

DEBIX R3566-01 User Guide

Version: V1.0 (2025-6)

Compiled by: Polyhex Technology Company Limited (<http://www.polyhex.net/>)

The DEBIX R3566-01 is a cost-effective, commercial-grade, single-board computer based on the Rockchip RK3566, which focuses on power consumption control and cost-effectiveness. It provides rich and scalable I/O interfaces for flexible application in various fields such as AIoT devices, smart home products, and electronic ink screen devices.

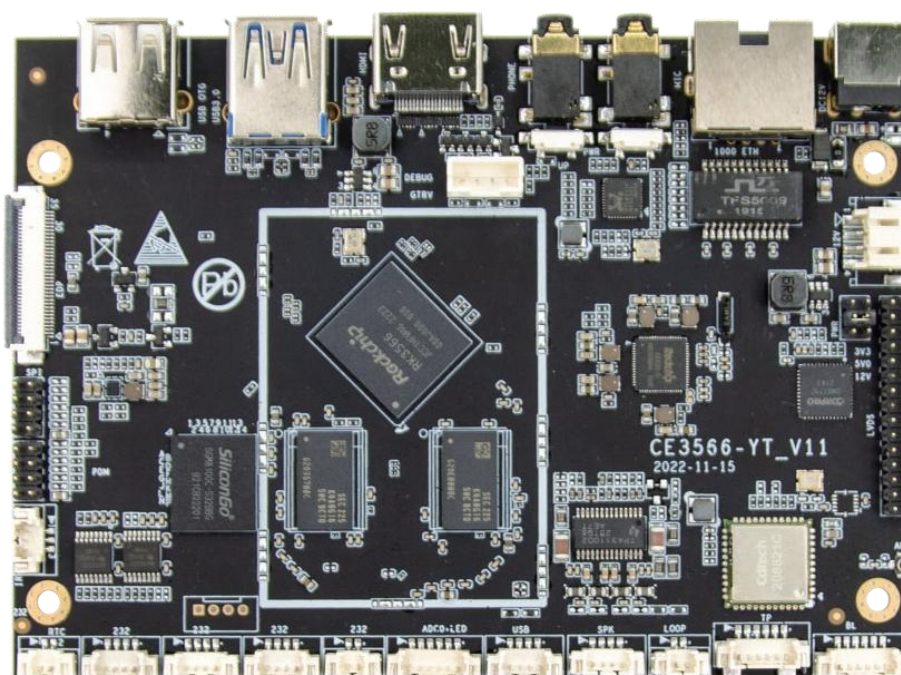


Figure 1 DEBIX R3566-01

REVISION HISTORY

Rev.	Date	Description
1.0	2025.06.23	First edition

INDEX

REVISION HISTORY	2
INDEX	3
Chapter 1 Security	5
1.1. Safety Precaution	5
1.2. Safety Instruction	5
1.3. Technical Support	6
Chapter 2 Introduction	8
2.1. Overview	8
2.2. Interface	12
2.2.1. Power	12
2.2.1.1. Power Supply Socket	12
2.2.1.2. Power Supply 2Pin Connector	13
2.2.1.3. Power Key 2Pin Connector	15
2.2.2. USB	17
2.2.3. Ethernet	19
2.2.4. Audio	20
2.2.4.1. Headphone	20
2.2.4.2. MIC	20
2.2.4.3. PDM MIC	21
2.2.4.4. L&R SPK	23

2.2.4.5. AEC Loopback	25
2.2.5. Display	26
2.2.5.1. HDMI	27
2.2.5.2. LVDS	28
2.2.5.3. LVDS BL	30
2.2.5.4. LVDS PWR	32
2.2.5.5. eDP	34
2.2.6. DEBUG	38
2.2.7. UART	40
2.2.8. RTC	44
2.2.9. IR	46
2.2.10. SPI	48
2.2.11. ADC+LED	49
2.2.12. TP	52
2.2.13. Antenna	54
2.2.14. LED & Key	54
Chapter 3 Getting Started	58
3.1. Software Installation	58

Chapter 1 Security

1.1. Safety Precaution

This document informs how to make each cable connection. In most cases, you will simply need to connect a standard cable.

Table 1 Terms and conventions

Symbol	Meaning
<i>Warning!</i> 	Always disconnect the power cord from the SBC whenever there is no workload required on it. Do not connect the power cable while the power is on. Sudden power surges can damage sensitive electronic components.
<i>Caution!</i> 	Always ground yourself to remove any static electric charge before touching the <i>DEBIX R3566-01</i> product. Modern electronic devices are very sensitive to electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag.

1.2. Safety Instruction

To avoid malfunction or damage to this product please observe the following:

1. Disconnect the device from the DC power supply before cleaning. Use a cloth. Do not use liquid detergents or spray-on detergents.
2. Keep the device away from moisture.
3. Before connecting the power supply, ensure that the voltage is in the required range, and the way of wiring is correct.
4. Carefully put the power cable in place to avoid stepping on it.
5. If the device is not used for a long time, power it off to avoid damage caused by sudden overvoltage.

6. If one of the following situations occur, get the equipment checked by service personnel:

- The power cord or plug is damaged.
- Liquid has penetrated into the equipment.
- The equipment has been exposed to moisture.
- The equipment does not work well, or you cannot get it to work according to the user's manual.
- The equipment has been dropped and damaged.
- The equipment has obvious signs of breakage.

7. Do not place the device outside the specified ambient temperature range. This will damage the machine. It needs to be kept in an environment at controlled temperature.

8. Due to the sensitive nature of the equipment, it must be stored in a restricted access location, only accessible by qualified engineer.

DISCLAIMER: Polyhex assumes no liability for the accuracy of any statement of this instructional document.

1.3. Technical Support

1. Visit DEBIX website <https://www.debix.io/> where you can find the latest information about the product.

■ Quick Links:

Debix Documentation: <https://debix.io/Document/manual.html>

Debix Blog: <https://debix.io/Software/blog.html>

Debix GitHub: <https://github.com/debix-tech>

2. Contact your distributor, sales representative or DEBIX's customer service center for technical support if you need additional assistance. Please have the following info ready before you call:

- Product name and memory size
- Description of your peripheral attachments
- Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages

■ TechSupport Platforms:

Discord Community (recommended): <https://discord.com/invite/adaHHaDkH2>

Email: teksupport@debix.io

Chapter 2 Introduction

The DEBIX R3566-01 is a cost-effective, commercial-grade, single-board computer based on the Rockchip RK3566, which focuses on power consumption control and cost-effectiveness. It provides rich and scalable I/O interfaces for flexible application in various fields such as AIoT devices, smart home products, and electronic ink screen devices.

2.1. Overview

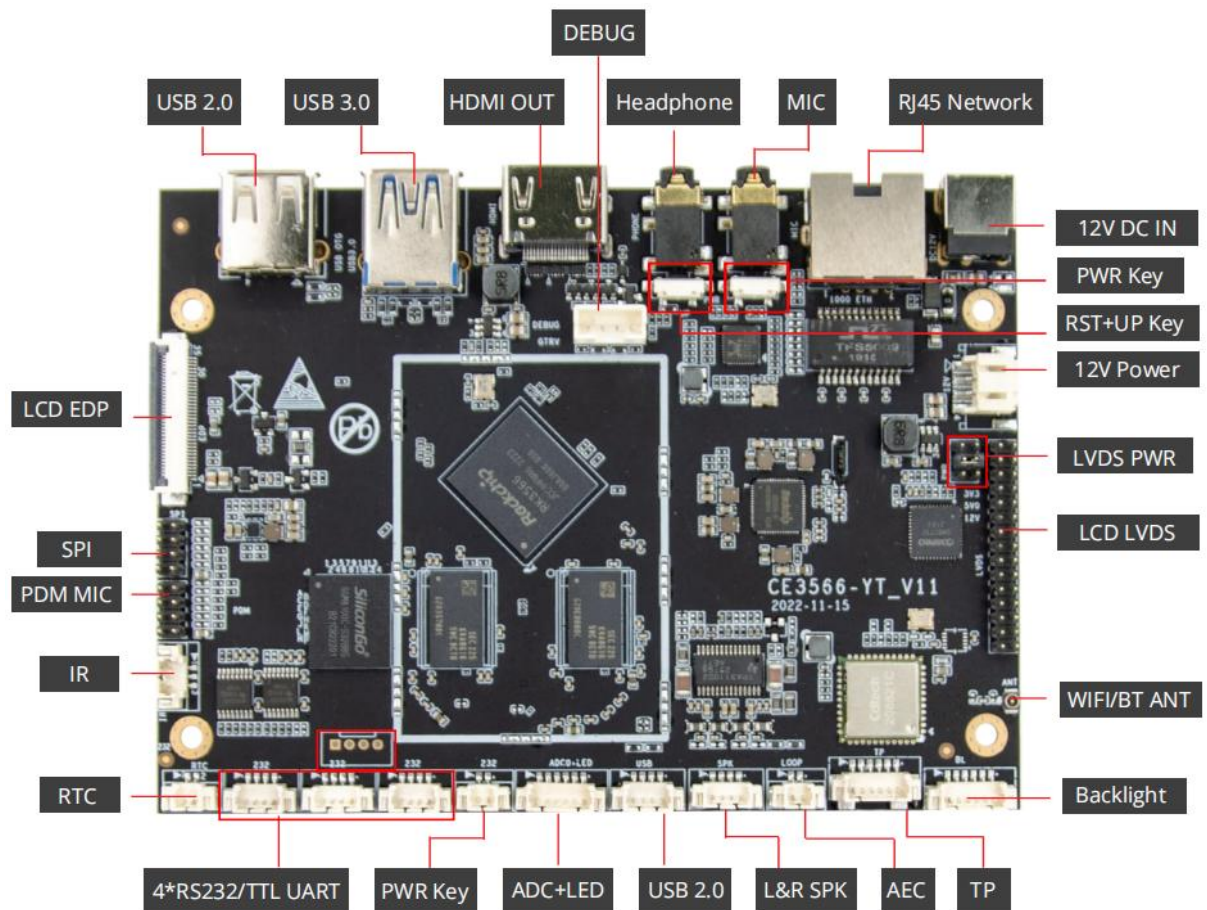


Figure 2 Front View of the DEBIX R3566-01

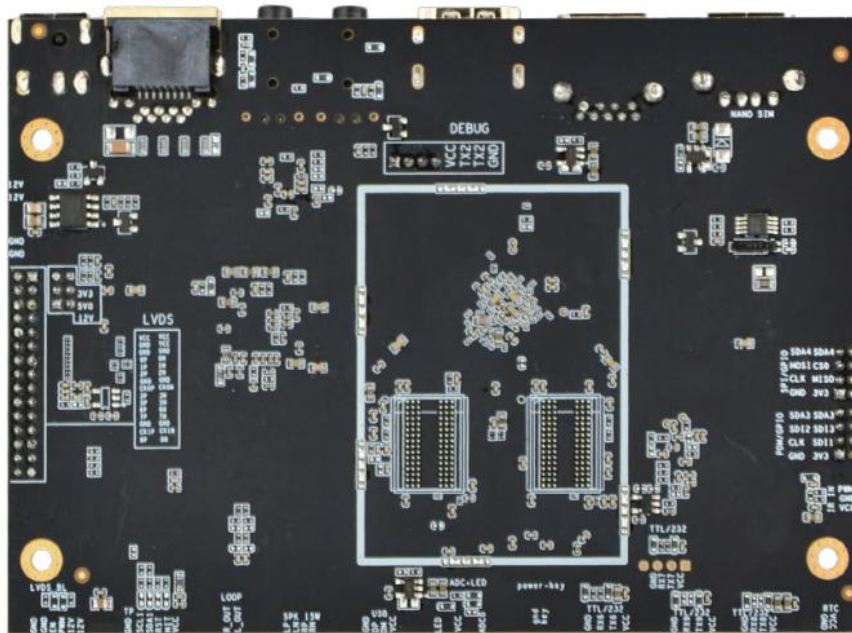


Figure 3 Back View of the DEBIX R3566-01

Using RK3566 as SoC, DEBIX R3566-01 supports Gigabit Ethernet, dual-band wireless network and Bluetooth 5.0, etc. See Table 2 for specifications:

Table 2 Specification of the DEBIX R3566-01

System	
CPU	Rockchip RK3566, 4 x Cortex-A55 up to 1.8GHz, comes with an integrated neural processing unit (NPU) that delivers up to 1.0 TOPS
Memory	1) Default: 2GB LPDDR4 (4GB/8GB optional) 2) 2GB/4GB/8GB LPDDR4X optional
Storage	16GB eMMC (8GB/32GB/64GB/128GB/256GB optional)
OS	Android, Yocto, Debian
Communication	
Gigabit Network	1 x Gigabit Ethernet Interface with RJ45 connector
Wi-Fi & BT	2.4GHz & 5GHz Wi-Fi, BT 5.0 (optional)

Video & Audio	
LVDS	(1) 1 x LVDS, supports single and dual 8bit, 2*15Pin/2.0mm pin header (2) 1 x LVDS backlight control, supports backlight adjustment, 1*6Pin/1.25mm wafer connector (3) 1 x LVDS power, 2*3Pin/2.0mm pin header
TP	1 x TP, supports I2C or USB protocol, 1*6Pin/1.25mm wafer connector
eDP	1 x eDP, 35Pin 0.5mm Pitch FPC socket
HDMI	1 x HDMI output, the connector is HDMI Type A female
SPK	1 x L&R speaker, 4Ω/2W, 1*4Pin/1.25mm wafer connector
Headphone	1 x Headphone, 3.5mm jack
MIC	1 x MIC, 3.5mm jack
PDM	1 x PDM MIC, 2*4Pin/2.0mm pin header
AEC	1 x AEC Loopback, 1*2Pin/1.25mm wafer connector
External I/O Interface	
UART	3 x UART (TTL/RS232), 1*4Pin/1.25mm wafer connector 1 x UART (TTL/RS232) (reserved)
USB 2.0	1 x USB 2.0 OTG, Type-A 1 x USB 2.0, 1*4Pin/1.25mm wafer connector
USB 3.0	1 x USB 3.0, Type-A
SPI	1 x SPI, 2*4Pin/2.0mm pin header
IR	1 x IR receiver interface, 1*3Pin/1.25mm wafer connector
ADC & LED	1 x ADC signal acquisition and LED control interface, 1*6Pin/1.25mm wafer connector
Debug	1 x Debug, 1*4Pin/2.0mm wafer connector
Power	1 x DC IN, 1*4Pin/2.0mm wafer connector
RTC	1 x RTC battery interface, 1*2Pin/1.25mm wafer connector

