

Screen series

4.3 Inch Smart Central Control Screen Specification



TDD-CP-SCCS430F-IC-A133P Datasheet

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Changelog

Ver.	Date	Description	Editor
V1.0	2024-01-10	Create Document	Jiang Bao
V1.1	2024-03-09	Adding Cover and Background	Jiang Bao
V1.2	2024-04-10	Update core processor Quad-core A53 processor, 1.8GHz	Jiang Bao
V1.3	2024-05-15	Add electrostatic discharge test	Jiang Bao
V1.4	2024-07-06	Increase hole size and package size	Jiang Bao
V1.5	2024-10-09	Modify the cover logo	Jiang Bao
V1.6	2024-12-05	Updated interface notes for v3.0 motherboard (horizontal socket to vertical)	Jiang Bao

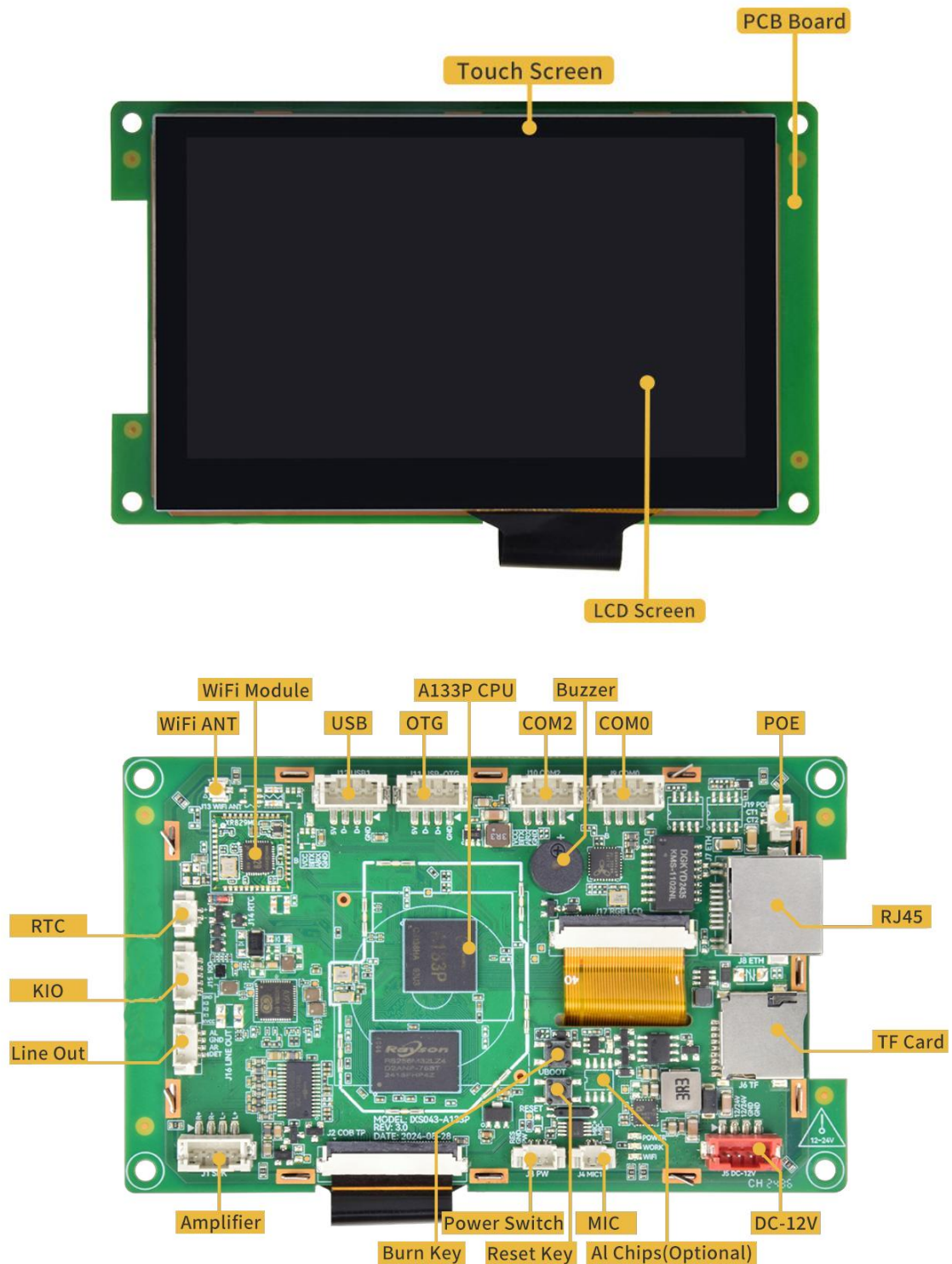
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1 Hardware Introduce

This chapter mainly introduces some appearance reference pictures, hardware configuration parameters and product-related test content of the product.

