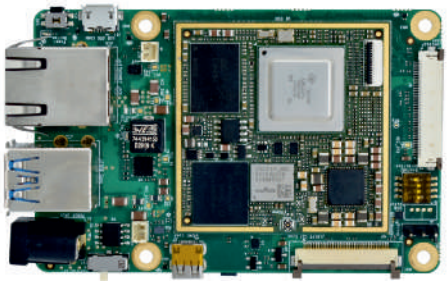
Single Board Computer iW-RainboW-G55S

TI AM62Ax Based SBC



The AM62Ax SoC based LGA Module is designed as per The Open Standard Module™ specification v1.1 (OSM). It integrates TI AM62Ax offerings Quad/ Dual/ single Cortex A53 @ up to 1.4GHz, dual Cortex R5F @ up to 800MHz for MCU Channel with FFI & Device Management, embedded Deep Learning (DL) with up to 2 TOP/s, Vision Processing Accelerators (VPAC) with Image Signal Processor (ISP), Functional Safety, Security, IEEE 802.11 a/b/g/n/ac/ax Wi Fi + BT 5.3 + IEEE 802.15.4 module, High-Speed Interfaces & General Connectivity with AEC - Grade components.

iW-RainboW-G55M HIGHLIGHTS

AM62Ax with 64-Bit Quad ARM Cortex® A53 & Dual core ARM Cortex®-R5F Subsystem

2GB LPDDR4 memory and 16GB eMMC Flash

C7xV-256 Deep Learning Accelerator (up to 2 TOPS)

Supports Low power mode by Device Manager

IEEE 802.11 a/b/g/n/ac/ax Wi-Fi + BT 5.3 + IEEE 802.15.4

1000/100/10 Mbps Ethernet

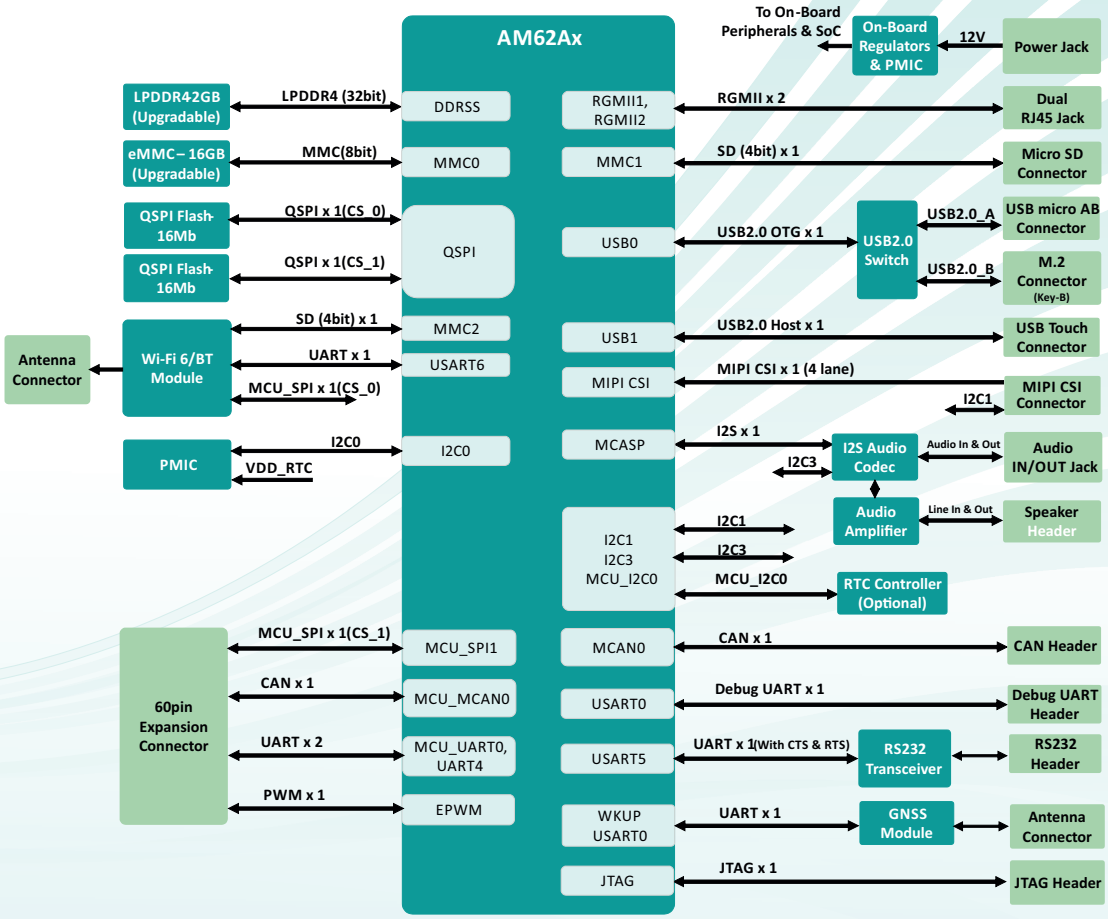
Industrial Grade (-40 to +85)

