



Touch Think Intelligence Product Specification

Mainboard series

CX-J1900B

V1.6

CONTENTS

Chapter 1 Product Introduction.....	- 4 -
1.1 Applicability.....	- 4 -
1.2 Functions.....	- 4 -
1.3 Features.....	- 4 -
1.4 interface schematic diagram	- 4 -
Chapter 2 Product Specifications and Parameters.....	- 5 -
parameter list	- 5 -
Chapter 3 Definition of Product Interface.....	- 6 -
3.1 Interface Serial Number Identification.....	- 6 -
3.2 Interface Serial Number Description.....	- 8 -
3.3 Description of interface terminal definitions.....	- 8 -

Chapter 1 Introduction

1.1 Application Scenarios

- ◆ Advertising machine ◆ Digital signage ◆ Intelligent self-service terminal
- ◆ Intelligent retail terminal ◆ O2O intelligent equipment ◆ Industrial intelligent automation equipment

1.2 Functions

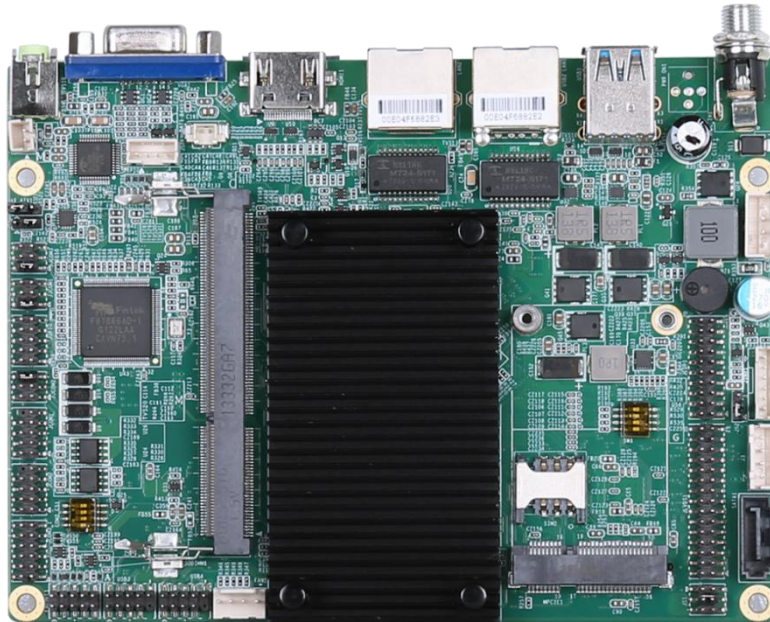
CX-J1900B motherboard adopts Intel Celeron J1900/J1800 quad-core is a high-speed, fanless motherboard. It is mainly used in financial, retail, medical, all-in-one machine, advertising machine, industrial control machine and other fields;

1.3 Features

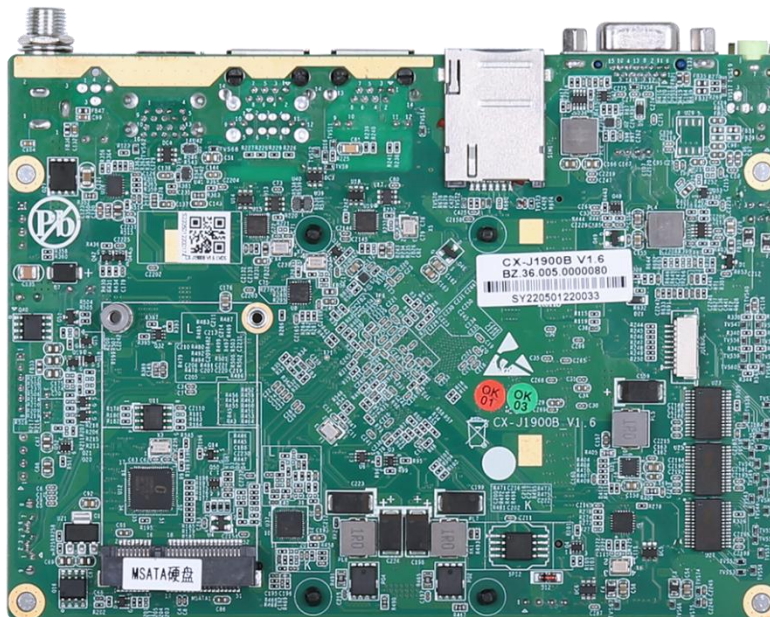
- Intel Celeron J1900 Quad-Core 1.99G. J1800, J1900 optional, using Intel Bay trail SOC chipset.
- Support DDR3L 1333/1600 low voltage 1.35V memory, up to 8GB.
- Supports wide-voltage 12V-36V input.
- Onboard VGA/HDMI interface, LVDS/EDP port; support dual-screen display
- 2*COM (standard RS232) ports on board; 1* RS232 and RS422, RS485 inter-conversion; 4 *RS232 serial ports.
- Onboard MiniPCIE, support WIFI/3G, 1*MSATA, support MSATA disk
- Rich expansion interface: six USB interfaces (two USB3.0 standard socket, four USB terminal interface); four RS232 serial port; a RS232/RS422/RS485 (5V) inter-conversion; four GPIO (TTL) output, four GPIO TTL input, can meet the requirements of a variety of peripherals on the market