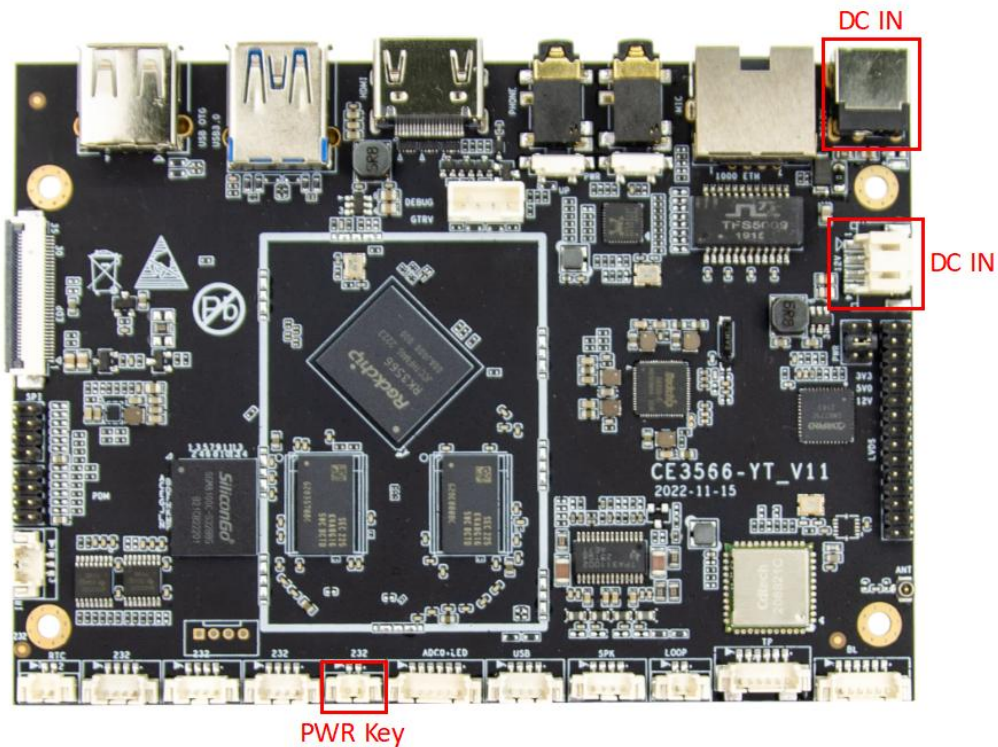
Key	1 x PWR key, 1*2Pin/1.25mm wafer connector 1 x PWR key 1 x RST+UP key
Power Supply	
Power Input	Default DC 12V-24V/2A, 5.5 x 2.1mm socket
Mechanical & Environmental	
Size (L x W)	123.0mm x 88.0mm x 1.20mm (±0.5mm)
Net Weight	69g (±0.5g)
Operating Temp.	Commercial grade: 0°C~70°C

2.2. Interface

2.2.1. Power

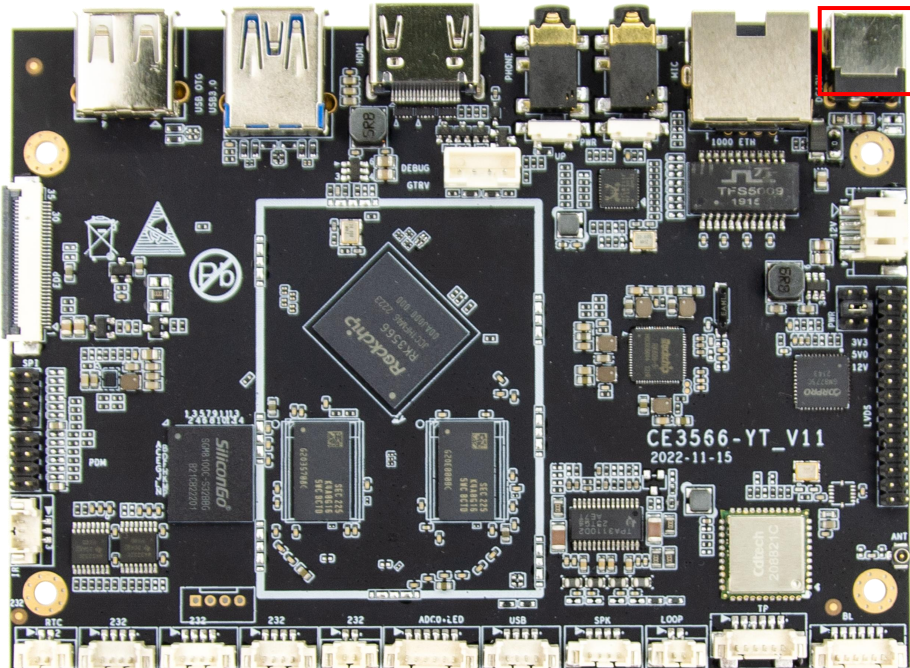
DEBIX R3566-01 provides two DC IN connectors and one power key connector:

- Two DC IN connectors:
 - 1 x **Power Supply Socket**
 - 1 x **Power Supply 2Pin Connector**
- One power key connector:
 - 1 x **Power Key 2Pin Connector**



2.2.1.1. Power Supply Socket

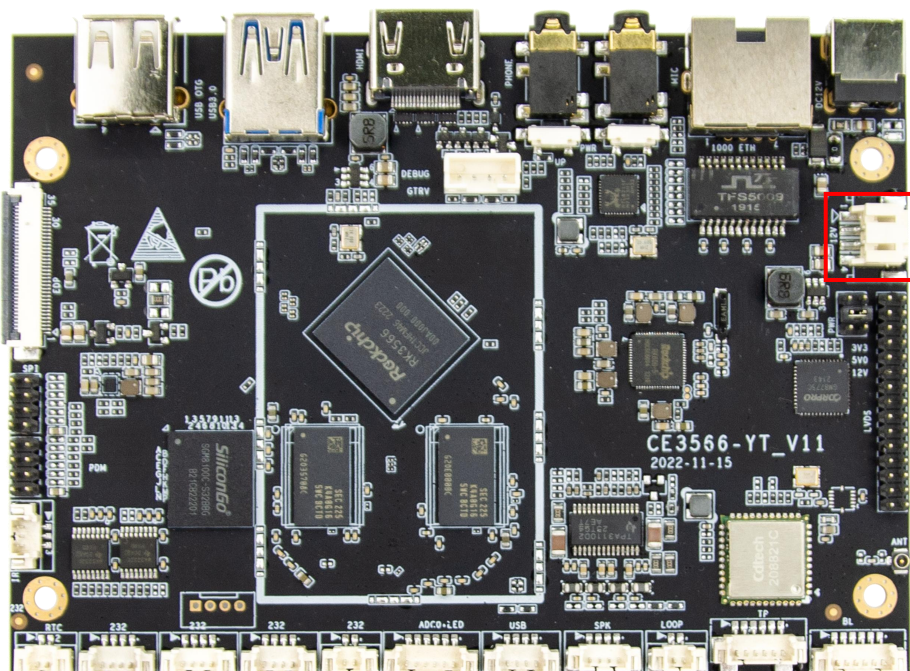
DEBIX R3566-01 provides **one power supply socket**. The inner diameter is 2.1mm. Default input: DC 12V.



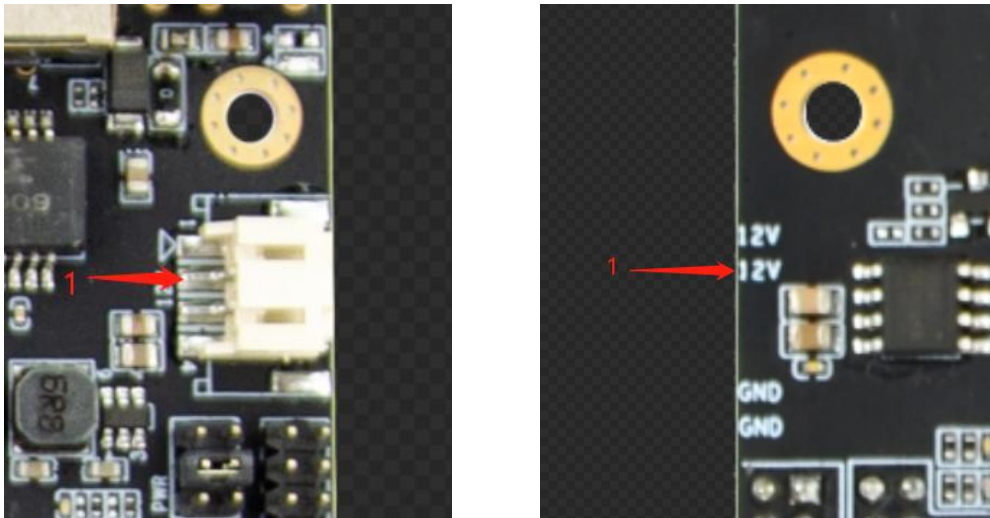
2.2.1.2. Power Supply 2Pin Connector

DEBIX R3566-01 provides **one power supply 2Pin connector**: the refdes. is J7.

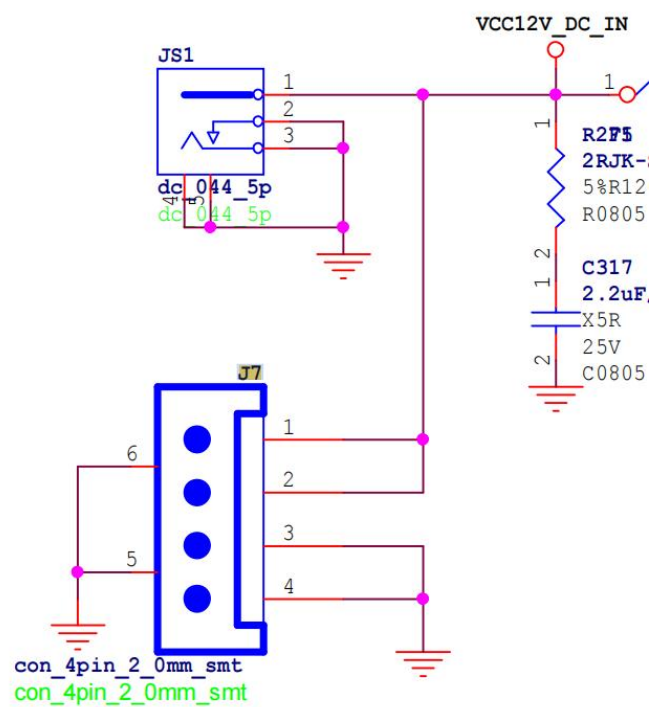
The connector is a 1*2Pin/2.0mm Pitch wafer connector. Default input: DC 12V.



The PCBA physical pin sequence of **the power supply 2Pin connector** is shown in the figures below:



The pin sequence of **the power supply 2Pin connector** is shown below:



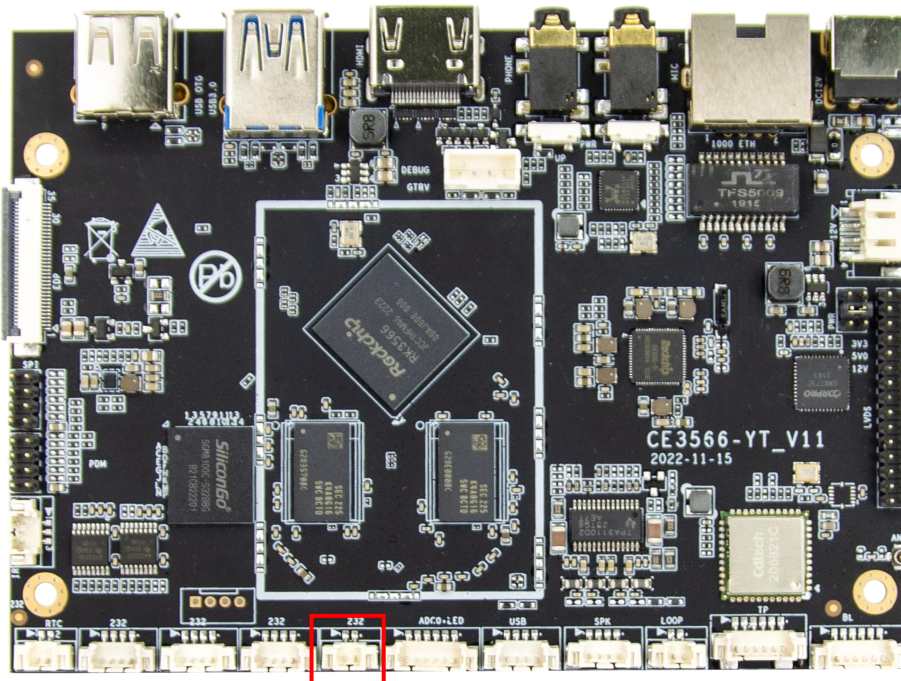
The power supply 2Pin connector is defined as follows:

Table 3 The Pin Definition of the Power Supply 2Pin Connector

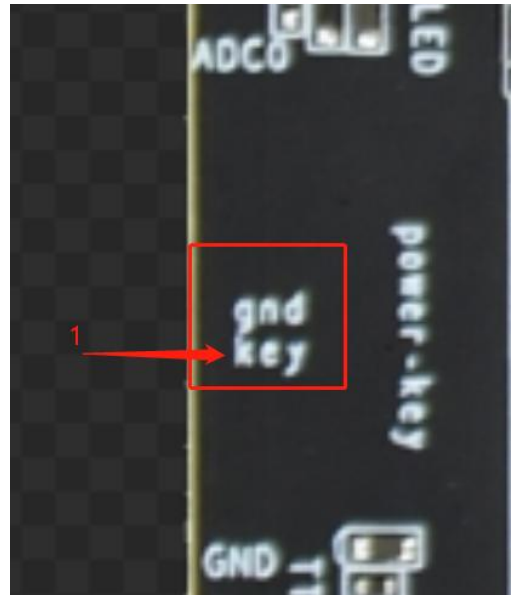
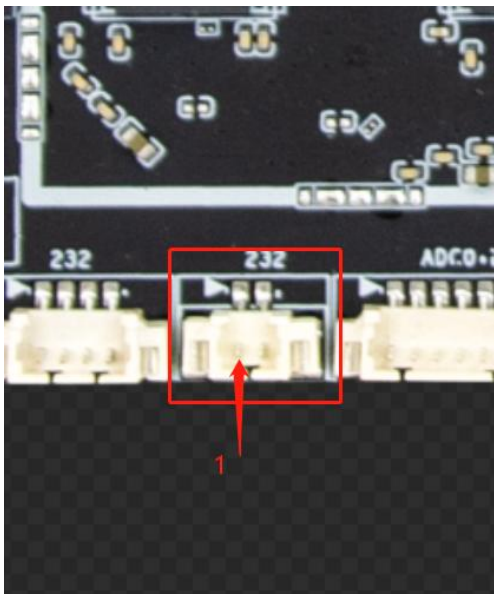
Pin	Definition	Description
1	VCC12V_DC_IN	DC 12V
2	GND	To ground

2.2.1.3. Power Key 2Pin Connector

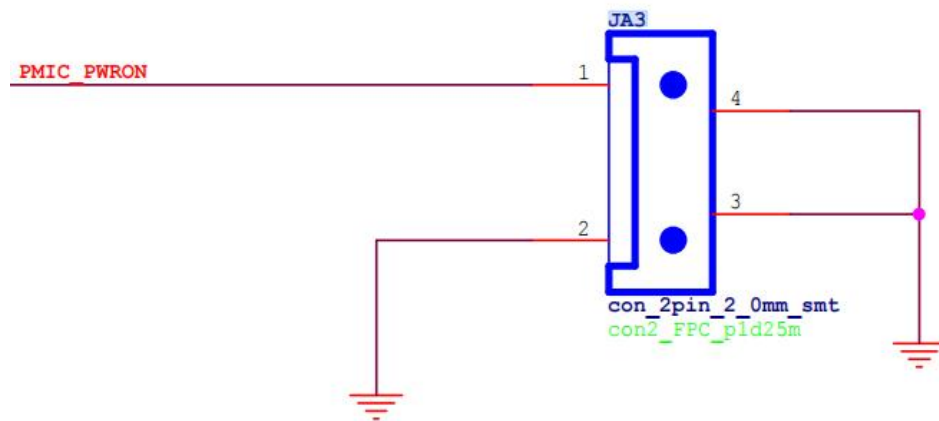
DEBIX R3566-01 provides **one power key 2Pin connector**: the refdes. is JA3. The connector is a 1*2Pin/1.25mm Pitch wafer connector.



