



Digital Signage Mother board DJM-3100

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1 Overview

1.1 Introduction

Digijupiter networked multimedia player board **DJM-3100** is designed based on Rockchip 3188 (quad core) which has a powerful capacity of multimedia processing and rich peripheral interfaces, supporting full HD decoding up to 1080P. It can support output of HDMI or VGA , and drive the 18-61 inch LCD directly.

1.2 Features

1. Compact design combining multi-media decoding, LCD drive, audio amplifier and multiple network access
2. Multi-touch, interactive operation, with the touch of smooth experience
3. Support mainstream media formats and split screen playback of images,video,scrolling subtitles
4. Supports display of scroll text, date, time, weather and LOGO
5. Multiple and flexible interface layout, while full/split screen switching free
6. Screen switch arbitrary by Cross/Vertical, and Smooth transitions without black
7. Support background music playback while displaying HD images,instead of traditional light box and poster
8. Support cycle,timing,spots,gaskets and other multi player mode,to achieve on the playing time,order,frequency,content and venue multi-faceted flexible control
9. Support breakpoint resume,time download,and reasonable use of network bandwidth
10. Auto timed on/off in multiple periods enables unattended operation
11. Contents can play directly or imported by a USB disk
12. Support auto repair,remote upgrade,smart DNS,and convenient to operation
13. Support hybrid Standalone/LAN/WIFI/3G networks