1.4 Motherboard front and back interface diagram

【Front】



【Back】

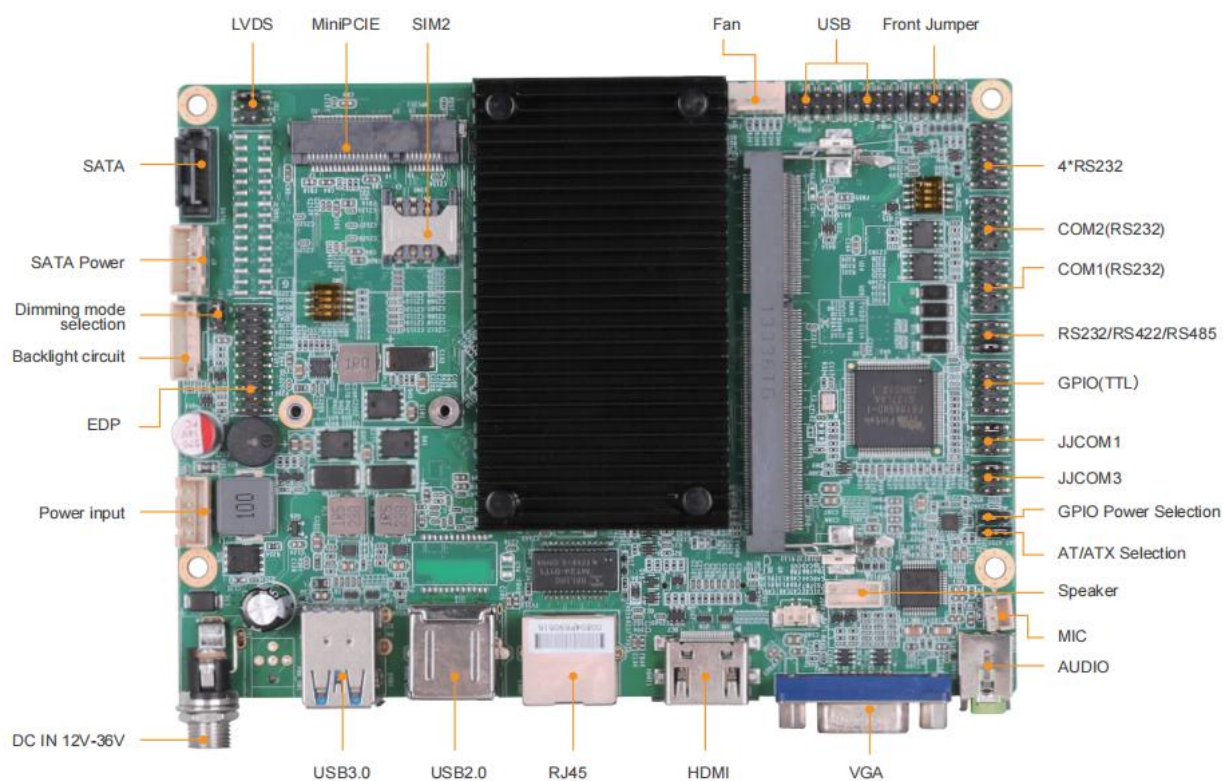


