

User Manual

FP-30 Motherboard (VHFP-30 Mini PC)

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FP30 User Manual

(Version 1.3)

Version:		
Version No.	Description	Date
V1.0	Initial Version.	2019/08/02
V1.3	<ol style="list-style-type: none">Added two fixed screw holes on the PCB boardAdded CPU Specifications	2020/07/22

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Chapter 1 Product Introduction

1.1 Brief Introduction

The FP30 motherboard is based on AMD Ryzen embedded/mobile processors.

1.2 Parameters

Ryzen Embedded V1000 Series Processor:

- Ryzen V1605B—Quad-Core, Base Freq. 2GHz, Max Freq. 3.6GHz, TDP 12-25W
- Ryzen V1202B—Dual-Core, Base Freq. 2.3GHz, Max Freq. 3.2GHz, TDP 12-25W

Ryzen Mobile Processors:

- Ryzen 5 2500U—Quad-Core, Base Freq. 2GHz, Max Freq. 3.6GHz, TDP 15W
- Ryzen 5 3500U—Quad-Core, Base Freq. 2.1GHz, Max Freq. 3.7GHz, TDP 15W
- Ryzen 3 3300U—Quad-Core, Base Freq. 2.1GHz, Max Freq. 3.5GHz, TDP 15W

Memory: Dual Channel SO-DIMM DDR4 up to 32GB, Maximum Frequency 2400MHz.

GPU: Integrated graphics based on CPU, dual display via 1x HDMI2.0, 1xDP interface

Storage: 1 x M.2 Key B for 2242 SATA SSD, NGFF 3G/4G Module. 1 x M.2 Key M for 2242/2280 NVMe SSD

USB: 2xUSB3.2; 4xUSB2.0; 1xType-C(USB3.0)

Ethernet: Two onboard Gigabit Network Controllers

Audio: High-Definition Audio Codec, 1x Speaker-out, 1x Mic-in

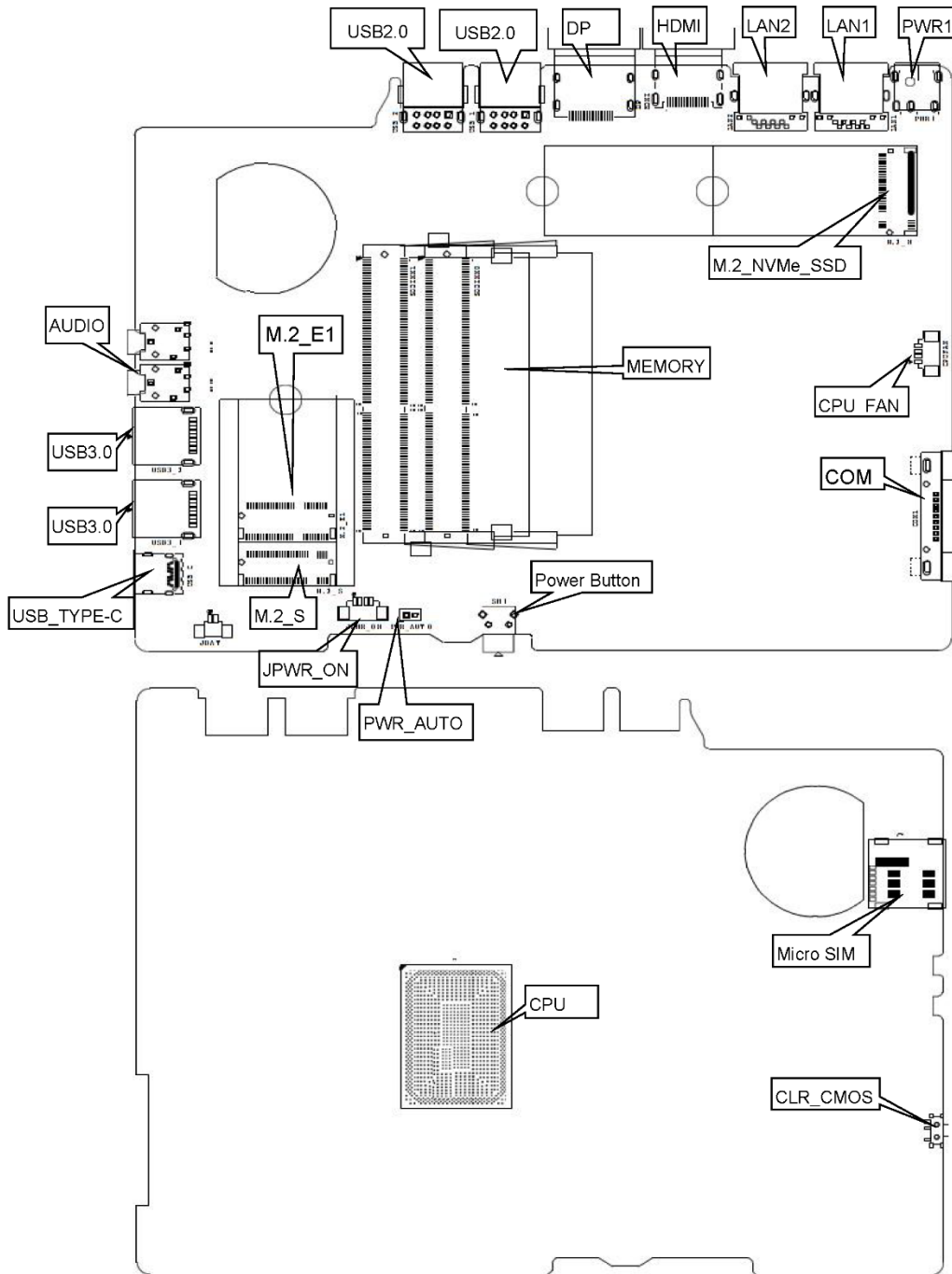
Other I/O: 1xRS232, 1 x M.2 Key E 2230 for Wi-Fi & Bluetooth