The PCBA physical pin sequence of **the power key 2Pin connector** is shown in the figures below:



The pin sequence of **the power key 2Pin connector** is shown below:



The power key 2Pin connector is defined as follows:

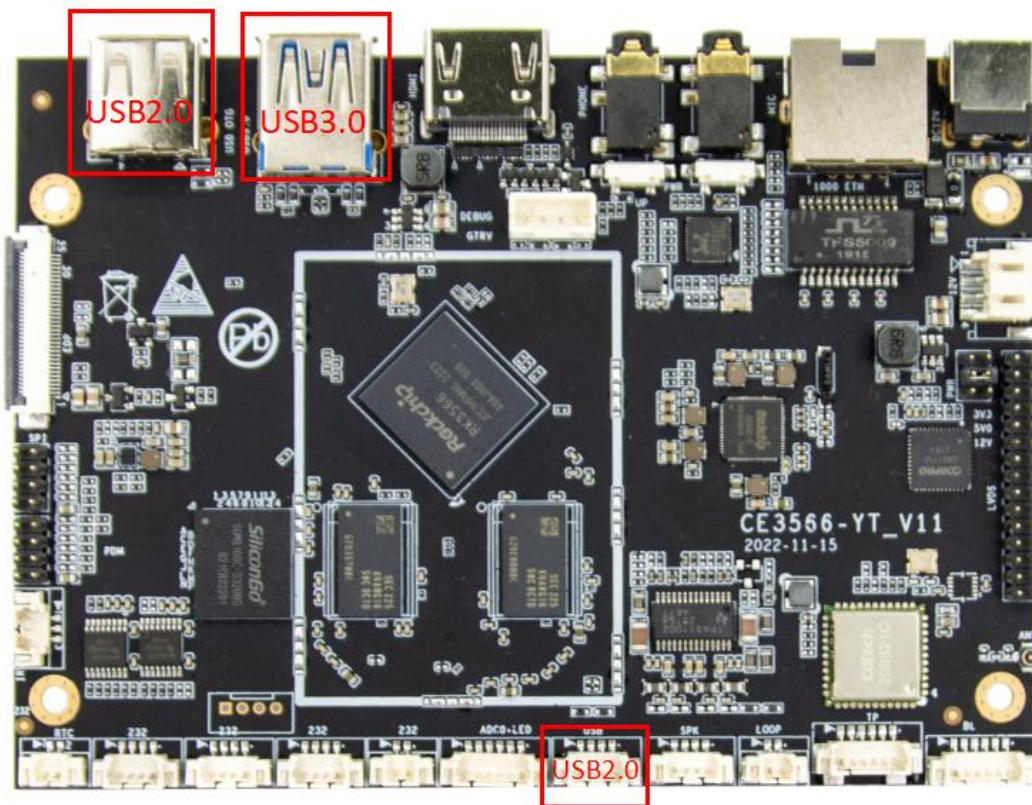
Table 4 The Pin Definition of the Power Key 2Pin Connector

Pin	Definition	Description
1	PMIC_PWRON	power on, 3V3 IO
2	GND	To ground

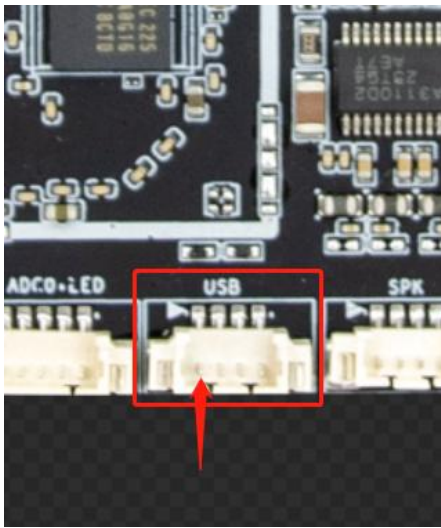
2.2.2. USB

DEBIX R3566-01 provides **three USB interfaces**, support USB3.0 and USB2.0.

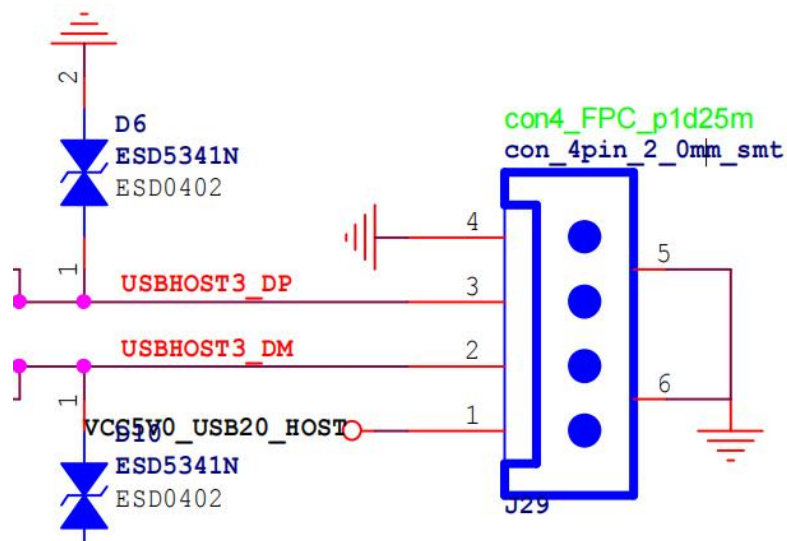
- 1 x **USB3.0 Type-A** (J1)
- 1 x **USB2.0 Host Type-A** (J3)
- 1 x **USB2.0 1*4Pin/1.25mm Pitch wafer connector** (J29)



The PCBA physical pin sequence of **the USB2.0 4Pin wafer connector** is shown in the figures below:



The pin sequence of **the USB2.0 4Pin wafer connector** is shown below:



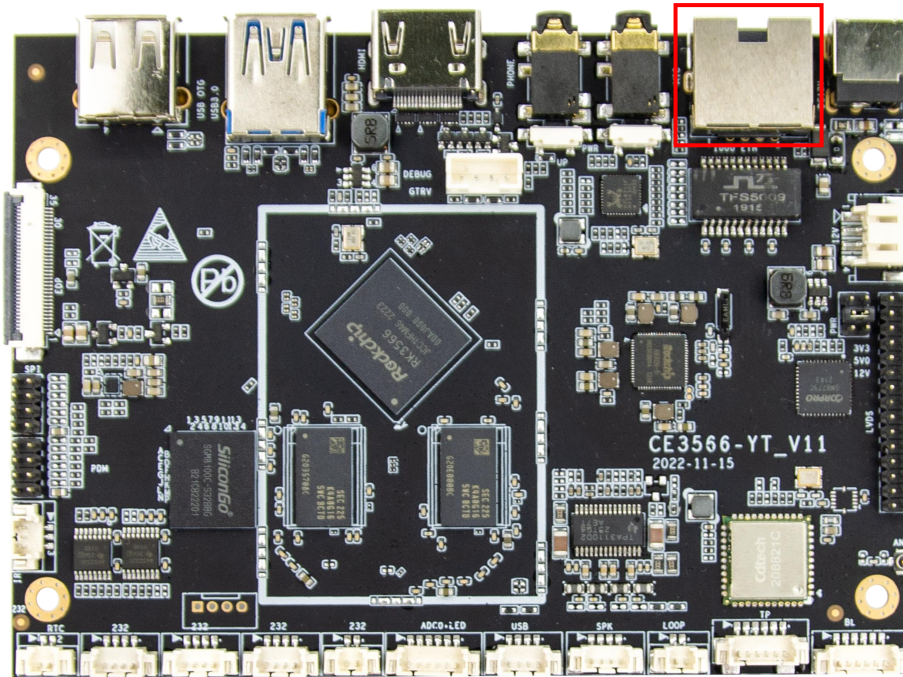
The USB2.0 4Pin wafer connector is defined as follows:

Table 5 The Pin Definition of the USB2.0 4Pin wafer Connector

Pin	Definition	Description
1	VCC5V0_USB20_HOST	DC 5V
2	USBHOST3_DM	Data-, 3V3 IO
3	USBHOST3_DP	Data+, 3V3 IO
4	GND	To ground

2.2.3. Ethernet

DEBIX R3566-01 provides **one Gigabit Ethernet port** with independent MAC address: the refdes. is J6.



Connect the DEBIX R3566-01 to the network through a network cable in the RJ45 connector. A set of status indicators below the interface displays the status signal. The green one indicates **Link**, which is network connection indicator, and the yellow one does **Active**, which is signal transmission indicator.

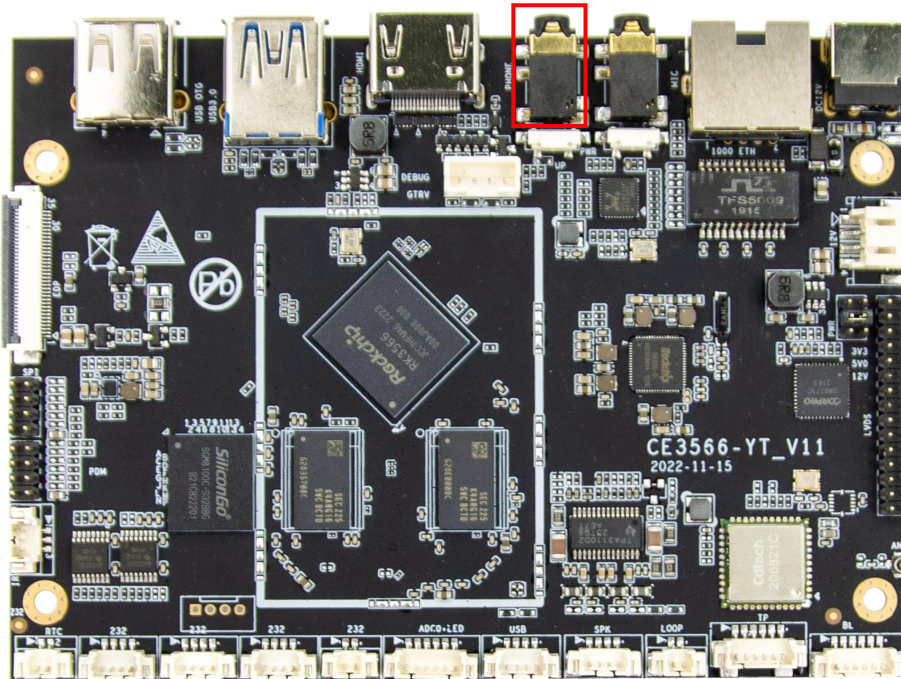
Table 6 Description of Gigabit Ethernet Port Status Indicators

LED	Color	Description
Link	Green	Light, the network cable is plugged in, network connection status is good
Active	Yellow	Blinking, network data is being transmitted

2.2.4. Audio

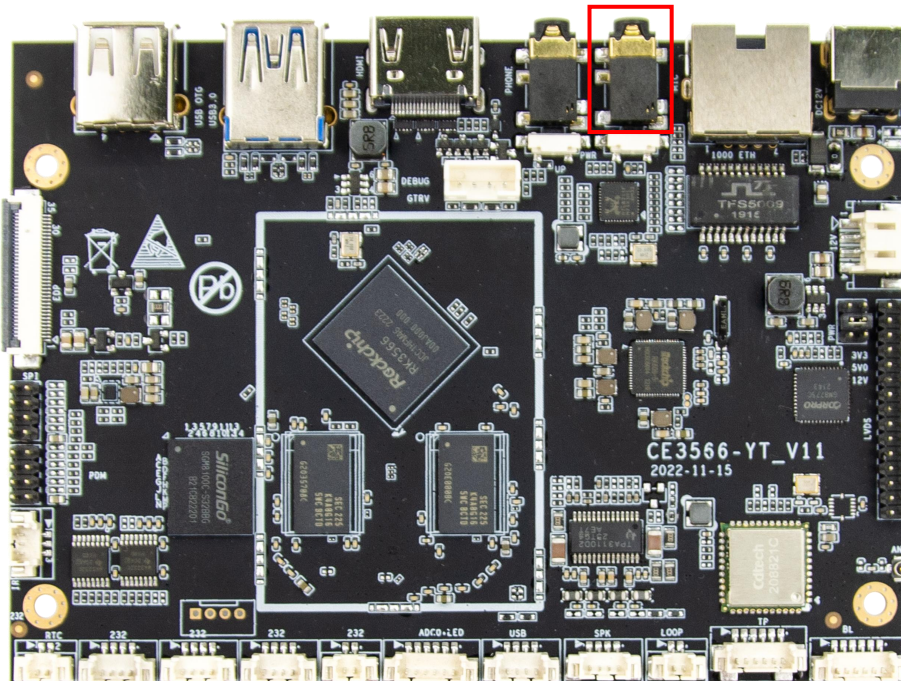
2.2.4.1. Headphone

DEBIX R3566-01 provides **one headphone interface**. The connector is a 3.5mm socket.



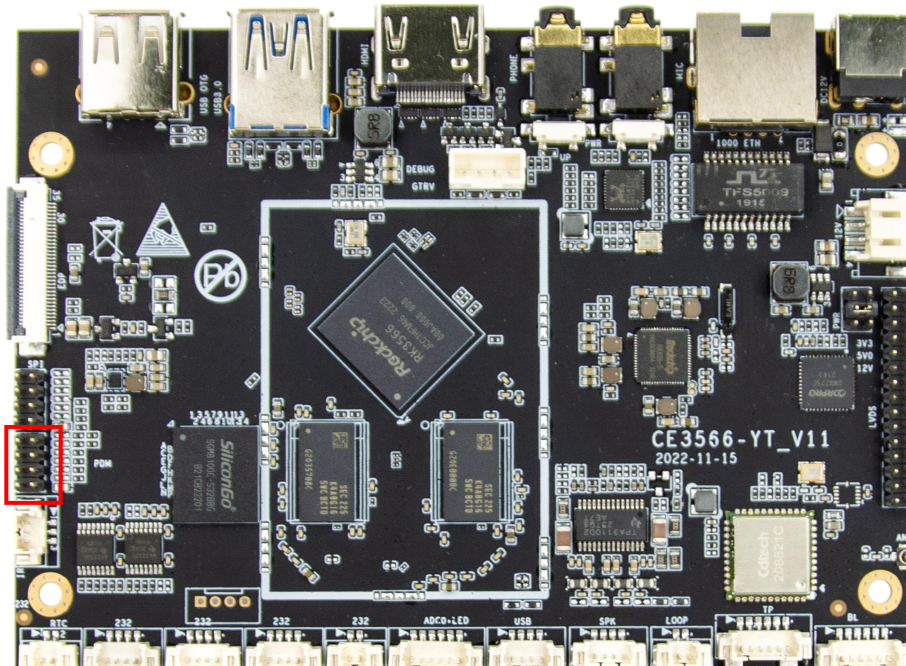
2.2.4.2. MIC

DEBIX R3566-01 provides **one microphone interface**. The connector is a 3.5mm socket.