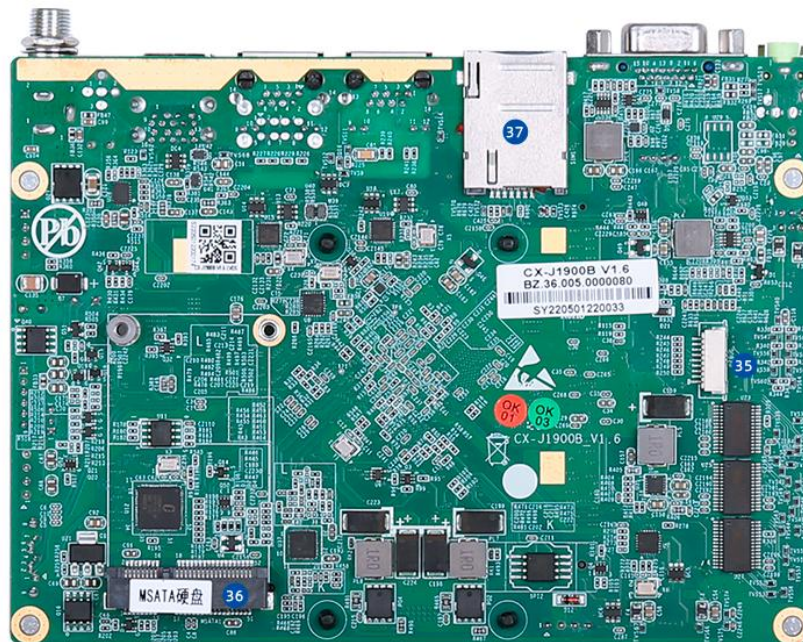
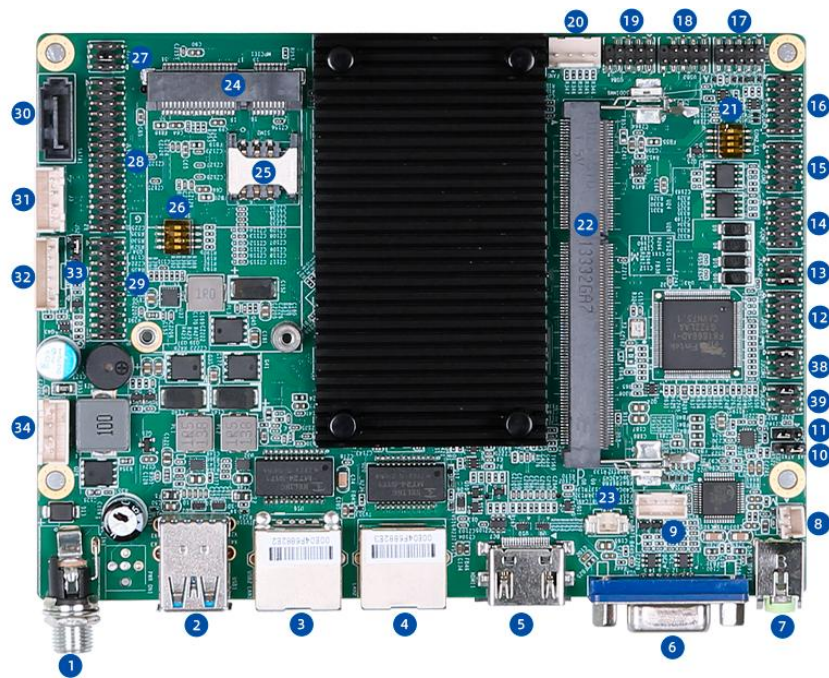
Chapter 2 Basic Function List