2 Specification

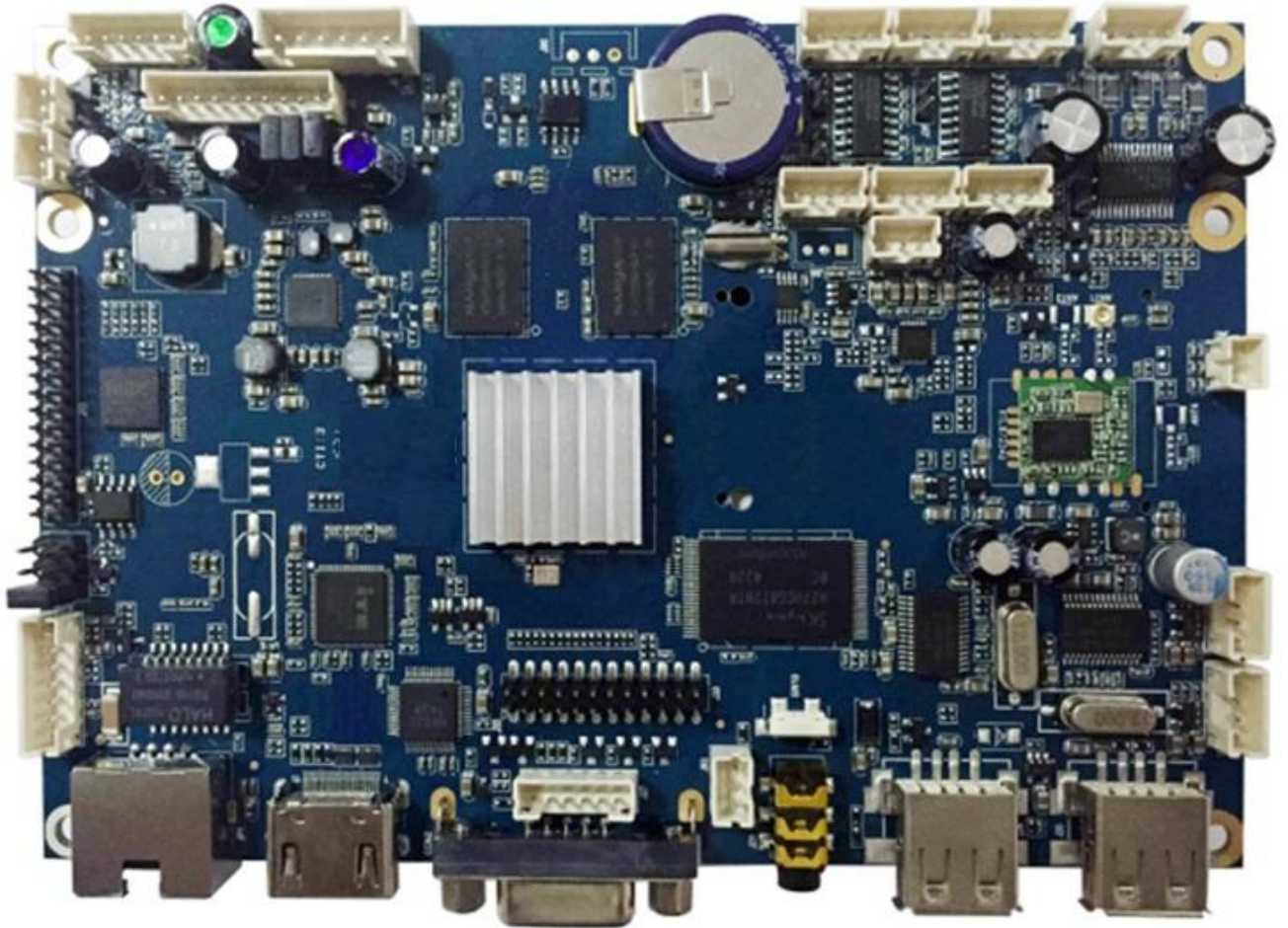
Hardware Configuration	
CPU	Rockchip RK3188 + ARM quad-core Cortex A9 (Up to 1.8GHz)
GPU	ARM Quad Core Mali-400 MP GPU
CPU Frequency	1.8GHz
DRAM	HYNIX/SAMSUNG DDR3 2Gbyte
Flash memory	HYNIX/SAMSUNG NANDFLASH 8GB
Storage interface	TF/USB
Resolution	Full HD 1080P
Features	
Operation system	Android 4.2
Contents	Support Video/Image/Text/logo/Date/Time/Week/Weather split-screen display and background image
Playback	1) Contents are obtained via network and stored in local disk for playback on a loop, at a specified time or idle hours, or as instant break-ins.
	2) Contents are imported from a USB disk.
	3) Play contents stored in a USB disk.
Internet	10/100M Ethernet
	WIFI(150Mbps)
Content Management	1) CDMS (B/S architecture) - customized templates, scheduled publish idle-time/scheduled/looping/break-in playback, bi-directional MD5 encryption, Multi-level audits, grouped players, real-time monitoring, remote control, timed on/off,timed download, traffic control, rights control, log statistics
Media Formats	
Media Formats	Video: AVI、MPEG4、WMV、MKV、flv Audio: MP3 Image: JPG, JPEG, BMP, PNG, GIF
Interfaces	
Power Supply	×2,12V / 5V / STB Input
Video Output	LVDS×1, LVDS 30 Pin 2.0mm, Double Row, direct for 50/60Hz LCD, VGA×1 HDMI×1(The Output of VGA and HDMI has the same resolution)
Audio Output	×1, 4 Pin 2.0mm, 2*15W Stereo CLASS-D Amplifier ×1, Line Out, 3.5mm Headphone
WiFi	×1, BT Optional
USB2.0	USB HOST x3 USB OTG x1
Backlight	×1, 6 Pin, 2.0mm

Fan	×2, 2 Pin, 2.0mm
3G	PCIE Slot (2G,3G Module Optional) ×1 SIM Slot ×1
TF Card Slot	×1
Function Extension	RS232 ×3 (TTL ×3) Camera Input ×1 USB Touch Screen ×1 Microphone ×1
Other Features	
RTC	Time synchronization over network and time saving when power failure
Watch Dog	External WDT included for auto recovery from failure
IR Input	Infrared remote control
Electrical Parameter	
Input Power	DC 12V
Power Consumption	8.4W
Working Environment	
Working temperature	0°C ~ 40°C
Working Humidity	10% ~ 90%

