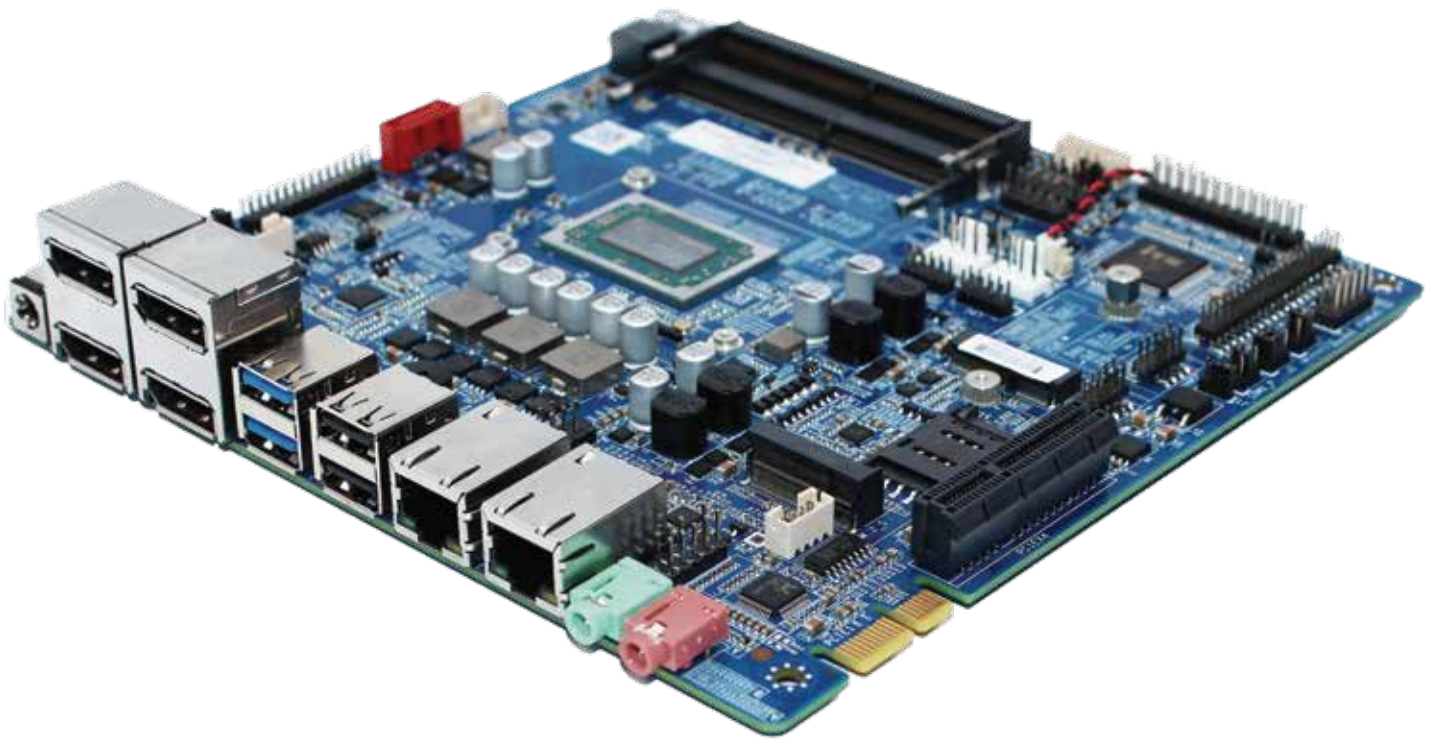


# mITX-FP10

AMD® Ryzen Embedded V1000-based Motherboard with 4 DisplayPort



## Features

- CPU: AMD Ryzen Embedded V1000 series Processor
- Memory: Dual channel SO-DIMM DDR4 (max 32 GB)
- Display: Up to 4 DP displays (LVDS/eDP optional)
- Ethernet: Support dual 1GbE ethernet cards
- Storage: SATA3.0, M.2, PCIe X4, PCIe X1
- Power: 12V DC input
- Security: TPM 2.0 supported (optional)



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## Introduction

The new Maxtang mini-ITX embedded motherboard FP10 is based on the AMD Ryzen™ Embedded V-series Family APUs V1202B (dual-core) and V1605B (quad-core), which features the industry leading “Vega” graphics architecture combined with the high-performance “Zen” CPU. Four independent 4K+ DP displays are supported in addition to dual-channel DDR4 SO-DIMM memory, dual 1-Gigabit Ethernet controllers, and M.2 expansion for Wi-Fi and SSD modules. The TPM module for added security is also optional. It also has rich interfaces as 2 x USB2.0, 2 x USB3.0, 1 x Mic-in, 1 x Line-out and 2 x LAN, catering to most requirements in the market.

