

# Controller C2200 Specification

Version: V1.0.1



### > Product Overview

#### 1.1 Product Overview

C2200 is a product designed and developed based on the Allwinner T5 main control chip, running on the Linux operating system. It features a quad-core CPU with a frequency of 1.5GHz, 1GB of memory, excellent performance, and high cost-effectiveness. Equipped with the G31GPU, it has good image and video processing capabilities. This product has multiple I/O ports, analog interfaces, serial ports, as well as Ethernet and other interfaces.

This chip is an automotive-grade chip, which runs stably with a long supply cycle, making it an ideal choice for industrial applications.

#### 1.2 Application Scope

C2200 is a complete machine developed for the industrial control industry, designed and developed with mature solutions. It features rich interfaces, strong anti-interference capabilities, stable operation, and is suitable for industrial field applications such as robot controllers.

#### 1.3 Product Image



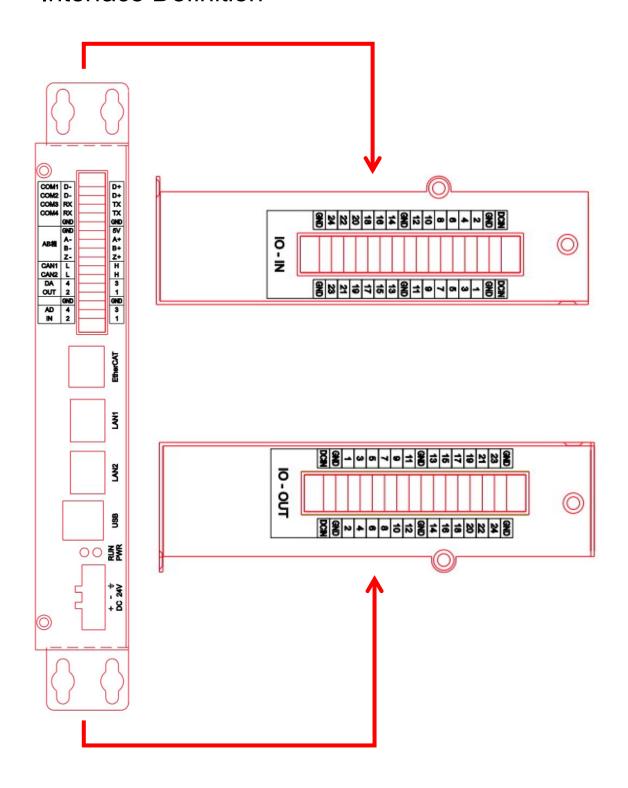


# > Basic Parameter List

Item	Parameter			
CPU	Allwinner T507, quad-core with a main frequency of 1.5GHz			
Memory	1GB			
Onboard Storage	EMMC Flash 8GB			
os	Linux			
Ethernet port	1*RTL8211F Gigabit Ethernet port			
	1*RTL8152B Fast Ethernet port			
	1*IP101GR Fast Ethernet port			
USB interface	2 * TypeA 2.0 interface			
Serial port	1 * RS485, 2 * RS232			
IO port	24-channel input, 24-channel output with optical isolation			
Pulse interface	1-channel 5V encoder ABZ differential interface			
CAN	1-channel MCP2515 CAN			
Analog	0~10V, 4-channel input, 4-channel output, 12-bit precision			
RTC	Supported			
Power	DC 24V (±10%)			
Power consumption	4W (excluding external circuits)			
Operating temperature	-10~60°C			
Storage temperature	-40~85 °C			



# > Interface Definition



Product interface diagram



# 3.1 Power Input

Terminal	Specifications	Description	
+ - \(\frac{1}{2}\) DC 24V	24V (±10%)	DC	

### 3.2 Status Indicator

LED Name	Description
RUN	System running
PWR	Power indicator

#### 3.3 USB Interface

2 USB interfaces are both TypeA 2.0.

#### 3.4 Network Port

Network Port Name	Description	Default IP
LAN1	100M Ethernet port	192.168.1.13
LAN2	100M Ethernet port	192.168.2.13
EtherCAT	1G Ethernet port	N/A



