RZ Ecosystem Partner Solution CORE GR-MANGO

Solution Summary

<u>GR-MANGO</u> is equipped with <u>RZ/A2M</u>, which delivers image processing performance 10 times faster than the CPU and strongly accelerates AI processing. It is also equipped with a wide variety of other interfaces such as HDMI, audio, Ethernet, USB, CAN, etc., allowing you to create an embedded AI system that suits your needs.

Features/Benefits

<u>Dynamic Reconfiguration Processor (DRP)</u> - Renesas' proprietary technology

24MHz

12MHz

GPIO/I2C

USB

GPO

GPI x2

GPO/PWM x4

JTAG/SWD

UART/I2C

GPIC

JTAG Cores<mark>i</mark>ght10

Equipped with Arm Cortex-A9 "RZ/A2M"
 CPU 528MHz High Speed Operation

Switch

nbed IC

CC Ctrl

USB SW

VBUS SW

Switch 0/1

LED(ROYG)

12C x2

SPI x2

GPIO

LVDS / RMIL / SSL

ADC x4

• Built-in 4MB RAM, External 16MB

CC1/CC2

- Micro HDMI
 - Audio In/Out

MIPI-CSI Camera Interface

OctaB

QSPI

25MHz

125

120

SPDIF

DV0 / G

RGB888

CANMicro SD

R 145

Terminal

Block

StereoJack

HDMI

LCD I/F

MIP

MicroSD

Ethernet

RZ/A2N

• USB Host Function (Type-C)

UART ADC x2

(*)Due to RZ/A2M specification restrictions, only 64Mbit can be used.

OctaFLASH

128Mbit

OctaRAM 128Mbit

QSPI FLASH 1Gbit

EtherPHY

PoE

Connector

CAN

CODEC

HDMI Transmitter

Tran

(*)Due to RZ/A2M specification restrictions,

https://www.core.co.jp/service/iot/gr-mango





Diagrams/Graphics

MicroB USB

USB C (Host/Devi

> (Upp USB A (Host)

> > (Lo

Expantion

Connector

Raspberry Pi

Target Markets and Applications

Image processing related

Embedded Al



Image processing software DRP Sketch

We also provide an application that allows users to try out the DRP library without programming.

(https://www.core.co.jp/service/iot/gr-mango/dl/gr-mango_fileserver)







GR-MANGO DRP Sketch ver.0.3.0 (Updated January 18, 2021)

It is a PC application that allows you to easily try image processing using DRP on GR-MANGO. You can change filters and parameters in real time just by operating the icons. It works on Windows 10 (64bit).

download

Food Recognition Demo

(<u>https://github.com/renesas-rz/rza2m-food-recognition-demo</u>) What is rza2m-food-recognition-demo

Food recognition demonstration program performed by DRP enabled RZ/A2M



We also have <u>GR-PEACH</u> / <u>GR-LYCHEE</u> with RZ/A1.

GR-LY©HEE

