Digital Signage PCB board DJM-A830

Contents

1 Overview

DJM-A830 is based on A83T chipset for digital signage, this model have 1G DDR3&8G eMMC and support LVDS/HD output

The chipset is using TSMC 28nm HPC and base on ARM Cortex-A7 architecture, Octa-Core. Basic Frequency is up to 2GHz

DJM-A830use newest SmartColor technology that is good to output better quality image and video from player to your screen.

2 Specification

Hardware Configuration

CPU	Allwinner A83T，Octa-Core Cortex A7
GPU	PowerVR SGX544
DRAM	DDR3 1G(Up to 2G)
Flash Memory	EMMC　8GB/16G/32G Option（Default 8GB）
Video Output	LVDS×1，LVDS 30 Pin 2.0mm, Double Row, direct for 50/60Hz LCD。 Support Max Resolution 1920×1080，Support 7"-100" screen
Backlight	Support 3.3V/5V/12V　Select
Internet	10/100　RJ45 Ethernet。
	Support Bluetooth & wifi module ，Support Wi-Fi 802.11b/g/n protocol
	Support 3G/4G module ，Support WCDMA、EVDO、CDMA、GSM，Full band support 2G/3G 850/900/1800/1900MHz/2100MHz
Rotation	Support 0 ,90，180，270 degree
RTC	Time synchronization over network and time saving when power failure
Interface	Support USB camera
	Support HD Output，Max output 4K（Single Output）
	6 x USB HOST、2x Rear USB、4x internal USB
	3 x TTL Output，1x RS232 ，Support Extend serial module

	TF Card，Max 64GB
	1x I2C interface
	Audio Output，10W Amplifier
Audio input	Support MIC in
Touch screen	Support IR、Resistive Touch screen、Capacitive Touch screen
Power supply	DC in： DC12V & DC12V 5VSTB(on/off power)