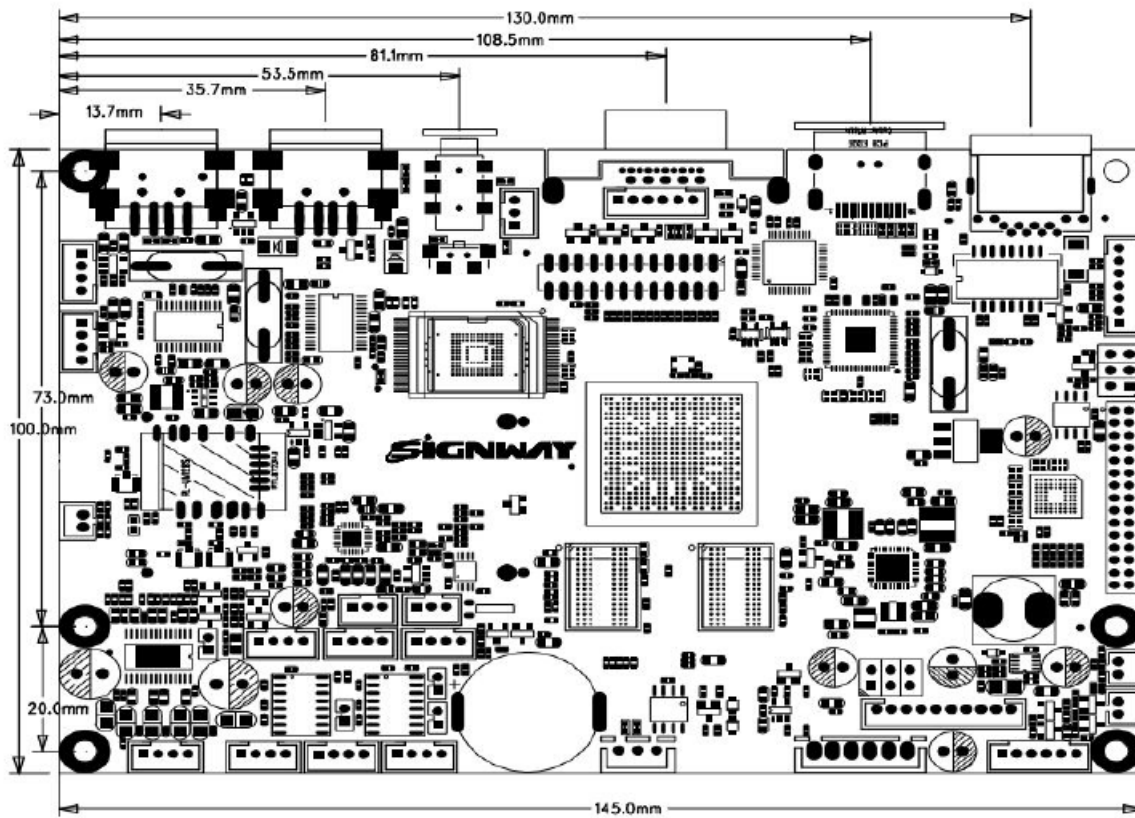
3 Appearance

3.1 Profile

- Front View



3.2 Dimensions

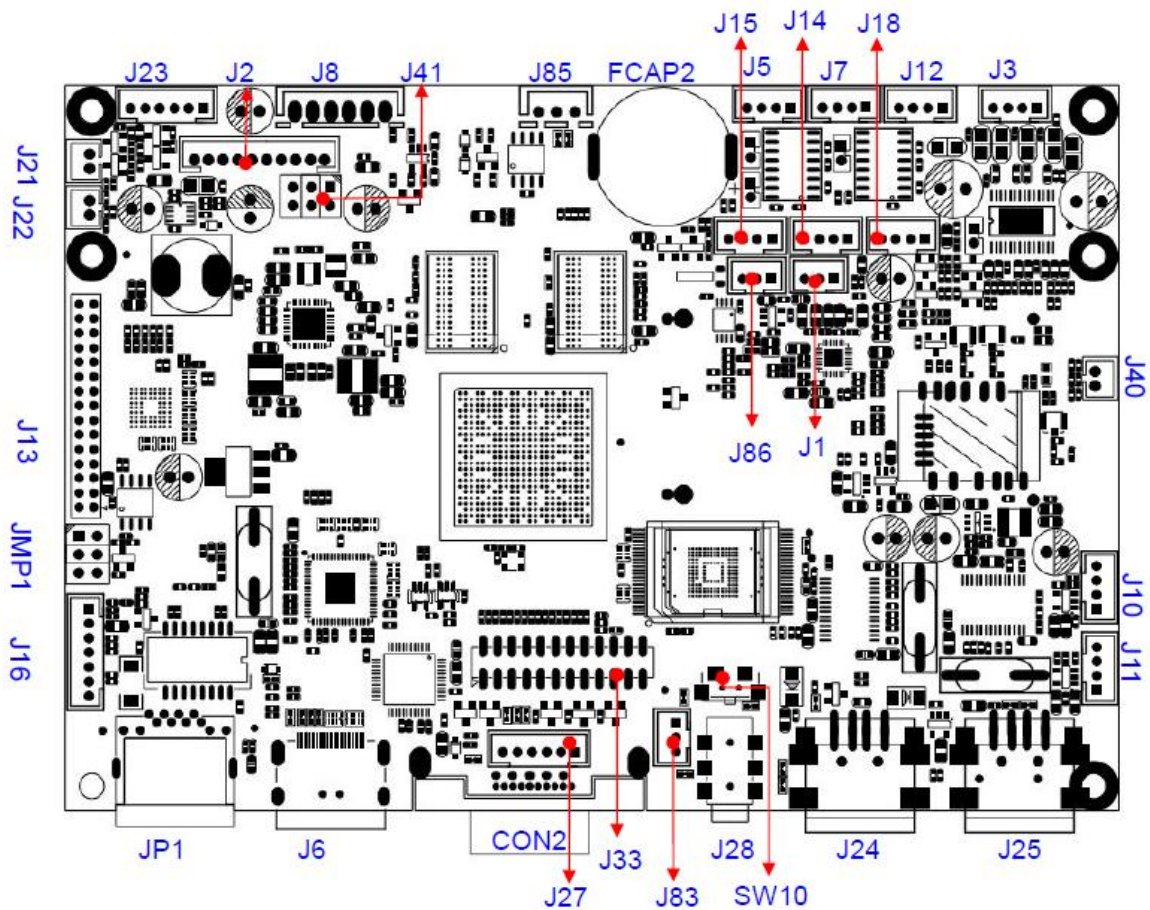


Length:145mm, Width:100mm,Front Height:8mm,Rear Height:5mm

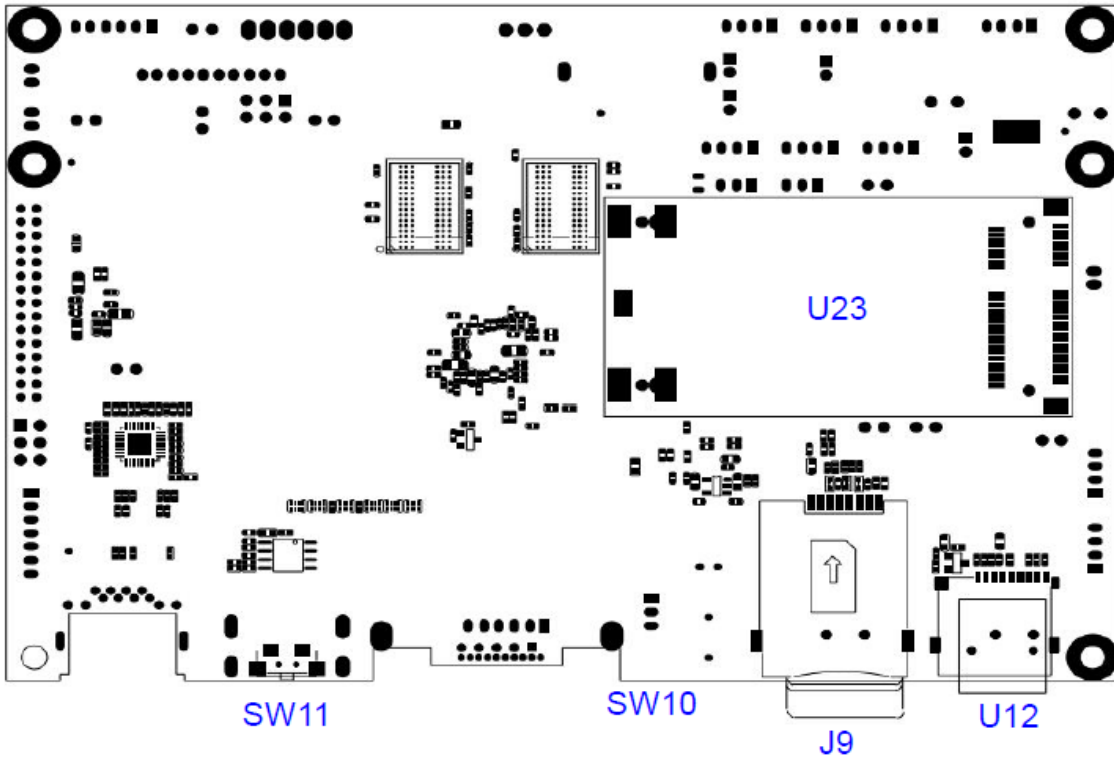
4 Interfaces

4.1 Interface Layout

■ Front



■ Rear



4.2 Interface Description

□ **J1 Audio Signal Input**

Pin No.	Pin Name	Type	Description
1	LIN	Input	Input Signal of Left Speaker
2	GND	Ground	Ground
3	RIN	Input	Input Signal of Right Speaker

□ **J2 Power Input**

Pin No.	Pin Name	Type	Description
1	12V-IN	Input	+12V general power input, not including backlight and LCD; Minimum current is 0.5A;Maximum LCD current is 1A , Separate power supply is required for extra demands. Maximum Backlight board control current is 3A; Separate power supply is required for extra demands