1.1 Product Interface



1.2 Product Specifications

Product Spec.	Description
Model	TDD-CP-SCCS430F-IC-A133P(Capacitive Touch Panel, with WiFi and RS232)
Series	Center Control Screen Series
Processor	Quad-core A53 processor, 1.8GHz
Operating System	Default Android 10.0, Optional Linux QT, Ubuntu18.04
Memory	Default 1GB (2GB/4GB Optional)
Storage	Default 8GB EMMC NAND Chips, Expandable Up to 128GB
Screen Dimension	4.3 Inch
Screen Resolution	800*480 Pixel
Install Angle	Support 0°, 90°, 180° and 270° Multi-Angle Display Installing
Image Format	Support JPEG, PNG compression, Supports image storage of any size, supports image rotation, enlargement, reduction and other functions
Colors	16.7Million Colors
Input Voltage	Support 9~24V Widely Voltage DC Input, Standard 12V 2A Power Adapter
Power consumption	Standby: 0.36W
	Running without display: 1.85W
	Running with Minimum Brightness: 2.32W
	Running with Maximum Brightness: 4.10W
Serials Interface	Support RS232/TTL/RS485(Default RS232)
Baud Rate	4800~1000000bps, Typical Baud Rate: 115200bps
External Storage	Support TF Card/U Disk/UART/OTG
Real-time Clock	Ultra-low Power Consumption RTC circuit, Supports alarm clock, timer, stopwatch, year, month, day and other time display, supports scheduled power on and off
Active Area(A.A.)	Length*Width=95.04mm*53.86mm
Product Dimension	Length*Width*Height=122.4mm*73.75mm*22.75mm
Audio	MP3 Audio format (Speaker 8Ω6W, Dual-channel), Shares the same storage with images.
Video	MP4 Video format, Shares the same storage with images.
WiFi Module	Internal XR829 Module, Support IEEE 802.11 b/g/b + HS/BT v4.2, default Single-frequency 2.4GHz WiFi Module.
Ethernet	10/100M Auto-adaptive Ethernet RJ45 Interface

2 Hardware Specifications

2.1 Display Specification

LCD Monitor	
Screen Panel	IPS LCD Panel
View Angle	Widely Viewing angle, typical 85°/85°/85°/85° (Left/Right/Up/Down)
Resolution	800*480 Pixel
Brightness	300nit
Active Area	95.04mm (Width)*53.86mm (Height)
Backlight Mode	White LED
Backlight Lifetime	More than 20000 Hours
Backlight Adjustment Accuracy	100 Levels Brightness Adjustment

2.2 Touch Specification

Touch Panel	
Touch Panel	Capacitive Touch Panel
Touch Panel Structure	G+G Structure, Tempered Glass Surface, ITO GLASS Inner Layers
Touch mode	5-point touch mode, Support continuous sliding touch
Transmittance	≥85%
Surface Hardness	6H
Touch Lifetime	>1,000,000 Times

2.3 Electrical Specifications

Working Environment		
Rated Power	<3W	
Working Voltage	9~24V, Typical 12V	
Working Current	336mA	VCC = +12.2V, Max. Backlight
	190mA	VCC = +12.2V, Min. Backlight
Working Temperature	-10°C ~ 60°C	
Storage Temperature	-20°C ~ 70°C	
Working Humidify	0% ~ 95% (No Condensation)	
Recommended working power supply: 12V 2A DC regulated power supply		

3 PCB Interface Function

Function&Interface	Description
A133P Chips	Allwinner A133P Quad Cortex-A53, Clocked Up to 1.8GHz
Line Output	Support standard left and right channel line output (pin header)
Amplifier	8Ω·6W Dual-channel Audio Amplifier Output
MIC	1-channel Single-ended MIC Input(Pin Header Interface)
USB	1*External USB 2.0 Socket, 1*External USB-OTG Socket Support USB Camera Within 2M Pixels
Serial Interface	2*TTL/RS232/RS485 Compatible Built-in(Data Serial Port and Debugging Serial Port)
TF Card	Self-elastic TF Card Socket, Supports Up to 256GB TF Card
Ethernet	10/100M Auto-adaptive Ethernet RJ45 Interface + 2 Chips POE PD Socket
GPIO Interface	3-way GPIO Signal, Expandable GPIO Button or 3.3V Input/Output
AI Chips	Supports Megvii face chip and provides algorithm hardware authorization (optional)
Button	Reset and Burn Button
Real Time Clock	Ultra-low-power RTC circuit with timer and alarm functionalities
PCB Dimension	L*W*H(122.4mm*73.75mm*14.8mm)