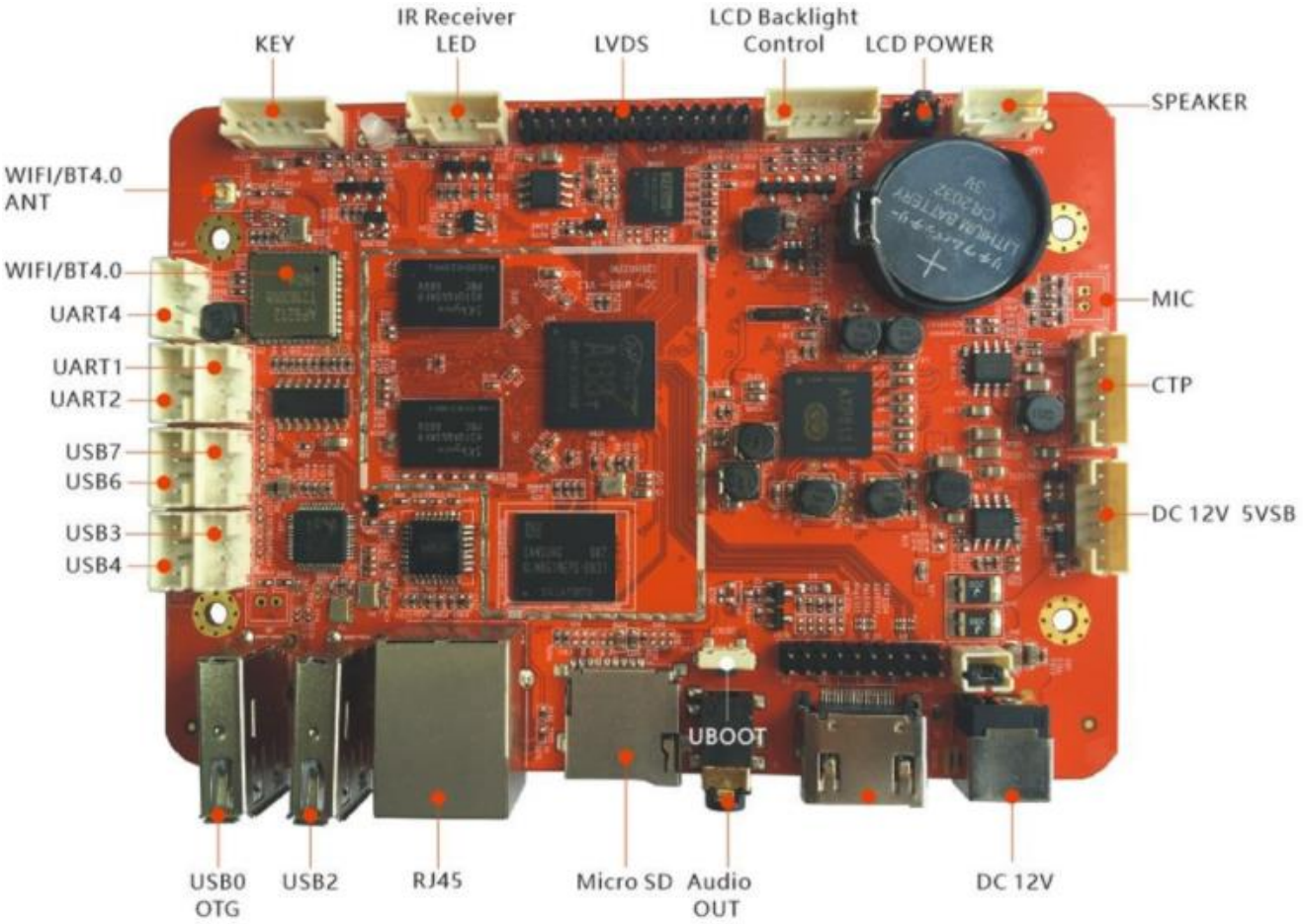
Software Configuration

Operation system	Google Android 4.4.4
Language	Multi-Lingual
Media Formats	Support Video playback up to 1080P @60fps Support Multi-Format video playback,including Mpeg1、Mpeg2、Mpeg4 SP/ASP GMC、H.263 including sorenson spark、H.264 BP/MP/HP、VP8、WMV9/VC1、JPEG/MJPEG、etc HEVC/H.265 1080P @30fps
Audio Formats	Support 2,OGG,AAC,M4A,MA4,FLAC,APE,3GP,WAV
Image	Support BMP、PNG、GIF . Max 4096*4096 resolution
Word processing	WORD, EXCEL, POWERPOINT, PDF, TXT
keyboard language type	Standard android keyboard language. Support English/Korean/Japanese..est

System Management	Un-limits of Root authority. Help user to make their customized software.
	Auto power ON and OFF