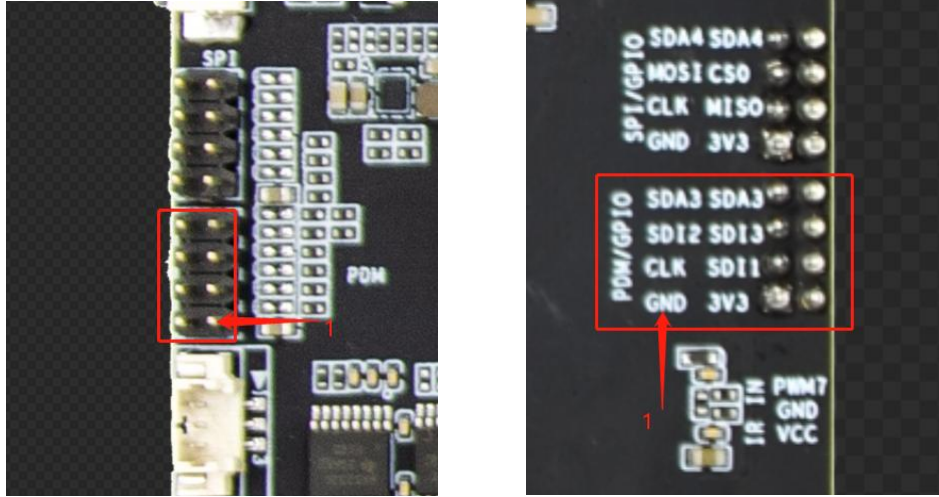


2.2.4.3. PDM MIC

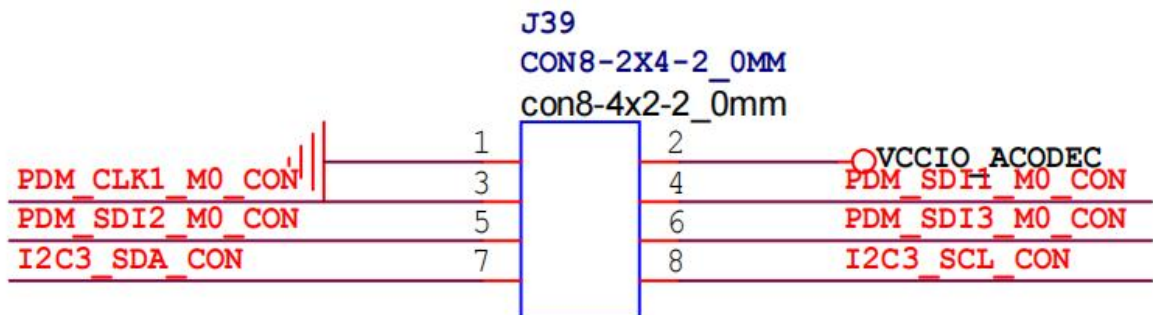
DEBIX R3566-01 provides **one PDM MIC interface**: the refdes. is J39. The connector is a 2*4Pin/2.0mm pin header.



The PCBA physical pin sequence of **the PDM MIC connector** is shown in the figures below:



The pin sequence is as shown in the figure:



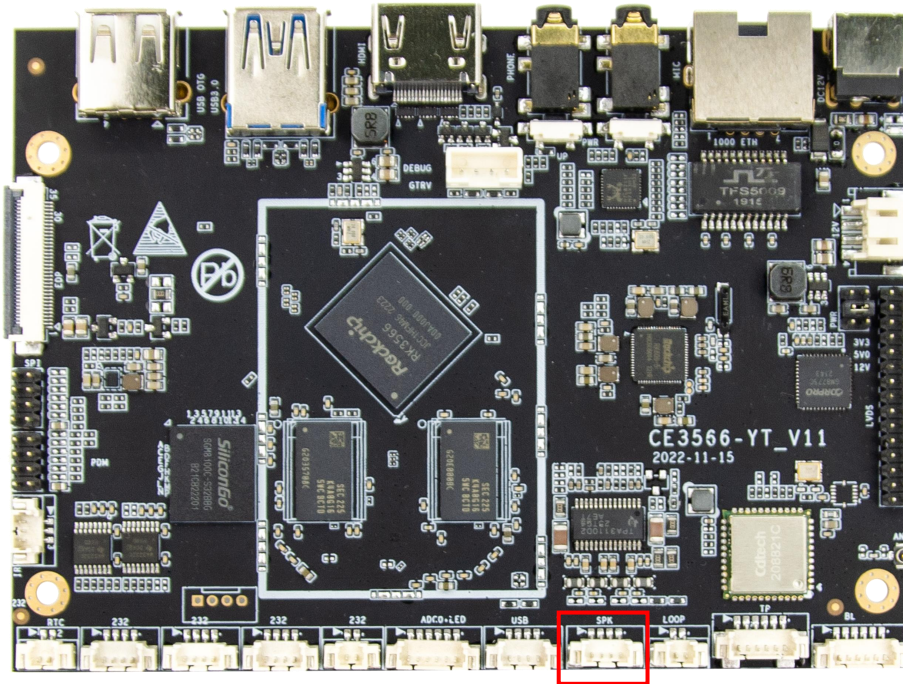
The PDM MIC interface is defined as follows:

Table 7 The Pin Definition of the PDM MIC Interface

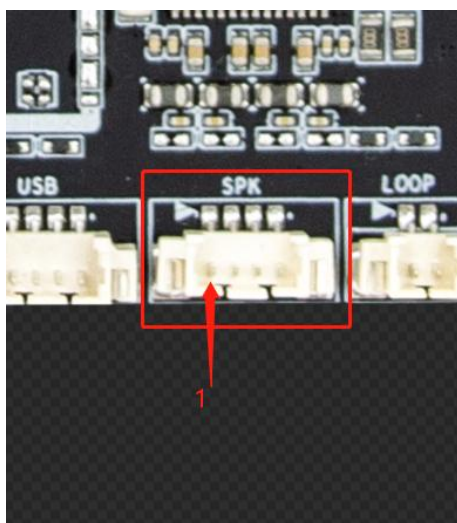
Pin	Definition	Pin	Definition
1	GND	2	VCCIO_ACODEC, 3V3 IO
3	PDM_CLK1_M0_CON, 3V3 IO	4	PDM_SDI1_M0_CON, 3V3 IO
5	PDM_SDI2_M0_CON, 3V3 IO	6	PDM_SDI3_M0_CON, 3V3 IO
7	I2C3_SDA_CON, 3V3 IO	8	I2C3_SCL_CON, 3V3 IO

2.2.4.4. L&R SPK

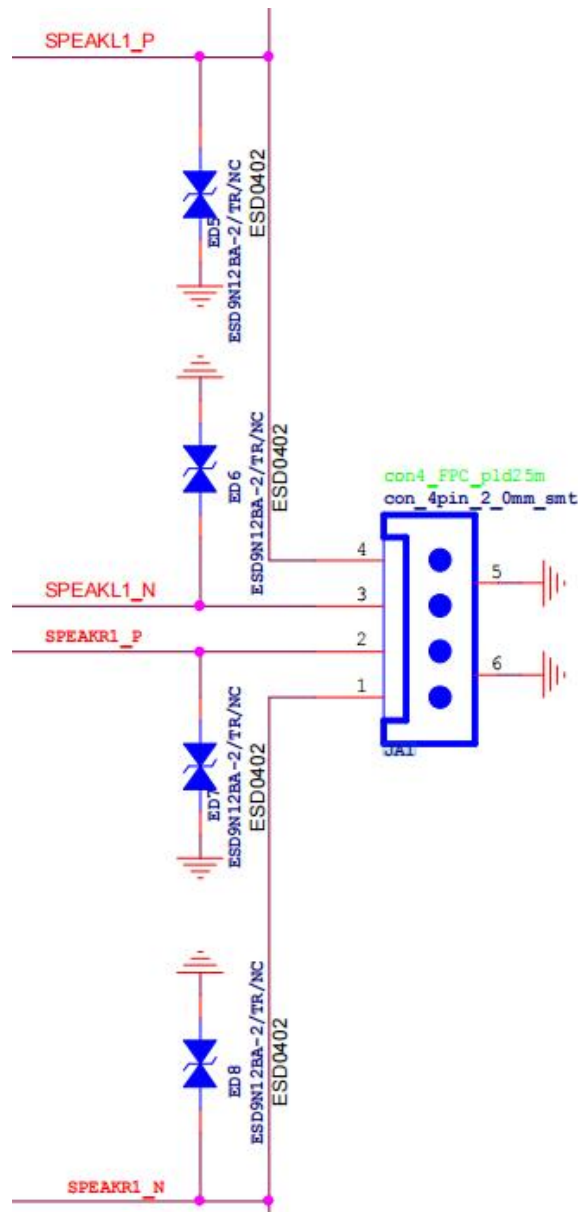
DEBIX R3566-01 provides **one L&R SPK interface**: the refdes. is JA1. The connector is a 1*4Pin/1.25mm wafer connector.



The PCBA physical pin sequence of **the L&R SPK connector** is shown in the figures below:



The pin sequence is as shown in the figure:



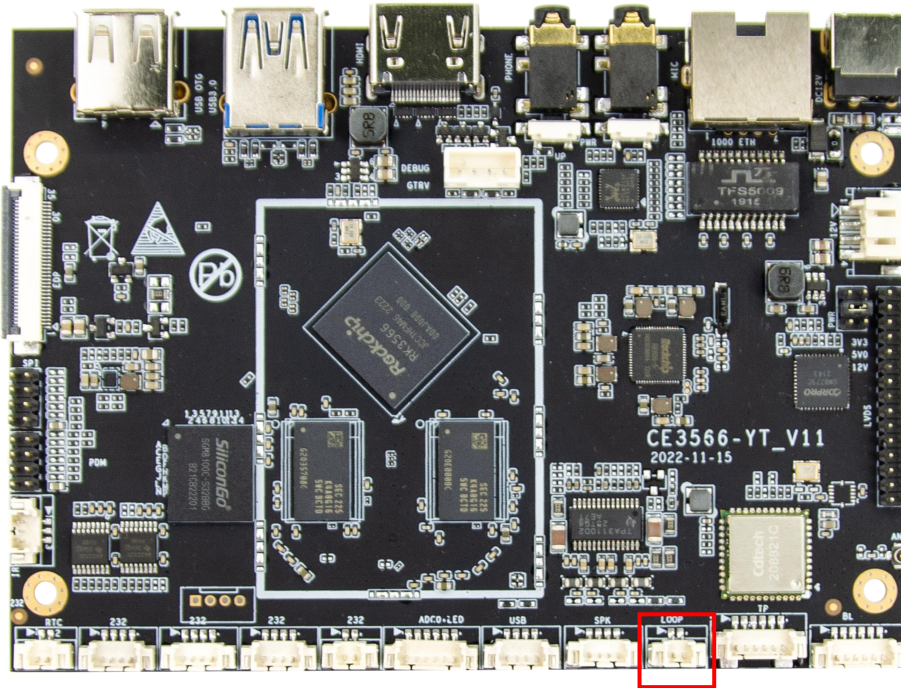
The L&R SPK interface is defined as follows:

Table 8 The Pin Definition of the L&R SPK Interface

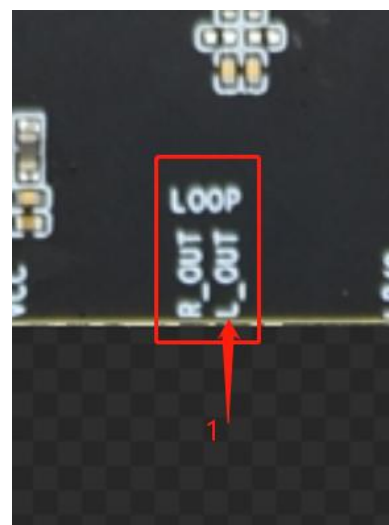
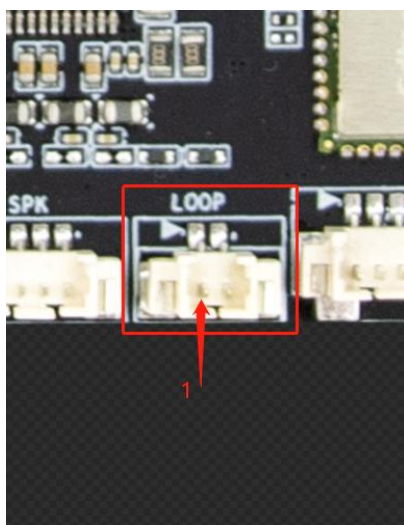
Pin	Definition	Description
1	SPEAKR1_N	Right channel (-), 3V3 IO
2	SPEAKR1_P	Right channel (+), 3V3 IO
3	SPEAKL1_N	Left channel (-), 3V3 IO
4	SPEAKL1_P	Left channel (+), 3V3 IO

2.2.4.5. AEC Loopback

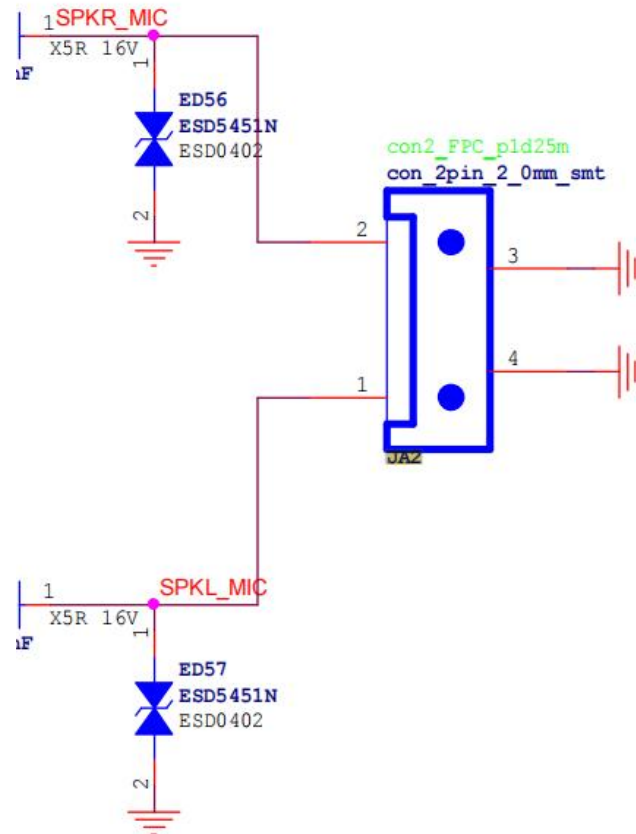
DEBIX R3566-01 provides **one AEC Loopback interface**: the refdes. is JA2. The connector is a 1*2Pin/1.25mm wafer connector.