4 Internal Interface Definition

4.1 J1 Amplifier

[J1] Amplifier Header(SIP 2.0mm-Square pad is pin 1)

Pin#	Definition	Note
1	R+	Speaker right channel +
2	R-	Speaker right channel -
3	L-	Speaker left channel -
4	L+	Speaker left channel +

4.2 J3Power ON/OFF

[J3] Power and Reset (SIP 1.25mm-square pad is pin 1)

Pin#	Definition	Note
1	PW	One-key switch/switch screen signal
2	GND	Digital Ground
3	RES	Hardware reset signal

4.3 J4Microphone

[J4] Microphone Header (SIP 1.25mm-square pad is pin 1)

Pin#	Definition	Note
1	MIC-	Single-channel Microphone Input-
2	MIC+	Single-channel Microphone Input+

4.4 J5DC_IN

[J5] 12V Input Terminal (SIP 2.0mm-square pad is pin 1).

Pin#	Definition	Note
1	12V	Direct Current Input(9~24V)
2	12V	Direct Current Input(9~24V)
3	GND	Power Ground
4	GND	Power Ground

4.5 J6 TF Card Socket

[J6] Standard TF Card Socket. Support 256GB Self-elastic TF Card.

4.6 J7 Ethernet Interface

[J7] RJ45 Ethernet Interface. Support 10/100Mbps Bandwidth.

4.7 J9 COM0

[J9] Built-in Serial Port 0 (SIP 2.0mm-Square pad is pin 1). The output level is RS-232 by default and

it could be setup to TTL 3.3V/RS-485 if required (RS-232 if U35 mounted, RS-485 if U68 mounted).

The related software device node name is **ttyS0**.

Pin#	Definition	Note
1	GND	Digital Ground
2	RX A+	Data receive (TTL or RS-232 or RS-485 level)
3	TX B-	Data transmit (TTL or RS-232 or RS-485 level)
4	VCC	Power output (Default 5V, 3.3V option)

4.8 J10 COM2

[J10] Built-in Serial Port 2 (SIP 2.0mm-Square pad is pin 1). The output level is RS-232 by default and

it could be setup to TTL 3.3V/RS-485 if required (RS-232 if U35 mounted, RS-485 if U67 mounted).

The related software device node name is **ttyS2**.

Pin#	Definition	Note
1	GND	Digital Ground
2	RX A+	Data receive (TTL or RS-232 or RS-485 level)
3	TX B-	Data transmit (TTL or RS-232 or RS-485 level)
4	VCC	Power output (Default 5V, 3.3V option)

4.9 J11 USB-OTG

[J11] USB Header(SIP 2.0mm-square pad is pin 1).This port should only be used as system burn or ADB connection.

Pin#	Definition	Note
1	GND	Digital Ground
2	D+	USB Differential Data+
3	D-	USB Differential Data-
4	5V	5Voltage Output

4.10 J12 USB

[J12] USB Header(SIP 2.0mm-square pad is pin 1).

Pin#	Definition	Note
1	GND	Digital Ground
2	D+	USB Differential Data+
3	D-	USB Differential Data-
4	5V	5Voltage Output

4.11 J13 WiFi Antenna Buckle

[J13] Standard IPEX Antenna buckle(Φ 2.0mm).

4.12 J14RTCBatteryHeader

[J14] RTCBatteryHeader(SIP-1.25mmSquare pad is pin 1).

Pin#	Definition	Note
1	BAT-	3VCoinBatteryNegative
2	BAT+	3VCoinBatteryPositive

4.13 J15GPIO Signal

[J15] GPIO Header(SIP 1.25mm-square pad is pin 1).

Pin#	Definition	Note
1	VCC	3.3V Power Supply Output
2	K1	Button1 (GPIO No.66)
3	K2	Button2 (GPIO No.67)
4	K3	Button3 (GPIO No.68)
5	GND	Digital Ground

4.14 J16 Audio Line Output

[J16] Audio Line Output (SIP 1.25mm-Square pad is pin 1).

Pin#	Definition	Note
1	DET	HPdetectionIO signal
2	AR	Stereo output right channel
3	GND	Audio Ground
4	AL	Stereo output left channel

4.15 J19 POE PD

[J19] POE PD Header (SIP 1.25mm-square pad is pin 1).

