

Specification

Client:

Product: Android Digital Signage Network Board

Model: AND-A20

Date: 05-28-2013

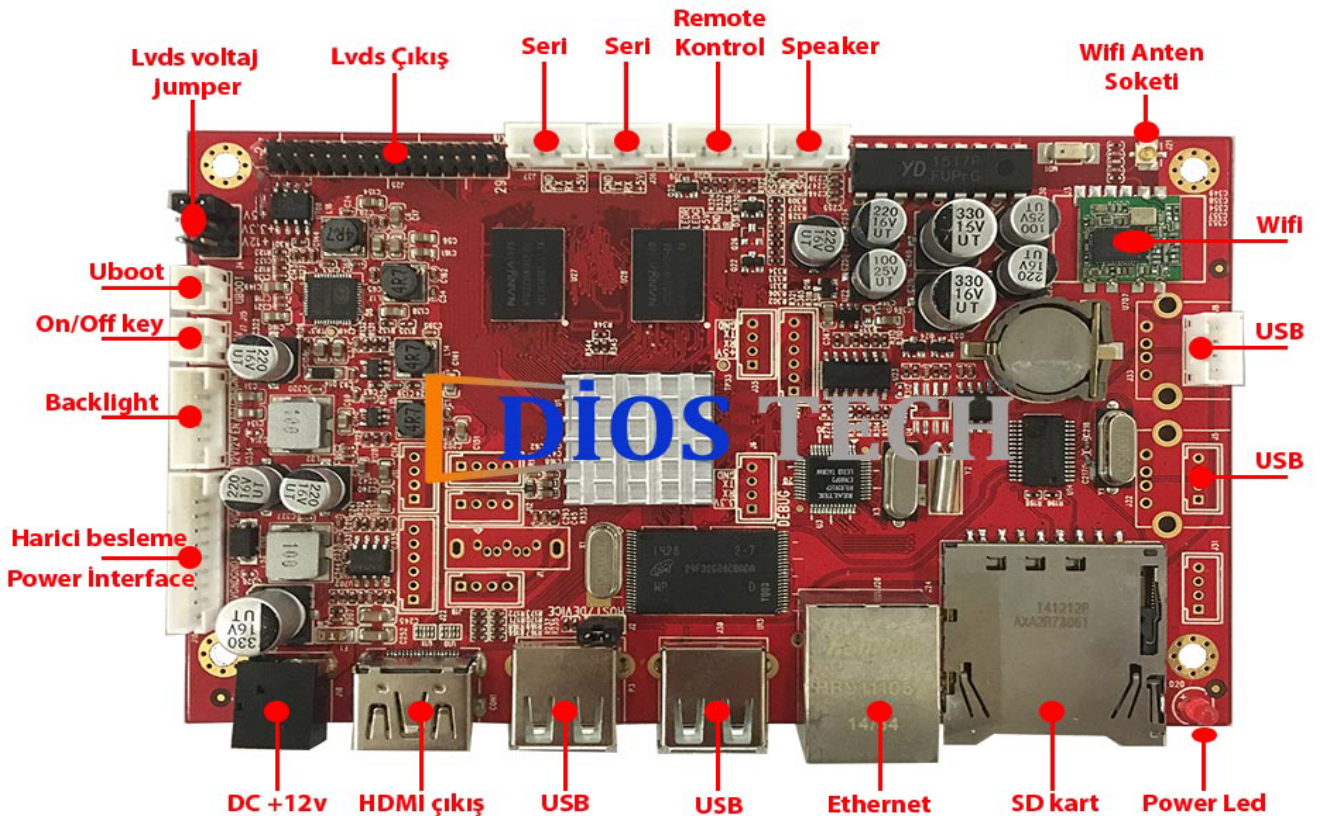
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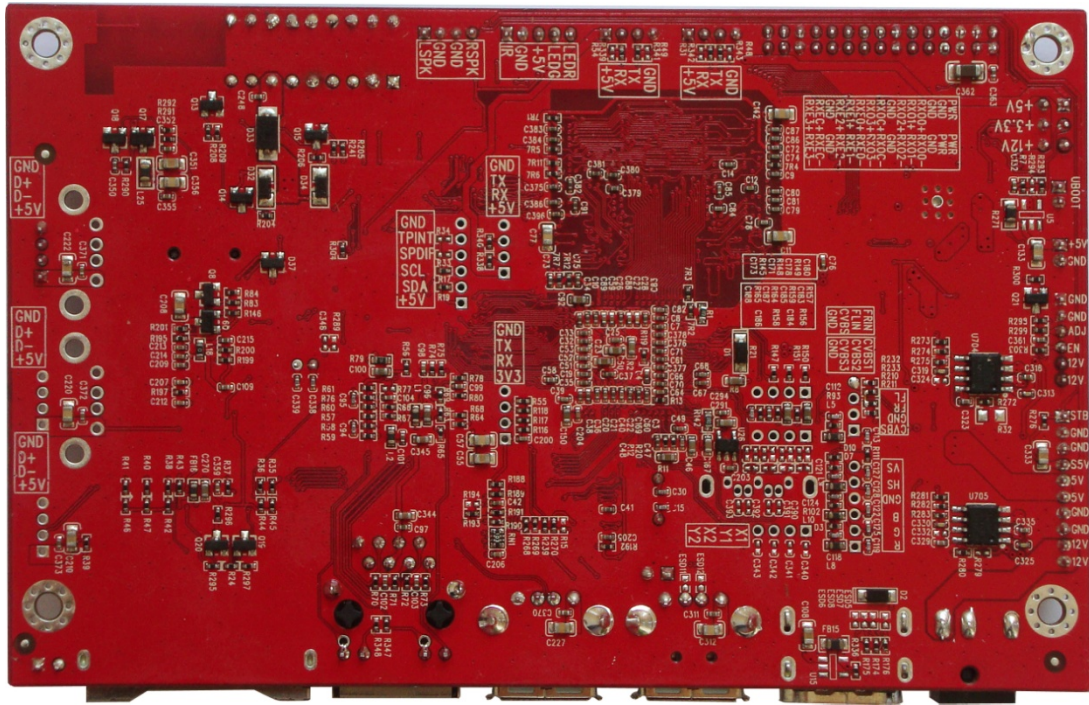
(Both parties must be signed and sealed)