Specification	
CPU	Intel® Celeron® J1900/J1800, Quad-core, TDP 10W
DISPLAY	1 * VGA ; 1 * HDMI ; 1 * LVDS ; 1 * EDP
Memory	Support DDR3L-1333 MHz, 1 * SO-DIMM Slot, Up to 8GB
Storage	1 * SATA2.0 + 1 * mSATA
Ethernet	1 * Realtek PCI-E NIC RTL8111H for 1000Mbps
Audio	The GPD8104B is a USB stereo audio chip Compatible with USB 2.0 full speed specification; And a external Stereo amplifier (8Ω 3W)
COM	2*COM(full signal RS232)
Other Ports	USB:2*USB3.0 + 4*USB2.0(Rear I/O) 1*RS232/RS422/RS485 intertwine; 4*RS232 serial port; 8 * GPIO (TTL) ; 1 * Front Jumper; 1*LED Control; 1* FAN

Chapter 3 Interface Definitions

◆ 3.1 interface serial number identification

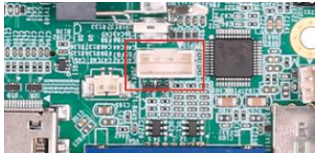
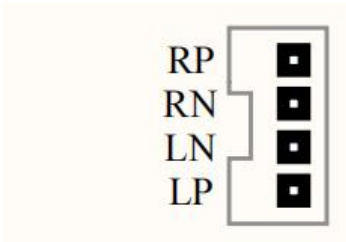
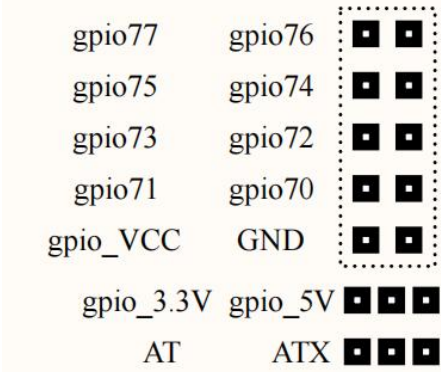
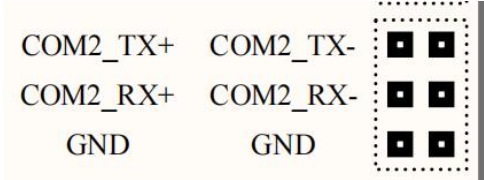
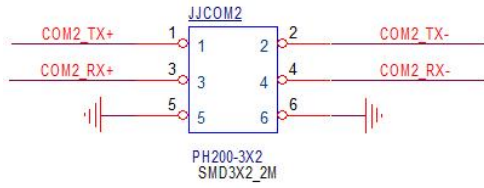




◆ 3.2Interface Serial Number Description

1. DC input (12-36V)	21. RS232/RS422/RS485 encoders
2. USB 3.0 sockets	22. Memory Slot
3. RJ45 network port	23. RTC terminals
4. RJ45 network port	24. MiniPCIE (3G/4G/WiFi)
5. HDMI video output	25. SIM2 (Micro card)
6. VGA video output	26. LVDS encoders
AUDIO sockets	27. LVDS Power supply options
7. MIC terminals	28. LVDS connector
9. Speaker terminals	29. EDP connector
AT/ATX option	30. SATA
11. GPIO Power Supply Selection	31. SATA power supply
12. GPIO connector(TTL)	32. Backlighting Circuit
13. RS232/RS422/RS485 terminals	33. Dimming method selection
14. COM1 (full signal RS232)	34. Power Input Port
15. COM2 (full signal RS232)	35. Debug connector
16. 4*RS232 串口	36. MSATA
17. Front Jumper	37. SIM1 (standard card)
18. USB terminals	38. JJCOM1
19. USB terminals	39. JJCOM3
20. Fan Interface	

◆ 3.3 Interface Terminal Definition Description

3.3.1 MIC 	
3.3.2 loudspeaker 	
3.3.3 AT/ATX GPIO Port and Configuration Description 	
3.3.4 RS232/RS422/RS485 Interchange Interface Definitions and Configuration Notes 	 JCOM2 definitions are as follows: 

