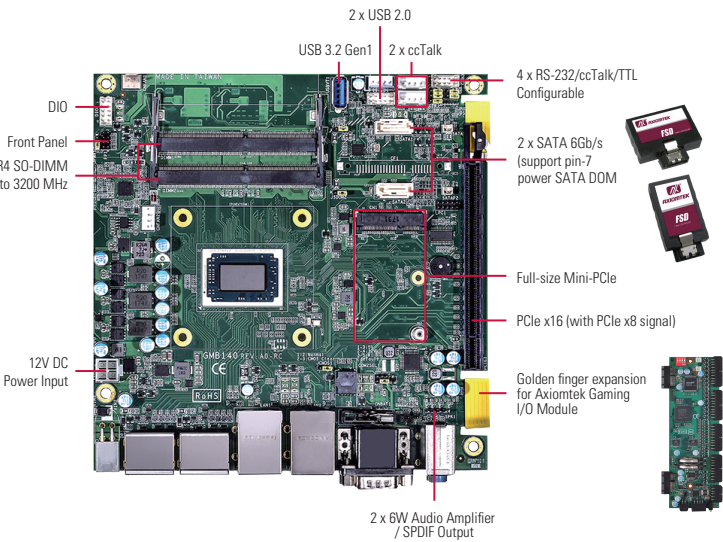
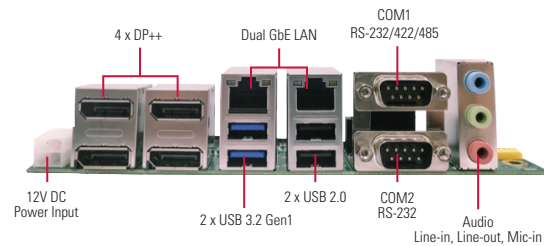


# GMB142

AMD Ryzen™ Embedded R2000 SoC  
Mini-ITX Board

## Features

- High performance AMD platform
- GLI verified TrustedBoot
- PCIe golden finger expansion for Gaming I/O Module
- Optional support 9-bit serial port for SAS 6.02
- Lifetime long-term supply



## System

|                       |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                   | AMD Ryzen™ Embedded R2000 Series SoC “Zen+” APU<br>AMD Ryzen™ Embedded R2544, Quad Core, 8 CU, 3.35GHz (3.7GHz), 35-54W<br>AMD Ryzen™ Embedded R2514, Quad Core, 8 CU, 2.1GHz (3.7GHz), 12-35W<br>AMD Ryzen™ Embedded R2314, Quad Core, 6 CU, 2.1GHz (3.5GHz), 12-35W<br>AMD Ryzen™ Embedded R2312, Dual Core, 3 CU, 2.7GHz (3.5GHz), 12-25W |
| Memory                | 2 x DDR4 SO-DIMM up to 3200 MHz, max. up to 32 GB                                                                                                                                                                                                                                                                                            |
| BIOS                  | AMI -uEFI<br>TrustedBoot (Bios secure boot) secure hash and public key algorithm                                                                                                                                                                                                                                                             |
| Watchdog Timer        | 1 sec to 255 min                                                                                                                                                                                                                                                                                                                             |
| Expansion             | 1 x PCIe x16 (PCIe x8 signal)<br>1 x Full-size Mini-PCle (PCIe x1 & USB 2.0 signal)<br>2 x PCIe golden finger expansion for Axiomtek Gaming I/O Module                                                                                                                                                                                       |
| Power Input           | DC +12 V                                                                                                                                                                                                                                                                                                                                     |
| Dimensions            | 170 mm x 170 mm                                                                                                                                                                                                                                                                                                                              |
| Operating Temperature | 0 °C to 60 °C (32 °F to 140 °F)                                                                                                                                                                                                                                                                                                              |
| Humidity              | 10 % to 90 %, non-condensing                                                                                                                                                                                                                                                                                                                 |
| Security              | - TPM 2.0 engine<br>- RSA2048 and AES256 hybrid encryption                                                                                                                                                                                                                                                                                   |

## I/O

|                  |                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| USB              | External: 2 x USB 3.2 Gen1x1 (5Gb/s)<br>2 x USB 2.0<br>Internal: 1 x USB 3.2 Gen1x1 (5Gb/s)<br>2 x USB 2.0 box header                        |
| Serial Interface | External: 2 x Full RS-232 DB9 (COM1 supports RS-232/422/485)<br>Internal: 4 x Simple RS-232 box header (Two support ccTalk/ Two support TTL) |

|          |                                                                                                                                                             |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio    | External: HD Audio Line-in/ Line-out/ Mic-in phone jack (7.1 Ch.)<br>Internal: Stereo 6W + 6W audio amplifier outputs pin header<br>SPDIF output pin header |
| Storage  | 2 x SATA 6Gb/s (support pin-7 power SATA DOM)                                                                                                               |
| Ethernet | 2 x GbE LAN port                                                                                                                                            |
| GPIO     | 8-bit GPIO                                                                                                                                                  |

## Display

|           |                                                                      |
|-----------|----------------------------------------------------------------------|
| Graphic   | AMD high performance Radeon™ VEGA graphics                           |
| Interface | 4 x DP++ (up to 3840 x 2160 @60Hz)<br>R2312 supports triple displays |

## Software

|    |                                                                      |
|----|----------------------------------------------------------------------|
| OS | Windows® 11 GAC & Windows® 10 IoT Enterprise, 64-bit<br>Linux Kernel |
|----|----------------------------------------------------------------------|

## Ordering Information

|              |                                                                                                                                                    |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| GMB142-R2544 | Mini-ITX board supports AMD Ryzen™ Embedded R2544 w/ VEGA graphics, 4 x DP++, 6 x COM, 7x USB, 2 x GbE, Audio, PCIe x8 and Mini-PCle, DC 12V input |
| GMB142-R2514 | Mini-ITX board supports AMD Ryzen™ Embedded R2514 w/ VEGA graphics, 4 x DP++, 6 x COM, 7x USB, 2 x GbE, Audio, PCIe x8 and Mini-PCle, DC 12V input |
| GMB142-R2314 | Mini-ITX board supports AMD Ryzen™ Embedded R2314 w/ VEGA graphics, 4 x DP++, 6 x COM, 7x USB, 2 x GbE, Audio, PCIe x8 and Mini-PCle, DC 12V input |
| GMB142-R2312 | Mini-ITX board supports AMD Ryzen™ Embedded R2312 w/ VEGA graphics, 3 x DP++, 6 x COM, 7x USB, 2 x GbE, Audio, PCIe x4 and Mini-PCle, DC 12V input |

\* All specifications and photos are subject to change without notice.

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