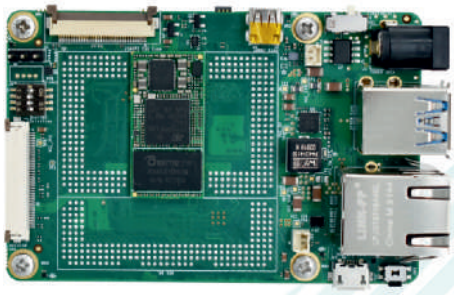
Single Board Computer iW-RainboW-G54S

STM32MP13x Based SBC



The STM32MP13x SBC integrates ST microelectronics STM32MP131/ STM32MP133/ STM32MP135: Cortex®-A7@up to 1 GHz, Support 10/100/1000 Mbps Ethernet PHY. The STM32MP135-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 form factor, the SBC is packed with all the necessary on-board connectors.

iW-RainboW-G54S HIGHLIGHTS

STM32MP135: Cortex®-A7@upto 1 GHz

DDR3L – 512MB (Expandable up to 1GB)

QSPI – 16Mb QSPI NOR flash

OSM v1.1 Size-0F SBC with 85mm x 56mm form factor

10+ years of Product Longevity Program

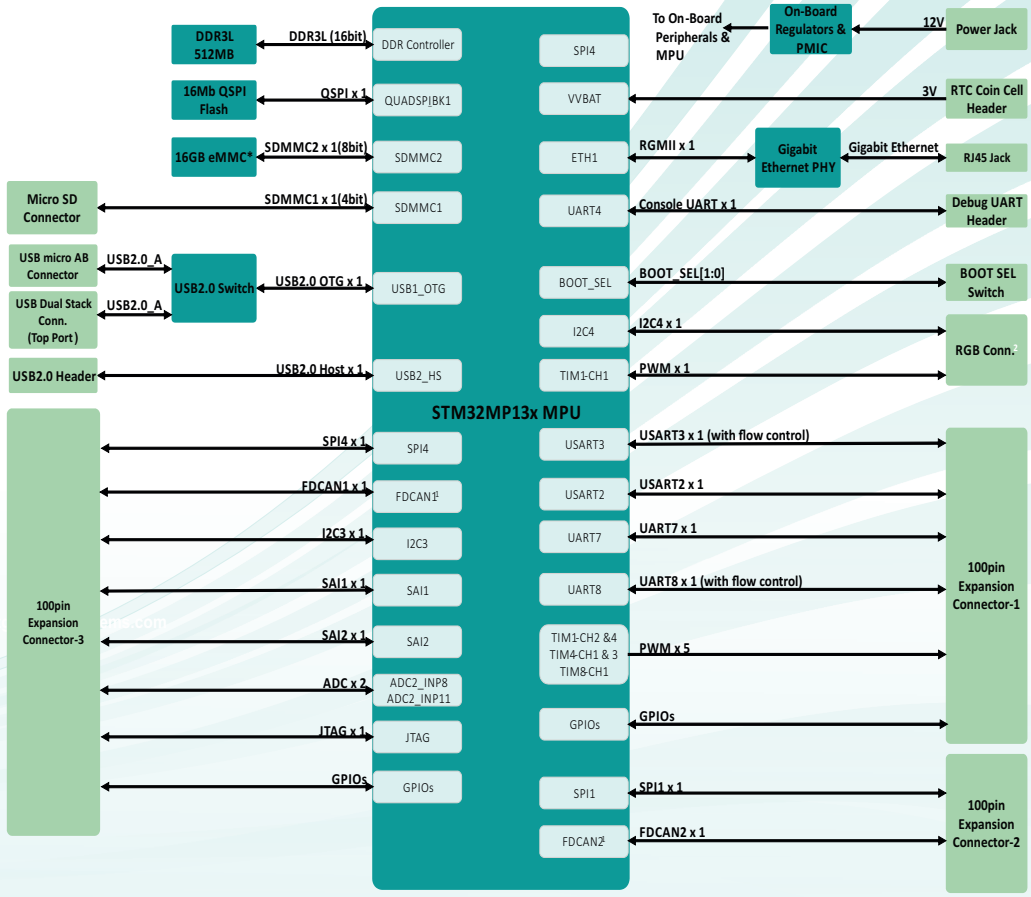
Industrial Grade (-40 to +85)

SPECIFICATIONS

CPU
STM32MP13x Applications Processor
STM32MP131: Cortex®-A7@upto 1 GHz, 26 Communication Peripherals
STM32MP133: Cortex®-A7@upto 1 GHz 29 Communication Peripherals including CAN and Ethernet 2.
STM32MP135: Cortex®-A7@upto 1 GHz 30 Communication Peripherals including CAN Ethernet 2 and Camera interface.
Power
STPMIC1EPQR PMIC
Memory
DDR3L – 512MB(Expandable up to 1GB)
QSPI Flash – 16Mb
Micro SD slot
eMMC – 4GB (Optional)
Network & Communication
Gigabit Ethernet PHY Transceiver with RJ45 Magjack Connector x 1
USB2.0 OTG Port through - microAB Receptacle Connector
USB2.0 Header x 1

Expansion Connector 1, 2 & 3 Interfaces
FDCAN x 2 Ports
UART x 2 Ports (with flow control)
UART x 2 Ports (without flow control)
SPI – 2 Ports
PWM – 5 Ports
ADC – 2 Ports
I2C3 – 1 Port
Miscellaneous Interfaces
Debug UART Connector
RTC Battery Connector
OS Support
Linux 5.15.57 (or higher)
Power Input:
5V , 0.5A through OSM LGA
Form Factor:
OSM Size OF - 30mm x 15mm
Operating Temperature:
-40°C to +85°C (Industrial)
Environment Specification
REACH & RoHS3 Compliant

STM32MP13x Based SBC Block Diagram



Note:

[1]These features are available only when using STM32MP133 or STM32MP135 MPU.

[2]There is no display support available in this SBC.

*Optional

OS SUPPORT

Linux 5.15.67 (or Higher)

DELIVERABLES

STM32MP13x Based SBC
Board Support Package
User Manual
Quick Start Guide

OPTIONAL KITS/Modules

STM32MP13x Based SBC

CUSTOM DEVELOPMENT

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

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services.iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol Stacks.

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STM32MP13x Based SBC

The device can be ordered online from the iWave Website
https://www.iwavesystems.com/product/stm32mp13x-based-sbc/
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