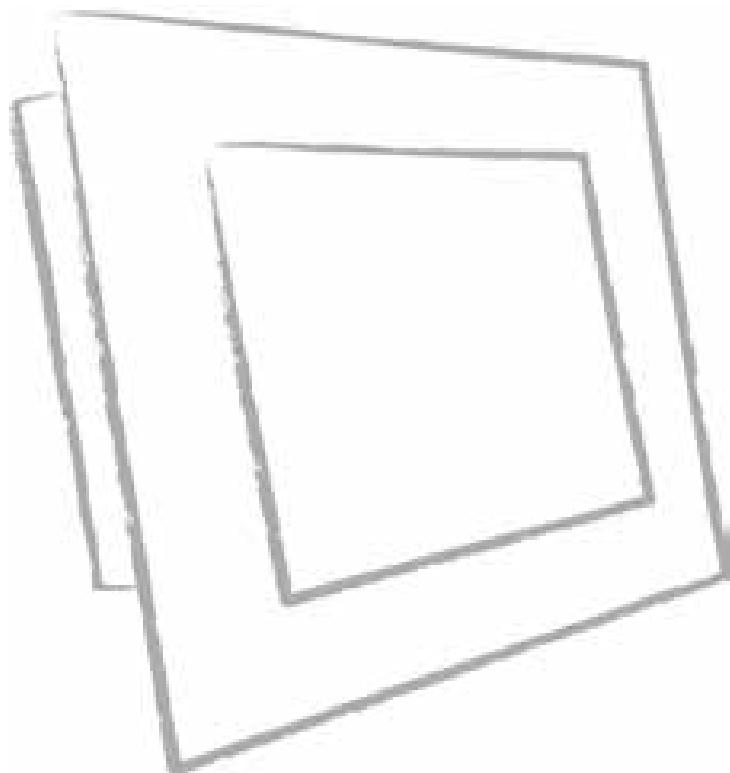


# User's Manual

## Winsonic Cortex ARM SBC with S5P6818 SOC



# Winsonic®

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# **1. Revision History :**

<b>Issue</b>	<b>Edition</b>	<b>Date</b>	<b>Editor</b>	<b>Details of Change</b>
0	1	2016/11/07	V01	Initial draft.
0	2	2016/11/08	V02	
0	3	2016/11/16	V03	
0	4	2016/11/21	V04	
0	5	2016/12/06	V05	

