

# P13768HY185C\_T01

**18.5 Inches, 1366xRGBx768, 16.7M Colors, Android LCM**



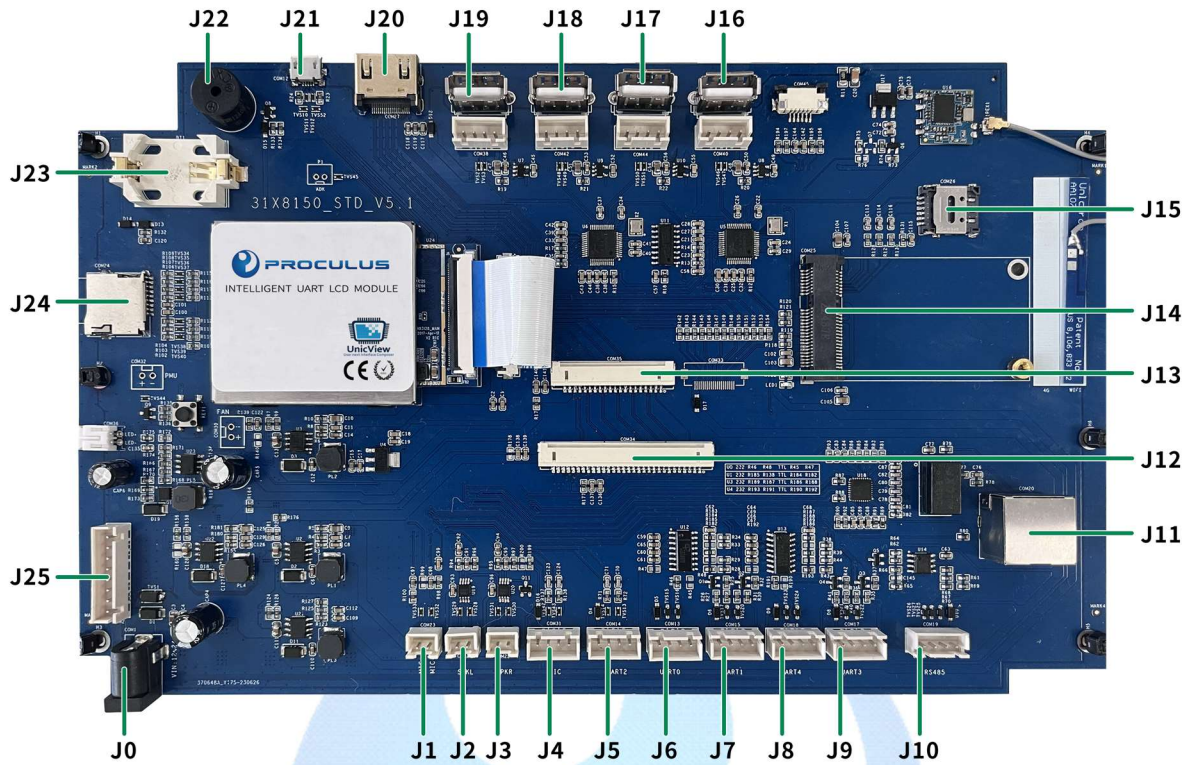
P13768HY185C\_T01 is an industrial level Android LCM based on Rockchip RK3128 ARM. It is equipped with Quad-core Cortex-A9, supports most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions under 1080p@60fps and many other great features of Rockchip RK3128. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and 1.1 OpenVG1.1.

Rockchip RK3128 has high-performance external memory interface (DDR3/DDR3L/LPDDR2) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

Core Board						
CPU	1.3GHz Quad-core A7 ARM					
RAM	1GB DDR3					
eMMC	8GB					
GPU	Mali400 MP2					
Power Management	ACT8846 PMU					
System Version						
Android	Android 5.1/7.1					
Ubuntu	Ubuntu18.04 (Default system is Android. Need to refresh firmware to choose Ubuntu. Apps need to be developed separately.)					
Display						
Color	16.7M (16777216) colors, 24-bit color 8R8G8B					
Active Area (A.A.)	409.8 mm(W)×230.4 mm(H), 1366×768.					
View Area (V.A.)	413.0 mm(W)×233.2mm(H), 1366×768.					
Resolution	1366×768.					
Backlight	LED					
Brightness	300nit					
Optical Specifications						
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle (CR≥10)	θL	Φ=180° (9 o' clock)	85	89	—	Degree
	θR	Φ=0° (3 o' clock)	85	89	—	
	θT	Φ=90° (12 o' clock)	85	89	—	
	θB	Φ=270° (6 o' clock)	85	89	—	
Voltage & Current						
Item	Condition		Min.	Typ.	Max.	Unit
Power Voltage			12	12	24	V
Operation Current	—		—	700	—	mA

