Motherboard

V1.0

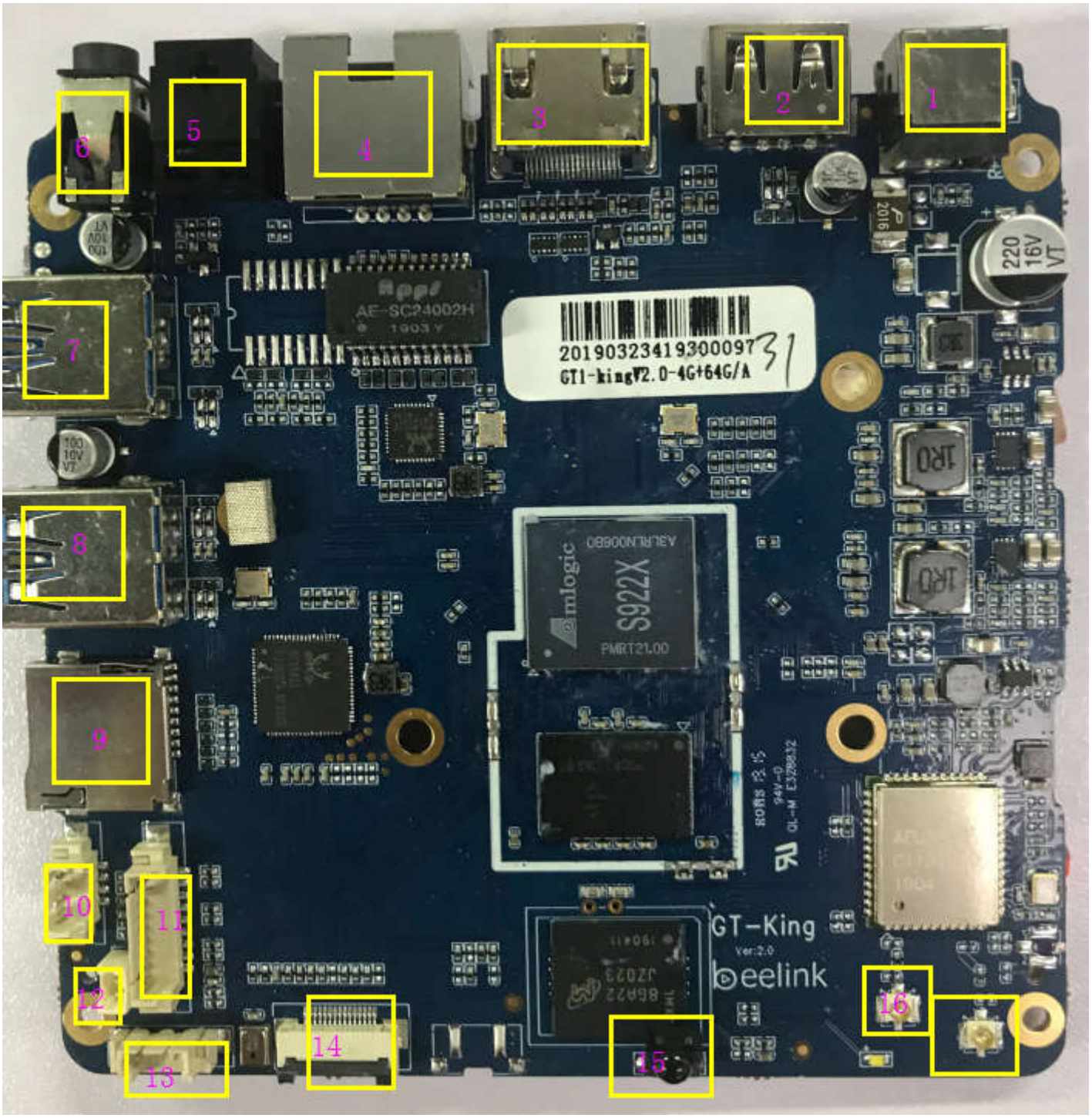
Prepared by：　　Date：

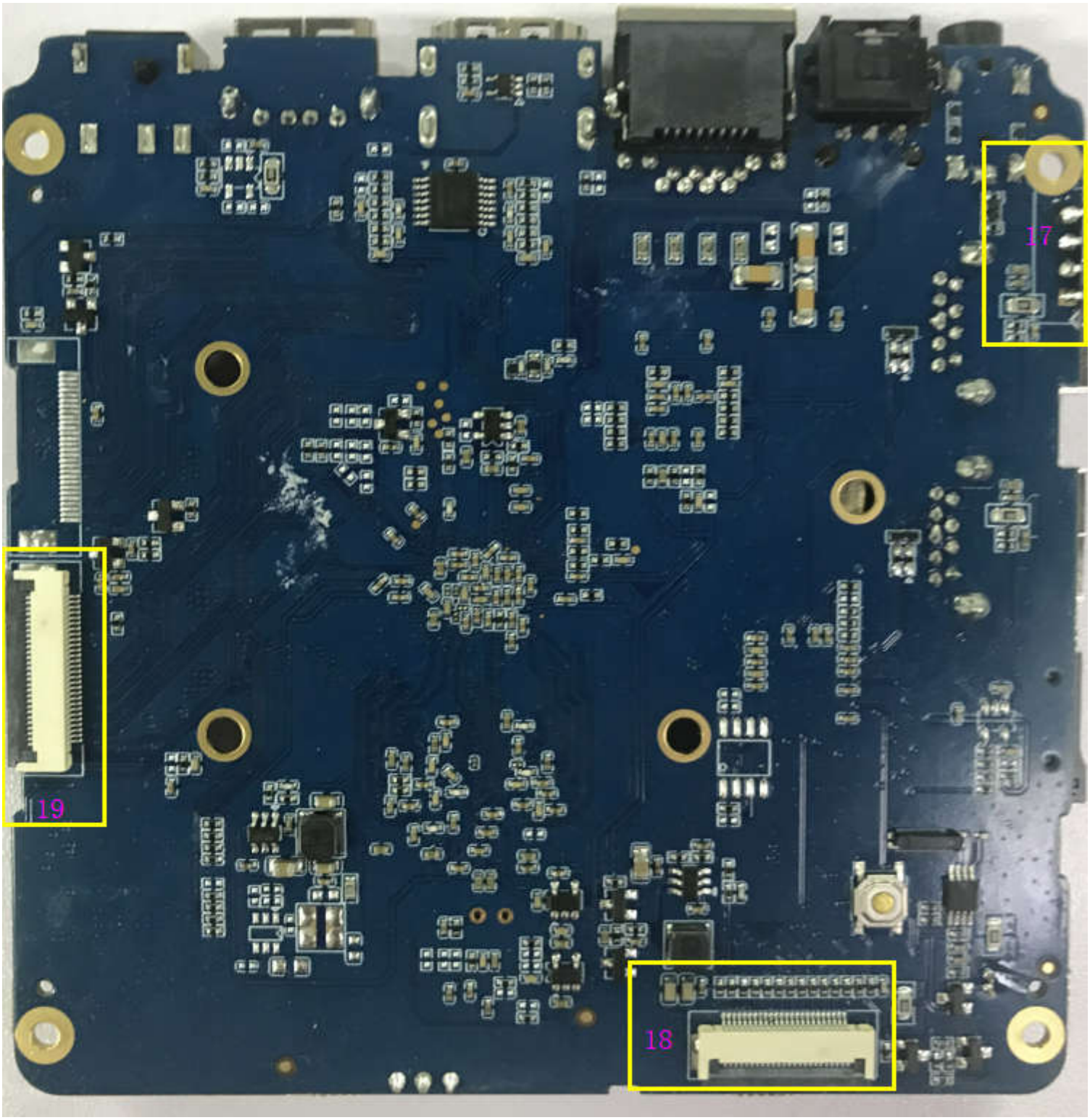
Approved by：　　Date：

Revision History			
Revision	**Date**	**Description**	**Author**
V1.0	2019/05/11	First release	Guo

