

FP-20

AMD® Ryzen™ Quad Core Processor V1605B based Mini ITX



Features

- CPU: Ryzen™ V1605B Quad Core Processor
- Memory: Dual channel SO-DIMM DDR4 up to 32 GB
- Display: Display via 2xHDMI2.0,1xDVI-D,1xVGA
- Ethernet: 10/100/1000Mbps
- Storage: SATA3.0, M.2 2242/2280 SSD NVME(SATA Optional)
- Expansion: 1xM.2 2230 for WiFi
- Power: 12V/19V DC input



Introduction

The Maxtang FP20 mini-ITX embedded motherboard is based on the AMD Ryzen™ V1605B (quad-core) and provides a complete PC platform with high performance. Coming from the embedded V1000 processor family and mobile processor family, these CPUs combine the incredible performance of the pioneering “Zen” architecture and “Vega” GPU in a single chip with thermal design power (TDP) as low as 12W/15W. It supports four independent 4K displays, in addition to dual-channel SO-DIMM DDR4 memory.

Features dual 1-Gigabit Ethernet controllers, and M.2 expansion for Wi-Fi and SSD modules. Rich interfaces as 8 x USB2.0, 3 x USB3.2, 1 x Mic-in, 1 x Line-out and Line-in, catering to most requirements in the market. The FP20 is an ideal solution for applications requiring a high-speed communication 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