<b>Power Supply</b>	12V 2A DC (Recommended).				
<b>Reliability Test</b>					
<b>Item</b>	<b>Condition</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Unit</b>
<b>Working Temperature</b>	60%RH at 12V voltage	-20	25	70	°C
<b>Storage Temperature</b>	—	-30	25	85	°C
<b>Working Humidity</b>	25°C	10%	60%	90%	RH
<b>Protection Paint</b>	—	—	None	—	—
<b>Interface</b>					
<b>Item</b>	<b>Condition</b>	<b>Min.</b>	<b>Typ.</b>	<b>Max.</b>	<b>Unit</b>
<b>Baud Rate</b>	Standard	1200	115200	115200	bps
	User Defin	1200	—	115200	bps
<b>Serial Mode</b>	Serial Port*3 (2*RS232/TTL, 1* RS232/TTL/RS485).				
<b>User Interface</b>	Standard serial communication protocol. 4Pin_2.54mm/8Pin_2.54mm socket.				
<b>USB</b>	USB DEBUG*1. USB HOST*4.				
<b>Ethernet</b>	Support 10m/100m Ethernet.				
<b>Wi-Fi/Bluetooth</b>	Support 802.11b/g/n Wi-Fi wireless network; Bluetooth is optional.				
<b>4G LTE Module</b>	4G LTE Module/GPS. (Optional)				
<b>Peripherals</b>					
<b>Microphone</b>	Audio input interface.				
<b>Loudspeaker</b>	2-channel, 4Ω/3W loudspeaker.				
<b>HDMI</b>	—				
<b>TF card</b>	Yes				
<b>IIC</b>	Reserved				