2			
3	GND	Ground	Ground

4			
5	VSY5	Input	+5V general power input,Maximum LCD current is 1A , Separate power supply is required for extra demands.
6			
7	GND	Ground	Ground
8			
9	5VSB	Input	Standby Power, +5V
10	STB	Output	Standby Power Control

□ **J3 Left / Right Speaker Output**

Pin No.	Pin Name	Type	Description
1	ROUT+	Output	+ Audio Signal of Right Speaker
2	ROUT-	Output	- Audio Signal of Right Speaker
3	LOUT-	Output	- Audio Signal of Left Speaker
4	LOUT+	Output	+ Audio Signal of Left Speaker

□ **J5 232 Communication Interface**

Pin No.	Pin Name	Type	Description
1	UART_5V	Output	5V DC Output
2	TX	Output	232 Communication Send Pin
3	RX	Output	232 Communication Receive Pin
4	GND	Ground	Ground

□ **J7 232 Communication Interface**

Pin No.	Pin Name	Type	Description
1	UART_5V	Output	5V DC Output
2	TX	Output	232 Communication Send Pin
3	RX	Output	232 Communication Receive Pin
4	GND	Ground	Ground

□ **J8 Power Input**

Pin No.	Pin Name	Type	Description
1	STB	Output	Standby Power Control
2	5VSB	Input	Standby Power, +5V
3	GND	Ground	Ground
4			

5	12V-IN	Input	+12V general power input, not including backlight and LCD; Minimum current is 0.5A;Maximum LCD current is 1A , Separate power supply is required for extra demands.
6			Maximum Backlight board control current is 3A; Separate power supply is required for extra demands