The PCBA physical pin sequence of **the AEC Loopback interface** is shown in the figures below:



The pin sequence is as shown in the figure:



The AEC Loopback interface is defined as follows:

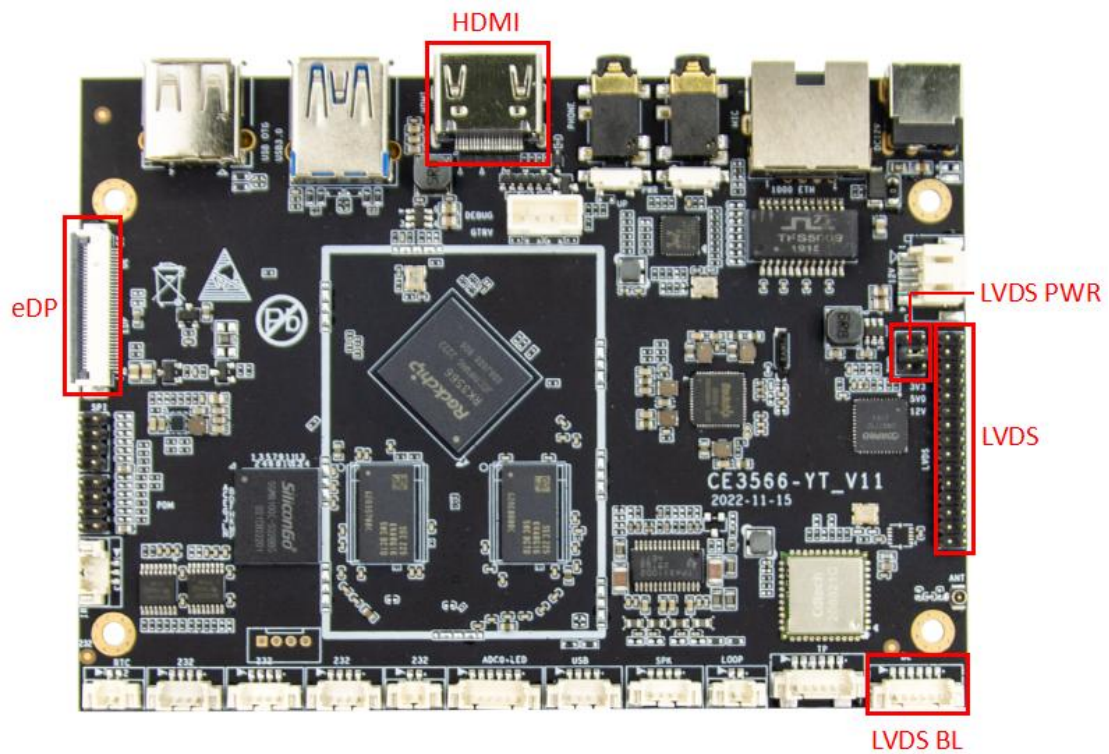
Table 9 The Pin Definition of the AEC Loopback Interface

Pin	Definition	Description
1	SPKL_MIC	L_OUT, 3V3 IO
2	SPKR_MIC	R_OUT, 3V3 IO

2.2.5. Display

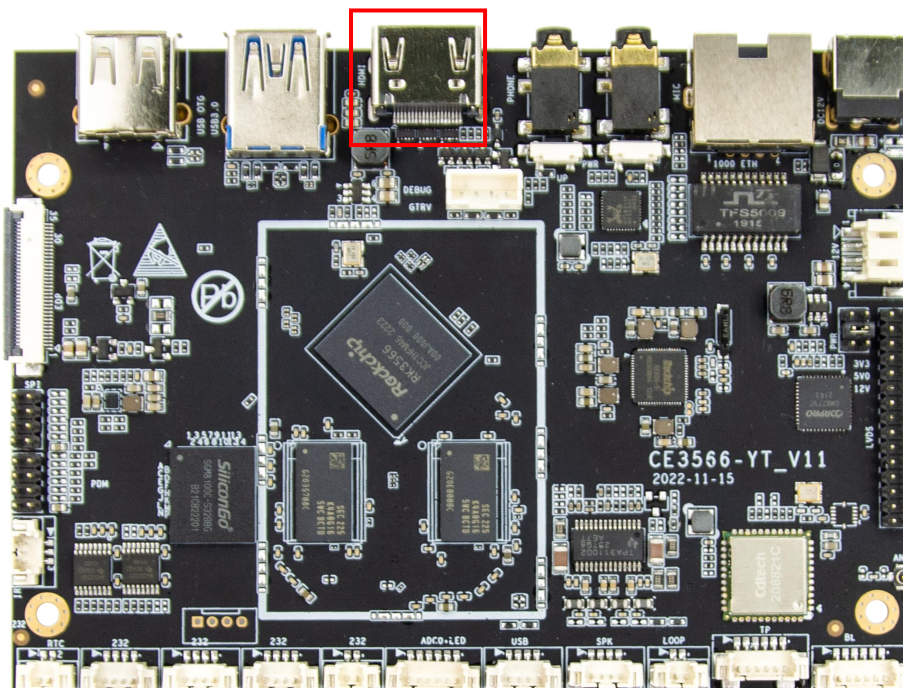
DEBIX R3566-01 supports three display interfaces:

- 1 x HDMI Tx Interface
- 1 x LVDS Interface
- 1 x eDP Interface



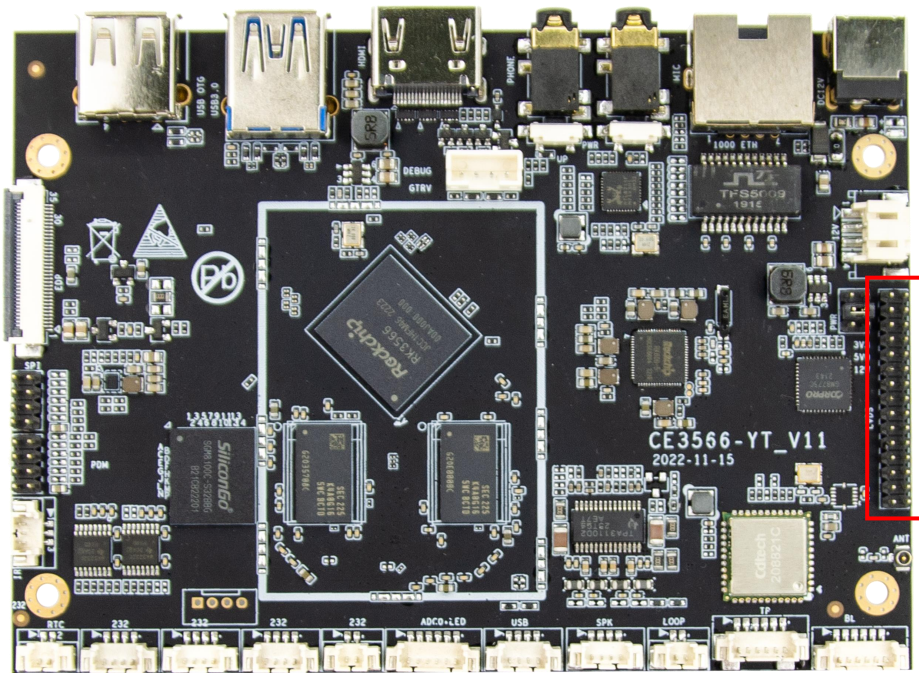
2.2.5.1. HDMI

DEBIX R3566-01 provides **one HDMI interface**. The connector is HDMI Type-A female. It supports up to 1080p@120Hz and 4096x2304@60Hz.

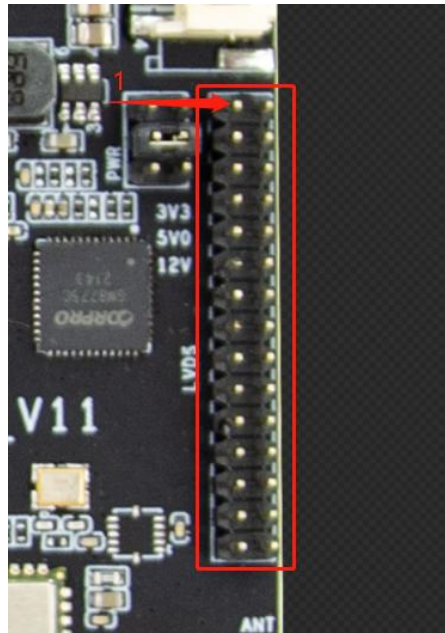


2.2.5.2. LVDS

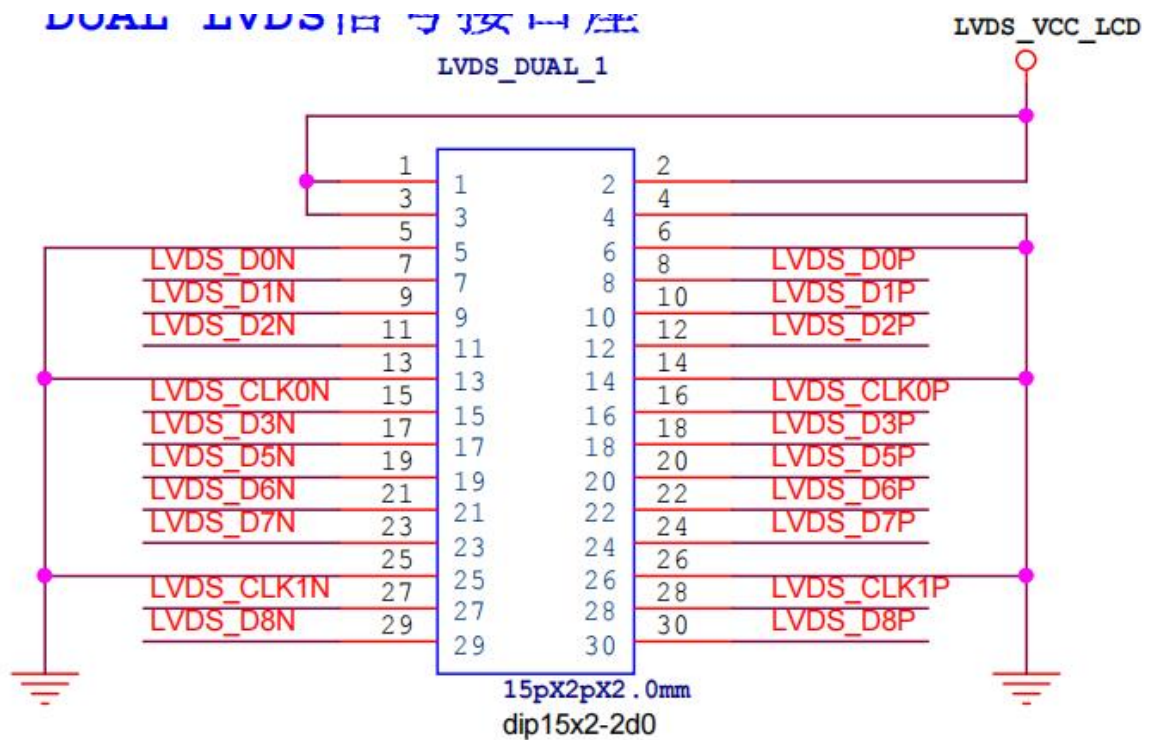
DEBIX R3566-01 provides **one LVDS interface**. The connector is a 2*15Pin/2.0mm Pitch pin header. It supports RGB888 and RGB666 input, and VESA/JEIDA LVDS data format transfer.



The PCBA physical pin sequence of **the LVDS interface** is shown in the figure below:



The pin sequence is shown in the figure:



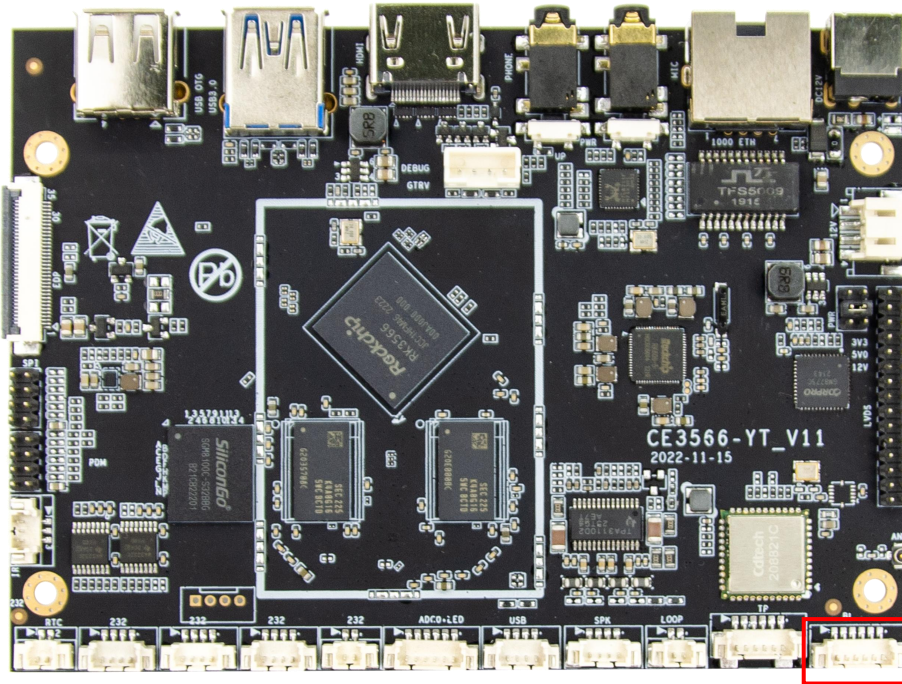
The LVDS interface is defined as follows:

Table 10 The Pin Definition of the LVDS Interface

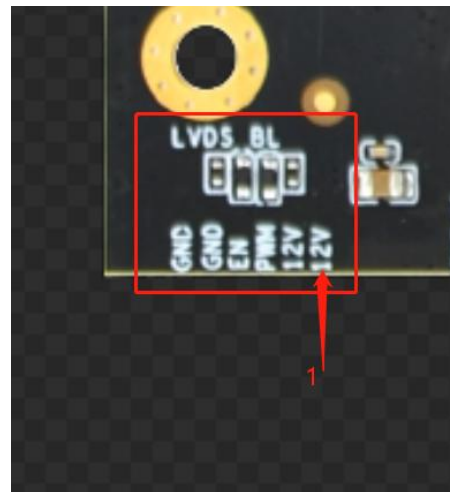
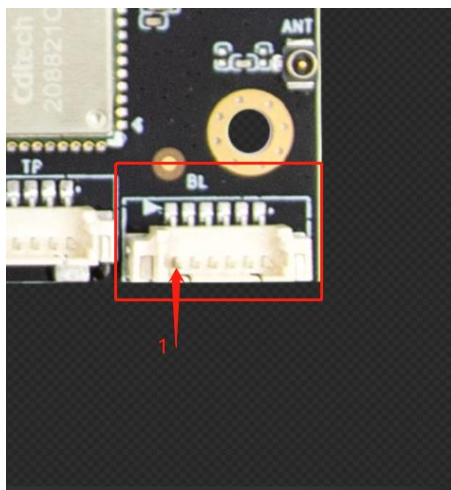
Pin	Definition	Pin	Definition
1	LVDS_VCC_LCD	2	LVDS_VCC_LCD
3	LVDS_VCC_LCD	4	GND
5	GND	6	GND
7	LVDS_D0N	8	LVDS_D0P
9	LVDS_D1N	10	LVDS_D1P
11	LVDS_D2N	12	LVDS_D2P
13	GND	14	GND
15	LVDS_CLK0N	16	LVDS_CLK0P
17	LVDS_D3N	18	LVDS_D3P
19	LVDS_D5N	20	LVDS_D5P
21	LVDS_D6N	22	LVDS_D6P
23	LVDS_D7N	24	LVDS_D7P
25	GND	26	GND
27	LVDS_CLK1N	28	LVDS_CLK1P
29	LVDS_D8N	30	LVDS_D8P

2.2.5.3. LVDS BL

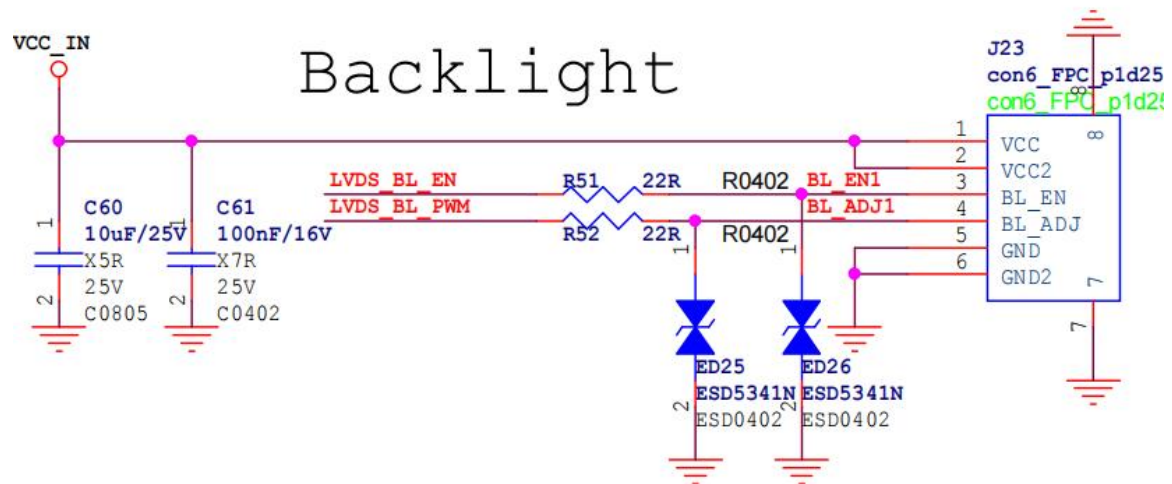
DEBIX R3566-01 provides **one LVDS backlight control adjustment Interface**: the refdes. is J23. The connector is a 1*6Pin/1.25mm wafer connector. Through it, the LVDS backlight can be turned on or off and the backlight brightness can be adjusted.



