

C I N D U E L
Cheng Dian gong kong

CDHX-GM62 V1.0.0 Embedded Development Board

Hardware specification

Version number: V1.1

July 2019

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Statement

Please read the instruction manual carefully before using the motherboard, and then operate the motherboard. We are not responsible for any direct, indirect, intentional or unintentional serious damage and hidden dangers caused by improper installation and use.

For products under any of the following circumstances, free warranty is not implemented:

- Exceeding the warranty service period;
- No valid purchase documents;
- Liquid, damp or moldy;
- Failures and damages caused by non-product quality reasons such as falling after purchase, strong vibration, unauthorized modification and misoperation;
- Damage caused by force majeure.

Before ordering the product, please ask the dealer in detail whether the product performance meets your needs, so as to avoid unnecessary troubles for both parties.

The company reserves the right to modify the instructions without notice.

Suggestions on the use of motherboard

- Before using the product, be sure to read the product manual carefully.
- Unused boards should be kept in antistatic protective bags as far as possible.
- Before taking the card from the packaging bag, you should put your hand on a grounded metal object for a while to discharge the static electricity in your body and hands.
- When holding a board, you should also get into the habit of touching only its edge.
- When the motherboard is connected to the power supply, please confirm the power supply voltage.
- In order to avoid electric shock to human body or damage to products, the AC power supply must be turned off or the AC power cord must be unplugged from the power socket every time the motherboard and board are plugged or reconfigured.
- Please disconnect the power supply before moving the board.
- Please disconnect the power supply before connecting or unplugging any equipment.
- In order to avoid unnecessary damage to the product caused by frequent switching on and off, after switching off, you should wait for at least a moment before switching on.
- If the equipment is abnormal during use, please find a professional to deal with it.
- This product may cause radio interference. Users may be required to take practical measures against their interference.

Document modification history

Model:	CDHX-GM62	PCBA No:	CDHX-GM62-V100	
Compilation:		Audit:	electron	
			software	
Version change record				
version	date	page number	annotate	check
V1.0	2022-06-11			
V1.0.1	2022-09-16		Modified JLVDS definition	

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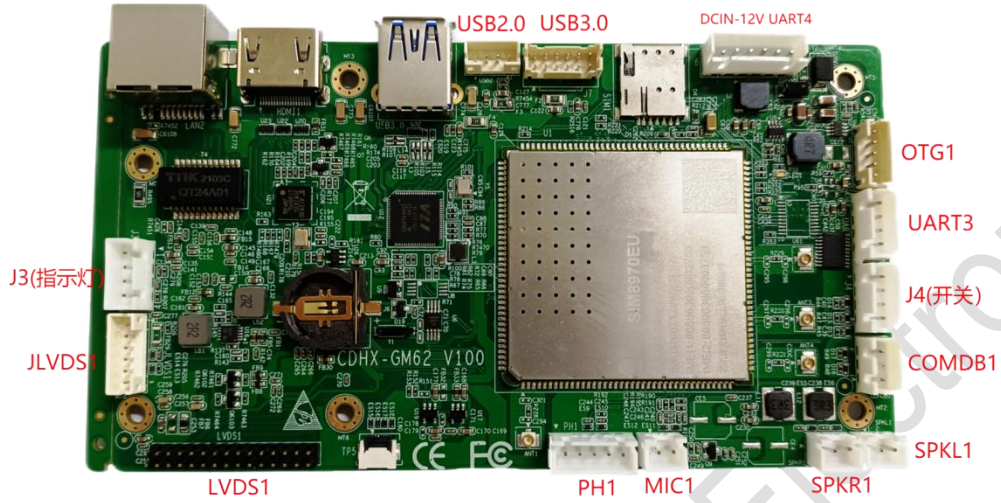
一、 Product overview

Main control chip	QCM6125
processor	8-core Kryo 260@2.0GHz
graphics coprocessors	Adreno 610 GPU support OpenGL ES 1.1/2.0/3.0/3.1, OpenVG 1.1, OpenGL and DX11 support AFBC (frame buffer compression).
Video processor	Support 4K30 HEVC video decoding, up to 30fps. 4K30 H.264 video decoding (WMV, MPEG-1/2/4, VP8) video coding, supporting H.264, VP8 format. Video post-processor: anti-interleaving, denoising, edge/detail/color optimization. 1080P
internal storage	4GB dual channel 64Bit LPDDR4
storage	64GB high-speed eMMC 5.1 supports SD expansion.

