SENBAINNO® 千羽云创

One-Stop Embedded IoT solutions provider

ITX-YH853A1_R723L v:1.0

Mini ITX_ form factor, Based on AMD Embedded IoT Solution_ Ryzen™ 7 Processor-**8845HS** / **35~54**W TDP

ideal for embedded systems, edge computing, IoT devices.

Features

- CPU: AMD Ryzen™ 7 8845HS 3.8GHz 8-Core Processor
- Memory: Dual channel SO-DIMM DDR5 up to 64GB
- Display: AMD Radeon™ 780M; 2*HDMI+LVDS/EDP displays
- Ethernet: 2* RTL8111H GbE Ports
- Storage: 1* M.2
- Expansion: 1* M.2 for WIFI/BT; 1* 80-pin High-Speed Connector
- Power: DC_12~19V input

intel IoT Solutions Alliance
Industrial Solution Builders Specialist

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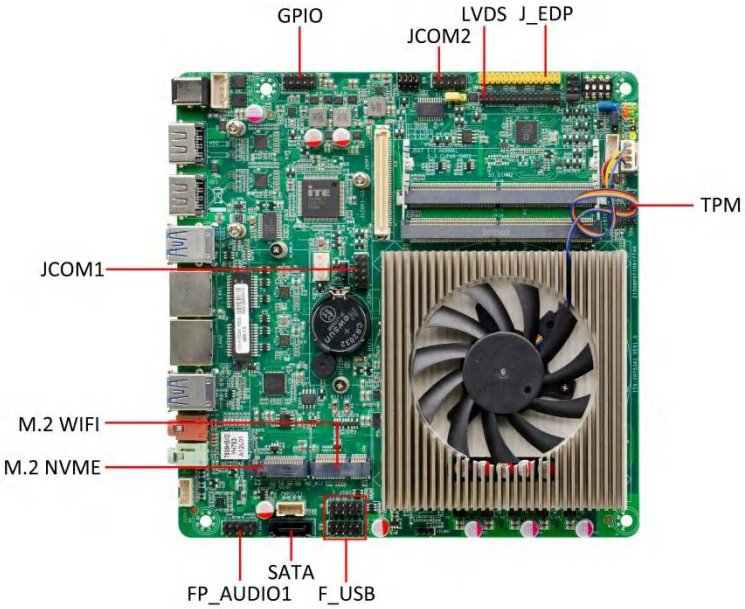
Introduction

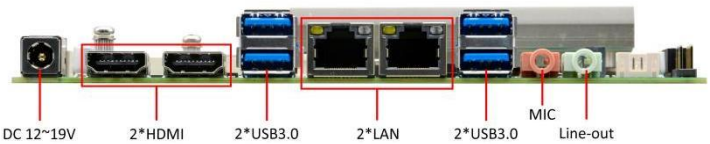
The Senbainno ITX-YH853A1 is an X86-based Mini ITX industrial motherboard powered by either the AMD Ryzen™ 5 7535HS (6 cores/12 threads, 3.3GHz) or AMD Ryzen™ 7 8845HS (8 cores/16 threads, 3.8GHz) processor, featuring a TDP of 35–54W. It supports two DDR5 SO-DIMM slots for dual-channel memory up to 4800MHz and a maximum capacity of 64GB. Integrated with AMD Radeon™ 660M/780M graphics, it offers display outputs via two HDMI 2.0 ports and either LVDS or eDP, enabling independent triple-display setups. Connectivity options include two 8111H Gigabit Ethernet ports, two RS-232 serial ports (with COM2 supporting RS-485 mode), and M.2 slots for Wi-Fi and SSD expansion.

Combining stable, reliable industrial-grade performance with cost-effectiveness and low power consumption, the Senbainno ITX-YH853A1 is suitable for a wide range of applications, including media playback, digital signage, advertising, large-format LCD displays, communication control, medical instrumentation, industrial and traffic control, information systems, financial equipment, automotive systems, digital control, military applications, and various terminal markets.

GPIO Watchdog

I/O Interfaces





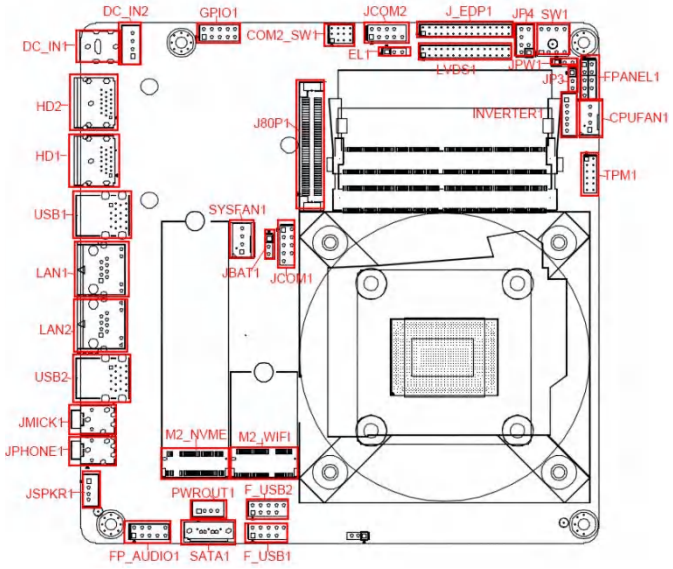
Specifications:

