x4 grid. Each diagram illustrates the connection of various components to the microcontroller's pins.

- Power Domain:** Shows the power supply network, including VDD_3V3, VDD_SOC_IN, and VDD_SOC_IN, with various capacitors and resistors for power regulation.
- MCU Pinout:** Provides a comprehensive list of the microcontroller's pins and their functions, including GPIO, I2C, SPI, and UART.
- BOOT:** Illustrates the boot mode selection circuit, including the BOOT_MODE pin and the associated pull-up and pull-down resistors.
- SWD_Debug:** Shows the Serial Wire Debug (SWD) interface circuit, including the SWDIO and SWCLK pins and the associated capacitors.
- TriColor LED & IR LED:** Displays the connection for a tri-color LED and an IR LED, including the current-limiting resistors.
- OpenMV Interface:** Shows the connection for the OpenMV camera module, including the camera data lines and the power supply.
- Sensor MPU9250:** Illustrates the connection for the MPU9250 digital motion sensor, including the I2C interface and power supply.
- Camera_OV7725:** Shows the connection for the OV7725 camera module, including the camera data lines and the power supply.
- SD Card:** Illustrates the connection for an SD card, including the SDIO interface and the power supply.
- Camera Interface:** Shows the connection for a camera module, including the camera data lines and the power supply.

[illegible]

Power Domain

MCU Pinout

BOOT

SWD_Debug

TriColor LED & IR LED

OpenMV Interface

Sensor MPU9250

Camera_OV7725

SD Card

Camera Interface

Power

Flash

The image displays 12 detailed circuit diagrams for the NXP MMRT105x microcontroller, organized into a 3x4 grid. Each diagram illustrates the connection of various components to the microcontroller's pins.

- Power Domain:** Shows the power supply network, including VDD_3V3, VDD_SOC_IN, and VDD_SOC_IN. It details the connection of capacitors (e.g., 0.1uF, 1uF, 10uF) and the MMRT105x microcontroller.
- MCU Pinout:** Provides a comprehensive pinout for the MMRT105x, showing connections for various pins (e.g., GPIO, I2C, SPI, UART) and their corresponding functions.
- BOOT:** Illustrates the boot configuration, including the connection of the BOOT_MODE pin to a pull-up resistor and the BOOT_MODE pin to a pull-down resistor.
- SWD_Debug:** Shows the SWD (Serial Wire Debug) interface, including the connection of the SWDIO pin to a pull-up resistor and the SWDIO pin to a pull-down resistor.
- TriColor LED & IR LED:** Details the connection of the tri-color LED and the IR LED to the microcontroller's pins, including the use of current-limiting resistors.
- OpenMV Interface:** Shows the connection of the OpenMV camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- Sensor MPU9250:** Illustrates the connection of the MPU9250 sensor to the microcontroller, including the connection of the sensor's power, ground, and I2C/SPI pins.
- Camera_OV7725:** Shows the connection of the OV7725 camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- SD Card:** Details the connection of an SD card to the microcontroller, including the connection of the SD card's power, ground, and data pins.
- Camera Interface:** Shows the connection of the camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.

The diagrams are presented in a clear, professional layout, with each diagram labeled with its respective title. The components and connections are color-coded for clarity, and the microcontroller pinout is clearly marked.

[illegible]

Power Domain

MCU Pinout

BOOT

SWD_Debug

TriColor LED & IR LED

OpenMV Interface

Sensor MPU9250

Camera_OV7725

SD Card

Camera Interface

Power

Flash

The image displays 12 detailed circuit diagrams for the NXP MMRT105x microcontroller, organized into a 3x4 grid. Each diagram illustrates the connection of various components to the microcontroller's pins.