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Chapter 1. Product overview:

The PCBA software is pre-build Android OS, with small size, high effective, low consumption, low price cost, and can take the advertising display function very well. Platform support 1080P Full HD display, support LVDS connect to monitor, support HDMI/VGA output, support 3G module, support infrared remote control, support touch screen, keyboard, mouse etc. To help user support the advertising application.





Chapter 2. Features:

Hardware specification	
CPU	Allwinner A20, ARM® Cortex™-A7 Dual-Core
RAM	1GB DDR3
Internal storage	4GB Nand Flash (Extensible)
Decoding ability	MAX. 1080P
OS	Android 4.2.2
Network	Support Ethernet, WIFI, 3G
Video format	RM/RMVB,MKV,TS,FLV,AVI,VOB,MOV,WMV,MP4, etc
Audio format	MP3,WMA,APE,Flac, etc
Image format	BMP/JPEG/PNG/GIF, etc
USB2.0port	4 USB HOST,1 USB OTG/HOST
Ethernet	10M/100M self-adaption Ethernet
LVDS output	50/60Hz 6Bit/8Bit Dual Channel LVDS
HDMI putout	support 1080P/720P 50/60Hz output
Audio output	L&R audio-out (2X8Ω/6W speaker)
RTC	Available
Timing	Available
System update	Support USB/SD update