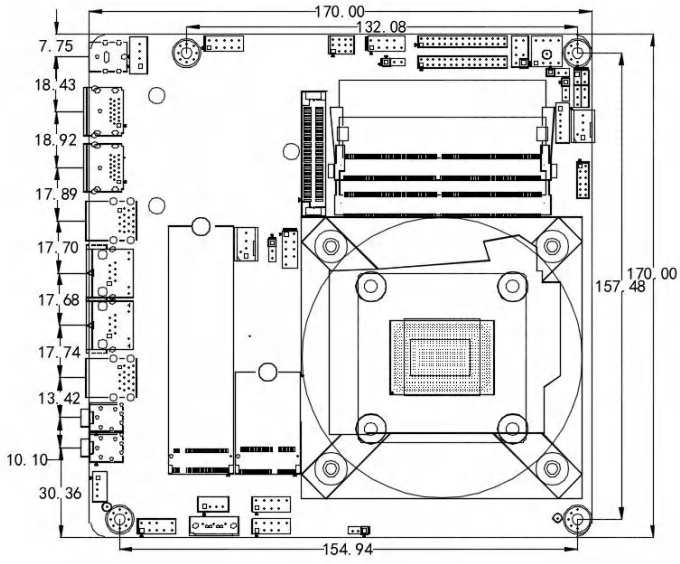
Model No.	ITX-YH853A1_R723L VER:1.0
Processor	Integrated AMD Ryzen™ 7 8845HS 3.8GHz 8-core 16-thread CPU,TDP 35~54W NPU TOPS 16
	Compatible with AMD Ryzen™ 5/7 series processor
Chipset	Based on SOC platform
RAM	2* SODIMM slot ,support dual channel 5600MHz DDR5 memory, up to 64GB
Dispay	Integrated AMD Radeon™ 780M, support DirectX 12 OpenGL 4.6, support 4K/60H
	1* LVDS, supports dual-channel 24-bit
	2* HDMI, maximum supported resolution: 3840×2160@60Hz
	1* eDP interface (selectable via jumper between eDP and LVDS)
	Supports triple-display output (HDMI/LVDS or eDP) in synchronous or asynchronous modes
Ethernet	2* RTL8111H Gigabit Ethernet Lan, support Wake_on_LAN/PXE function
Storage	1* M.2 slot, supports M.2 Key M 2280 NVME PCIE4.0 X4 standard SSD
Audio	Integrated ALC897 7.1+2 channel high-fidelity audio controller, supporting MIC,Line-out and power amplifier
	Support amplifier 4Ω 3W speaker
Expansion Slot	1* M.2 slot, supports M.2 Key E 2230 WIFI/BT module
	1* 80-pin high-speed connector, including 4* PCIe, eSPI, USB, and DDI signals (using YH753-H2 expansion board)
Rear I/O interface	4* Type-A USB3.0 (5Gbps)
	2* HDMI2.0
	2* RJ-45 Gigabit Network Interface
	1* Line out (Green); 1* MIC (Red)
	1* DC power input, supporting 12V~19V power input
Built-in I/O interface	1* LVDS interface (2*15-pin, 2.0mm pitch), supports dual-channel 24-bit
	1* LVDS backlight power interface (1*6-pin, 2.0mm pitch)
	1* eDP interface (2*15-pin, 2.0mm pitch); selectable via jumper (mutually exclusive with LVDS)
	2* RS-232 serial interfaces (2*5-pin, 2.54mm pitch); COM2 supports RS-485 functionality
	4* USB 2.0 interfaces (2*5-pin, 2.54mm pitch)
	1* Front audio interface (2*5-pin, 2.54mm pitch)
	1* Front panel switch/indicator interface (2*5-pin, 2.54mm pitch)
	1* HDD power interface (1*4-pin, 2.0mm pitch)
	1* Audio amplifier interface (1*4-pin, 2.0mm pitch)
	1* DC power interface (1*4-pin, 2.5mm pitch; supports 19V power input)
	1* TPM interface (eSPI specification), 2x6-pin, 2.0mm pitch
Fan interface	1* 4Pin CPU intelligent fan interface and 1* 4Pin system fan interface
GPIO	Support 4-way input and output GPIO
BIOS	256Mb Flash ROM
Watchdog	Support hardware reset function (256 levels, 0~255 seconds)
OS	Window 10/Windows 11/Linux
Power type	Powered by DC 12~19V power supply

Operating temperature	-10℃ ~ 60℃
Storage temperature	-20℃ ~ 70℃
Working humidity	5%-95% relative humidity, non-condensing
Size	170mm x 170mm

*All specifications and photos are subject to change without notice

Interface Diagram





Ordering Info

No.	Model	Processor	Frequency	Memory	DP	HDMI	LVDS	EDP	LAN	USB	COM	Power
1	ITX-YH753A1_R523L VER:1.0	7535HS	3.3G	2*SODDR5	/	2	2ch*24BIT	1	2*8111H	8	2	DC 12~19V
2	ITX-YH853A1_R723L VER:1.0	8845HS	3.3G	2*SODDR5	/	2	2ch*24BIT	1	2*8111H	8	2	DC 12~19V

!! *For customized options, please consult regional sales. And please conrm the model name and description before purchasing.

*The model name and description might vary due to inventory changes.