Specifications

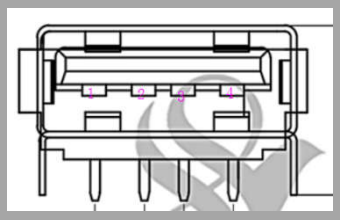
CPU	CPU	Quad core ARM Cortex-A73 and dual core ARM Cortex-A53
	Instruction Set	32bit
	Lithography	12nm
	Frequency	1.8GHz (max)
Memory	Type	LPDDR4
	Max Memory Size	4GB
Graphics	Graphics	ARM MaliTM-G52MP6(6EE) GPU
	Graphics Frequency	800MHz (max)
	Displays Supported	1 x HDMI,1 x CVBS
Audio	Built-in DAC	x1 L/R ,x1 MIC
Ethernet	RTL8211F	x1 10/100/1000M LAN
Internal Connector	RTC Battery	x1 1.25mm 2pin Socket
	USB2.0	x1 1.25mm 4pin Wafer Socket
	USB3.0	x1 1.25mm 9pin Wafer Socket
	LED	x1 1.25mm 4pin Wafer Socket
	DMIC(PDM)	x1 0.5mm 15pin FPC Socket
	Audio(I2S)	x1 0.5mm 24pin FPC Socket
	Display (MIPI_DSI)	x1 0.5mm 28pin FPC Socket
	UART	x1 2.54mm 4pin Socket
I/O	DC JACK	x1 12V 1.5A
	USB	x1 USB2.0 Port ,x2 USB3.0 Ports
	HDMI	x1 HDMI Type-A
	RJ45	x1 RJ45
	SPDIF	x1 Optical
	AV	x1 CVBS, L/R
	TF	x1 TF card Seat
	MIC	x1 PDM MIC
	IR	x1 Infrared receiver
	Button	x1 Upgrade Button
Software	Android	Android 9.0
Power	Adapter	12V-1.5A 18W Certification Input: 100-240V~50/60Hz , Output: 12V 1.5A
Dimensions	PCB	100*99mm
Requirements Environment	Operation	-10° C--45° C, 30%--90% Humidity
	Storeage	-20° C--60° C, 10%--90% Humidity


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
AE-SC24002H
201903234193000973
GT1-kingV2.0-4G+64G/A
S922X
PMRT21.00
GT-King
Ver:2.0
beelink

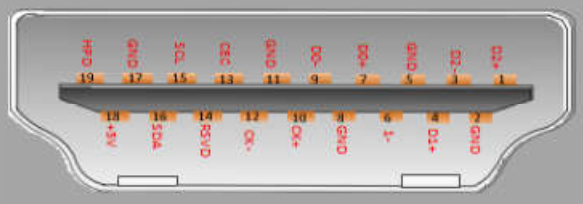

17
19
18

DC_IN	J2(①)
PIN Define	
Type	DC JACK,PIN C=2.1mm,DC044

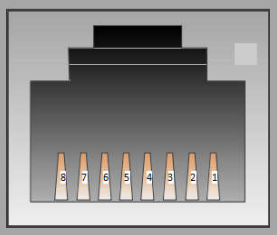
1	12V
2	GND

USB2.0	USB4(②)
PIN Define	
Type	Standard USB2.0 Connector

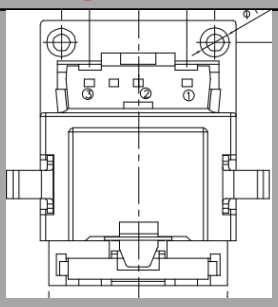
1	VCC
2	D-
3	D+
4	GND

HDMI	9J1(③)
PIN Define	
Type	Standard HDMI Connector

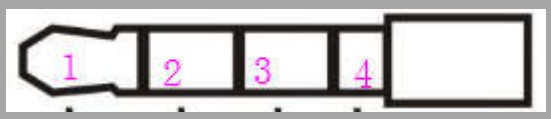
1	D2+	2	GND
3	D2-	4	D1+
5	GND	6	D1-
7	D0+	8	GND
9	D0-	10	CK+
11	GND	12	CK-
13	CEC	14	RSVD
15	SCL	16	SDA
17	GND	18	+5V
19	HPD		

RJ45	LAN3(④)
PIN Define	
Type	Standard Single RJ45 Connector

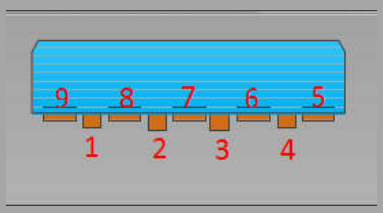
1	A+
2	A-
3	B+
4	C+
5	C-
6	B-
7	D+
8	D-

SPDIF	DJ1(⑤)
PIN Define	
Type	Optical Transmitter Interface;Sink plate

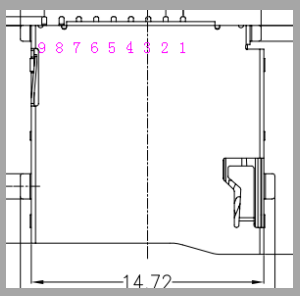
1	VIN
2	VCC
3	GND

AV	J5(⑥)
PIN Define	
Type	Standard Single 3.5mm Audio jack

1	L
2	R
3	CVBS
4	GND

USB3.0	USB3(⑦) USB3(⑧)
PIN Define	
Type	Standard Single 3.5mm Audio jack

1	Vbus	2	D-
3	D+	4	GND
5	SSRX-	6	SSRX+
7	GND	8	SSTX-
9	SSTX+		

TF	6J1(⑨)
PIN Define	
Type	TF Card Socket

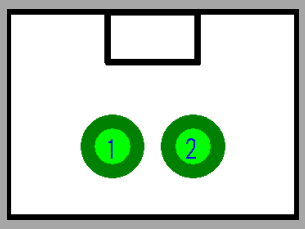
1	D2	2	D3
3	CMD	4	VCC
5	CLK	6	VSS
7	D0	8	D1
9	DET		