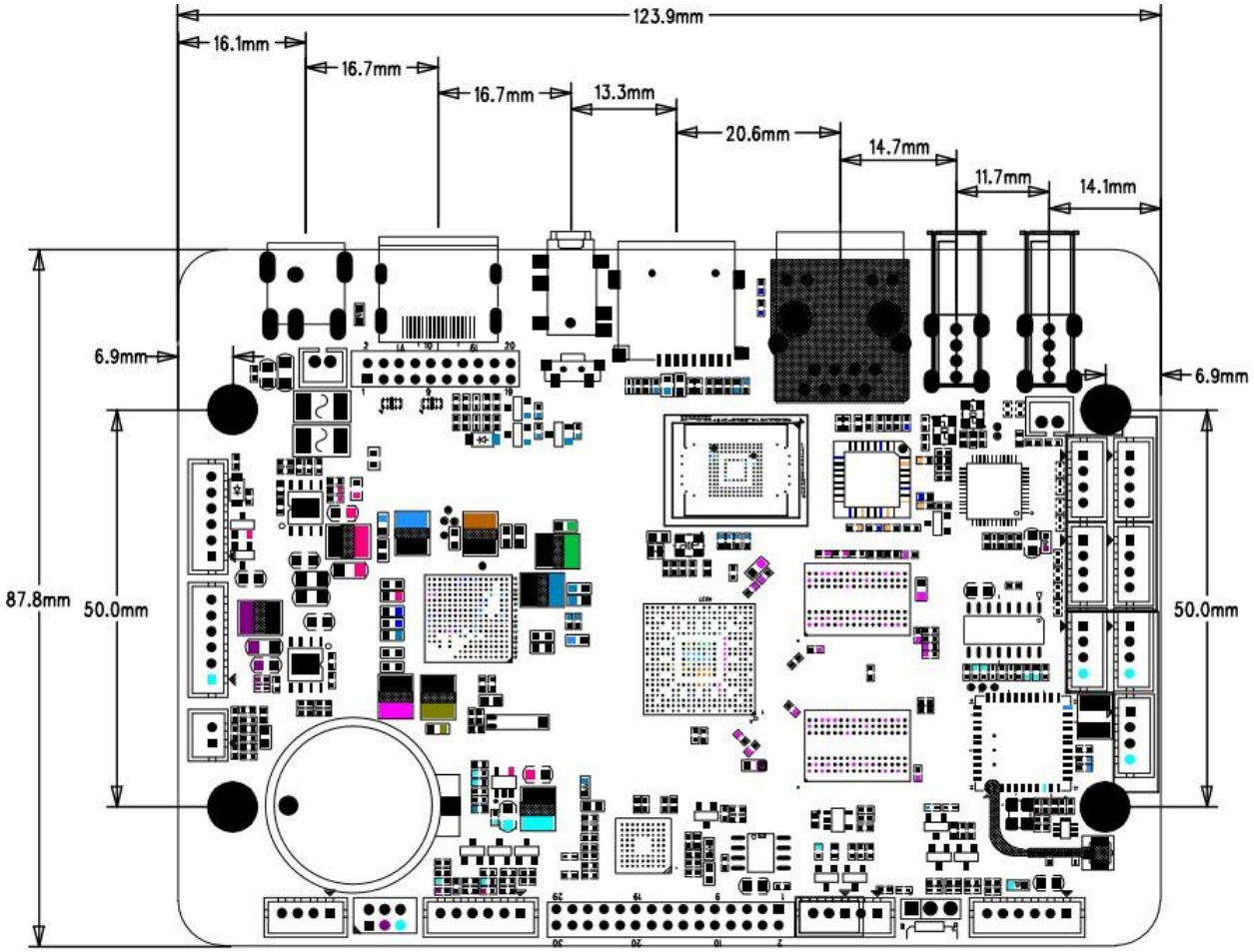
3 Appearance & Dimension

3.1 Front View



3.2 Dimension

Length: 123.9mm Width: 87.8mm Front Height: 12mm



4 Interfaces

4.1 Interface Layout

◆ JP9 (4PIN/2.0) Extend Power Input

Pin No.	Pin Name	Type	Description
1	12V	Power Input	+12V Power Input
2	12V	Power Input	+12V Power Input
3	GND	Ground	Ground
4	GND	Ground	Ground
5	5VSB	Input	STB Power +5V
6	STB	Output	STB Power control

◆ JP4(6PIN/2.0) Backlight control

Pin No.	Pin Name	Type	Description
1	12V	Output	Backlight Power output，+12V
2			
3	BL_EN	Output	Backlight Enable
4	BL_ADJ	Output	Backlight control
5	GND	Ground	Ground
6			

◆ JP21(6PIN/2.0) Button interface

Pin No.	Pin Name	Type	Description
1	3.3V	Output	3.3V Output
2	PWR-ON	Output	Power Button
3	RESET	Output	Reset
4	BOOT	Input	Update
5	KEY	Output	Buttom
6	GND	Ground	Ground

◆ JP13(6PIN/2.0) CTP interface

Pin.No	Pin Name	Type	Description
1	3.3V	Output	3.3V Output
2	SCK	Output	I2C Clock
3	SDA	Input /Output	I2C data
4	INT	Input	Interrupt
5	RST	Output	Reset
6	GND	Ground	Ground