Pin#	Definition	Note
1	CT1	Transformer Center1
2	CT2	Transformer Center2

Note: The power supply of the POE powered interface comes from the J7 Ethernet port. This interface is externally connected to the POE powered conversion board for 12V power supply conversion. The current size of the 12V power supply is affected by the power supply capability of the POE switch and

the conversion capability of the adapter board. The typical current is 1 ~1.5A. This interface only supports POE power supply equipment with 1/2 wires being positive and 3/6 wires being negative.

4.16 Hardware Button

[RESET] Press the reset button once to initiate a system restart.

[UBOOT] To enter burning mode, manually press and hold the system burning button, then power on after releasing it about 3 seconds later.

5 Reliability test

5.1 High and low temperature aging test

➤ Testing Environment

Environment Temperature: $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$

Environment Humidity: $20\% \pm 3\% \text{RH}$

Testing Process: Place the product obliquely in the high and low temperature test box, as shown in Figure 5.1; pass 72H high temperature, low temperature, high and low temperature

Alternately change the aging test, and observe whether the screen resets, restarts, displays abnormally, functions abnormally, etc. during the test process and after the experimental test.



Pic 5.1 High and low temperature aging test

➤ Test data

Model	Temperature	Humidity	Test Result
TDD-CP-SCCS430F-IC-A13	High(60°C)	20%	Normal Operation
	Low(-10°C)	0	Normal Operation

3P	Alternate (-10°C ~ 60°C)	20%	Normal Operation
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5.2 Electrostatic Discharge Test

➤ Test environment

Ambient temperature:27°C

Ambient humidity:50%RH

Test Procedure: Place the product flat on the test stand, and conduct contact and air discharge tests on the iron frame of the central control screen and the display area one by one. During the test, observe the screen for any abnormal phenomena such as freezing, black screen, white screen, distorted screen, or restart. The performance must meet the criteria of GB/T 17626.2 B grade or above.