## **2. License and Conditions**

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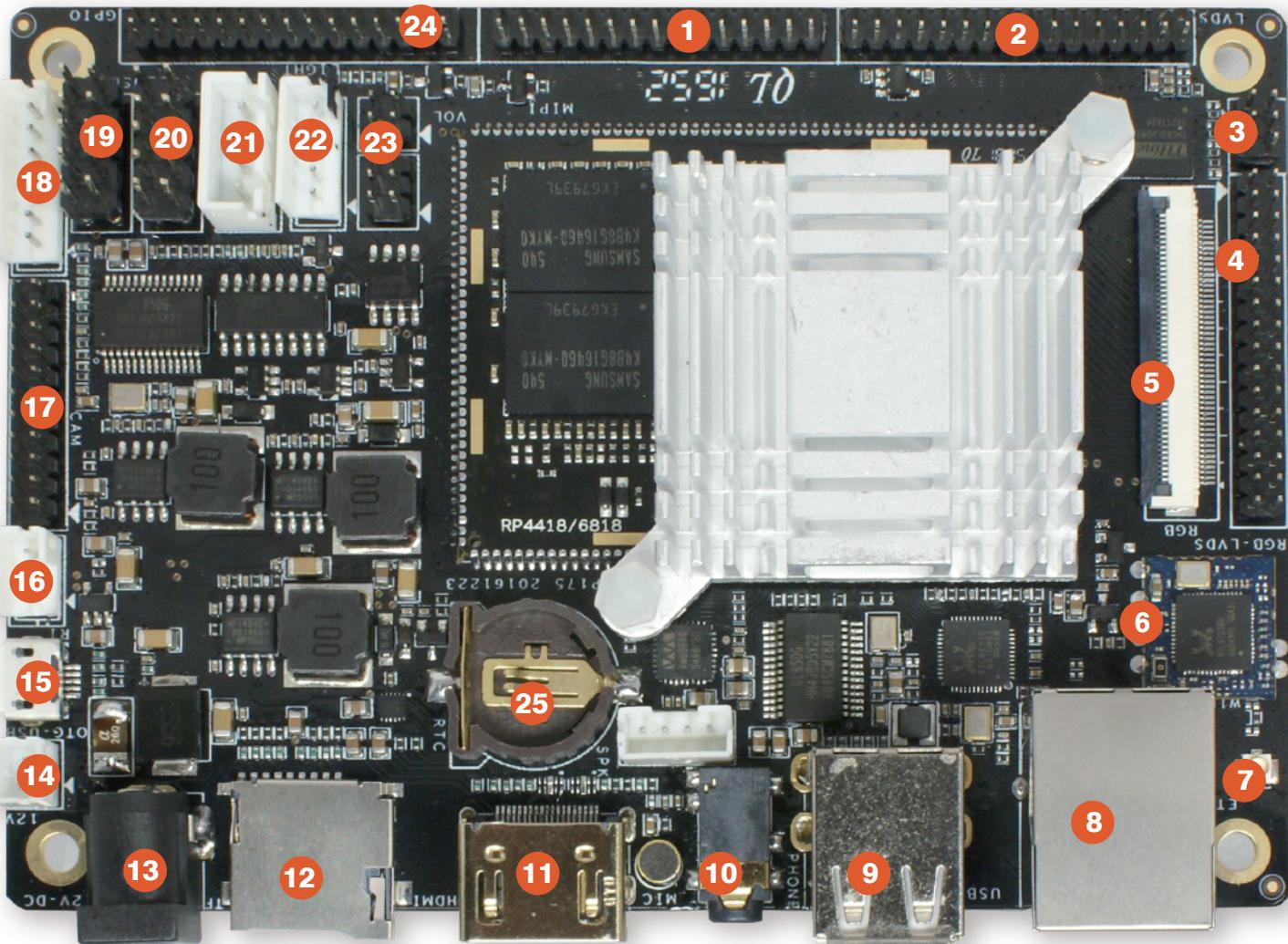
### **3. Introduction**

Winsonic Cortex ARM SBC featured with Samsung S5P6818, Cortex A53 Octa Core, Mail400MP4, Complies with OpenGL ES2.0/1.1, Onboard 2G DRAM and 16GB eMMC OS support: Android5.1, or Linux+QT2.2, or Ubuntu12.04

### **4. Product Features**

#### **4.1 Interface**

Interface	Description	Note
LAN	GBE with RJ45	
USB	6 x USB 2.0 Host (2 x A type / 4 x 2.54mm pin)	
SPK	Pitch=2.0mm Wafer	
PHONE	3.5 audio jack	
Mic	2 PIN Pitch=2.0mm Wafer	
HDMI	HDMI 1.4a, Type A	
Power	DC12V-In / & 2.1	
UART	4 Port, 2 x RS232, 2 x TTL	
USB OTG	1 Port Micro USB	
YUV Camera	2.0mm wafer	
SD	microSD slot	
IR	3 PIN Pitch=2.0mm Wafer	
User Key	2x2 Pitch=2.0mm pin	
Reset Key	Pitch=2.0mm Wafer	
Power Key	Pitch=2.0mm Wafer	
Mipi LCD	MIPI_LCD Pitch=2.0mm pin	
RGB LCD	FPC	
RTC	RTC	
Backlight Ctrl	5 PIN Pitch=2.0mm Wafer	
GPIO	Pitch=2.0mm pin	
Wireless	WIFI+Bluetooth 4.0	



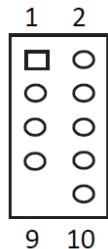
- |          |              |           |           |           |                 |           |                |
|----------|--------------|-----------|-----------|-----------|-----------------|-----------|----------------|
| <b>1</b> | MIPI LCD (0) | <b>7</b>  | WiFi      | <b>13</b> | Power           | <b>19</b> | USB            |
| <b>2</b> | LVDS LCD(0)  | <b>8</b>  | LAN       | <b>14</b> | Battery         | <b>20</b> | USB            |
| <b>3</b> | USB OTG      | <b>9</b>  | USB       | <b>15</b> | OTG USB         | <b>21</b> | Uart           |
| <b>4</b> | LVDS LCD(0)  | <b>10</b> | Audio     | <b>16</b> | IR              | <b>22</b> | BacklightCtrl  |
| <b>5</b> | RGB LCD(0)   | <b>11</b> | HDMI(0,1) | <b>17</b> | YUV Camera      | <b>23</b> | Voltage/Volume |
| <b>6</b> | WiFi         | <b>12</b> | TF        | <b>18</b> | Reset Key Power | <b>24</b> | GPIO           |
|          |              |           |           |           |                 | <b>25</b> | RTC            |

#### NOTE:

In a supported Android, the display port1,2,(4,5),11 will display the same content, while the HDMI(11) can be managed to display different content. Through an supported APK, one can accomplish the purpose desired.