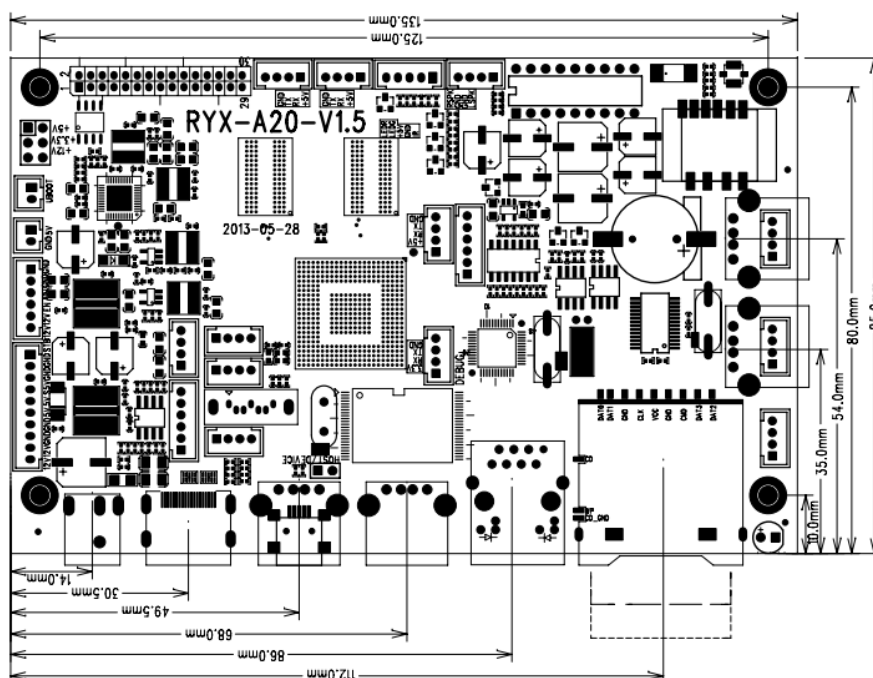
Chapter 3. functions:

- ◆ Use Allwinner A10 processor, platform use Android4.2.2;
- ◆ Hardware platform: ARM Cortex-A7 1.2GHZ dual-core processor; Software platform, Android OS
RAM/DDR3 1GB internal storage FLASH memory/NAND 4GB;
- ◆ DC voltage input:DC+12V,normal working (<4.5W) ,standby (<1.0W) ;

- ◆Support 1080P full HD image and video display;HDMI1.4 inside to support 1080P and 3D output;
- ◆Multi video format,RMVB,FLV,MPEG1/2/4,AVI,DIVX,XDIV,WMV9,H.264,VC-1,MOV,MKV,MP4,TS,M2T,VOB;Multi-Audioformat,MP3,WMA,WAV,EAAC+,MP2dec,Vorbis(Ogg),AC3,FLAC,APE,BS AC; Image format,BMP/PNG/GIF/JPEG (4088*4088) ;
- ◆ Support webpage/Flash display and interactive;
- ◆Multi method input:1) Support multi touchscreen(infrared touch, capacitive touch, resistance touch,with calibration function;2) Support remote control function;3) Support USB mouse and keyboard input;
- ◆Powerful display function:1) Support power on and power off via remote control;2) Support LVDS/HDMI/VGA/AV;3) 1080P Full HD, From 8~70 inch;
- ◆Multi storage medium:Mobile HDD, USB flash drive and SD card;
- ◆Multi-Language:Chinese and English and others.
- ◆Timing function: save the power consumption and the lifetime;
- ◆RTC: RTC IC inside,will get connection and synchronous with Internet and adjust by itself.
- ◆Multi network connection: Support Ethernet/Wifi and 3G network;

Chapter 4.PCBA size

- *PCBA : Six laminates
- *PCBA height:18.8mm
- *PCB length:135.0mm
- *PCB width:85.0mm
- *PCB screw hole:3.5mm x4



Chapter 5.Working environment

RH ≤75%

Storage temperature:-10°C to +60°C

Working temperature:0°C to +60°C

- *Please pay attention on destabilization during item installing and using.
- *No installation position request, only if the installation position will make the PCB comes warping.
- *The holes for terminal port can not be too small, especial for HDMI terminal port, to avoid PCB comes warping during machine installation.
- *Display content will be damaged if the transmission wired is too long.
- *Please make sure that all the connection wired cable is far away from the chipset.
- *For better Electro Magnetic Compatibility, advice use LVDS get connection between motherboard and panel, please use shielded wire and add magnet ring on the cable with near the chipset AMAP.
- *HDMI has been approved for the inner standard, please get contact with relevant departments if you want to use HDMI.
- *ROHS certificate.