The PCBA physical pin sequence of **the LVDS BL interface** is shown in the figures below:



The pin sequence of **the LVDS BL interface** is shown as below:



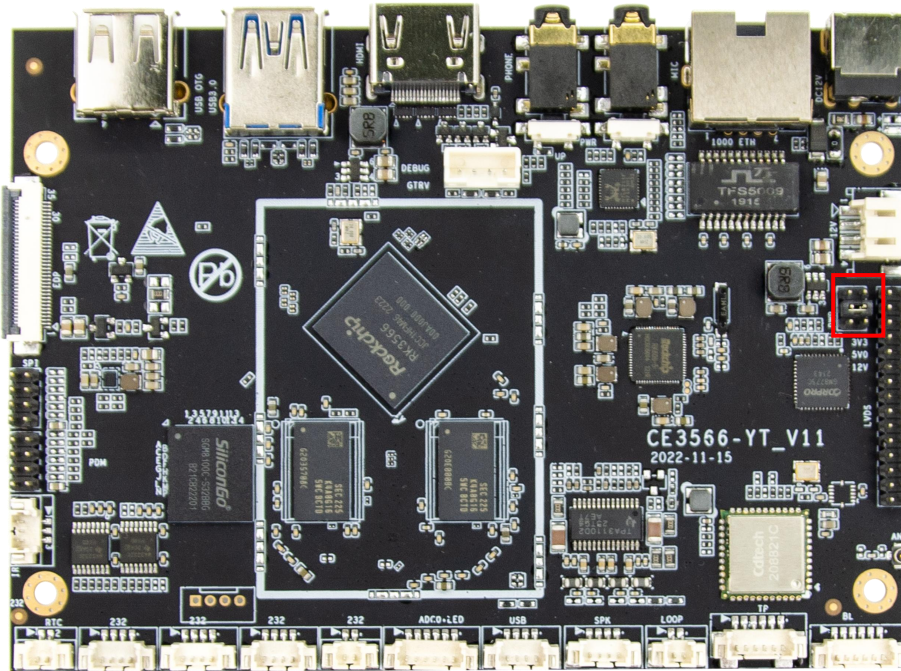
The LVDS BL interface is defined as follows:

Table 11 The Pin Definition of the LVDS BL Interface

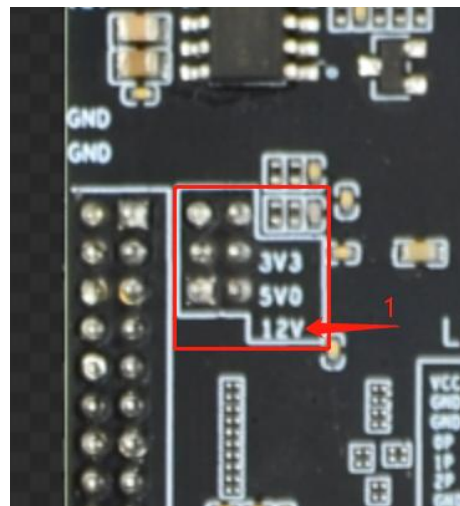
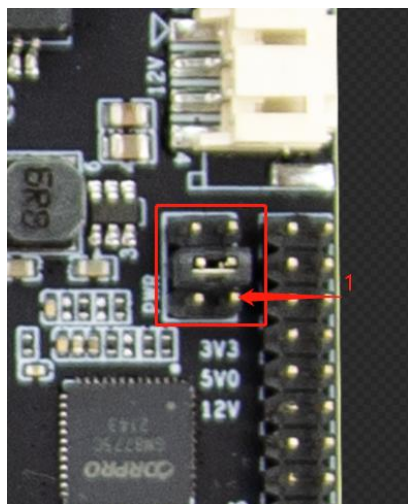
Pin	Definition	Description
1	VCC_IN	DC 3V3
2	VCC_IN	DC 3V3
3	LVDS_BL_EN	Backlight switch enabled, 3V3 IO
4	LVDS_BL_PWM	Backlight brightness PWM control, 3V3 IO
5	GND	To ground
6	GND	To ground

2.2.5.4. LVDS PWR

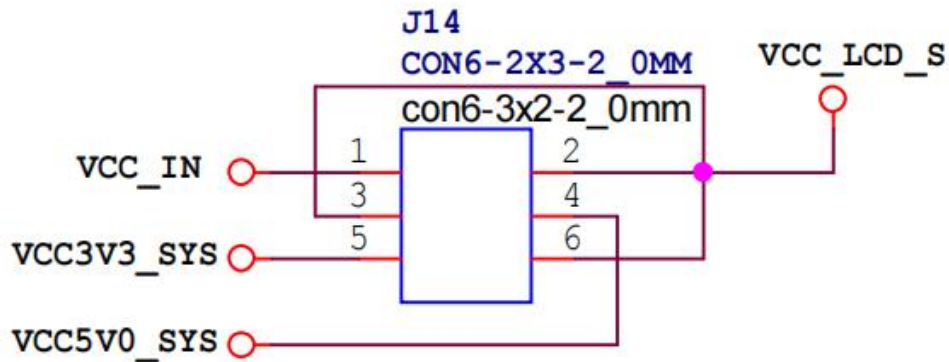
DEBIX R3566-01 provides **one LVDS PWR interface**: the refdes. is J14. The connector is a 2*3Pin/2.0mm Pitch pin header.



The PCBA physical pin sequence of **the LVDS PWR interface** is shown in the figures below:



The pin sequence is shown in the figure:



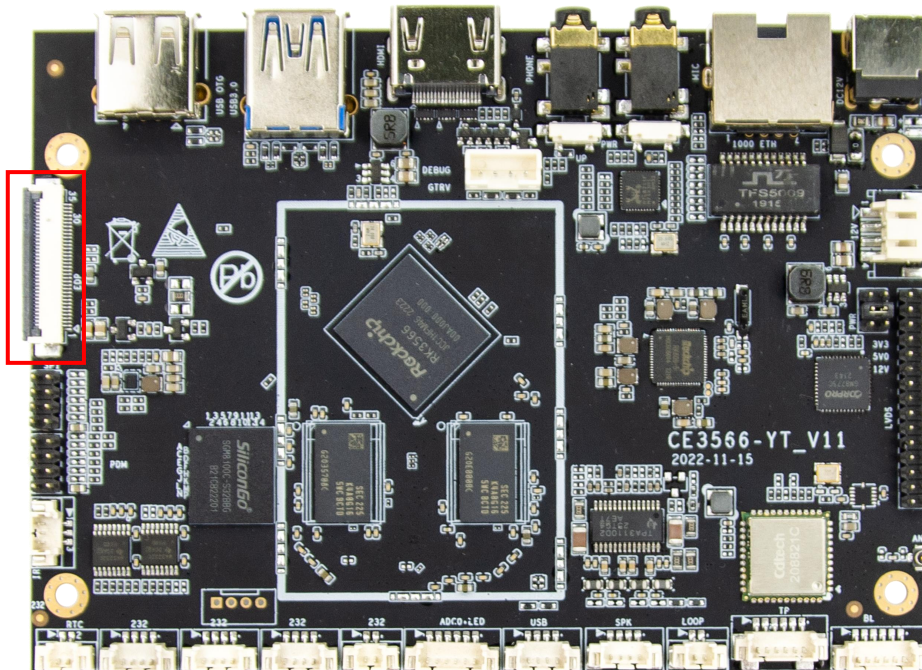
The LVDS PWR interface is defined as follows:

Table 12 The Pin Definition of the LVDS PWR Interface

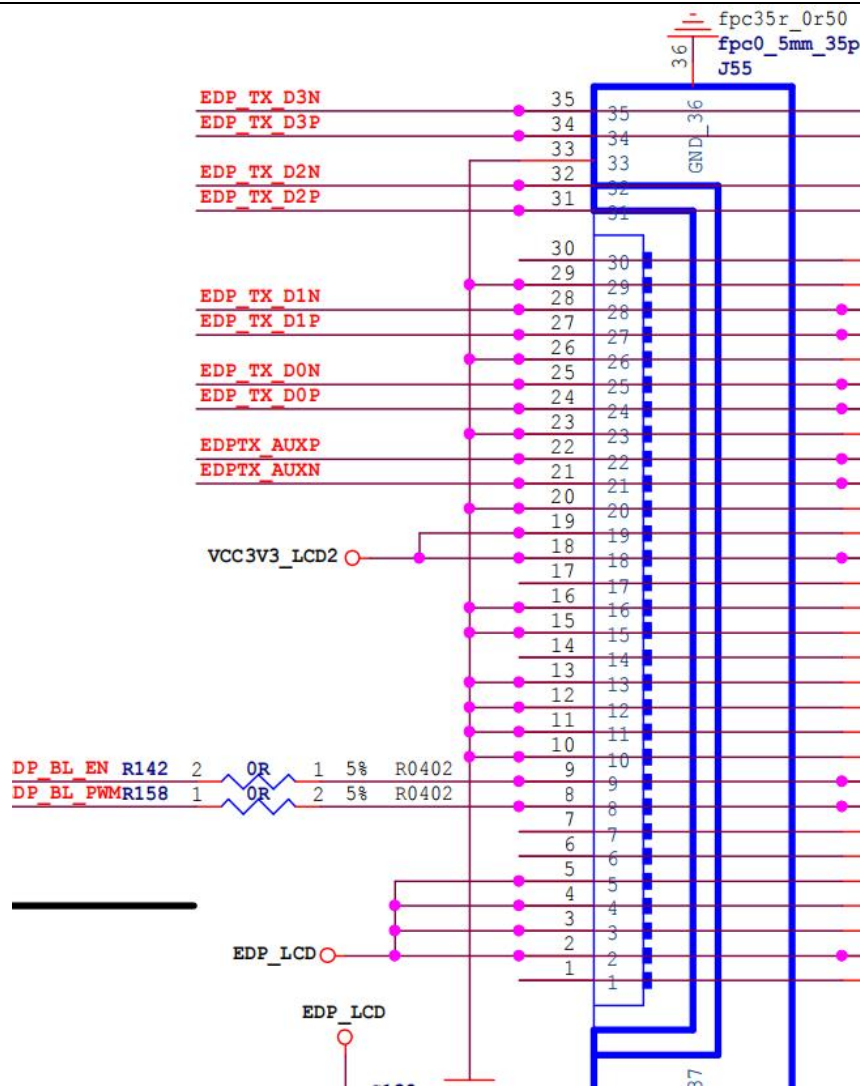
Pin	Definition	Pin	Definition
1	VCC_IN, 3V3 IO	2	VCC_LCD_S, 3V3 IO
3	VCC_LCD_S, 3V3 IO	4	VCC5V0_SYS
5	VCC3V3_SYS	6	VCC_LCD_S, 3V3 IO

2.2.5.5. eDP

DEBIX R3566-01 provides **one eDP interface**: the refdes. is J55. The connector is a 35Pin 0.5mm Pitch FPC socket. It supports up to 2560x1600@60Hz.



The pin sequence of **the eDP interface** is shown in the figure:



The eDP interface is defined as follows:

Table 13 The Pin Definition of the eDP Interface

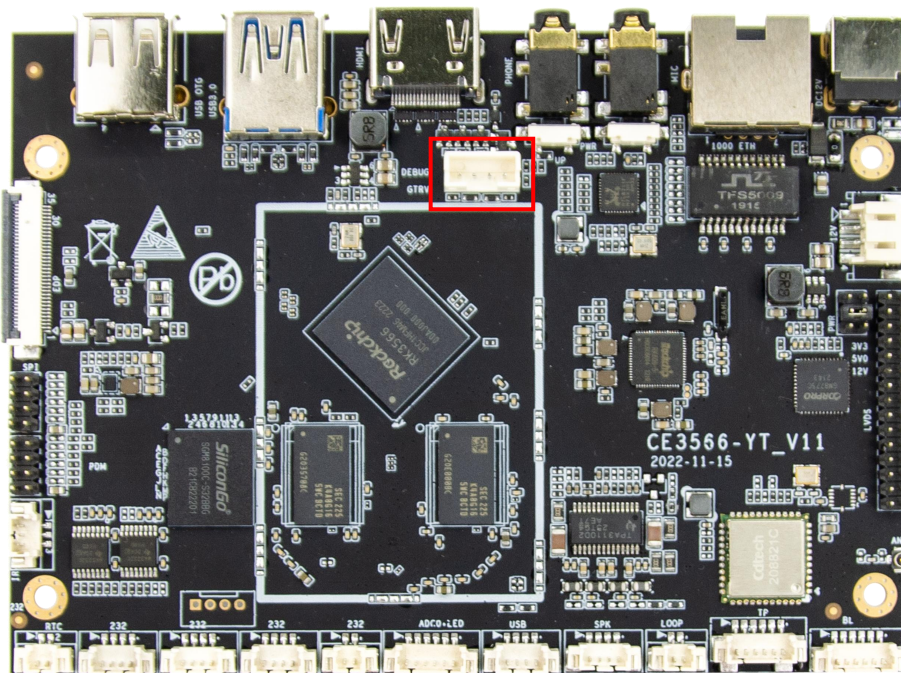
Pin	Definition	Description
1	NC	Not connected
2	EDP_LCD	LCD panel control signal
3	EDP_LCD	LCD panel control signal
4	EDP_LCD	LCD panel control signal
5	EDP_LCD	LCD panel control signal
6	NC	Not connected
7	NC	Not connected

8	EDP_BL_PWM	Backlight brightness control (PWM signal)
9	EDP_BL_EN	Backlight enable signal
10	GND	To ground
11	GND	To ground
12	GND	To ground
13	GND	To ground
14	NC	Not connected
15	GND	To ground
16	GND	To ground
17	NC	Not connected
18	VCC3V3_LCD2	DC 3V3
19	VCC3V3_LCD2	DC 3V3
20	GND	To ground
21	EDPTX_AUXN	Auxiliary channel negative differential signal
22	EDPTX_AUXP	Auxiliary channel positive differential signal
23	GND	To ground
24	EDP_TX_D0P	Lane 0 positive differential data signal
25	EDP_TX_D0N	Lane 0 negative differential data signal
26	GND	To ground
27	EDP_TX_D1P	Lane 1 positive differential data signal
28	EDP_TX_D1N	Lane 1 negative differential data signal
29	GND	To ground
30	NC	Not connected
31	EDP_TX_D2P	Lane 2 positive differential data signal
32	EDP_TX_D2N	Lane 2 negative differential data signal
33	GND	To ground
34	EDP_TX_D3P	Lane 3 positive differential data signal

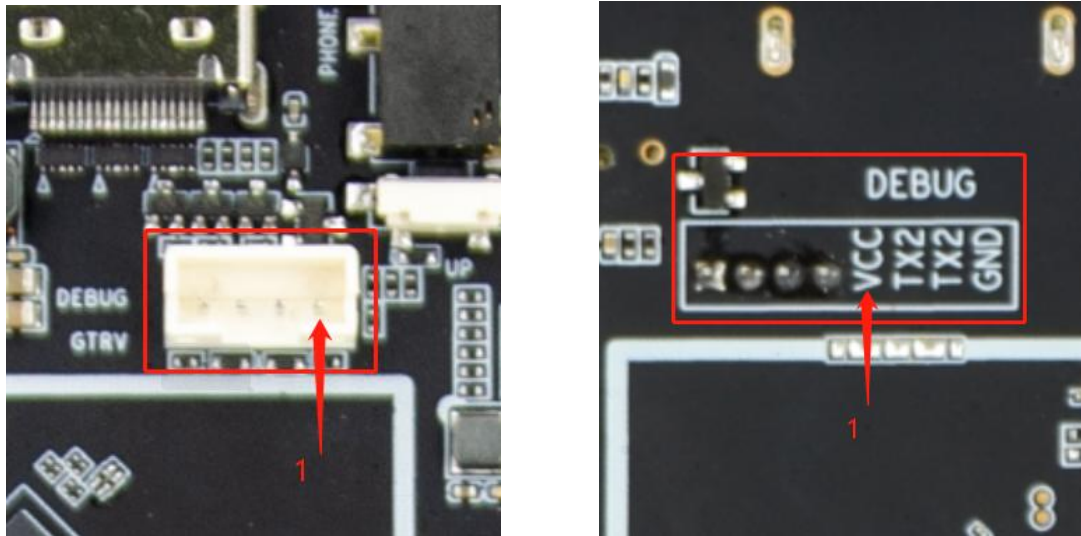
35	EDP_TX_D3N	Lane 3 negative differential data signal
----	------------	--

2.2.6. DEBUG

DEBIX R3566-01 provides **one debug interface**: the refdes. is J9. The connector is a 1*4Pin/2.0mm Pitch wafer connector.

