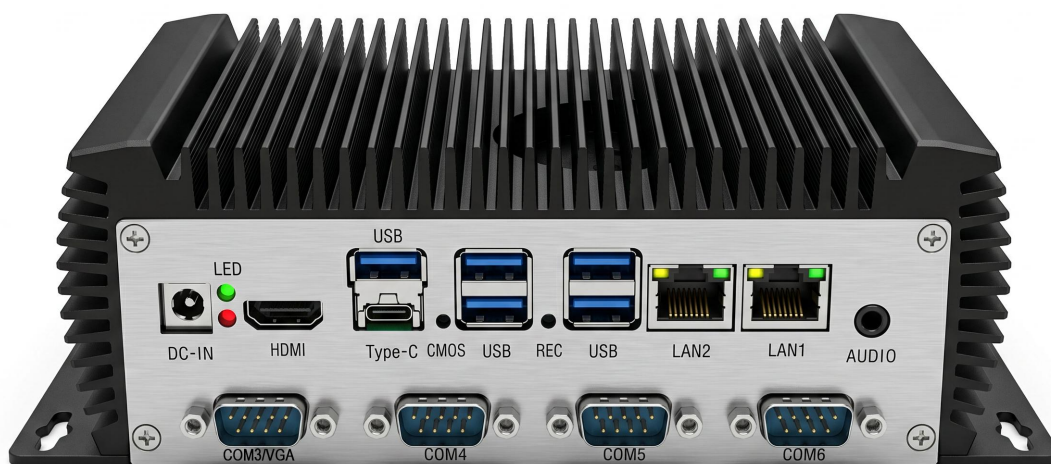


工控机 DY35-M1213U IPC

用户使用手册 User Manual



主板型号 MB Model: DY35-M1213U

PCB 版本 PCB_VERSION: V0.1

声明： Statement:

本手册包含的内容并不代表本公司承诺，本公司保留对此手册更改的权力，且不另行通知，对于任何因安装、使用不当而导致的间接、直接、有意或无意的损坏及隐患概不负责。

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警告提示 Warning

为避免电击危险： To avoid the risk of electric shock:

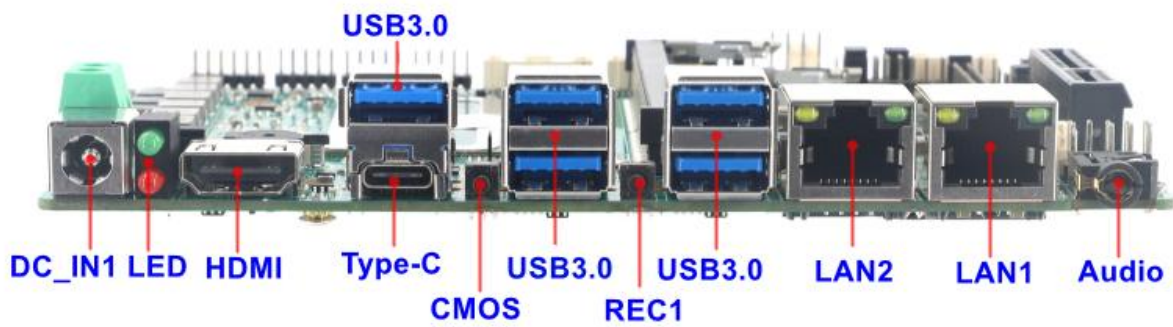
- 请勿在雷暴天气期间连接或断开任何电缆的连接，安装，维护或重新配置本产品。
Do not connect or disconnect any cables, install, maintain or reconfigure this product during a thunderstorm.
- 将所有电源线连接正确且采用接地的电源插座。 Connect all power cords properly and use a grounded electrical outlet.
- 将所有要连接到本产品的设备连接到正确连线的插座。 Connect all devices to be connected to this product to properly wired outlets.
- 尽量仅用单手连接或断开信号电缆的连接。 Try to connect or disconnect signal cables with one hand only.

更换系统电池时，请使用同类电池进行更换。电池含锂，如果使用、操作或处理不当会发生爆炸。 When replacing the system battery, use a comparable battery for replacement. Batteries contain lithium and can explode if used, handled, or disposed of incorrectly.

