

P12800MS101C_T01

10.1 Inches, 1280xRGBx800, 16.7M Colors, Android LCM



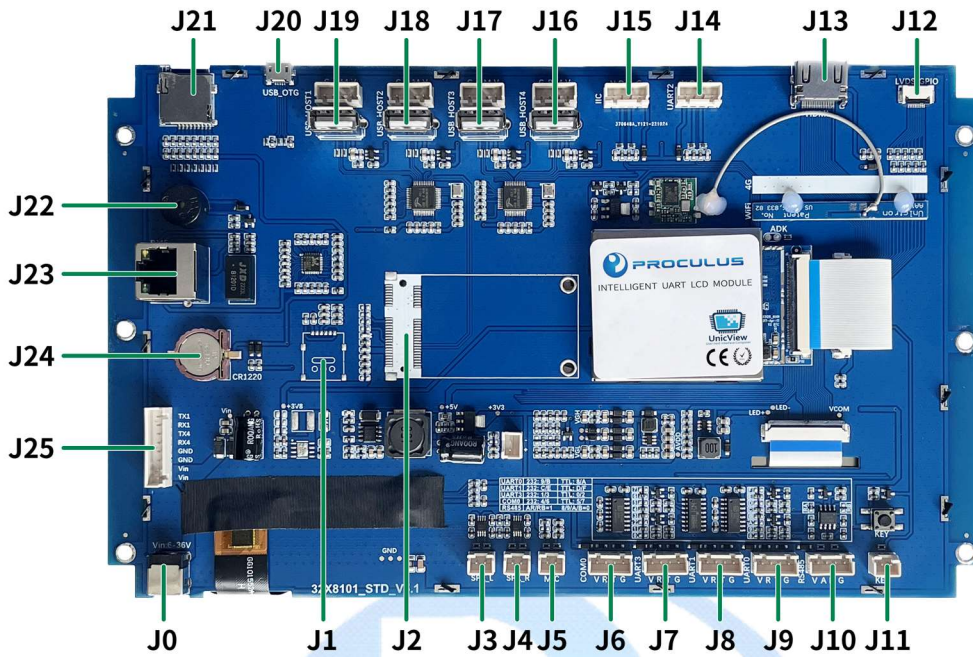
P12800MS101C_T01 is an industrial level Android LCM based on Rockchip RK3128 ARM. It is equipped with Quad-core Cortex-A9, supports most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions under 1080p@60fps and many other great features of Rockchip RK3128. Meanwhile, with good jpeg picture 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.)	216.96 mm(W)×135.60 mm(H), 1280×800.					
View Area (V.A.)	219.46 mm(W)×138.10mm(H), 1280×800.					
Resolution	1280×800					
Backlight	LED					
Brightness	300nit					
Optical Specifications						
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle (CR _≥ 10)	θL	Φ=180° (9 o' clock)	75	85	—	Degree
	θR	Φ=0° (3 o' clock)	75	85	—	
	θT	Φ=90° (12 o' clock)	75	85	—	
	θB	Φ=270° (6 o' clock)	75	85	—	
Voltage & Current						
Item	Condition		Min.	Typ.	Max.	Unit
Power Voltage			6	12	36	V
Operation Current	—		—	400	—	mA