SPECIFICATIONS

AM62Ax SBC supports the following features.
SoC
AM62Ax Applications Processor1
AM62A74 Quad Core: 4 x Cortex-A53, 2 x Cortex-R5F, 1 x C7x DSP, VPU & ISP, up to 2 TOPS
AM62A72 Dual Core: 2 x Cortex-A53, 2 x Cortex-R5F, 1 x C7x DSP, VPU & ISP, up to 2 TOPS
AM62A34 Quad core: 4 x Cortex-A53, 2 x Cortex-R5F, 1 x C7x DSP, VPU & ISP, up to 1 TOPS
AM62A32 Dual core: 2 x Cortex-A53, 2 x Cortex-R5F, 1 x C7x DSP, VPU & ISP, up to 1 TOPS
AM62A31 Single core: 1 x Cortex-A53, 2 x Cortex-R5F, 1 x C7x DSP, VPU & ISP, up to 1 TOPS
Power
TPS6593-Q1 PMIC
Memory & Storage
LPDDR4 With Inline ECC - 2GB (Expandable up to 8GB)
eMMC Flash - 16GB (Exapandable up to 128GB)
Micro SD Slot
16Mb QSPI Flash
Network & Communication
IEEE 802.11 a/b/g/n/ac/ax Wi-Fi + BT 5.3 + EEE802.15.4
Gigabit Ethernet PHY Transceiver with RJ45 Magjack Connector
USB 2.0 (USB 3.0 stack top port)
USB 2.0 OTG port through – micro AB Receptacle Connector
USB 2.0 Header x 1

Audio/Video Features
36pin MIPI_CSI Camera Connector
50pin RGB Display Connector with touch
Expansion Connector Features
Expansion Connector 1 Interfaces
UART x 4 Port (1 With CTS & RTS)
PWM x 1 Port
GPIO x 5
RGMII_Tx
Expansion Connector 2 Interfaces
MCU_SPI x 1(CS_1)
MCU_CAN x 1 Port
I2S x 1
Expansion Connector 3 Interfaces
QSPI x 1(CS_1)
CAN x 1 Port
I2C x 1 Port
JTAG x 1
I2S x 1
RGMII_Rx
Miscellaneous Interfaces
RTC Controller with RTC Battery Header
Debug UART Header
OS Support
Linux 5.10.153 (or higher)
Power Input:
12V , 2A
Form Factor:
OSM Size LF - 45mm x 45mm
Operating Temperature:
-40°C to +85°C (Industrial)
Environment Specification:
REACH & RoHS3 Compliant

TI AM62Ax Based SBC Block Diagram



OS SUPPORT
Linux 5.10.153 (or higher)

DELIVERABLES
TI AM62Ax Based SBC
Board Support Package
User Manual

OPTIONAL KITS/Modules
Heat Sink
Enclosure
Camera Module

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.

**Optional items not included in the standard deliverables.*

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

TI AM62Ax Based SBC

The device can be ordered online from the iWave Website
https://www.iwavesystems.com/product/ti-am62ax-based-sbc/
Or from our Local Partners in your region
http://www.iwavesystems.https://www.iwavesystems.com/

iW-G55S-BR-R1.1

INDIA
iWave Systems Technologies Pvt Ltd.
#7/B, 29th Main, BTM Layout
2nd Stage,
Bangalore - 560 076
mktg@iwavesystems.com

JAPAN
iWave Japan Inc.
8F Kannai Sumiyoshi Building,
3-29 Sumiyoshi-cho,Naka -ku,
Yokohama Kanagawa, Japan
mktg@iwavesystems.com

EUROPE
International Sales & Marketing Europe
Venkelbaan 55 2908KE Capelle
aan den Ijssel,
The Netherlands
info@iwavesystems.eu

USA
iWave USA
1692 Westmont Ave. Campbell
Ca95008
USA
info@iwavesystems.us

www.iwavesystems.com