Dimension: 183mm x143mm

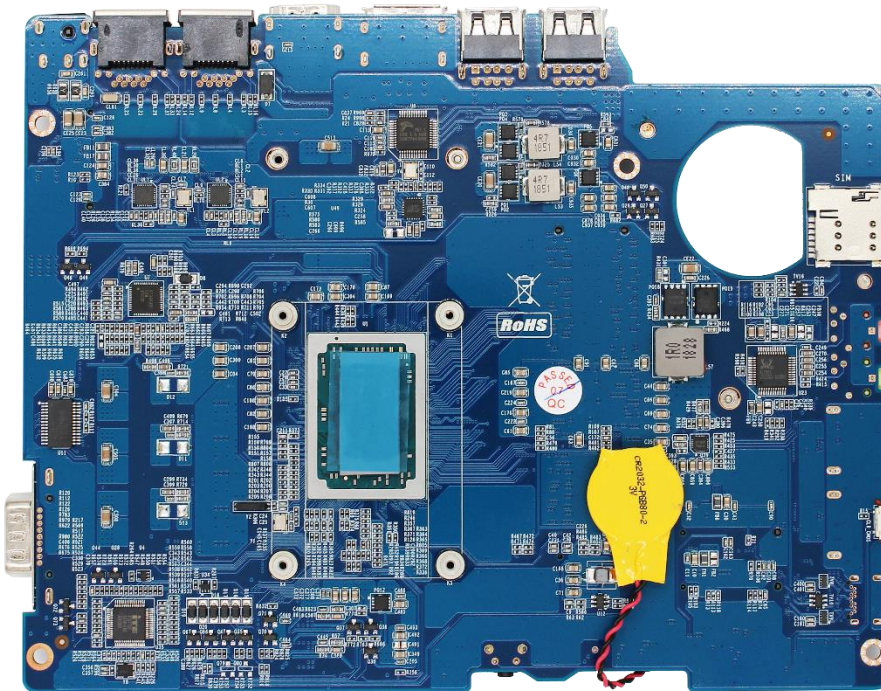
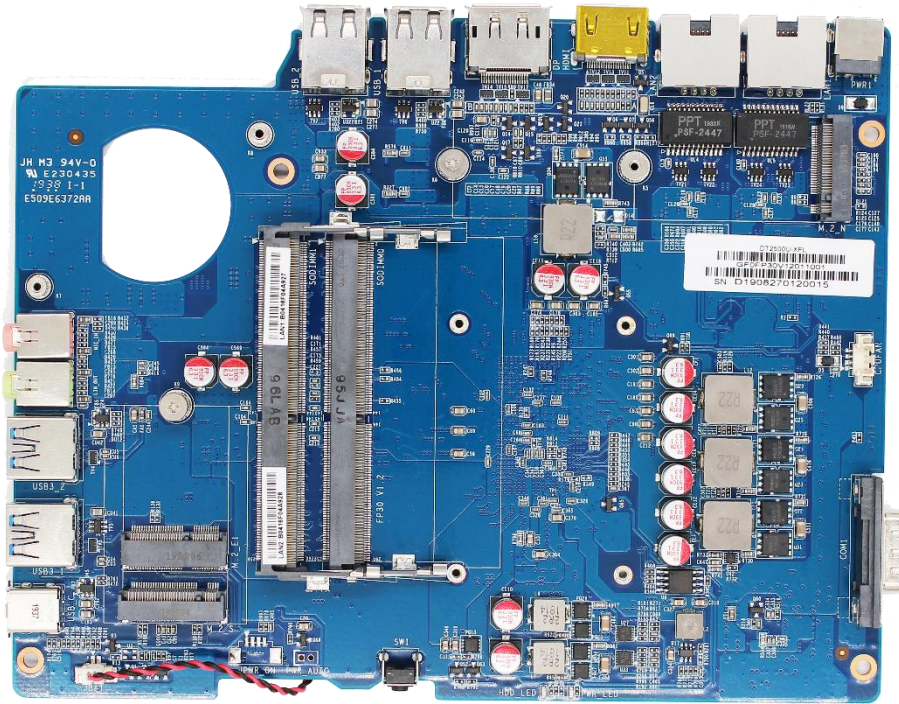
Power: 12V/19V DC-in