The FP10 is an ideal solution for applications requiring a high speed communications front-end like a mini-server or high-resolution display products like electronic gaming machines, medical imaging, interactive digital signage, thin clients, or PDS terminals.



H/W Monitor



Watchdog



GPIO



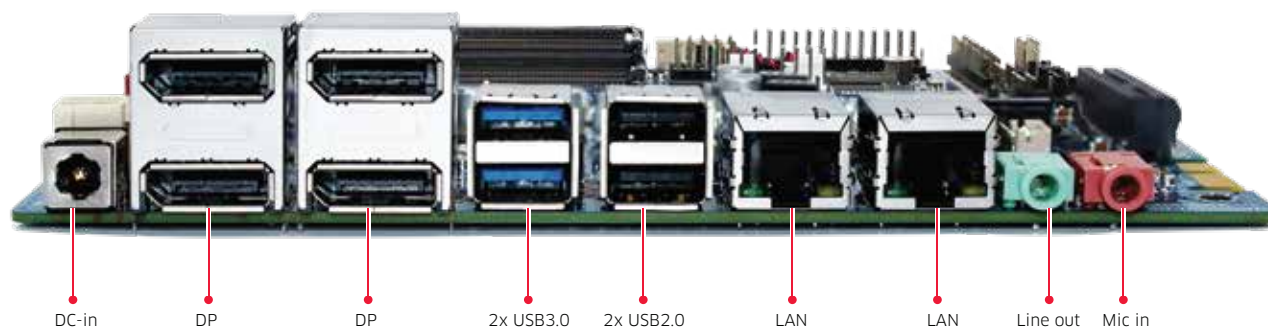
Brightness

## CPU Options

**Ryzen V1605B** (2.0GHz, max turbo frequency 3.6GHz, quad core, TDP 25W)

**Ryzen V1202B** (2.3GHz, max turbo frequency 3.2GHz, dual core, TDP 25W)

## I/O Interfaces

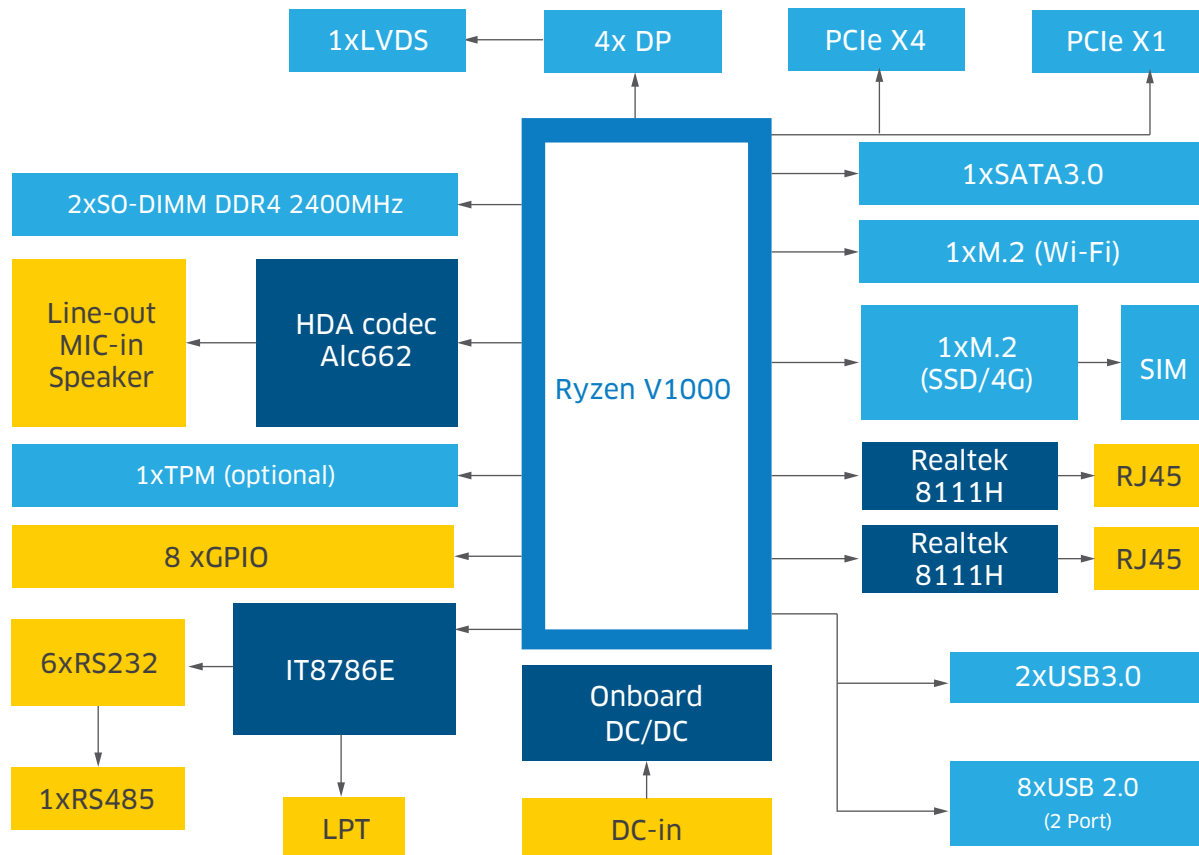


## Technical Specifications

| Processor             | CPU              | V1605B (quad-core)                                | V1202B (dual-core)         |
|-----------------------|------------------|---------------------------------------------------|----------------------------|
|                       | Max boost clock  | 3.6 GHz                                           | 3.2 GHz                    |
|                       | Base clock       | 2.0 GHz                                           | 2.3 GHz                    |
|                       | Cache            | 2MB L2                                            | 1MB L2                     |
|                       | BIOS             | AMI 64MB SPI                                      |                            |
| Memory                | Type             | 2 x SO-DIMM DDR4                                  |                            |
|                       | Max capacity     | 32GB                                              |                            |
| Display               | GPU              | AMD Radeon Vega 8 Graphics                        | AMD Radeon Vega 3 Graphics |
|                       | LVDS/eDP         | 1, colay DP1.2 port (optional)                    |                            |
|                       | Display Port     | 4 x DP1.2, resolution up to 4096x2160 @60Hz       |                            |
|                       | Multiple display | DP+DP+DP+DP/LVDS/eDP                              |                            |
| Ethernet              | Speed            | 1 GbE                                             |                            |
|                       | Controller       | RTL8111H                                          |                            |
|                       | Interface        | RJ-45                                             |                            |
| Audio                 | Audio codec      | Realtek HD ALC662 (Line-out, Mic-in)              |                            |
|                       | Interface        | Line-out, mic-in, audio header, amplifier header  |                            |
| Hardware              |                  | CPU system temperature, onboard voltage, watchdog |                            |
| Wireless connectivity | M.2              | 1xM.2 for Wi-Fi                                   |                            |
| Storage               | M.2              | 1xM.2 for 4G/2280 SSD                             |                            |
|                       | SATA             | 1xSATA                                            |                            |
| Expansion             | PCIe X1          | 1                                                 |                            |