## 4.2 Pin Description

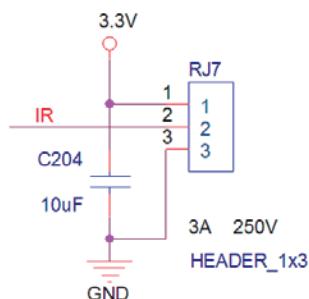
### 4.2.1 USB



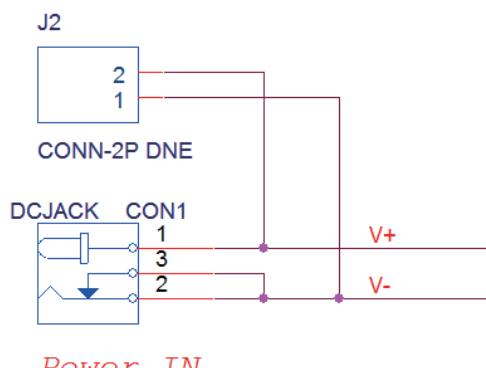
Pin	Signal Names	Pin	Signal Names
1	USBPower1	2	USBPower2
3	NegativeSignal1	4	NegativeSignal2
5	PositiveSignal1	6	PositiveSignal2
7	Ground1	8	Ground2
9	Key(No Connection)	10	Empty Pin

### 4.2.2 IR

1x3 Pitch=2.0mm Wafer

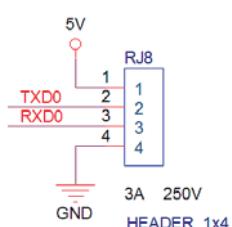


### 4.2.3 Power

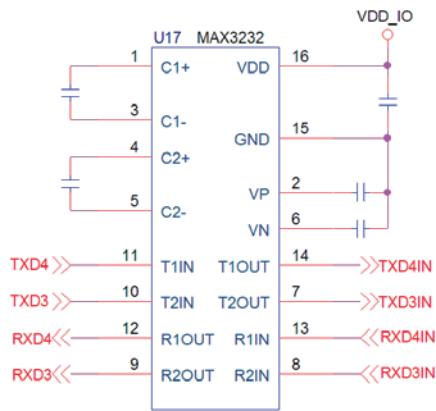


### 4.2.4 UART

UART0 PIN assignment 1\*4 2.54mm pitch wafer



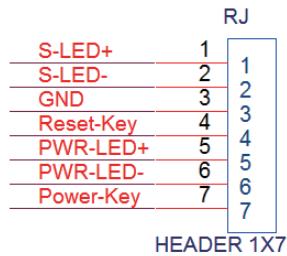
Core CPU pin TxD3/RxD3,TxD4/RxD4 are connected to MAX232



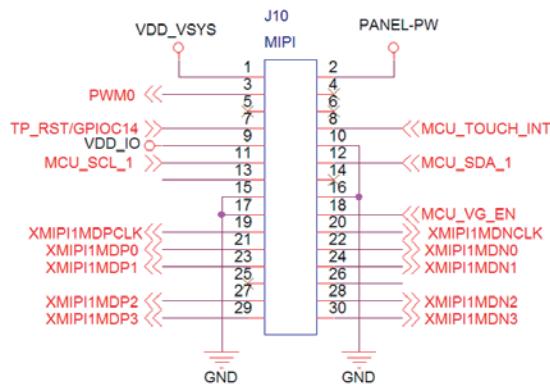
TXD4IN, RXD4IN, TXD3IN, RXD3IN appear at GPIO pin header.