□ **J10 USB Extension**

Pin No.	Pin Name	Type	Description
1	USBV3	Output	Power Out, +5V
2	DM	Input\Output	D- Signal
3	DP	Input\Output	D+Signal
4	GND	Ground	Ground

□ **J11 USB Extension**

Pin No.	Pin Name	Type	Description
1	USBV2	Output	Power Out, +5V
2	DM	Input\Output	D- Signal
3	DP	Input\Output	D+Signal
4	GND	Ground	Ground

□ **J12 232 Communication Interface**

Pin No.	Pin Name	Type	Description
1	UART_5V	Output	5V DC Output
2	TX	Output	232 Communication Send Pin
3	RX	Input	232 Communication Receive Pin
4	GND	Ground	Ground

□ **J40 MIC**

Pin No.	Pin Name	Type	Description
1	MIC-OUT+	Input	Microphone Input Signal +
2	MIC-OUT-	Input	Microphone Input Signal -

□ **J13 LVDS**

Pin No.	Pin Name	Type	Description
1	LCDVCC	Power	LCD Power Output
2			
3			
4	GND	Ground	Ground
5			
6			
7	TA1-	Output	Pixel0 Negative Data (Odd)
8	TA1+	Output	Pixel0 Positive Data (Odd)
9	TB1-	Output	Pixel1 Negative Data (Odd)
10	TB1+	Output	Pixel1 Positive Data (Odd)
11	TC1-	Output	Pixel2 Negative Data (Odd)
12	TC1+	Output	Pixel2 Positive Data (Odd)
13	GND	Ground	Ground
14			
15	TCLK1-	Output	Negative Sampling Clock (Odd)
16	TCLK1+	Output	Positive Sampling Clock (Odd)
17	TD1-	Output	Pixel3 Negative Data (Odd)
18	TD1+	Output	Pixel3 Positive Data (Odd)
19	TA2-	Output	Pixel0 Negative Data (Even)
20	TA2+	Output	Pixel0 Positive Data (Even)
21	TB2-	Output	Pixel1 Negative Data (Even)
22	TB2+	Output	Pixel1 Positive Data (Even)
23	TC2-	Output	Pixel2 Negative Data (Even)
24	TC2+	Output	Pixel2 Positive Data(Even)
25	GND	Ground	Ground
26			
27	TCLK2-	Output	Negative Sampling Clock (Even)
28	TCLK2+	Output	Positive Sampling Clock (Even)
29	TD2-	Output	Pixel3 Negative Data (Even)
30	TD2+	Output	Pixel3 Positive Data (Even)

□ **J14 UART Extension**

Pin No.	Pin Name	Type	Description
1	VSYS	Output	5V DC Output
2	TX	Output	UART Send Pin,TTL Level

3	RX	Input	UART Receive Pin,TTL Level
4	GND	Ground	Ground

□ **J15 UART Extension**

Pin No.	Pin Name	Type	Description
1	VSYS	Output	5V DC Output
2	TX	Output	UART Send Pin,TTL Level
3	RX	Input	UART Receive Pin,TTL Level
4	GND	Ground	Ground

□ **J18 UART Extension**

Pin No.	Pin Name	Type	Description
1	VSYS	Output	5V DC Output
2	TX	Output	UART Send Pin,TTL Level
3	RX	Input	UART Receive Pin,TTL Level
4	GND	Ground	Ground

□ **J16 Remote Receiver、Working LED、Button**

Pin No.	Pin Name	Type	Description
1	IR	Input	Remote Receiver Input
2	GND	Ground	Ground
3	IR_VCC	Power Output	Remote Power
4	R	Red Light	Indicates Standby State
5	G	Green Light	Indicates Working State
6	Key0-Sar0	Input	Outer Button Input
7	MCU_VCC	Power Output	Button Power Output

□ **J23 Backlight Control**

Pin No.	Pin Name	Type	Description
1	12V-IN	Power Output	+12V Backlight Power Output, Max. Current: 3A Large size multi-tube backlight with more than 3A current requires separate power supply
2			