|                       | PCIe X4          | 1                                                 |                            |
| Rear I/O              | DP               | 4 (Default)                                       |                            |
|                       | USB              | 2 x USB2.0 + 2 x USB3.0                           |                            |
|                       | LAN              | 2                                                 |                            |
|                       | Audio            | 1 x line-out + 1 x mic-in                         |                            |
|                       | DC-in            | 1                                                 |                            |
| Internal I/O          | COM              | 6×RS232 (COM2 can be RS485, optional)             |                            |
|                       | USB2.0           | 6×USB2.0 header                                   |                            |
|                       | I/O              | 8×GPIO                                            |                            |
|                       | LVDS/eDP         | 1×LVDS/eDP header                                 |                            |
|                       | LPT              | 1×JLPT                                            |                            |
|                       | PS/2             | 1×PS2_H                                           |                            |
|                       | TPM2.0           | Onboard, optional                                 |                            |
| Dimension             | Type             | Mini ITX                                          |                            |
|                       | Size             | 170 mm x 170 mm                                   |                            |
| Power                 | Standard port    | 1×12V DC-in/4 PIN Power                           |                            |
| Temperature           | Operating Temp.  | -20°C–60°C                                        |                            |
|                       | Storage Temp.    | -40°C–80°C                                        |                            |
| Operating System      |                  | Windows 10 64bit, Linux 64bit                     |                            |

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

## mitX-FP10 Functional Block Diagram



## Ordering Information

| Model      | CPU               | Memory          | DP | LAN | Audio | USB3.0 | USB2.0 | RS232 | PCIe X4 | PCIe X1 | SATA3.0 | M.2 | TPM      | Power | Cooling |
|------------|-------------------|-----------------|----|-----|-------|--------|--------|-------|---------|---------|---------|-----|----------|-------|---------|
| DT1605B-A  | AMD Ryzen V1605B  | 2x SO-DIMM DDR4 | 4  | 2   | Yes   | 2      | 2      | 6     | 1       | 1       | 1       | 2   | Optional | DC-in | Passive |
| DT1202B-A  | AMD Ryzen V1202B  | 2x SO-DIMM DDR4 | 4  | 2   | Yes   | 2      | 2      | 6     | 1       | 1       | 1       | 2   | Optional | DC-in | Passive |
| Customized | OEM/ODM available |                 |    |     |       |        |        |       |         |         |         |     |          |       |         |

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