I. 主板详细规格 Mothebroard Details Specifications:

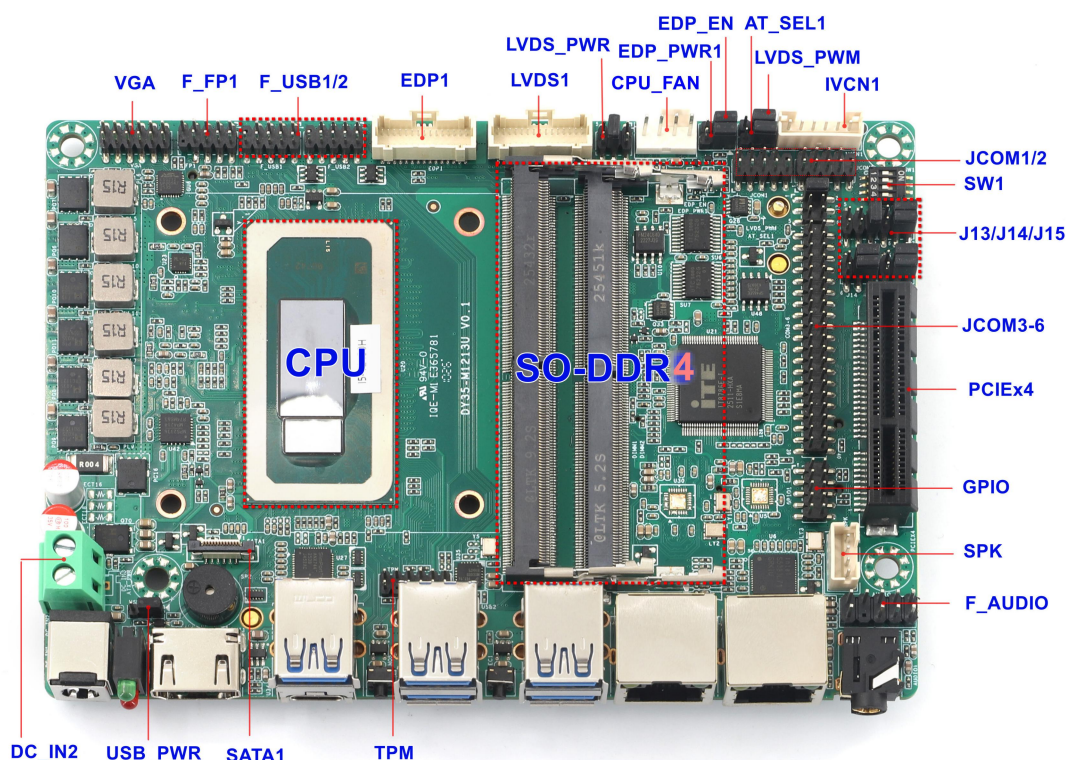
主板型号 MB Model.:	DY35-M1213U V0.1
处理器 Processor	Support FCBGA1744, 12-13th U/P/H Series Core™ I3 I5 I7 Mobile processor
显示芯片 Graphics	Intel®UHD Graphics integrated graphics
显示输出 Display Output	- IO PORT: HDMI2.1 Max resolution: 4096x2304@60Hz - VGA (Pin header, 2X6 P2.0mm) - LVDS (Pin header, default display: supports different resolutions, default 1920x1080) - EDP (Pin header, optional, remark at order notes) ***EDP / LVDS only one can be displayed (Use the EDP_EN pin to switch)
内存 RAM	2*SO-DIMM DDR4 dual memory channels, supports DDR4 2666 / 3200 MHz, MAX : 64GB
存储 Storage	1*M.2 M Key 2280 slot, supports NVMe/SATA protocols (adaptive).
扩展槽 Extension	1*M.2 E Key 2230 slot, supports WIFI + Bluetooth module 1*PCIEx4 (Expansion card that supports its interface)
音频 Audio	1*Realtek ALC897 High Definition Audio Driver
网络 Internet	2* Intel I226-V 2.5GbE Gigabit LAN card
USB	6*USB3.0 (IO ports) & 2*USB2.0 (extra 2* internal Pin)
Series Ports 串口	6*COM, where COM 1-2 support RS232/RS485 ; COM 3-6 support RS232.
I/O 芯片 Chip-set	IT8786E-I HX LQFP-128
BIOS	AMI BIOS
供电 Power Input	DC_IN: 12V (11V-27V optional, remark at order notes)
散热系统 Fan	Built-in CPU cooler [Internal: 1*CPU_FAN 1x4Pin]
环境 Environment	- Working Temperature: 0~60℃ Storage Temperature: -20℃~75℃ - Humidity: 0%~95% Relative humidity, non-condensing

