# 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** 