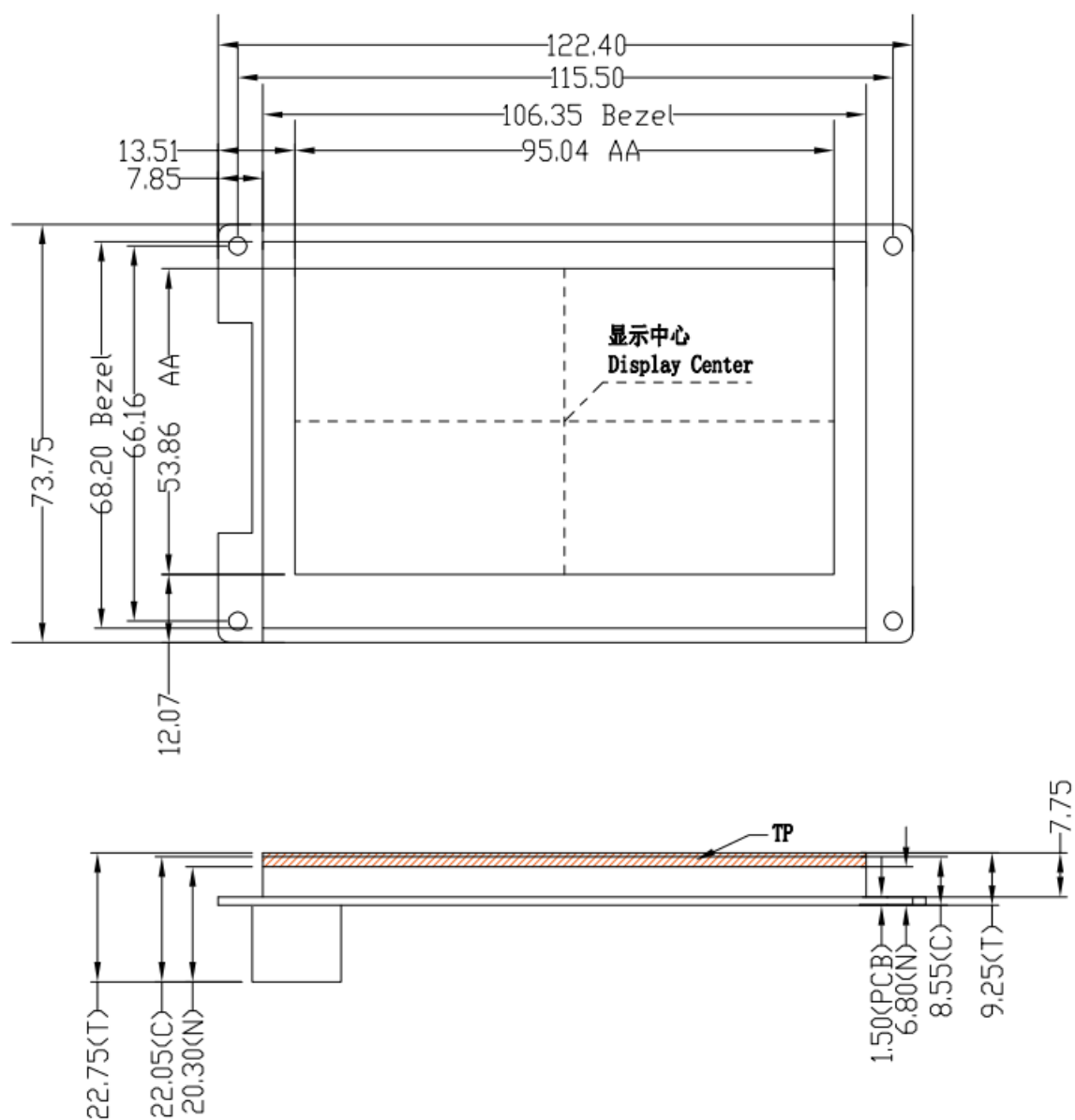


➤ Test data

Model	Type of discharge	Level	Discharge value	Test result
IX043S10600-IC-A133P	Contact discharge	3	±6KV	Normal operation
	Air discharge	3	±8KV	Normal operation

6 Product Dimension

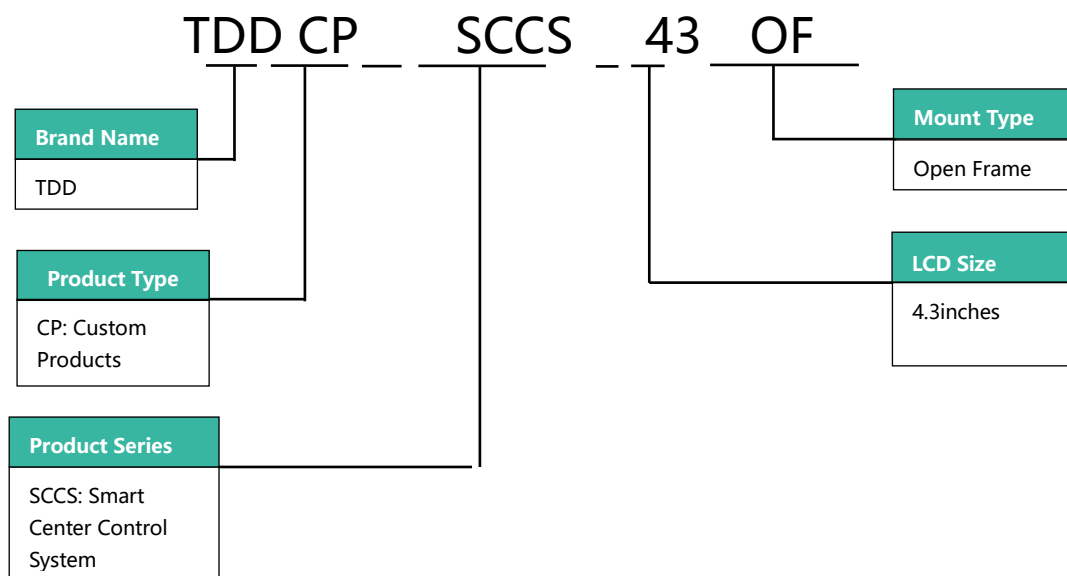
Product's Dimension Picture as follow(Unit: mm, deviation:±0.3)



Model	Overall dimension W x H x D (unit: mm)	Mounting dimension A x B (unit: mm)	Opening size suggested (unit: mm)	
			A+2	B+2
Screen Series 4.3 "center control screen	122.4 x 73.75 x 22.75	106.35 x 68.2	108.35	70.2

7 Model Definition

Product's Model Definition as follow.



8 Package & Physical Size

Product Weight				
Net Weight(kg)	0.1356			
Overall size(mm)	122.4 x 73.75 x 22.75			
Packing standard and total weight				
Package Model	Package Size (L*W*H, unit: mm)	Layers	Quantity	Gross Weight(kg)
4.3 "center screen packing box	155*100*55	1	1	0.2056

Tips: Gross Weight Not Contain Parts.