### 3.5 External Interface

				Terminal name	Description	Terminal name	Description
				COM1 (D-)	Port 1 (485-)	COM1 (D+)	Port 1 (485+)
COM1			D+	COM2 (D-)	Reserved	COM2 (D+)	Reserved
COM2 COM3 COM4	RX RX		D+ TX TX	COM3 (RX)	Port 3 (232R)	COM3 (TX)	Port 3 (232T)
AB phase	GND GND A- B-		5V A+	COM4 (RX)	Port 4 (232R)	COM4 (TX)	Port 4 (232T)
CAN1	Z- L		B+ Z+ H	GND	Signal ground	GND	Signal ground
DA OUT	4 2 GND		3 1 GND	AB phase (GND)	Encoder signal ground	AB phase (5V)	Encoder power 5V
AD IN	D 4 3	3	AB phase (A-)	Encoder input signal A-	AB phase (A+)	Encoder input signal A+	
			1	AB phase (B-)	Encoder input signal B-	AB phase (B+)	Encoder input signal B+
			AB phase (Z-)	Encoder input signal Z-	AB phase (Z+)	Encoder input signal Z+	
				CAN1 (L)	CAN channel 1_L	CAN1 (H)	CAN channel 1_H
				CAN2 (L)	Reserved	CAN2 (H)	Reserved
				DA_OUT (4)	Analog output channel 4	DA_OUT (3)	Analog output channel 3
				DA_OUT (2)	Analog output channel 2	DA_OUT (1)	Analog output channel 1
				GND	Signal ground	GND	Signal ground
				AD_IN (4)	Analog input channel 4	AD_IN (3)	Analog input channel 3

Analog input channel 2

AD\_IN (1)

Analog input channel 1

AD\_IN (2)



# 3.6 Digital Input

			Terminal Name	Description	Terminal Name	Description
			DCIN	Internal 24V	DCIN	Internal 24V
			GND	Digital input ground	GND	Digital input ground
ſ		ה ח	2	Digital input channel 2	1	Digital input channel 1
DCIN GND		DCIN	4	Digital input channel 4	3	Digital input channel 3
4		1 3	6	Digital input channel 6	5	Digital input channel 5
6 8 10		5 7 9	8	Digital input channel 8	7	Digital input channel 7
12 GND		11 GND 13 15 17 19 21 23 GND	10	Digital input channel 10	9	Digital input channel 9
14 16 18			12	Digital input channel 12	11	Digital input channel 11
20			GND	Digital input ground	GND	Digital input ground
GND			14	Digital input channel 14	13	Digital input channel 13
	IO - IN		16	Digital input channel 16	15	Digital input channel 15
			18	Digital input channel 18	17	Digital input channel 17
			20	Digital input channel 20	19	Digital input channel 19
			22	Digital input channel 22	21	Digital input channel 21
			24	Digital input channel 24	23	Digital input channel 23
			GND	Digital input ground	GND	Digital input ground



# 3.7 Digital Output

		Terminal Name	Description	Terminal Name	Description
		GND	Digital output ground	GND	Digital output ground
		23	Digital output channel 23	24	Digital output channel 24
		21	Digital output channel 21	22	Digital output channel 22
		19	Digital output channel 19	20	Digital output channel 20
GND 23	GND 24	17	Digital output channel 17	18	Digital output channel 18
21 19	22 20	15	Digital output channel 15	16	Digital output channel 16
17 15 13	18 16 14	13	Digital output channel 13	14	Digital output channel 14
GND 11	GND 12	GND	Digital output ground	GND	Digital output ground
9 7 5	10 8 6	11	Digital output channel 11	12	Digital output channel 12
3	4 2	9	Digital output channel 9	10	Digital output channel 10
DCIN	GND DCIN	7	Digital output channel 7	8	Digital output channel 8
	O - OUT	5	Digital output channel 5	6	Digital output channel 6
		3	Digital output channel 3	4	Digital output channel 4
		1	Digital output channel 1	2	Digital output channel 2
		GND	Digital output ground	GND	Digital output ground
		DCIN	Internal 24V	DCIN	Internal 24V

Note: The input power supply and IO port power supply have been isolated by MOS tubes



# 3.8 Wiring Method

#### Digital input circuit

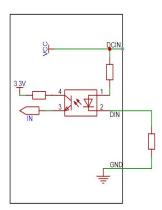


Figure 3-1 Input circuit wiring diagram

#### Digital output circuit

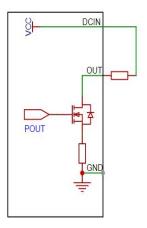


Figure 3-2 Output circuit wiring diagram (internal power supply)

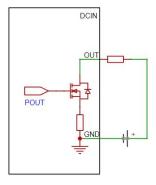
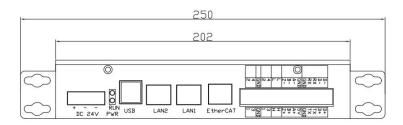
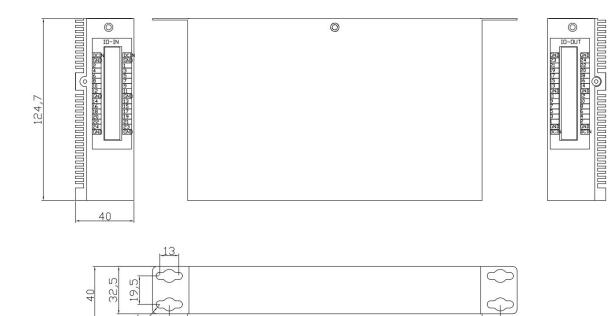


Figure 3-3 Output circuit wiring diagram (external power supply)



# > Exterior Dimension Diagram





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