RS422 mode TX+ TX- RX+ RX-

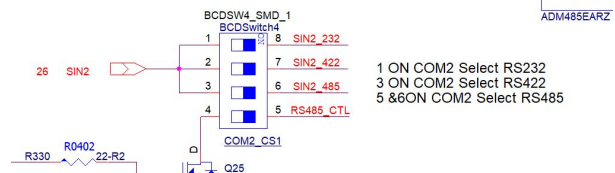
RS485 mode RS485+homologous TX+、
RS485-homologous TX-

The dip switches are defined as follows:



(Full Signal RS232) Interface Definitions
14,15

COM1_DCD	COM1_RXD	☐	☐
COM1_TXD	COM1_DTR	☐	☐
GND	COM1_DSR	☐	☐
COM1_RTS	COM1_CTS	☐	☐
COM1_RI		☐	

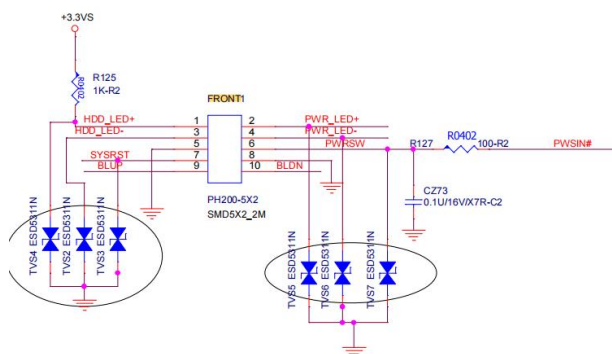


3.3.6 RS232 Serial Port Definition

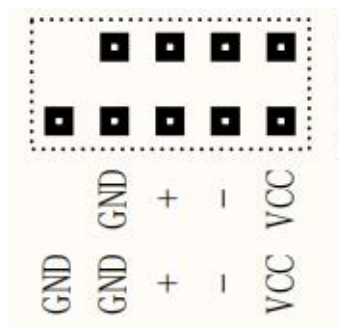


COM3_RX	☐	☐	COM4_RX
COM3_TX	☐	☐	COM4_TX
GND	☐	☐	GND
COM5_RX	☐	☐	COM6_RX
COM5_TX	☐	☐	COM6_TX
GND	☐	☐	GND

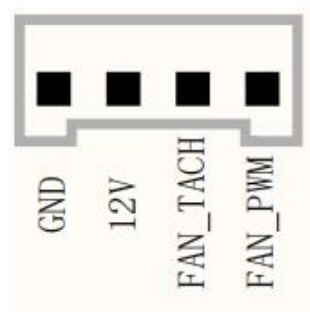
3.3.7 FRONT Jumper Interface Definition



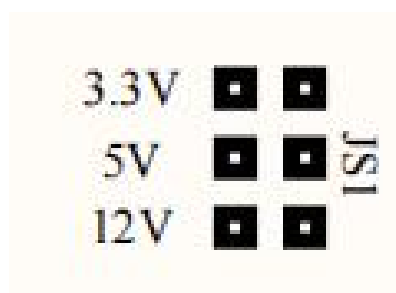
3.3.8 USB Terminal Interface Definition



3.3.9 Fan Interface Definition



3.3.10 LVDS Power supply options

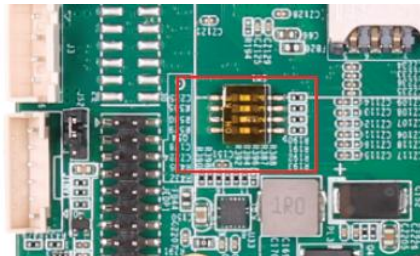


3.3.11 LVDS interface definition



1	2			1	VCC			VCC	2
					VCC			LVDS_Detect	
					GND			GND	
					D0N			D0P	
					D1N			D1P	
					D2N			D2P	
					GND			GND	
					CLK0N			CLK1N	
					D3N			D3P	
					D4N			D4P	
					D5N			D5P	
					D6N			D6P	
					GND			GND	
					CLK1N			CLK1P	
					D7N			D7P	
29	30			29	JLVDS1				30