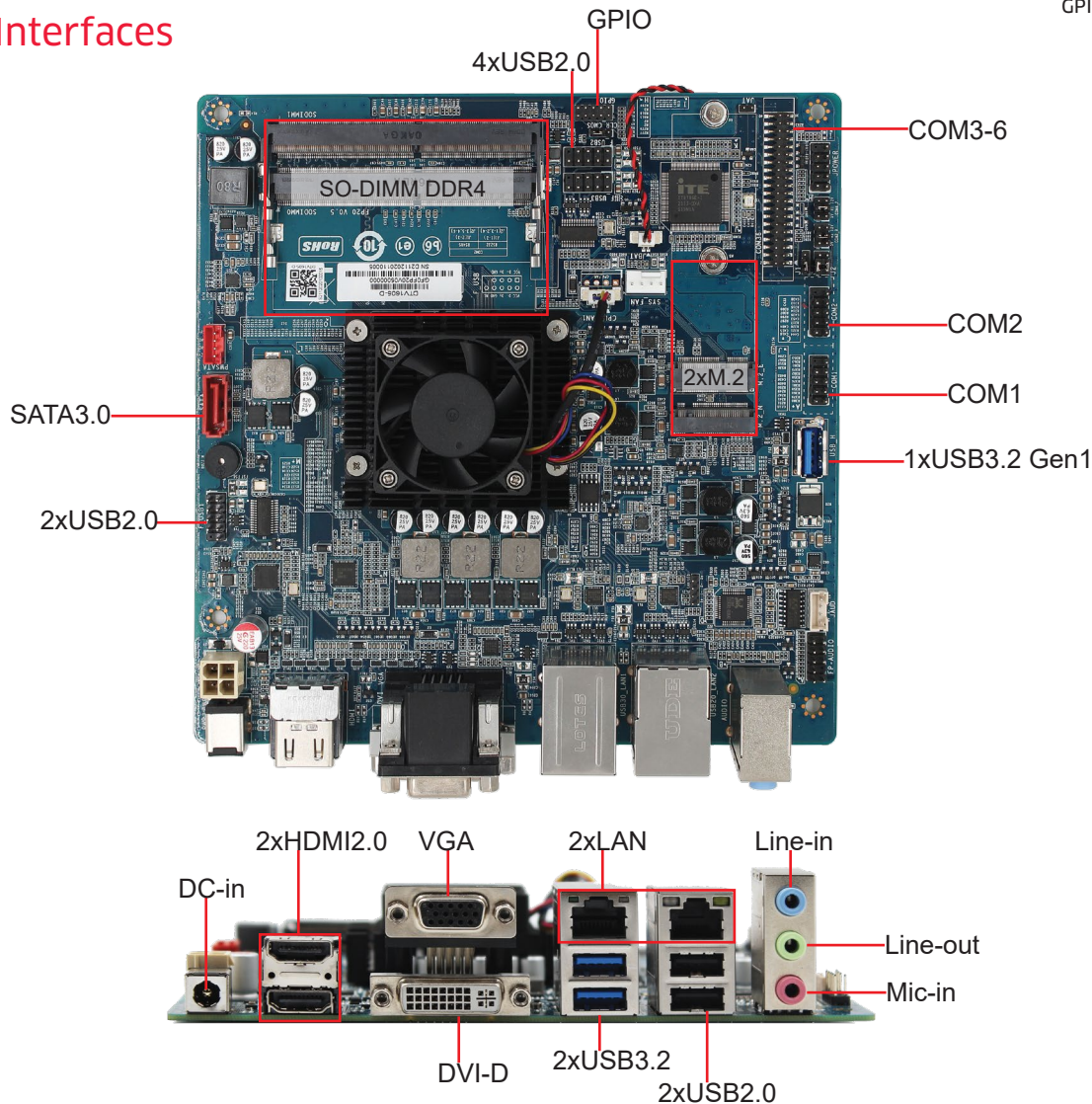


GPIO



Brightness

I/O Interfaces

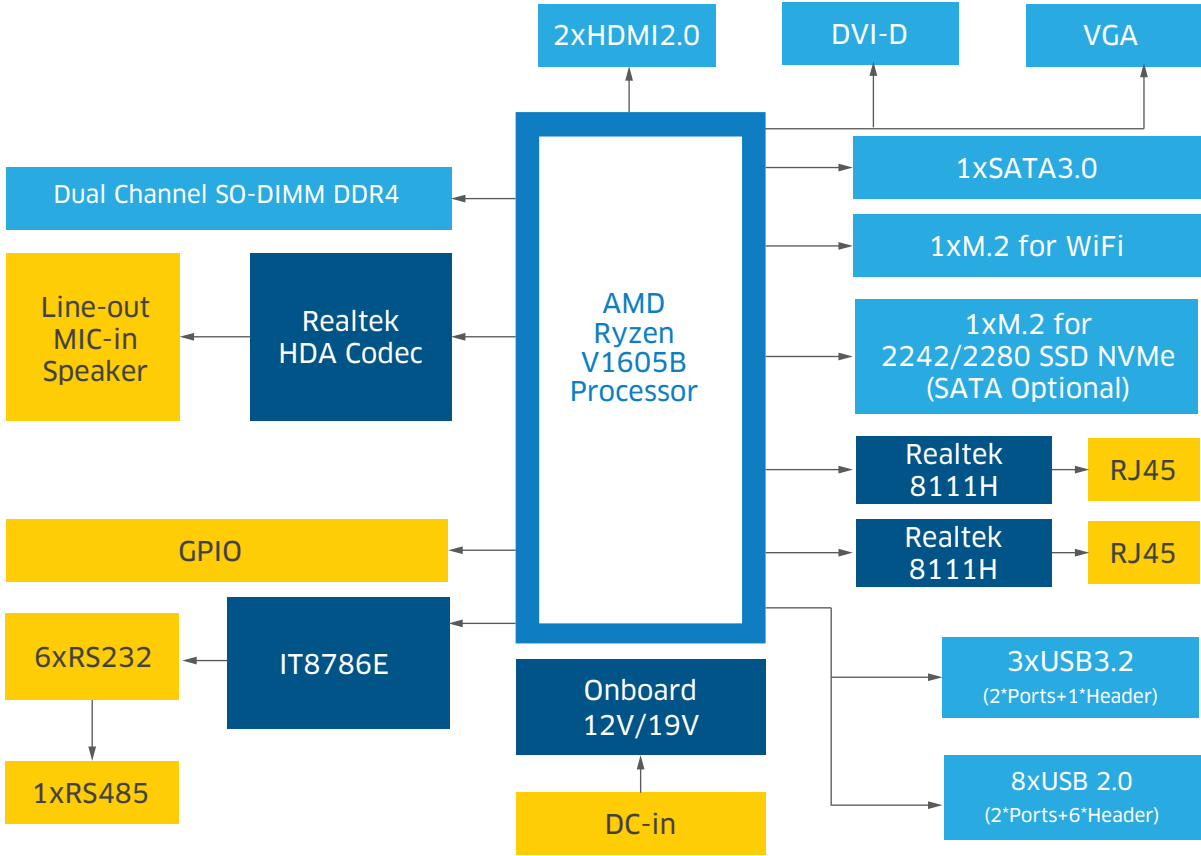


Technical Specifications

Processor	CPU	V1605B (Quad-Core)	
	Max Boost clock	3.6 GHz	
	Base Clock	2.0 GHz	
	Cache	2MB L2	
	BIOS	AMI SPI BIOS	
Memory	Type	Dual Channel SO-DIMM DDR4	
	Max. Capacity	32GB	
Display	GPU	AMD Radeon Vega 8 Graphics	
	Display via	HDMI2.0, DVI-D, VGA	
Ethernet	Speed	10/100/1000 Mbps	
	Controller	RTL8111H	
	Interface	2xRJ 45	
Audio	Audio codec	Realtek HD (Line-in, 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_Key E for Wi-Fi	
Storage	M.2	1xM.2_Key M for 2242/2280 SSD NVMe (SATA Optional)	
	SATA3.0	1	
I/O Interface	LAN	2	
	COM	6xRS232 (COM2 can be change to RS485, optional)	
	USB3.2	3 (2*Port + 1*header)	
	USB2.0	8 (2*Port + 6*header)	
	HDMI2.0	2	
	DVI-D	1	
	VGA	1	
	Audio	1 x Line-in + 1 x Line-out + 1 x Mic-in	
	GPIO	8 (One Group)	
	Dimension	Size	170 mm x 170 mm
		Board Type	Mini ITX
Power	Standard Port	12V/19V DC-in	
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.

Functional Block Diagram



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