二、 Hardware characteristics

Hardware characteristics	
Display interface	Video output interface: -1 x dual channel 8-bit LVDS, supporting up to 1920x1200(24-bit) @60pfs.
video input	Video input interface: -HDMIIN supports up to 1920x1200(24 bits) @60pfs.
audio frequency	1 x MIC audio input 1 x headphone jack for audio output 1 x dual-channel speaker (supporting left and right channel output, with dual 8Ω/10W and 4Ω/15W power amplifiers)
network	1 x RJ45 Gigabit network port (adaptive 10M/100M/100M) -WiFi 2.4GHz/5GHz dual band (supporting 802.11a/b/g/n/ac protocol) -Bluetooth 5.X (BLE supported) Support 3G/4G LTE(Mini-PCIe interface) module (optional): -Support WCDMA, EVDO and 4G full netcom.
USB	2 x USB3.0 (standard 3.0 interface and pin) 1 x USB2.0 (1 pin USB) 1 x OTG (time division multiplexing with USB HOST)
serial port	2 x RS232 (Time Division Multiplex TTL Level) 1 x debug serial port (TTL) for development and debugging.
camera	1 x USB camera (measured 800w) 1 x MIPI
System watchdog	Software watchdog
RTC	Built-in RTC real-time clock (supporting time switch machine)
system	Android 10.1
Power Supply	The input voltage is 12V.

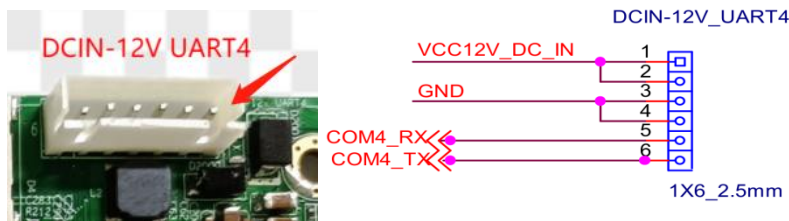
三、 Interface Description (Physical Diagram)



四、Interface definition

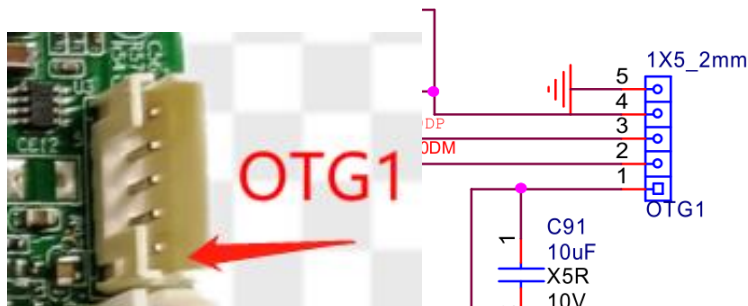
Description: The red arrow in the figure below points to the first pin position of the pin function.

DCIN-12V UART4:(6PIN/2.5MM), the unlabeled pin is empty:



pin	Signal name
one	VCC12_DC_IN
2	VCC12_DC_IN
three	GND
four	GND
five	COM_RX
six	COM_RX

OTG1:(5PIN/2.0MM), the unlabeled pin is empty:



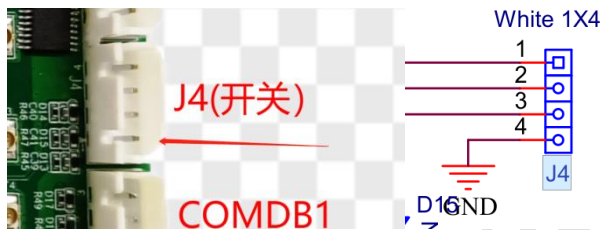
pin	Signal name
one	USB_VCC5
2	USB_D-
three	USB_D+
four	USB_ID
five	GND

UART3:(4PIN/2.5MM), the unlabeled pin is empty.



pin	Signal description
one	VCC3V3
2	GND
three	COM2_RX
four	COM2_TX

J4 switch pin: (4PIN/2.5MM), the unlabeled pin is empty.



pin	Signal description
one	PWRKEY
2	A_UP
three	A_DOWN
four	GND

COMDB1:(3PIN/2.5MM):



pin	Signal name
one	UART_RXD
2	UART_TXD
three	GND

SPKL1 :(2PIN/2.5MM), the unlabeled pin is empty.



Signal name	pin		Signal name
SPK_1N	one	2	SPK_1P

SPKR1 :(2PIN/2.5MM), the unlabeled pin is empty.