◆ JP1(2X15PIN/2.0) LVDS interface

Pin No.	Pin Name	Type	Description
1	VCC_Panel	Output	Power Output，According to screen can select 3.3V/5V/12V（Use JP6 Jumper select）
2			
3			
4	GND	Ground	Ground
5			
6			
7	RXO0-	Output	Pixel0 Negative Data (Odd)
8	RXO0+	Output	Pixel0 Positive Data (Odd)
9	RXO1-	Output	Pixel1 Negative Data (Odd)
10	RXO1+	Output	Pixel1 Positive Data (Odd)
11	RXO2-	Output	Pixel2 Negative Data (Odd)
12	RXO2+	Output	Pixel2 Positive Data (Odd)
13	GND	Ground	Ground
14			
15	RXOC-	Output	Negative Sampling Clock (Odd)
16	RXOC+	Output	Positive Sampling Clock (Odd)
17	RXO3-	Output	Pixel3 Negative Data (Odd)
18	RXO3+	Output	Pixel3 Positive Data (Odd)
19	RXE0-	Output	Pixel0 Negative Data (Even)
20	RXE0+	Output	Pixel0 Positive Data (Even)
21	RXE1-	Output	Pixel1 Negative Data (Even)
21	RXE1+	Output	Pixel1 Positive Data (Even)
23	RXE2-	Output	Pixel2 Negative Data (Even)
24	RXE2+	Output	Pixel2 Positive Data(Even)
25	GND	Ground	Ground

26			
27	RXEC-	Output	Negative Sampling Clock (Even)
28	RXEC+	Output	Positive Sampling Clock (Even)
29	RXE3-	Output	Pixel3 Negative Data (Even)
30	RXE3+	Output	Pixel3 Positive Data (Even)

◆ JP6(2X3PIN/2.0) Backlight Power

Pin No.	Pin Name	Type	Description
1	LCD12V	Output	Power Output，+12V
3	LCD5V	Output	Power Output，+5V
5	LCD3.3V	Output	Power Output，+3.3V
2	LCD-POWER	Input	According to 1，3，5 , Select LVDS power
4			
6			

◆ JP12(4PIN/2.0) Audio Output

Pin No.	Pin Name	Type	Description
1	OUTP-R+	Output	+ Audio Signal of Right Speaker
2	OUTN-R-	Output	- Audio Signal of Right Speaker
1	OUTN-L-	Output	- Audio Signal of Left Speaker
2	OUTP-L+	Output	+ Audio Signal of Left Speaker

◆ JP18(4PIN/2.0) UART4

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	RX1	Input	UART Data receive
3	TX1	Output	UART Data transmit
4	3.3V	3.3V Output	3.3V Output

◆ J23(4PIN/2.0) UART2

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	RX1	Input	UART Data receive
3	TX1	Output	UART Data transmit

4	3.3V	3.3V Output	3.3V Output

◆ J17 (4PIN/2.0) UART1

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	RX1	Input	UART Data receive
3	TX1	Output	UART Data transmit
4	3.3V	3.3V Output	3.3V Output

◆ J9 (4PIN/2.0) USB3 Extend IO

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	DP3	Input \ Output	D+ differential signal
3	DM3	Input \ Output	D- differential signal
4	5V Power	Output	Power Output +5V

◆ J11 (4PIN/2.0) USB4 Extend IO

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	DP3	Input \ Output	D+ differential signal
3	DM3	Input \ Output	D- differential signal
4	5V Power	Output	Power Output +5V

◆ J7 (4PIN/2.0) USB6 Extend IO

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	DP3	Input \ Output	D+ differential signal
3	DM3	Input \ Output	D- differential signal
4	5V Power	Output	Power Output +5V

◆ J8 (4PIN/2.0) USB7 Extend IO

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	DP3	Input \ Output	D+ differential signal

3	DM3	Input \ Output	D- differential signal
4	5V Power	Output	Power Output +5V

◆ **JP22(5PIN/2.0)　　Remote、LED**

Pin No.	Pin Name	Type	Description
1	LED_B	Blue LED	Work LED（LED_R Common Cathode）
2	LED_R	Red LED	STB LED
3	VCC_ MCU	MCU PWR	3.3V Output
4	GND	Ground	Ground
5	IR	Input	Remote receive

◆ **JP3(2PIN/2.0)　　MIC in**

Pin No.	Pin Name	Type	Description
1	MIC1P	Input	Mic in +
2	MIC1N	Input	Mic in -

◆ **J4　　3.5mm Audio Jack**
◆ **J5　　Micro SD Card**
◆ **HCON1　　HD output，Max support 1080P**
◆ **U210　　RJ45, 100M Ethernet**
◆ **SW3　　UBOOT Button，Update system**
◆ **JD14　　USB0_OTG**
◆ **JD13　　USB2-HOST**
◆ **ANT1　　WIFI connector　2.4G　BT4.0**