3	BL_ON/OFF	Output	Backlight On/Off Signal
4	BL-ADJ	Output	Backlight Brightness Control
5	GND	Ground	Ground
6			

□ **J27 VGA Slot**

Pin No.	Pin Name	Type	Description
1	R_RGB	Output	Red Primary Signal Output
2	G_RGB	Output	Green Primary Signal Output
3	B_RGB	Output	Blue Primary Signal Output
4	GND	Ground	Ground
5	HSYNC	Output	Horizontal synchronization Signal Output
6	VSNC	Output	Vertical synchronization Signal Output

□ **J33 Camera Input Interface**

Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2			
3	CIF0_D2A	Input	Image Data Input
4	CIF0_D3A	Input	Image Data Input
5	CIF0_D4A	Input	Image Data Input
6	CIF0_D5A	Input	Image Data Input
7	CIF0_D6A	Input	Image Data Input
8	CIF0_D7A	Input	Image Data Input
9	CIF0_D8A	Input	Image Data Input
10	CIF0_D9A	Input	Image Data Input
11	VSYS	Output	5V DC Output
12	GND	Ground	Ground
13	CIF0_VSYNCA	Input	VSYNC Input Signal
14	CIF0_HREFA	Input	HREF Input Signal
15	CIF0_PDNA	Output	Control

Pin No.	Pin Name	Type	Description
16	CIF1_PDNA	Output	Control
17	CIF0_CLKIN	Input	System Clock Input
18	CIF0_CLKOUT	Output	System Clock Output
19	VCCIO_WL	Output	Power Output, +1.8V
20	GND	Ground	Ground
21			
22	VCC_IO	Output	Power Output, 3.3V

□ **J83 Audio Signal Linear Output**

Pin No.	Pin Name	Type	Description
1	LIN_OR	Output	Linear Output Signal of Right Speaker
2	GND	Ground	Ground
3	LIN_OL	Output	Linear Output Signal of Left Speaker

□ **J86 I/O Extension**

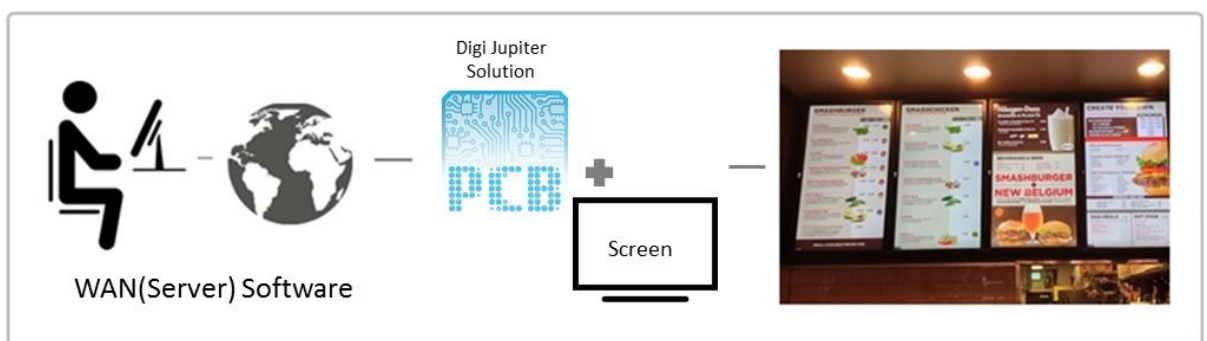
Pin No.	Pin Name	Type	Description
1	GND	Ground	Ground
2	GPIO0_C3	Input/Output	Extensible IO Interface
3	GPIO0_C2	Input/Output	Extensible IO Interface

