

P12800MS101I_T01

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

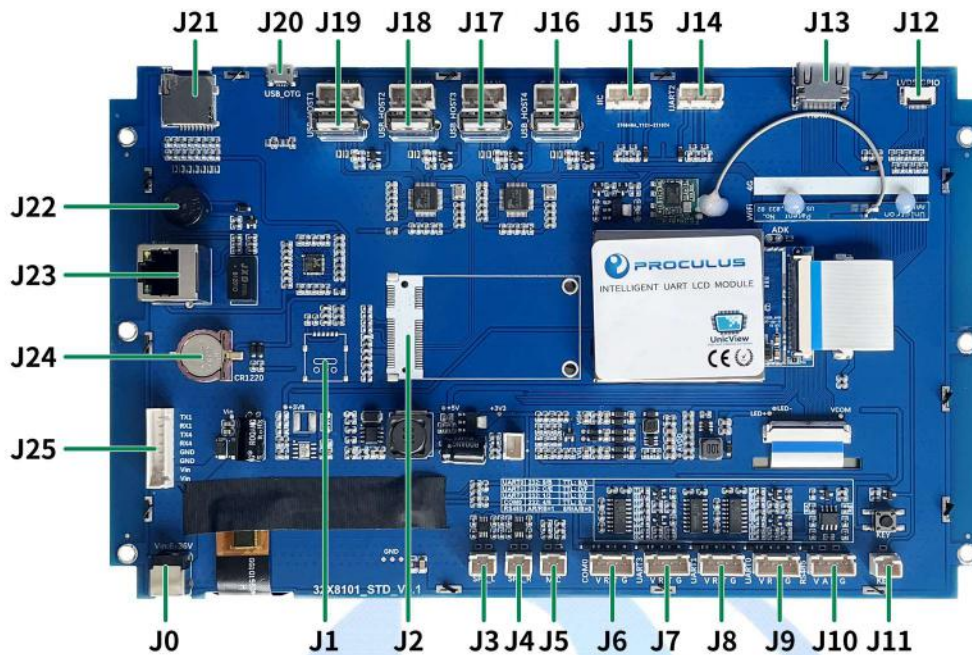


P12800MS101I_T01 is an industrial level Android LCM based on Rockchip RK3188 ARM. It is equipped with Quad-core Cortex-A9, supports most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions under 1080p@60fps and many other great features of Rockchip RK3188. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and 1.1 OpenVG1.1. RK3188 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	1.6GHz Quad-core A9 ARM					
RAM	1GB DDR3					
eMMC	8GB					
GPU	Mali400 MP4					
Power Management	ACT8846 PMU					
System Version						
Android	Android 5.1					
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	16	V
Operation Current	—		—	400	—	mA
Power Supply	12V 3A DC (Recommended).					
Reliability Test						

Item	Condition	Min.	Typ.	Max.	Unit
Working Temperature	60%RH at 12V voltage	-20	25	70	℃
Storage Temperature	—	-30	25	85	℃
Working Humidity	25℃	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*4 (3*RS232/TTL, 1*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	4Ω/3W loudspeaker.				
HDMI	HDMI output interface.				
TF card	Yes				

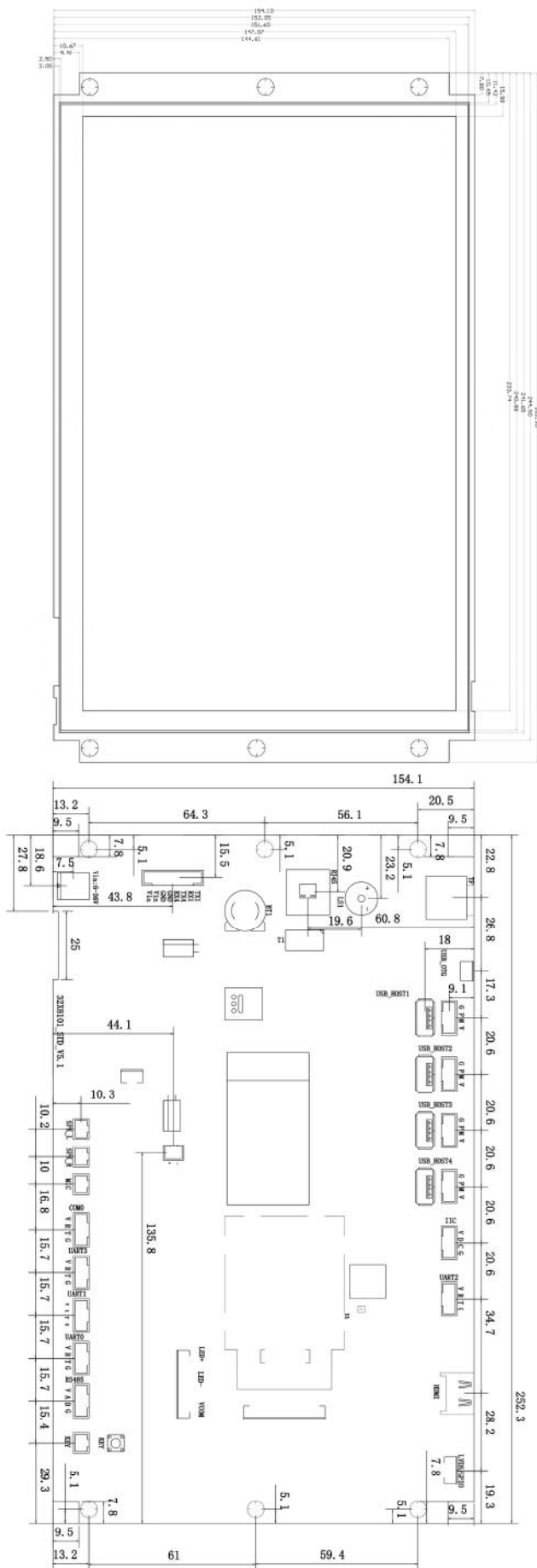
Interface Description



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	Device name: ttyS3. Pin definition: GND, RX, TX, 5V
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	HDMI output interface
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 $\pm 0.3\text{mm}$

Active area is marked in Dash lines

Part No.	P12800MS101H_T01_V5.1				
Datasheet	A4	Drawn by	Proculus	Date	
Proportion	1:1	Verified by		Date	
Unit	mm	Confirmed by		Date	