Working temperature: -20°C~60°C (0°C~60°C for CPU 2500U)

1.3 Connector Diagram (Board)



1.4 Board images



Chapter 2 Hardware

2.1 Jumper Setting

Please configure the jumpers according to your requirements before installing the hardware.

How to identify the first header of jumpers and pins: Observe the mark beside the jumper or pins and find the header marked by “1” or bold line or triangular symbol. Or observe the rear panel and the header with a square solder pad is the first header.

2.2 Memory Slots

2 x SO-DIMM DDR4-2400 MHz, supporting dual channels, maximum capacity 32GB.

2.3 Display

The board is equipped with 1xHDMI2.0b, and 1xDP1.4 interfaces for display.

2.4 Storage (Screen Printing: M.2_S, M.2_N)

Screen Printing M.2_S: M.2 Key B for 2242 SATA SSD, support 3G/4G module with Micro SIM card slot

Screen Printing M.2_N: M.2 Key M for 2242/2280 SATA SSD. This slot can be configured for optional 2242/2280 NVMe SSD through PCIe channel

2.5 Expansion (Screen Printing: M.2_E1)

Screen Printing M.2_E1: 1xM.2 Key E for 2230 Wi-Fi card & Bluetooth.

2.6 USB Interface

2x Standard USB3.2 interfaces

4x Standard USB2.0 interfaces

1x Type-C interface supports USB3.0 with voltage output but does not support DP output.

2.7 LAN

Two RJ45 interfaces Gigabit Network Controller (RTL8111H) onboard, supports Magic packet wake-up functions. LAN2 supports PXE network boot.

LED Status Indicators:

LINK LED(Orange)	Function	ACTIVE LED(Green)	Function
Always on	Network Connected	Blinking	Data transfer

2.8 Audio

The board features High-Definition Audio Codec ALC662, the audio interface colored green is the Line-out, the audio interface colored pink is the Mic-in.

2.9 Serial port (Screen Printing: COM1)

The board provides a 1xRS232 (DB-9) serial port.

2.10 Board Power Supply (Screen Printing: PWR1)

It supports a 12V/19V DC-in power adapter.



2.11 Switch Button/Light indicator (Screen Printing: PWR1 SW1, JPWR_ON, HDD_LED, PWR_LED)

The board provides an optional switch button (SW1), hard disk read and write indicator HDD_LED (RED), and power-on indicator PWR_LED(BLUE).

JPWR_ON (Optional)

Pin	Signal
1	PWR_ON
2	GND
3	5V Standby
4	SLP3

2.12 Hardware Auto Start (Screen Printing: PWR_AUTO)

PWR_AUTO (Optional)

Settings	PWR_AUTO
Close	Hardware Auto Start

2.13 CMOS Clearance/Retention (Screen Printing: CLR_CMOS)


Clearing CMOS will permanently erase the previous system settings and set them to the original (factory settings) system settings.

Step 1: Turn off the PC and disconnect the power adapter.

Step 2: Press the CLR_CMOS button for 10 seconds.

Step 3: Restart the device, press the button to enter the BIOS setting, and load the optimal default value.

Step 4: Save and exit the settings.

 **Please do not clear COMS when the PC is connected to power in case board damages.**