- Power Domain:** Shows the power supply network, including VDD_3V3, VDD_SOC_IN, and VDD_SOC_IN. It details the connection of capacitors (e.g., 0.1uF, 1uF, 10uF) and the MMRT105x microcontroller.
- MCU Pinout:** Provides a comprehensive pinout for the MMRT105x, showing connections for various pins (e.g., GPIO, I2C, SPI, UART) and their corresponding functions.
- BOOT:** Illustrates the boot configuration, including the connection of the BOOT_MODE pin to a pull-up resistor and the BOOT_MODE pin to a pull-down resistor.
- SWD_Debug:** Shows the SWD (Serial Wire Debug) interface, including the connection of the SWDIO pin to a pull-up resistor and the SWDIO pin to a pull-down resistor.
- TriColor LED & IR LED:** Details the connection of a tri-color LED and an IR LED to the microcontroller's pins, including the use of current-limiting resistors.
- OpenMV Interface:** Shows the connection of the OpenMV camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- Sensor MPU9250:** Illustrates the connection of the MPU9250 sensor to the microcontroller, including the connection of the sensor's power, ground, and I2C/SPI pins.
- Camera_OV7725:** Shows the connection of the OV7725 camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- SD Card:** Details the connection of an SD card to the microcontroller, including the connection of the SD card's power, ground, and data pins.
- Camera Interface:** Shows the connection of the camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.

The diagrams are presented in a clear, professional format, with component values and pin numbers clearly labeled. The overall layout is clean and easy to read, making it a valuable resource for anyone working with the MMRT105x microcontroller.

The image displays 12 detailed circuit diagrams for the NXP MMRT105x microcontroller, organized into a 3x4 grid. Each diagram illustrates the connection of various components to the microcontroller's pins.

- Power Domain:** Shows the power supply network, including VDD_3V3, VDD_SOC_IN, and VDD_SOC_IN. It details the connection of capacitors (e.g., 0.1uF, 1uF, 10uF) and the MMRT105x microcontroller.
- MCU Pinout:** Provides a comprehensive pinout for the MMRT105x, showing connections for various pins (e.g., GPIO, I2C, SPI, UART) and their corresponding functions.
- BOOT:** Illustrates the boot configuration, including the connection of the BOOT_MODE pin to a pull-up resistor and the BOOT_MODE pin to a pull-down resistor.
- SWD_Debug:** Shows the SWD (Serial Wire Debug) interface, including the connection of the SWDIO pin to a pull-up resistor and the SWDIO pin to a pull-down resistor.
- TriColor LED & IR LED:** Details the connection of a tri-color LED and an IR LED to the microcontroller's pins, including the use of current-limiting resistors.
- OpenMV Interface:** Shows the connection of the OpenMV camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- Sensor MPU9250:** Illustrates the connection of the MPU9250 sensor to the microcontroller, including the connection of the sensor's power, ground, and I2C/SPI pins.
- Camera_OV7725:** Shows the connection of the OV7725 camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.
- SD Card:** Details the connection of an SD card to the microcontroller, including the connection of the SD card's power, ground, and data pins.
- Camera Interface:** Shows the connection of the camera module to the microcontroller, including the connection of the camera's power, ground, and data pins.

The diagrams are presented in a clear, professional format, with component values and pin numbers clearly labeled. The overall layout is clean and easy to read, making it a valuable resource for anyone working with the MMRT105x microcontroller.

- v1.8修改
- 1.在RT的M7引脚处加上了复位按钮
 - 2.USB的ID与RT相连
 - 3.取消了schottky二极管
 - 4.USB与GND之间加了330OHM磁珠
 - 5.由于RST_B的上拉电阻之前画了两个，去掉了一个
 - 6.RT引脚名字做了修改，添上了所用引脚的功能名
 - 7.防止上电后引脚各电平不一样，FLASH四根数据线均加上了上拉电阻
 - 8.修改了部分网标名字，方便理解
 - 9.添加R10 R15 R16 R17 R18匹配电阻
 - 10.R23改为0ohm
 - 11.flash,camera的总线使用了总线符号
 - 12.电解电容footprint改为Radial Can - SMD
 - 13.LDO改为TI公司的TLV1117LV33DCYR
 - 14.没有miniSD卡卡槽，改为了microSD卡卡槽
 - 15.增加了一个2.54MM的电源插座
 - 16.增加了摄像头插头，间距1.27MM
 - 17.增加了mark点和螺丝孔

张诗婧