Chapter 6. Ports definition

Specifications (The leftside on the white flag is the first Pin)

J16 (10PIN/2.0) Power Interface

Pin	Definition	Description
1	+12V	Power
2	+12V	Power
3	GND	Earth wired
4	GND	Earth wired
5	5V	Power
6	5V	Power
7	5VSTB	Standby mode 5V input
8	GND	Earth wired
9	GND	Earth wired
10	STB	Standby singal input

J28 (6PIN/2.0) Backlight Power

Pin	Definition	Description
1	+12V	Power
2	+12V	Power
3	ON/OFF	Backlight on/off
4	ADJ	Backlight adjustment
5	GND	Earth wired
6	GND	Earth wired

J15 (2PIN/2.0) Uboot

Pin	Definition	Description
1	GND	Earth wired
2	Uboot	Data pin

J7 (2PIN/2.0) On/Off Key

Pin	Definition	Description
1	GND	Earth wired
2	KEY	Data pin

J37 (4PIN/2.0) Serial(ttys4)

Pin	Definition	Description
1	GND	Earth wired
2	TX	transport
3	RX	receive
4	+5V	Power

J36 (4PIN/2.0) Serial(ttys3)

Pin	Definition	Description
1	GND	Earth wired
2	TX	transport
3	RX	receive
4	+5V	Power

J35 (4PIN/2.0) Serial(ttys2)

Pin	Definition	Description
1	GND	Earth wired
2	TX	transport
3	RX	receive
4	+5V	Power

J6 (4PIN/2.0) Serial(ttys0)

Pin	Definition	Description
1	GND	Earth wired
2	TX	transport
3	RX	receive
4	3.3V	Power

J29 (5PIN/2.0) remote control

Pin	Definition	Description
1	+5V	Power
2	GND	Earth wired
3	IR	Remote control port
4	LEDG	LED light
5	LEDR	LED light

J10 (4PIN/2.0) loud speaker port

Pin	Definition	Description
1	RSPK+	Right speaker
2	GND	Earth wired
3	GND	Earth wired
4	LSPK+	Left speaker

JP2 (6PIN/2.0) LVDS Port

Pin	Definition	Description
1	PWR	12V/5V/3.3V
2	PWR	12V/5V/3.3V
3	PWR	12V/5V/3.3V
4	GND	Earth wired
5	GND	Earth wired
6	GND	Earth wired
7	RX00-	Odd pixel,Negative LVDS differential data input. Channel 0
8	RX00+	Odd pixel,Positive LVDS differential data input. Channel 0
9	RX01-	Odd pixel,Negative LVDS differential data input. Channel 1
10	RX01+	Odd pixel,Positive LVDS differential data input. Channel 1
11	RX02-	Odd pixel,Negative LVDS differential data input. Channel 2

12	RXO2+	Odd pixel,Positive LVDS differential data input. Channel 2
13	GND	Earth wired
14	GND	Earth wired
15	RXOC-	Odd pixel,Negative LVDS differential clock input.
16	RXOC+	Odd pixel, Positive LVDS differential clock input.
17	RXO3-	Odd pixel,Negative LVDS differential data input. Channel 3
18	RXO3+	Odd pixel,Positive LVDS differential data input. Channel 3
19	RXE0-	Even pixel,Negative LVDS differential data input. Channel 0
20	RXE0+	Even pixel, Positive LVDS differential data input. Channel 0
21	RXE1-	Even pixel,Negative LVDS differential data input. Channel 1
22	RXE1+	Even pixel, Positive LVDS differential data input. Channel 1
23	RXE2-	Even pixel,Negative LVDS differential data input. Channel 2
24	RXE2+	Even pixel, Positive LVDS differential data input. Channel 2
25	GND	Earth wired
26	GND	Earth wired
27	RXEC-	Even pixel,Negative LVDS differential clock input.
28	RXEC+	Even pixel, Positive LVDS differential clock input
29	RXE3-	Even pixel,Negative LVDS differential data input. Channel 3
30	RXE3+	Even pixel, Positive LVDS differential data input. Channel 3