Signal name	pin		Signal name
SPK_2N	one	2	SPK_2P

MIC1 :(2PIN/2.5MM), the unlabeled pin is empty.



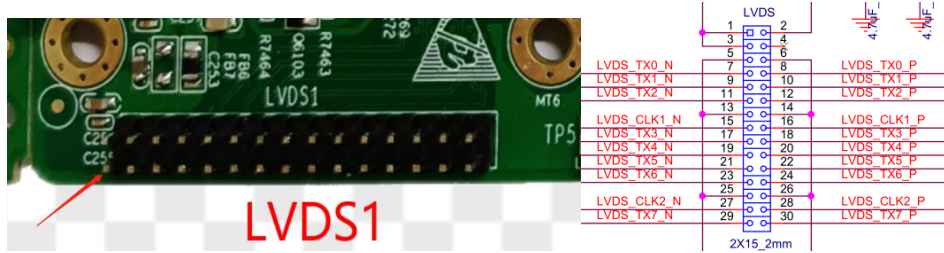
Signal name	pin		Signal name
MIC1_P	one	2	MIC1_N

PH1:(10PIN/2.5MM), the unlabeled pin is empty.



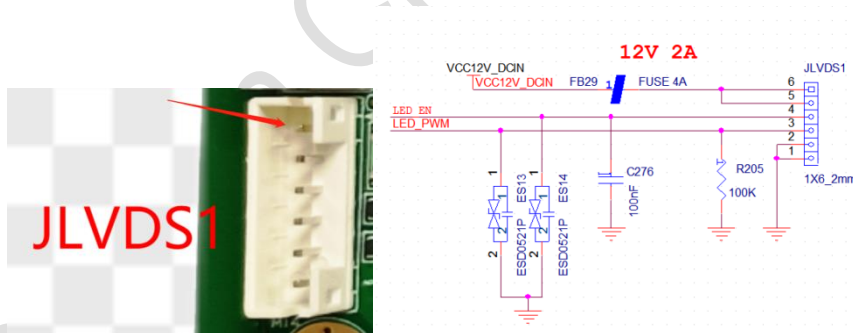
pin	Signal description
one	HS_DET
2	HPH_R
three	HPH_L
four	MIC2_P
five	HPH_REF

Lvd1: (30 pin/2.0mm), and the unlabeled pin is empty:



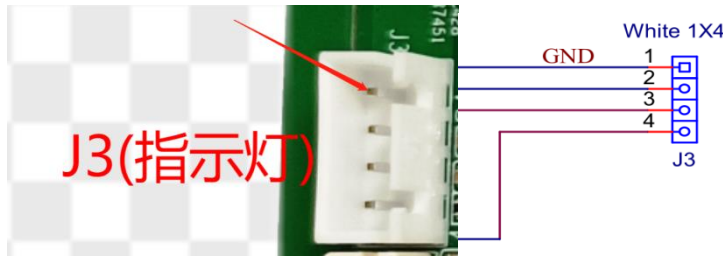
Signal name	pin		Signal name
LVDS_VDD	one	2	LVDS_VDD
LVDS_VDD	three	four	NC
GND	five	six	GND
LVDS_TX0_N	seven	eight	LVDS_TX0_P
LVDS_TX1_N	nine	10	LVDS_TX1_P
LVDS_TX2_N	11	12	LVDS_TX2_P
GND	13	14	GND
LVDS_CLK1_N	15	16	LVDS_CLK1_P
LVDS_TX3_N	17	18	LVDS_TX3_P
LVDS_TX4_N	19	20	LVDS_TX4_P
LVDS_TX5_N	21	22	LVDS_TX5_P
LVDS_TX6_N	23	24	LVDS_TX6_P
GND	25	26	GND
LVDS1_CLK2_N	27	28	LVDS1_CLK2_P
LVDS1_TX7_N	29	30	LVDS1_TX7_P

Jlvd1: (6pin/2.0mm), the unlabeled pin is empty.