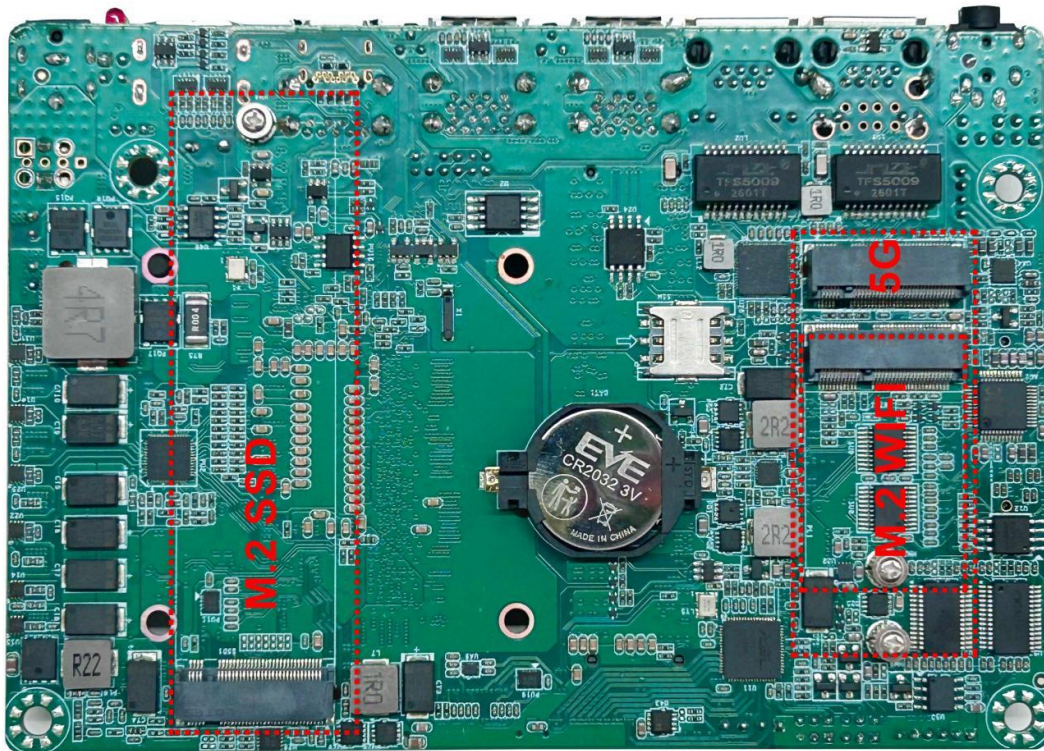
II. IO 面板 Panel I/O Ports:



I/O 面板 Panel	● DC_IN1: [DC JACK OD5.5 , DC12V motherboard power supply, optional 11V-27V]
	● LED: [Power/Hard Drive Indicator Light]
	● HDMI: [Default resolution is 1920x1080/60Hz when using HDMI+LVDS+VGA triple display; optional 4K @60Hz single display]
	● USB3.0: [5*USB3.0]
	● Type-C: [1*USB3.0, Support display function]
	● REC1: [One-click restore, achieved with software]
	● LAN1: [Intel I226-V 2.5GbE network card , optional RTL811H 1G, remark at order notes]
	● LAN2: [Intel I226-V 2.5GbE network card , optional RTL811H 1G, remark at order notes]
	● AUDIO: [Combo Jack, Line-OUT, MIC IN]
	● CMOS Clear CMOS