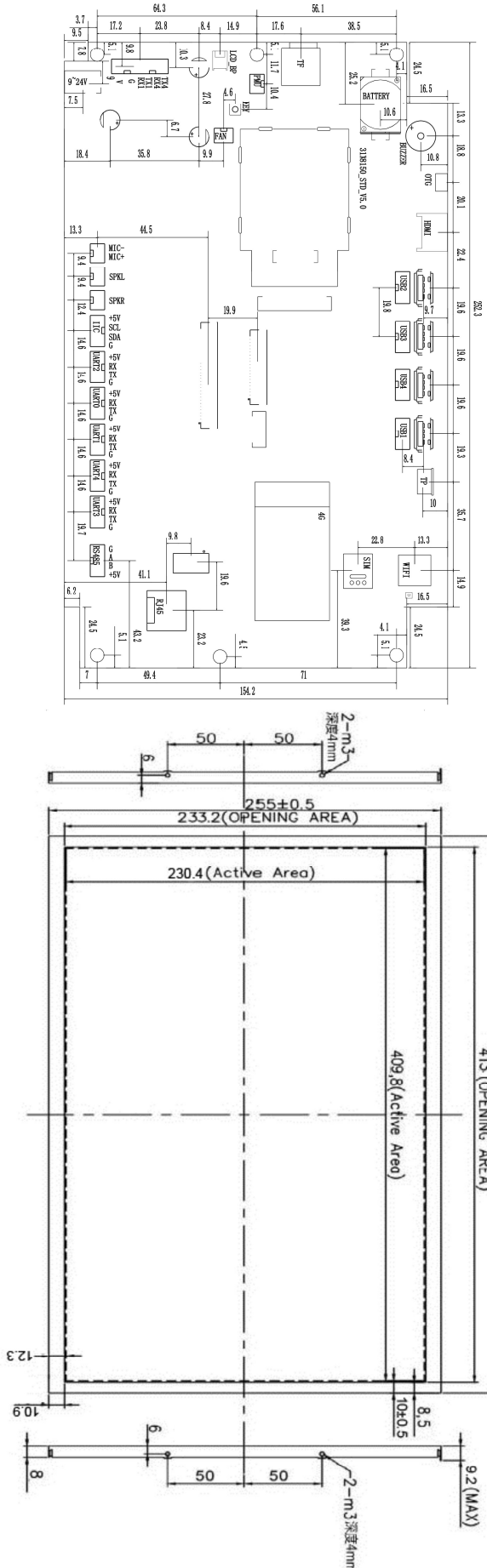
### Interface Description



Num.	Interface Name	Description
J0	Power	12V2A power supply
J1	MIC	Audio input interface
J2	SPK_L	Left channel audio output interface
J3	SPK_R	Right channel audio output interface
J4	IIC	IIC Interface. Pin definition: 5V,SCL,SDA,GND
J5	Debug interface	not open temporarily
J6	UART0	Device name: ttyS0 Pin definition: 5V, RX, TX, GND
J7	UART1	Device name: ttyS1. Pin definition: 5V, RX, TX, GND
J8	UART4	Device name: ttyS4. Pin definition: 5V, RX, TX, GND
J9	UART3	Device name: ttyS3. Pin definition: 5V, RX, TX, GND
J10	RS485	Device name: ttyS3 Pin definition: GND, A,B,5V
J11	RJ45 interface	Support 10M/100M network
J12	LCD interface	-
J13	LCD interface	-
J14	MINI PCIE 4G	4G LTE Module/GPS (Optional)
J15	SIM card	Nano-SIM supported (Optional)
J16	USB_HOST1	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J17	USB_HOST2	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J18	USB_HOST3	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J19	USB_HOST4	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals

J20	HDMI	-
J21	USB_Micro	OTG /App debugging/ Firmware upgrade interface
J22	Buzzer	Buzzer
J23	RTC	Supply system RTC
J24	TF card	Can do memory expansion
J25	User interface	Pin Definition: TX4,RX4,TX1,RX1,GND,GND,VIN,VIN



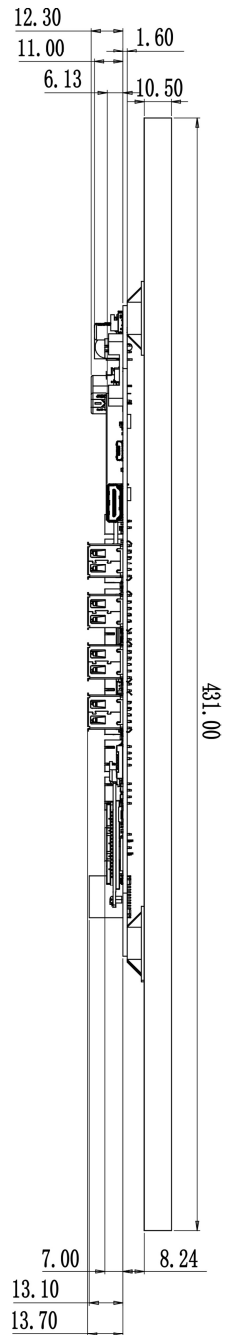
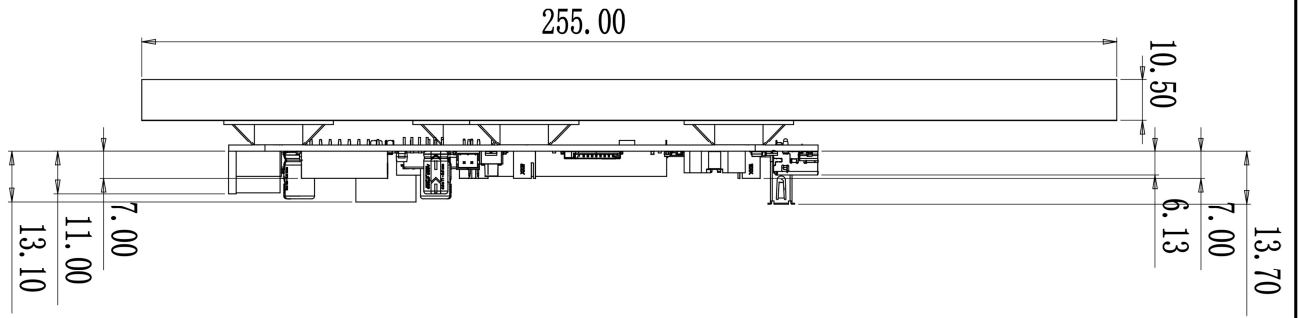


1. Location hole is used as position reference

2. Unmarked Tolerance is +/-0.3mm

Active area is marked in Dash lines

Part No.	P13768HY185C_T01_V5.0			
Datasheet	A4	Drawn by	Proculus	
Proportion	1:1	Verified by		Date
Unit	mm	Confirmed by		Date



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