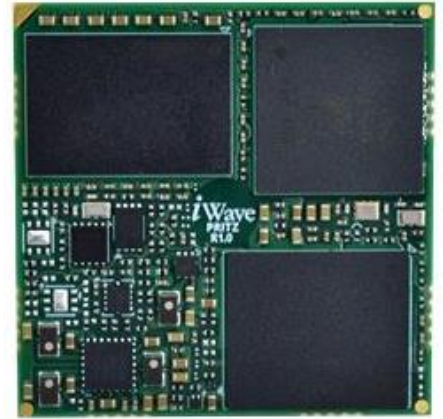


# iG-RainboW- G69M TI AM62Lx OSM-S LGA System on Module

The AM62Lx SoC based Size-S Module is designed as per the Open Standard Module™ specification v1.2 (OSM). It features TI's AM62Lx series, integrating a dual-core 64-bit ARM Cortex-A53 processor running at up to 1.25GHz. Each Cortex-A53 core includes 32KB L1 DCache, 32KB L1 ICache, and a shared 256KB L2 Cache. The module also supports multimedia, security, high-speed interfaces, and general connectivity.



## Highlights

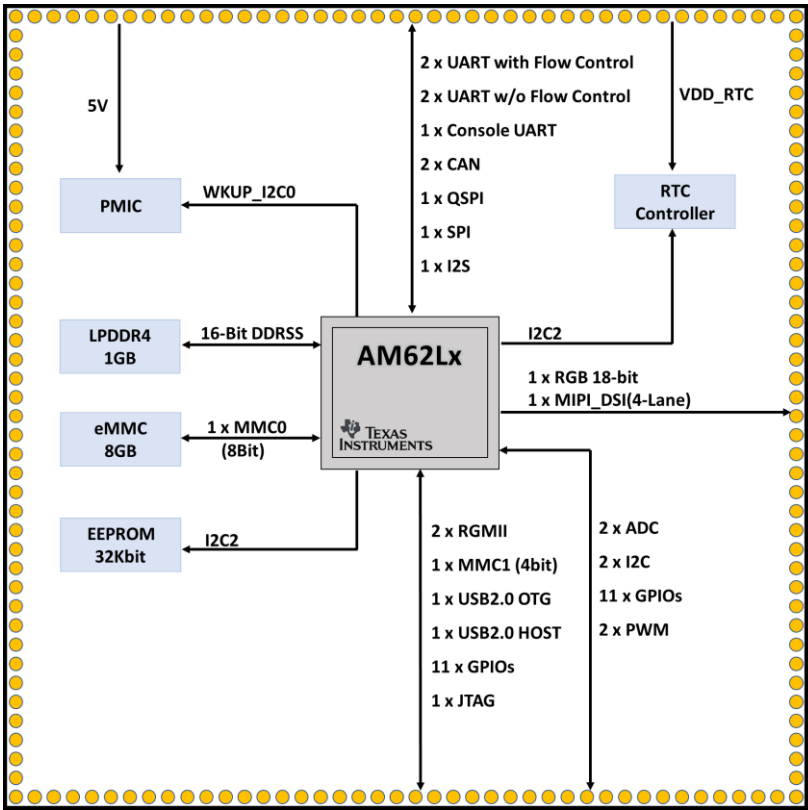
- ❖ AM62Lx with 64-Bit Dual Arm Cortex-A53
- ❖ 1GB LPDDR4 Expandable up to 2GB
- ❖ 8GB eMMC Flash (Expandable)
- ❖ 2 x 1Gb RGMII
- ❖ OSM v1.2 Size-S LGA Solderable Module
- ❖ Form Factor: 30mm x 30mm

## Ordering Information

iG69M-OSM62L-4L001G-E008G-IAA-ES

AM62L CPU based SOM with 1GB LPDDR4 RAM, 8GB eMMC, Industrial grade

# Block Diagram



# Technical Specifications

|                   |                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU               | Dual Core, Arm® Cortex®-A53 @1.25 GHz                                                                                                                                                                                                                                               |
| Memory            | 1GB LPDDR4 Expandable up to 2GB                                                                                                                                                                                                                                                     |
| Storage           | 8GB eMMC Flash<br>32Kbit EEPROM                                                                                                                                                                                                                                                     |
| OSM LGA Features  | <ul style="list-style-type: none"><li>• RGMII x 2 Ports</li><li>• USB 2.0 OTG x 1</li><li>• USB 2.0 Host x 1</li><li>• SD (4bit) x 1 Port</li><li>• QSPI x 1</li><li>• SPI x 1</li><li>• I2C x 2</li><li>• UART with Flow Control x 2</li><li>• UART w/o Flow Control x 2</li></ul> |
| OSM LGA Features  | <ul style="list-style-type: none"><li>• Debug UART x 1</li><li>• CAN x 2</li><li>• MIPI DSI x 1 (4-lane)</li><li>• RGB (18bit) x 1</li><li>• I2S x 1</li><li>• JTAG x 1</li><li>• PWM x 2</li><li>• ADC x 2</li><li>• GPIOs x 11</li></ul>                                          |
| Operating System  | Linux 6.12.13 or (Higher)                                                                                                                                                                                                                                                           |
| Operating Temp.   | -40°C to +85°C (Industrial)                                                                                                                                                                                                                                                         |
| Form Factor       | 30mm x 30mm (Size S)                                                                                                                                                                                                                                                                |
| Power Input       | 5V input through OSM LGA                                                                                                                                                                                                                                                            |
| Environment Spec. | REACH & RoHS3 Compliant                                                                                                                                                                                                                                                             |

## Deliverables

- AM62Lx based OSM Module
- Thermal Solutions
- Board Support Package

## Resources

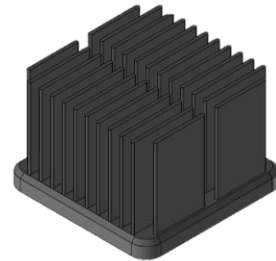
- Datasheet
- Quick Start Guide
- Linux User Manual

## Product accessories



### TI AM62Lx SBC

The AM62Lx SBC features dual 64-bit ARM Cortex-A53 (1.25GHz), Gigabit Ethernet, 18-bit RGB display, and expansion connectors



### Thermal Solutions

iWave offers heat sink solution for the AM62Lx Size-S OSM LGA module

## Applications

- **Human Machine Interface (HMI)**  
Enables seamless interaction between humans & machines in automation and smart systems
- **Medical - Patient Monitoring**  
Enhances real-time data collection for better diagnostics and treatment
- **Building Automation**  
Improves energy efficiency, security, and control in smart buildings
- **EV Charging Stations**  
AM62Lx-powered modules optimize the design and efficiency of EV chargers
- **Solar Energy**  
Enables efficient monitoring, storage, and distribution of solar power
- **Smart Secure Gateways & Metering**  
Facilitates secure data transmission and edge computing for smart metering
- **Mobile/Industrial Printers**  
Enhances efficiency in logistics, manufacturing, and on-the-go printing

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Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

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