III. 内置接口 Internal Interfaces:



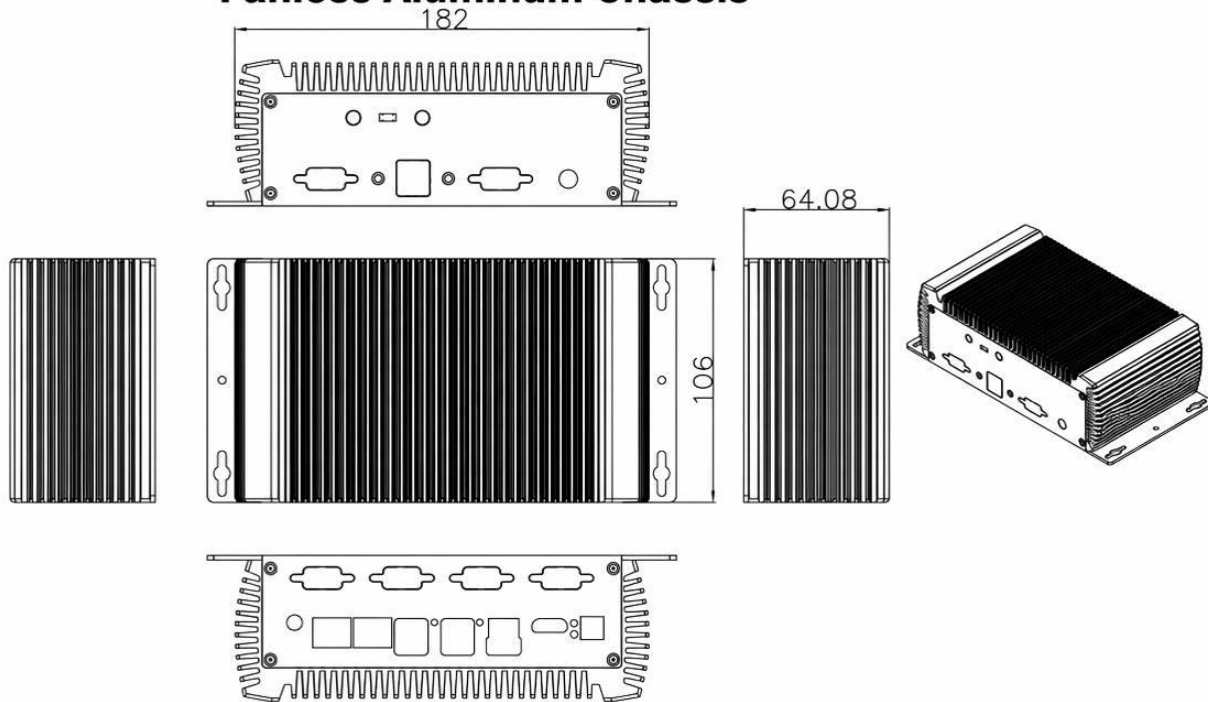


CPU	Support FCBGA1744, 12-13th U/P/H Series Core™ I3 I5 I7 Mobile processor
SO-DDR4	2x SO-DIMM Dual memory channels, supports DDR4 2666 / 3200 MHz, MAX : 64GB
M.2 WIFI	M.2 E Key 2230 slot supports Wi-Fi and Bluetooth modules.
M.2 SSD	M.2 M Key 2280 slot supports NVMe/SATA protocols (adaptive).
SATA1	FPC 12P Trans Socket for 2.5inch SATA SSD/HDD
DC_IN2	Default CONN 2PIN 5.08mmPhoenix connector (180°); optional Wafer, 4P 2.54mm lead pitch and ATX2x2 4P Socket.
AT_SEL1	1x3Pin Header JMP Default 1-2 =Disables Auto Power-on; Switching 2-3=Enables Auto Power-on.
PCIEX4	64PIN extension slot (expansion cards that support its interface)
CPU_FAN	1x4Pin Wafer CPU_FAN Connector (PWM Control)
F_PP1	2X5 P2.0 Pins, N10
F_USB1/2	4 ↑ USB2.0 [2X5 P2.0 Pins, N9]
F_AUDIO	Front MIC/Audio Pins, [2X5 P2.54 Pins, N8]
SPK	1X4 wafer [2x3W, 8 ohms/4 ohms, amplifier speaker interface]
USB_PWR	2*[1x3Pin Header] JMP defaults to 1-2 = VCC5, switching to 2-3 = 5VSB .

VGA	● 2X6 P2.0 Pins
EDP1	● interface 2*1 5 Header 1.0 mm SMT pins
EDP_PWR	● 1 * 3 Header 2.0mm pins, 3.3V/5V, default 3.3V (set to pins 1-2)
EDP_EN	● 1 * 3 Header 2.0mm pins , for switching between LVDS and EDP displays. ● By default, pins 1 and 2 of the jump cap support LVDS display, and pins 2 and 3 support EDP display.
LVDS1	● interface 2*1 5 Header 1.0 mm header , default 1920 *1080 resolution
LVDS_PWR	● 2*3 Header 2.0mm pins, 3.3V/5V/12V, default 5V (Pin3-4)
LVDS_PWM	● 1 * 3 Header 2.0mm pins , default Jumper 1-2
SW1	● 2x4 digital switch to adjust different LVDS screen resolutions; default resolution is 1920*1080.
IVCN1	● 1x 6- pin Wafer P2.0mm, LVDS screen backlight power supply
JCOM1/2	● Supports RS232 and RS485, achieved via BIOS and internal Jumper J13/J14/J15.
J13/J14/J15	● Serial ports JCOM1 / JCOM2 , RS232 /485 protocol switching ● Default RS232 serial ports: J13(1-3), J13(2-4), J14(1-3), J14(2-4), J15(1-3), J15(2-4) ● RS485 serial port: J13(3-5), J13(4-6), J14(3-5), J14(4-6), J15(3-5), J15(4-6) in conjunction with BIOS settings.
JCOM3-6	● 4 *COM pins , 2*20 Header 2.0 mm
GPIO	● 2 * 5 Header 2.0mm Pins , Control Interface
TPM	● 2 * 6 Header P 2.0mm N10 Pins , for connecting external encryption devices.
5G	● M.2 key-B, used with a SIM card

IV. 机箱结构和尺寸 Case Structure and Size

Fanless Aluminum Chassis



Case Size: 182*106*64.08MM

V. 机箱接口展示 Full IO Ports



VI. 适配器 Adapter