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

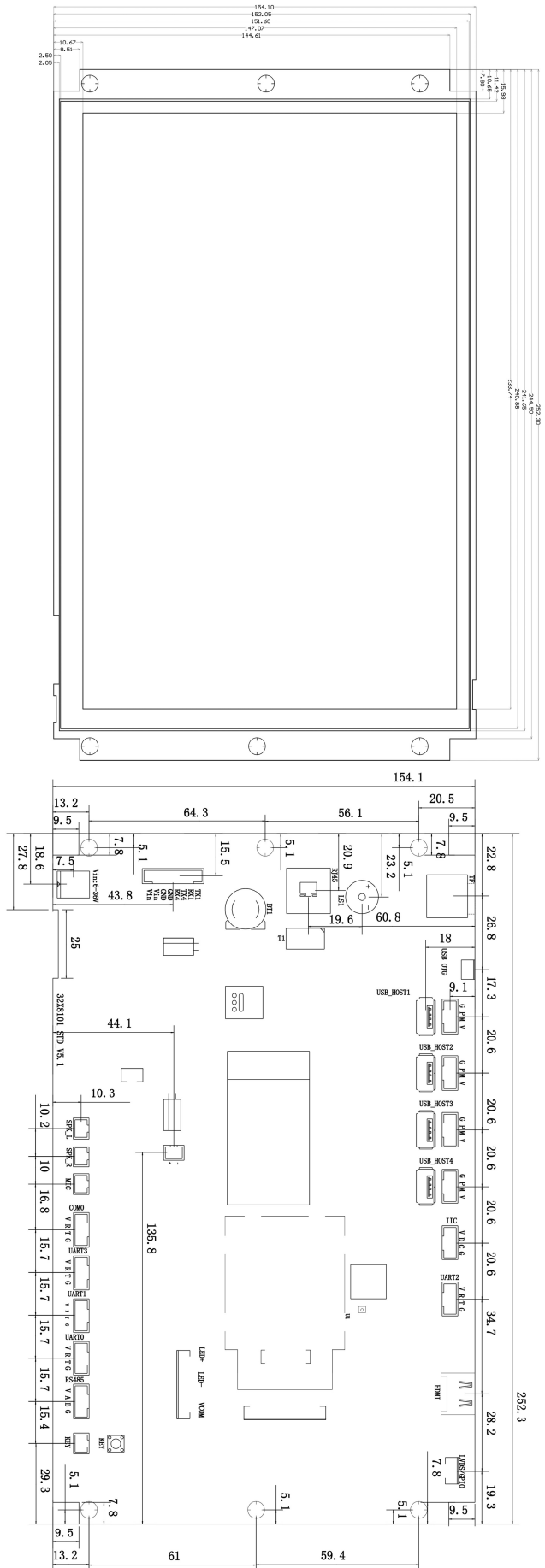
Interface Description



Num.	Interface Name	Description
J0	Power	12V 2A power supply
J1	SIM card	Nano-SIM supported (Optional)
J2	MINI PCIE 4G	4G LTE Module/GPS (Optional)
J3	SPK_L	Left channel audio output interface
J4	SPK_R	Right channel audio output interface
J5	MIC	Audio input interface
J6	COM0	Device name: ttyCOM0. Pin definition: GND, RX, TX, 5V
J7	UART3	not available for RK3128
J8	UART1	Device name: ttyS1. Pin definition: GND, RX, TX, 5V
J9	UART0	Device name: ttyS0. Pin definition: GND, RX, TX, 5V (choose one from J9 and J10)
J10	RS485	Device name: ttyS0. Pin definition: GND, A, B, 5V
J11	KEY interface	Control screen system on/off
J12	LVDS/GPIO interface	Default LVDS, GPIO needs to Firmware upgrade (GPIO only supports RK3128)
J13	HDMI	-
J14	Debug interface	Not open temporarily
J15	IIC interface	IIC interface Pin definition: V, D, C, G
J16	USB_HOST4	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J17	USB_HOST3	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J18	USB_HOST2	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J19	USB_HOST1	Horizontal USB2.0 (Vertical 4P2.54mm). Support USB Peripherals
J20	USB Micro	OTG /App debugging/ Firmware upgrade interface
J21	TF Card	Memory expansion

J22	Buzzer	Buzzer
J23	RJ45 interface	Support 10M/100M network
J24	RTC	Supply system RTC
J25	User interface	Pin Definition: TX1,RX1,TX4,RX4,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.	P12800MS101C_T01_V5.1				
Datasheet	A4	Drawn by	Proclus		Date
Proportion	1:1	Verified by		Date	
Unit	mm	Confirmed by		Date	