#### 4.2.5 Reset Key, Power Key

1x7 Pitch=2.0mm Wafer



#### 4.2.6 MIPI LCD

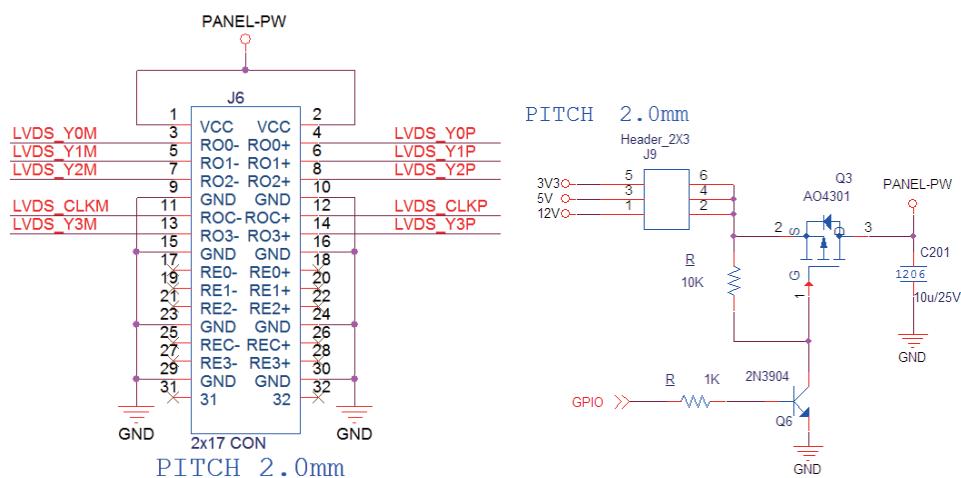
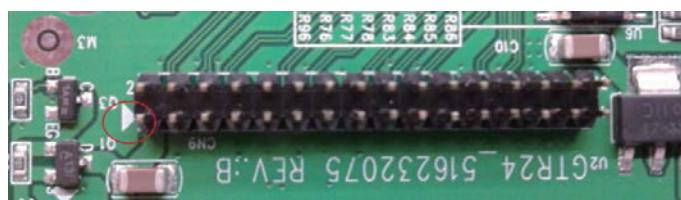


## 4.2.7 YUV Camera

	J8
VCC-3V3	1
SCL0	2
CAM0-VS	3
CAM0-PCLK	4
CAM0-D7	5
CAM0-D5	6
CAM0-D3	7
CAM0-D1	8
CAM RST	9
CAMERA_PD1	10
GND	11
	12
	13
	14
	15
	16
	17
	18
	19
	20
	21
	22