USB2.0	J3(⑩)
PIN Define	
Type	Wafer Connector;PH=1.25mm

1	VCC
2	D-
3	D+
4	GND

USB3.0	J4(11)
PIN Define	
Type	Wafer Connector;PH=1.25mm

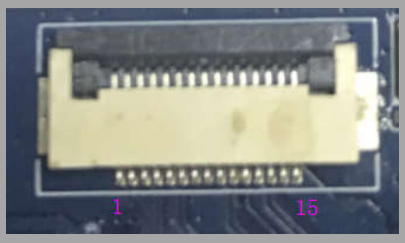
1	Vbus	2	D-
3	D+	4	GND
5	SSRX-	6	SSRX+
7	GND	8	SSTX-
9	SSTX+		

RTC	J34(12)
PIN Define	
Type	RTC_Battery Connector;PH=1.25mm

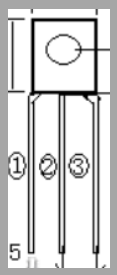
1	VCC
2	GND

LED	J6(13)
PIN Define	
Type	Wafer Socket;PH=1.25mm

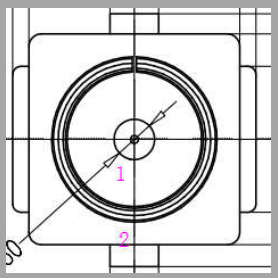
1	GND
2	LED_BLue
3	LED_Red
4	3.3V

MIC（PDM）	J21（14）
PIN Define	
Type	FPC Connector;PH=0.5mm

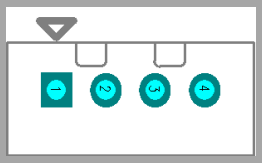
1	D0(GPIOA_8)	2	D1(GPIOA_9)
3	D2(GPIOA_6)	4	D3(GPIOA_5)
5	DGND	6	CLK(GPIOA_7)
7	NC	8	NC
9	GND	10	GPIOA0_8
11	GPIOA0_7	12	GND
13	GPIOH_7	14	VCC3.3V
15	VCC3.3V		

IR	2U1（15）
PIN Define	
Type	IR Receiver; PH=2.54mm

1	IR_IN
2	GND
3	VCC

ANT	J33和J35（16）
PIN Define	
Type	RF receptacle connector

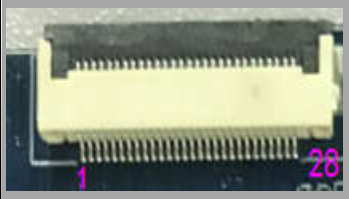
1	ANT
2	GND

UART	2CON1(17)
PIN Define	
Type	UART Connector; PH=2.54mm

1	GND
2	TX(GPIOA0_0)
3	RX(GPIOA0_1)
4	VCC3.3V

I2S OUT/IN	J14(18)
PIN Define	
Type	FPC Connector;PH=0.5mm

1	12V	2	12V
3	5V	4	5V
5	DGND	6	GPIOA_14
7	GPIOA_15	8	GND
9	MCLK(GPIOA_0)	10	GND
11	SCLK(GPIOA_1)	12	GND
13	LRCLK(GPIOA_2)	14	GND
15	DO(GPIOA_3)	16	GND
17	MCLK(GPIOA_11)	18	GND
19	SCLK(GPIOA_12)	20	GND
21	LRCLK(GPIOA_13)	22	GND
23	DO(GPIOA_10)	24	GND

MIPI_DSI	J12(19)
PIN Define	
Type	FPC Connector;PH=0.5mm

1	5V	2	5V
3	5V	4	3.3V
5	3.3V	6	GPIOZ_9
7	GPIOH_4	8	GPIOH_5
9	GPIOZ_3	10	GND
11	GPIOZ_1	12	GPIOZ_0
13	GND	14	CLK+
15	CLK-	16	GND
17	D0-	18	D0+
19	GND	20	D1+
21	D1-	22	GND
23	D2-	24	D2+
25	GND	26	D3+
27	D3-	28	GND