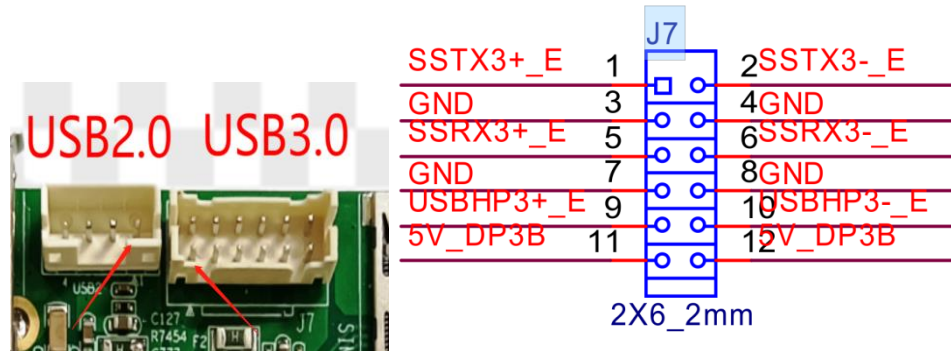
pin	Signal description
one	GND
2	GND
three	LED_PWM
four	LED_EN
five	VCC12_IN
six	VCC12_IN

J3 indicator: (4PIN/2.5MM), and the unlabeled pin is empty.



pin	Signal description
one	GND
2	RED_LED
three	GREEN_LED
four	BLUE_LED

J7 USB3.0 pin: (12PIN/2.0MM), the unlabeled pin is empty.



Signal name	pin		Signal name
SSTX3+	one	2	SSTX3-
GND	three	four	GND
SSRX3+	five	six	SSRX3-
GND	seven	eight	USB-
USBHP3+	nine	10	USBHP3-
USB_5V	11	12	USB_5V

USB2:(4PIN/2.0MM), the unlabeled pin is empty.



pin	Signal description
one	5V_USB
2	USBHP2-
three	USBHP2+
four	GND

五、 Screen printing diagram

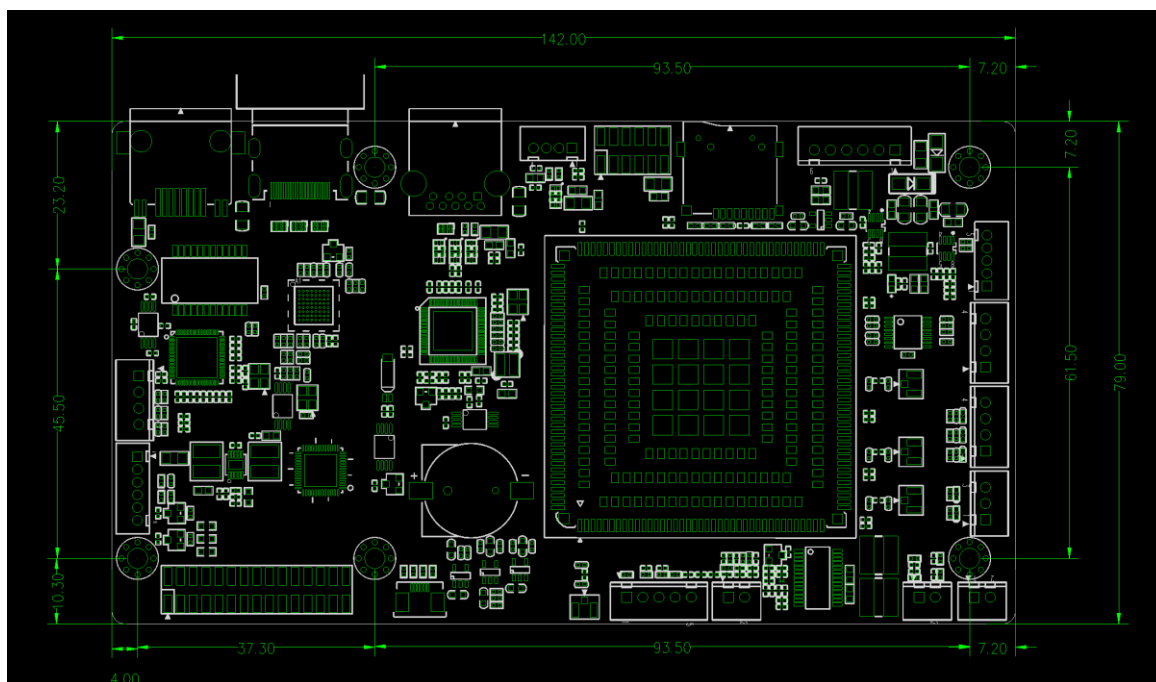


Figure 3 (Front Screen Printing)

六、 Conditions of transportation, storage and use

1. Preservation environment: anti-static, moisture-proof and anti-backlog.
2. Input voltage: DC 12V.
3. RTC button battery: 3.0V (lithium)
4. Working environment temperature: 0 ~ 60°C
5. Relative humidity: 20% ~ 70%
6. Storage environment temperature: -20~ 60°C

This SPEC may not fully reflect all the latest changes of PCBA, and the actual product shall prevail.