- **J2** **TF Card Slot**
- **FCAP2** **Power Supply For RTC When Farah Capacitor Board Interrupted**
- **J85** **Debug Interface**
- **J6** **HDMI Interface**
- **CON2** **VGA Interface**
- **J28** **Audio Signal Linear Output Interface**
- **J24** **USB_OTG, J25 USB_HOST**
- **JP1** **LAN**
- **JMP1** **The Jump Cap Of Screen Pressure Selection**
- **J41** **Three Jump Cap Should Be Inserted When Power Is Supplied By Single 12V**
- **J21** **J22 Fan**
- **J9** **SIM Card Slot**
- **SW10** **RECOVER Key For Program Writing**
- **SW11** **Reset Button**

5 Usage Contexts

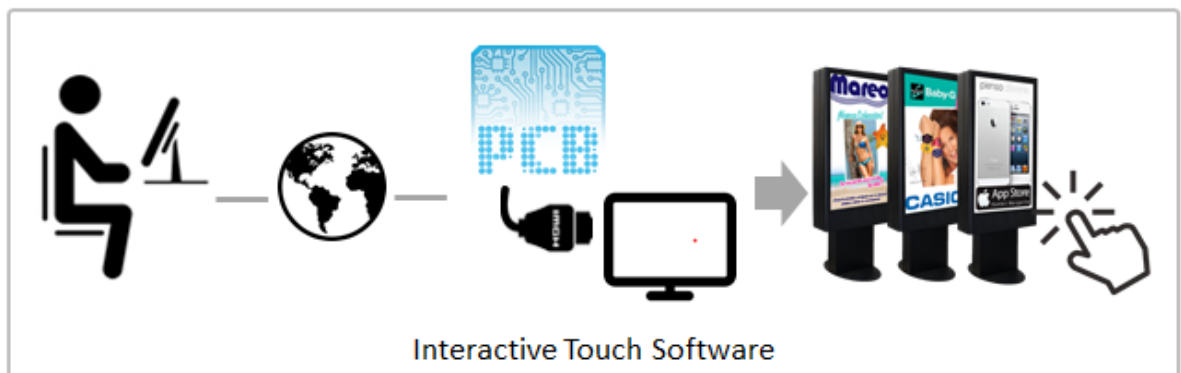
■ WAN(server) Software

For a widespread project, it is advised to use Digi-Jupiter WAN(server) software to compile programs and distribute contents to players via the network or a USB disk



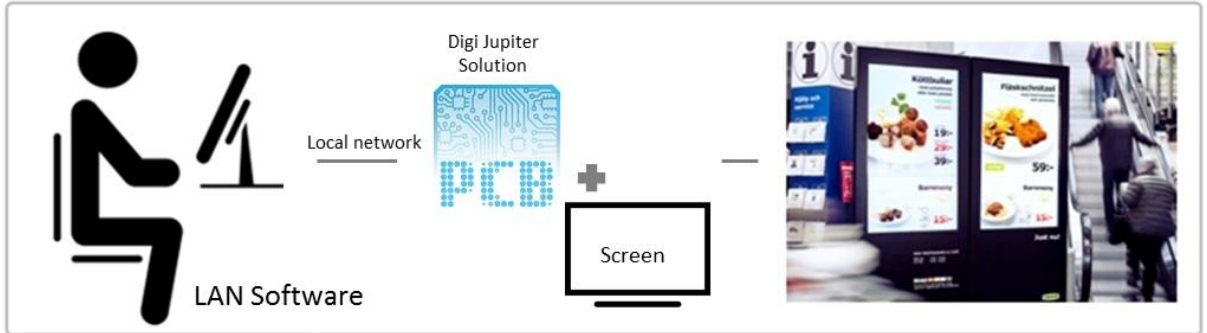
■ Interactive Touch Software

Touch software is special for Kiosk & Touch screen to design your own touch content of interactive advertisement



■ **LAN Software**

For a small scale deployment, it is advised to use Digi-Jupiter LAN software to compile programs. Programs can be distributed to players via the network or a USB disk. This is especially suitable for such occasions as meeting notifications



■ **Standalone Software**

For the place which has no internet, it is better to use Digi-Jupiter standalone software to edit content and use USB to update your device.