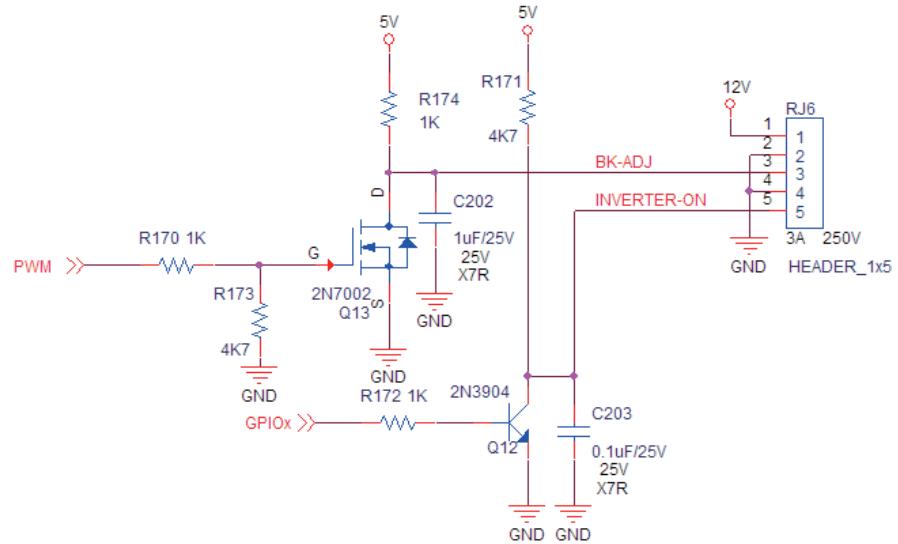
## 4.2.8

2\*16pins, pitch 2.0mm pin

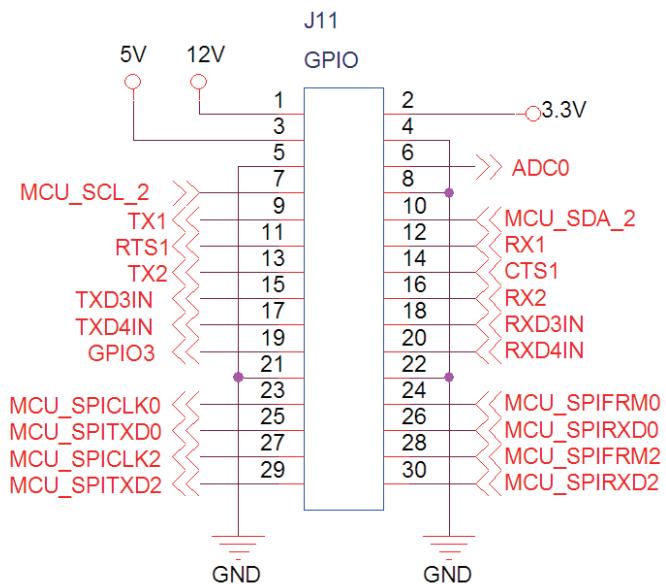


## 4.2.9 Backlight Ctrl

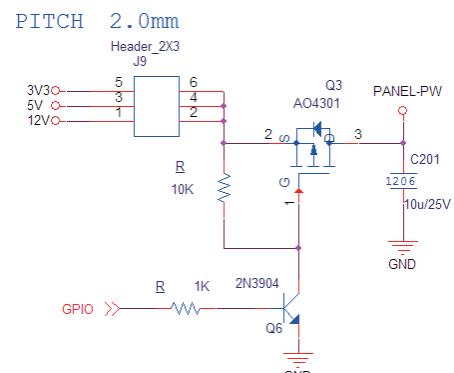
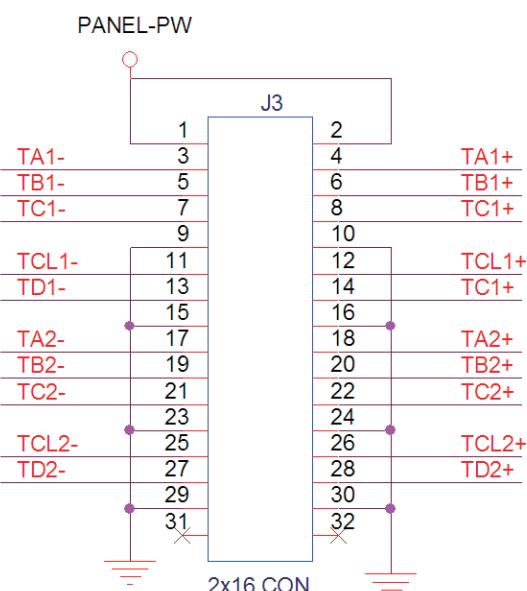
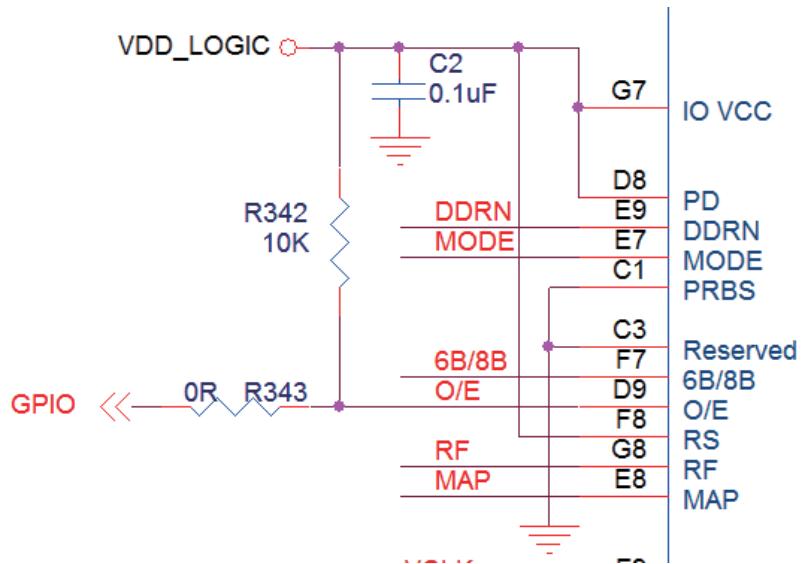
1x5 Pitch=2.0mm Wafer



## 4.2.10 GPIO



#### 4.2.11 LVDS from RGB LCD



DIP header 2\*16pins, pitch 2.0mm

