



System on Module iW-RainboW-G54S

STM32MP13x Based SBC



The STM32MP13x SBC integrates ST Microelectronics STM32MP13x: Cortex®-A7@up to 1 GHz, 10/100/1000 Mbps Ethernet PHY, and 18-bit RGB display support. The STM32MP13x-based SBC is aimed at applications mainly focusing on machine learning, NPU and vision systems, advanced multimedia, and industrial automation with high performance. With its 85mm x 56mm small form factor, the SBC is packed with all the necessary on-board connectors.

iW-RainboW-G54M HIGHLIGHTS

STM32MP13x Solo Core CPU with 32-bit ARMv7 Architecture

Up to 1GB DDR3L Memory

eMMC -4Gb (Expandable up to 128GB)

Compact Form Factor of 85mm x 56mm

10+ years of Product Longevity Program

SPECIFICATIONS

SoC

STM32MP13x Applications Processor

STM32MP135: Cortex®-A7@upto 1 GHz 30 Communication Peripherals including CAN Ethernet 2 and Camera interface

STM32MP133: Cortex®-A7@upto 1 GHz 29 Communication Peripherals including CAN and Ethernet 2

PMIC

STPMIC1EPQR PMIC

Memory & Storage

DDR3L – 512MB (Expandable up to 1GB)

eMMC -4Gb (Expandable up to 128GB)

EEPROM – 16Kbit

Micro SD Slot

Network & Communication

Gigabit Ethernet PHY Transceiver with RJ45 Magjack Connector x 1

USB2.0 Host x 1 Port

USB2.0 OTG x 1 Port

Display

18 bit RGB display with touch

Expansion Connector 1, 2 & 3 Interfaces

SAI x 1 Port

UART with flow control x 2 Ports

UART w/o flow control x 2 Ports

CAN x 2 Ports

SPI x 2 Ports

I2C x 2 Ports

JTAG x 1 Port

PWM X 1 Port

ADC X 2 Ports

GPIOs x 7

Miscellaneous Interfaces

Debug UART x 1 Port

RTC battery connector

OS Support

Linux 6.1.28 (or higher)

Power Input:

12V, 2A

Form Factor:

85mm x 56mm

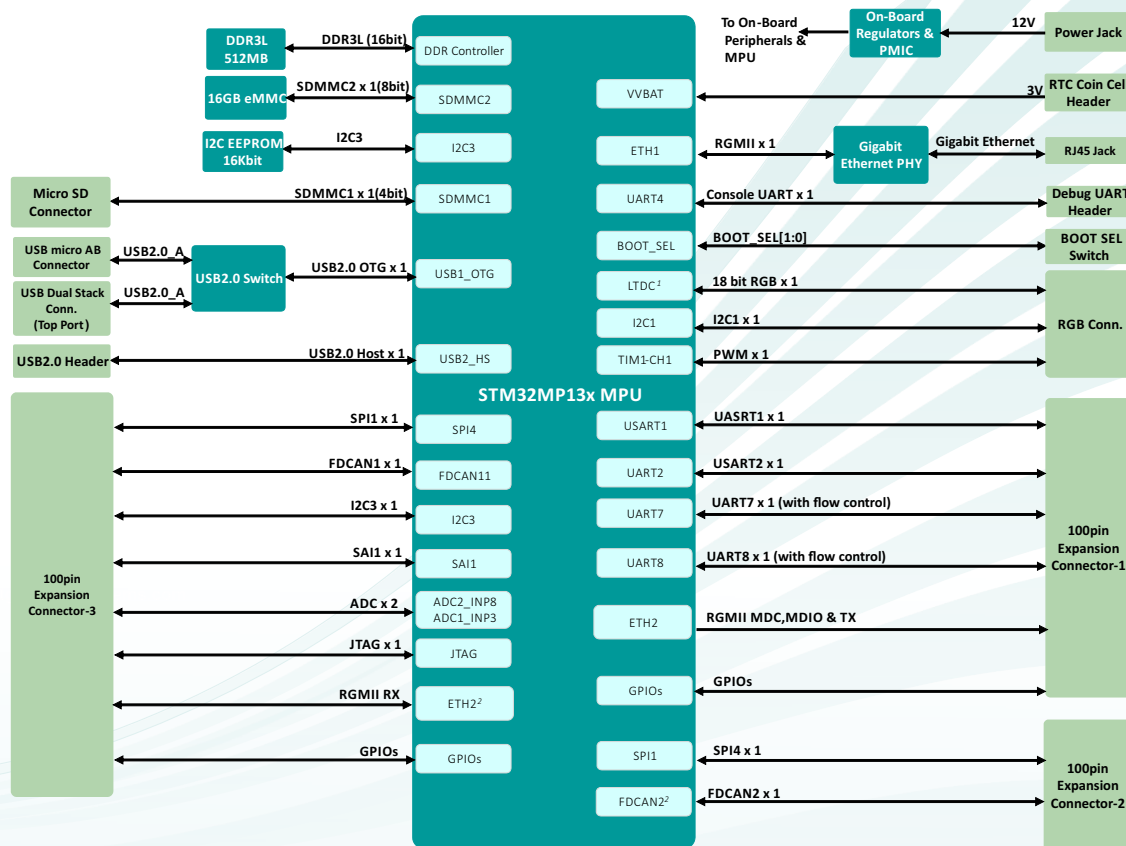
Operating Temperature:

-40°C to +85°C (Industrial)

Environment Specification

REACH & RoHS3 Compliant

STM32MP13x OSM SBC Block Diagram



Note:
 STM32MP135, STM32MP133 & STM32MP135 CPUs can be supported. By default, the CPU used is STM32MP135.
¹ RGB display will be supported only in STM32MP135 SOC.
² Not supported in STM32MP131 SOC.

OS SUPPORT

Linux 6.1.28

DELIVERABLES

STM32MP13x Based SBC
 Board Support Package
 User Manual
 Quick Start Guide

OPTIONAL KITS/Modules

STM32MP135 OSM LGA Module

CUSTOM DEVELOPMENT

BSP Development/OS Porting
 Custom SOM/Carrier Development
 Custom Application/GUI Development
 Design Review and Support

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STM32MP135 OSM LGA Module

The device can be ordered online from the iWave Website

<https://www.iwavesystems.com/product/stm32mp135-based-single-board-computer/>

Or from our Local Partners in your region

<http://www.iwavesystems.com>

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