LVDS Resolution Dial Definition



0000 → 640x480	1ch/18bit	1000 → 1280x768	1ch/24bit
0001 → 1024x768	1ch/18bit	1001 → 1280x800	1ch/24bit
0010 → 800x600	1ch/18bit	1010 → 1360x768	1ch/24bit
0011 → 1280x768	1ch/18bit	1011 → 1366x768	1ch/24bit
0100 → 1360x768	1ch/18bit	1100 → 1400x1050	1ch/24bit
0101 → 1366x768	1ch/18bit	1101 → 1280x1024	2ch/24bit
0110 → 800x600	1ch/24bit	1110 → 1440x900	2ch/24bit
0111 → 1024x768	1ch/24bit		

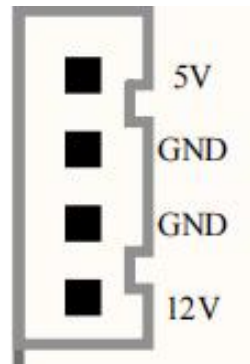
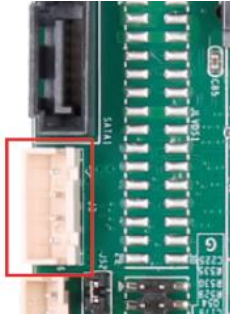
3.3.12 EDP interface definition



1	2			1	VCC			VCC	2
					GND			GND	
					TX0N			TX0P	
					TX1N			TX1P	
					TX2N			TX2P	
					NC			NC	
					GND			GND	
					AUXN			AUXP	
					GND			GND	
					GND			HPD	
19	20			19	JEDP1				20

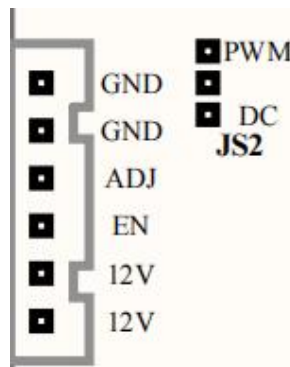
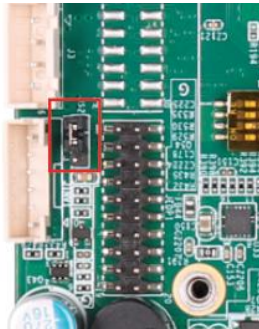
3.3.13 SATA POWER interface

Definition



3.3.14 Backlight Interface

Definition

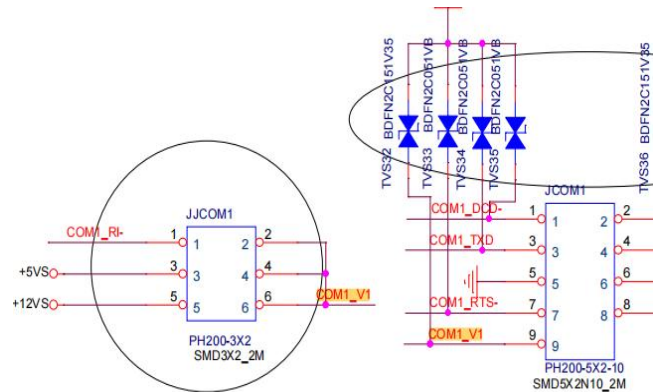


3.3.15 Power Terminal Interface

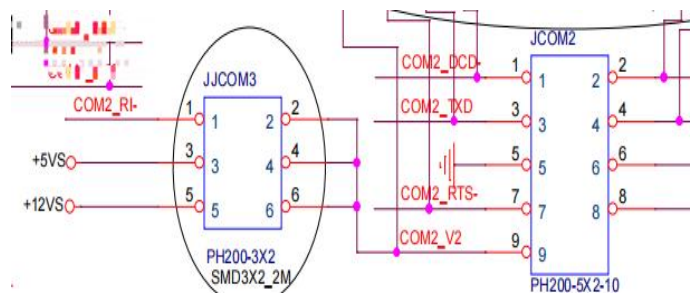
Definition



3.3.16 JJCOM1 interface definition (Corresponding function selection via JCOM1 pin9)



3.3.17 JJCOM3 interface definition (Corresponding function selection via JCOM2 pin9)





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