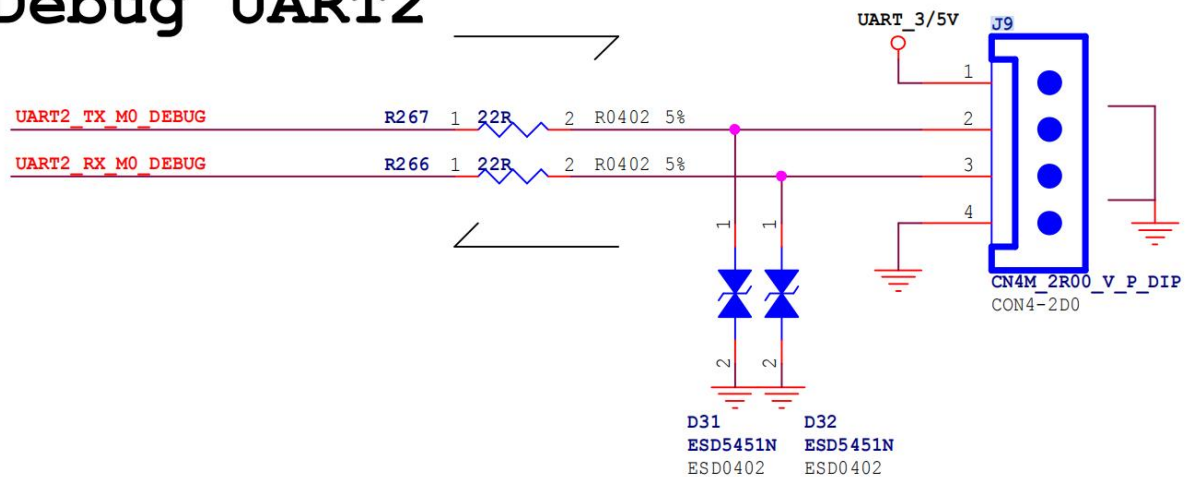


The PCBA physical pin sequence of **the debug interface** is shown in the figures below:



The pin sequence of **the debug interface** is shown in the figure:

Debug UART2



The debug interface is defined as follows:

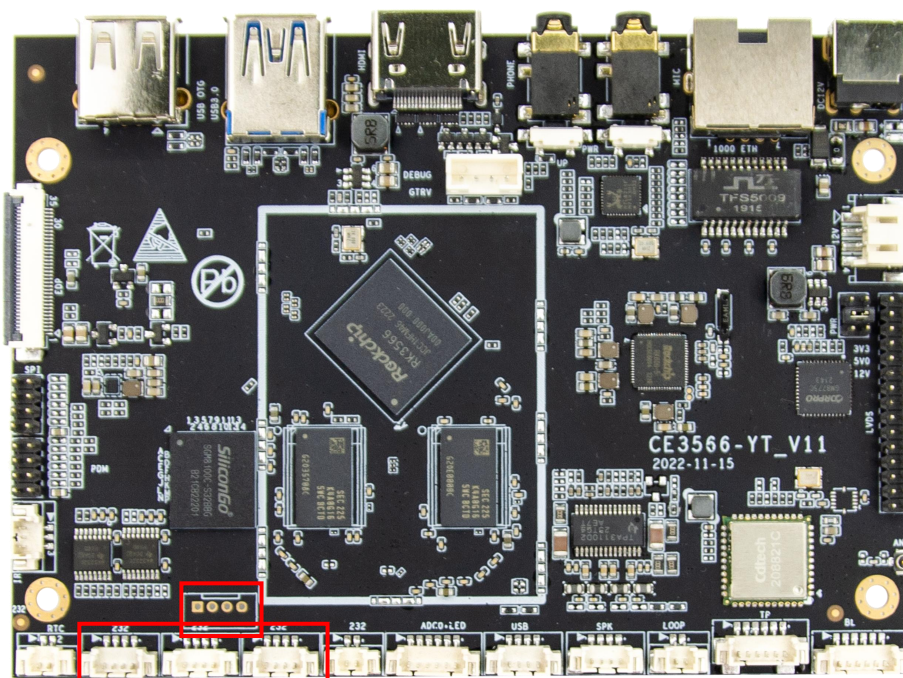
Table 13 The Pin Definition of the Debug Interface

Pin	Definition	Description
1	UART_3/5V	3V, 5V optional
2	UART2_TX_M0_DEBUG	Transmitting data, 3V3 IO
3	UART2_RX_M0_DEBUG	Receiving data, 3V3 IO
4	GND	To ground

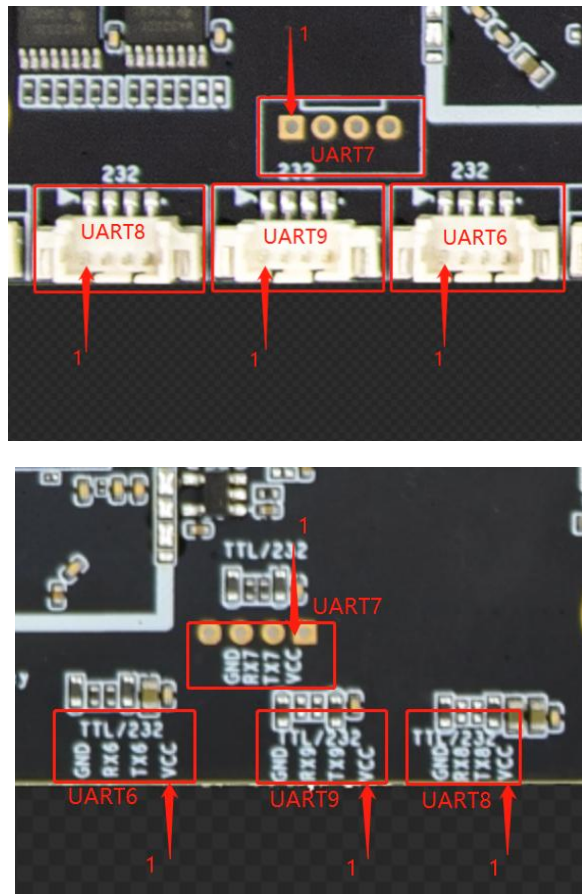
2.2.7. UART

DEBIX R3566-01 provides **four UART interfaces** with 1*4Pin/1.25mm Pitch wafer connector, which can be used as RS232 or TTL serial ports:

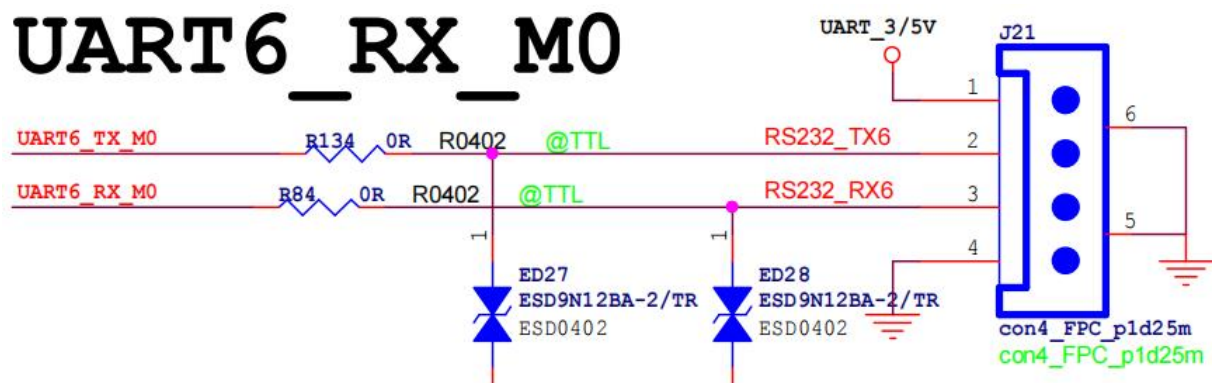
- **UART6:** the refdes. is J21;
- **UART7 (Reserved):** the refdes. is J11;
- **UART8:** the refdes. is J15;
- **UART9:** the refdes. is J16.



The PCBA physical pin sequence of **the UART interfaces** is shown in the figures below:



The pin sequence of the **UART6 interface** is shown in the figure:



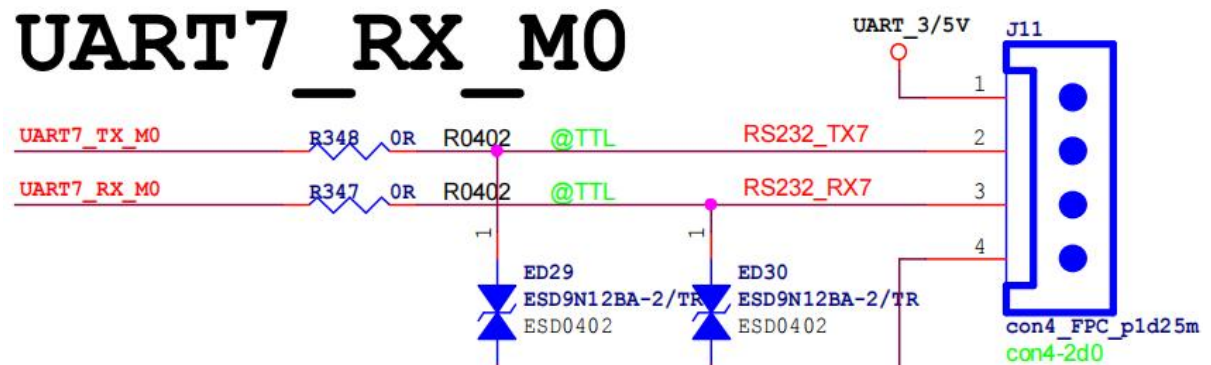
The **UART6 interface** is defined as follows:

Table 14 The Pin Definition of the UART6 Interface

Pin	Definition	Description
1	UART_3/5V	3V, 5V optional

2	UART6_TX_M0/RS232_TX6	Transmitting data, 3V3 IO
3	UART6_RX_M0/RS232_RX6	Receiving data, 3V3 IO
4	GND	To ground

The pin sequence of **the UART7 (Reserved) interface** is shown in the figure:



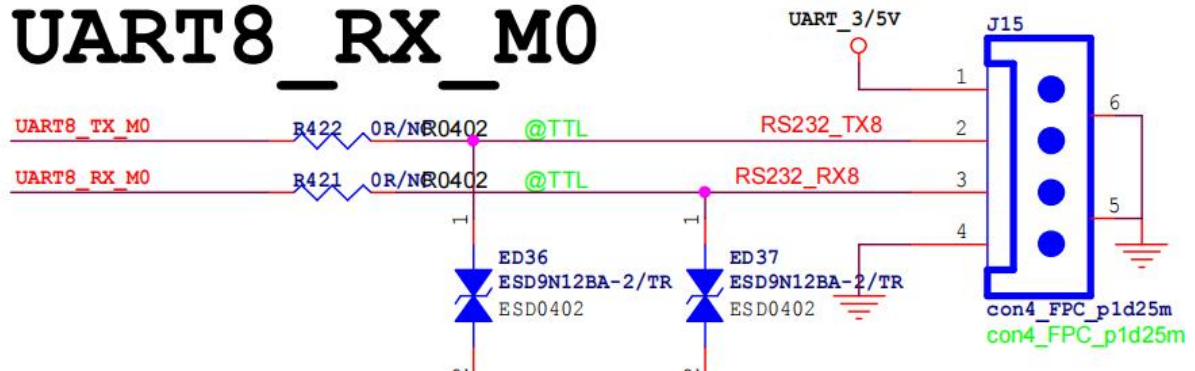
The UART7 (Reserved) interface is defined as follows:

Table 15 The Pin Definition of the UART7 (Reserved) Interface

Pin	Definition	Description
1	UART_3/5V	3V, 5V optional
2	UART7_TX_M0/RS232_TX7	Transmitting data, 3V3 IO
3	UART7_RX_M0/RS232_RX7	Receiving data, 3V3 IO
4	GND	To ground

The pin sequence of **the UART8 interface** is shown in the figure:

UART8_RX_M0



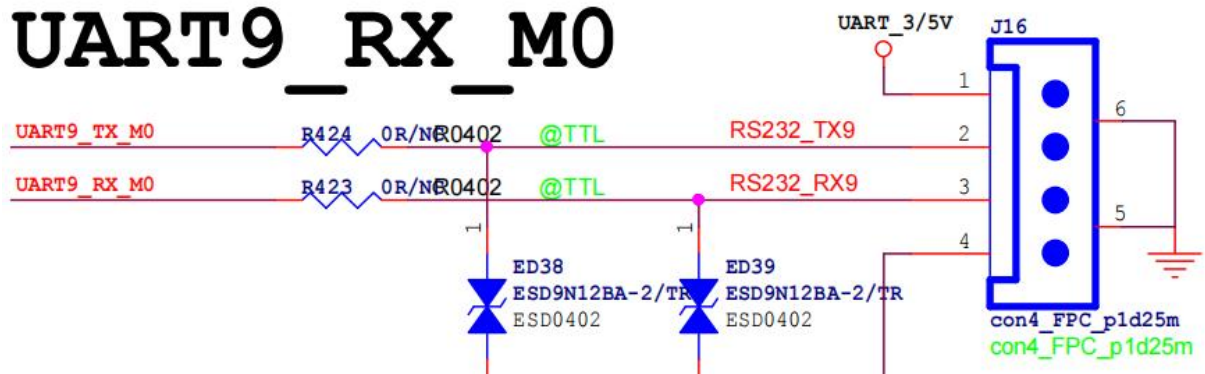
The UART8 interface is defined as follows:

Table 16 The Pin Definition of the UART8 Interface

Pin	Definition	Description
1	UART_3/5V	3V, 5V optional
2	UART8_TX_M0/RS232_TX8	Transmitting data, 3V3 IO
3	UART8_RX_M0/RS232_RX8	Receiving data, 3V3 IO
4	GND	To ground

The pin sequence of the UART9 interface is shown below:

UART9_RX_M0



The UART9 interface is defined as follows:

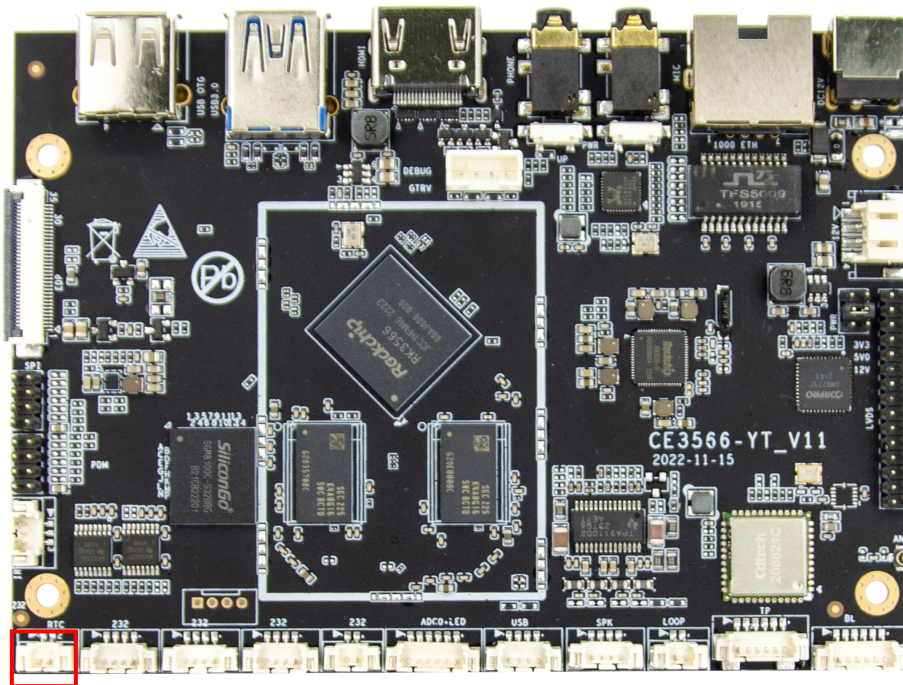
Table 17 The Pin Definition of the UART9 Interface

Pin	Definition	Description
1	UART_3/5V	3V, 5V optional

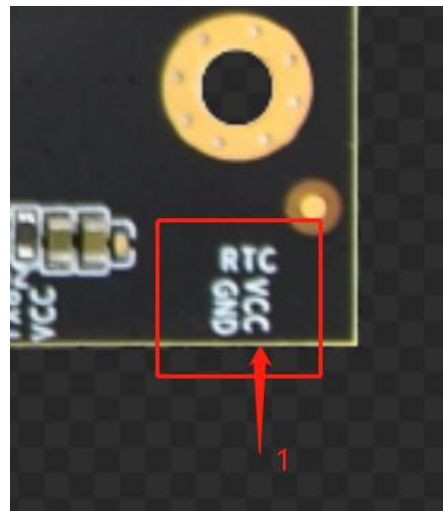
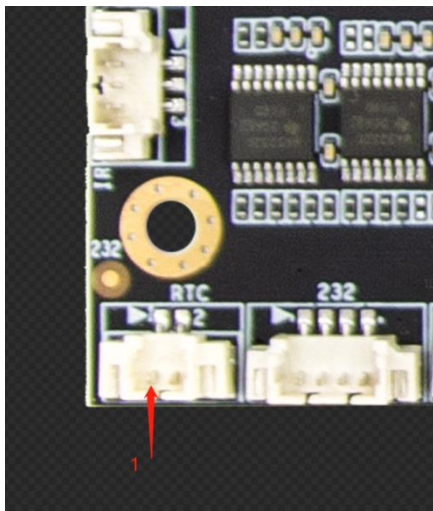
2	UART9_TX_M0/RS232_TX9	Transmitting data, 3V3 IO
3	UART9_RX_M0/RS232_RX9	Receiving data, 3V3 IO
4	GND	To ground

2.2.8. RTC

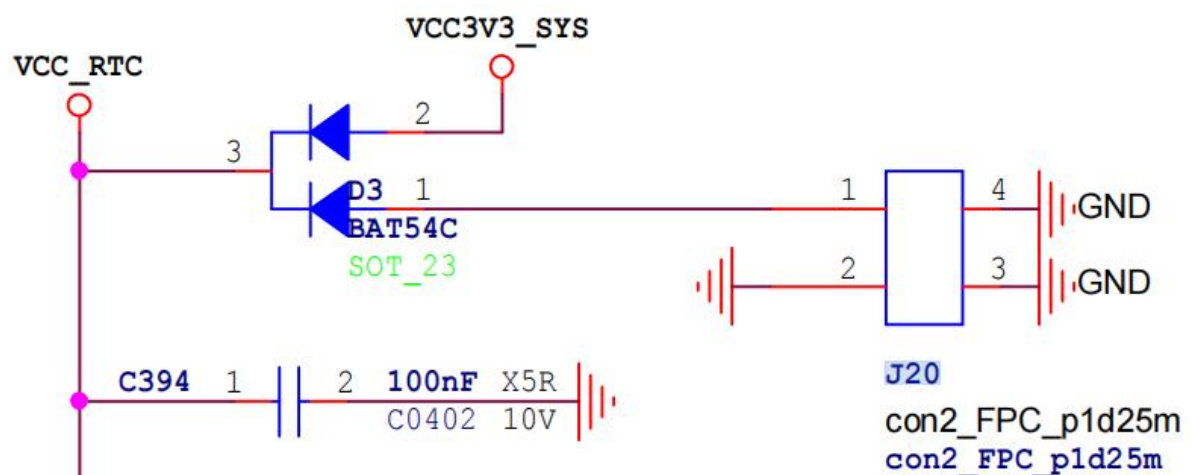
DEBIX R3566-01 provides **one RTC interface**: the refdes. is J20. The connector is a 1*2Pin/1.25mm Pitch wafer connector.



The PCBA physical pin sequence of **the RTC interface** is shown in the figures below:



The pin sequence of **the RTC interface** is shown as below:



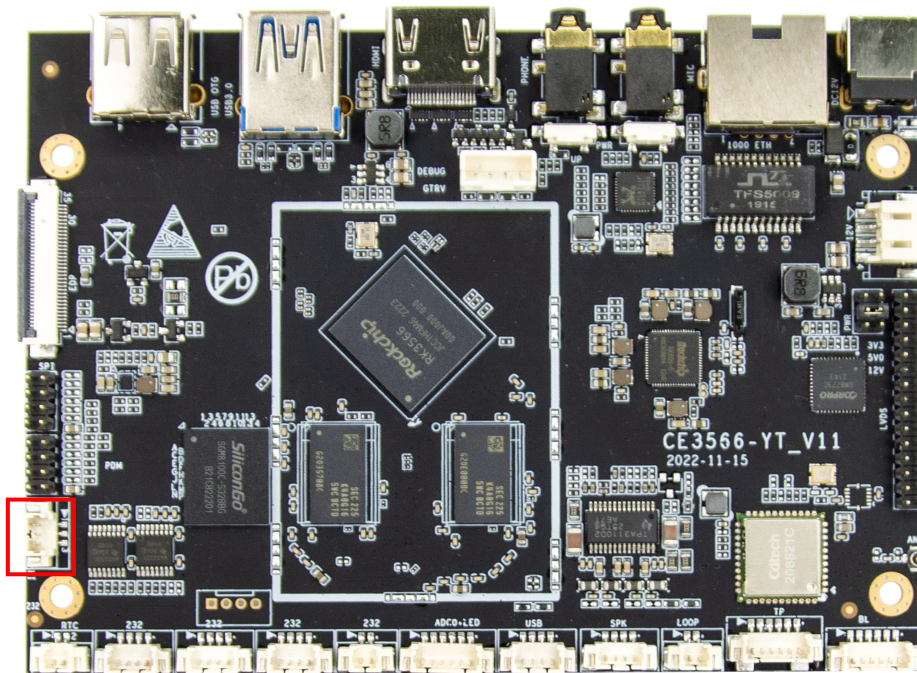
The RTC interface is defined as follows:

Table 18 The Pin Definition of the RTC Interface

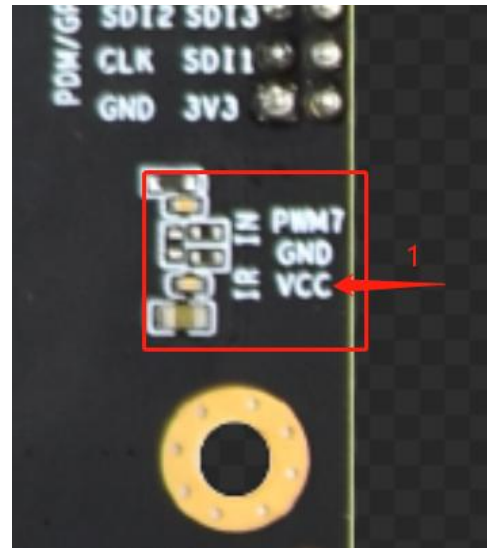
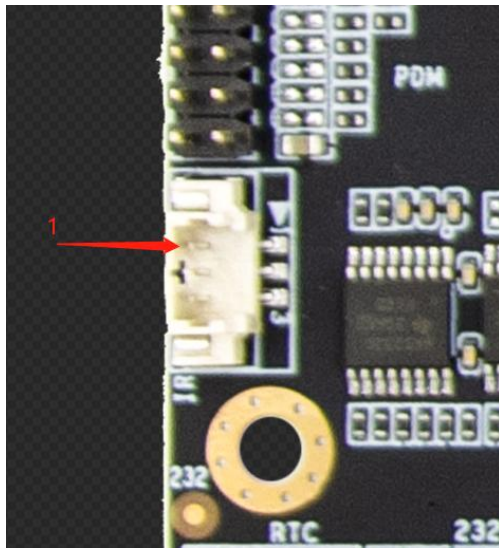
Pin	Definition	Description
1	VCC3V3_SYS	DC 3V3
2	GND	To ground

2.2.9. IR

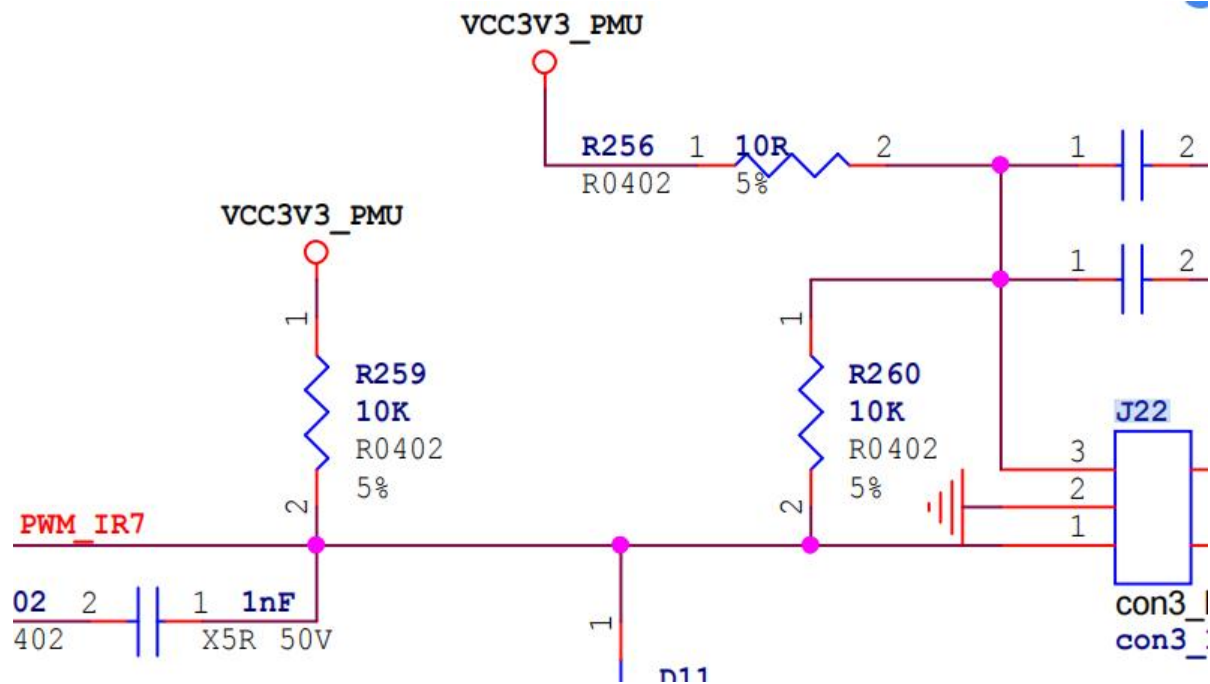
DEBIX R3566-01 provides **one IR interface**: the refdes. is J22. The connector is a 1*3Pin/1.25mm Pitch wafer header. It can be used for infrared communicate with devices with infrared interfaces, such as laptop, printer, Modem, PDA, mobile phone, etc.



The PCBA physical pin sequence of **the IR interface** is shown in the figures below:



The pin sequence of **the IR interface** is shown as below:



The IR interface is defined as follows:

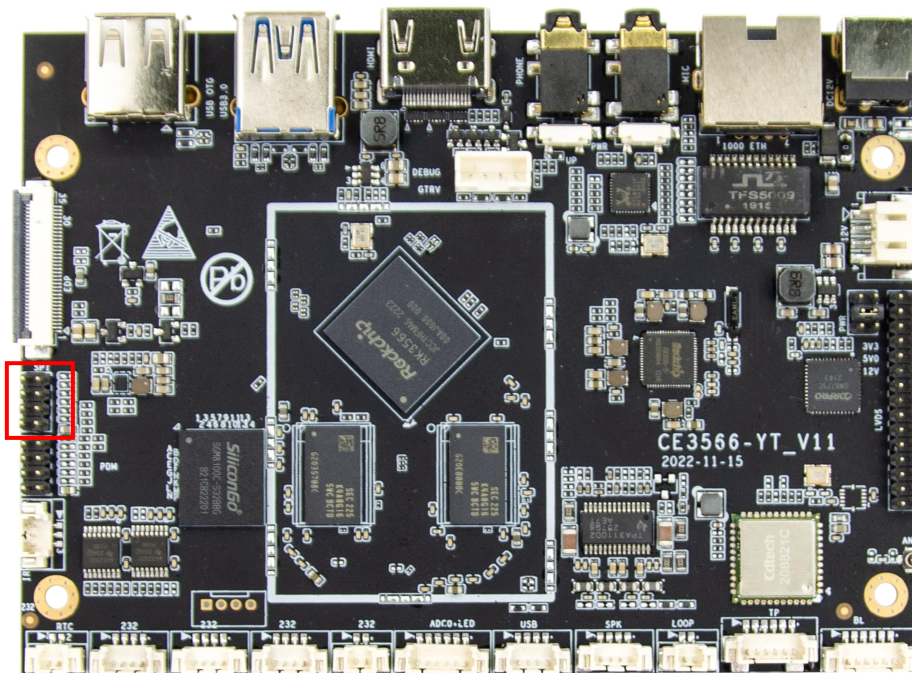
Table 19 The Pin Definition of the IR Interface

Pin	Definition	Description
1	PWM_IR7	Infrared PWM signal, 3V3 IO

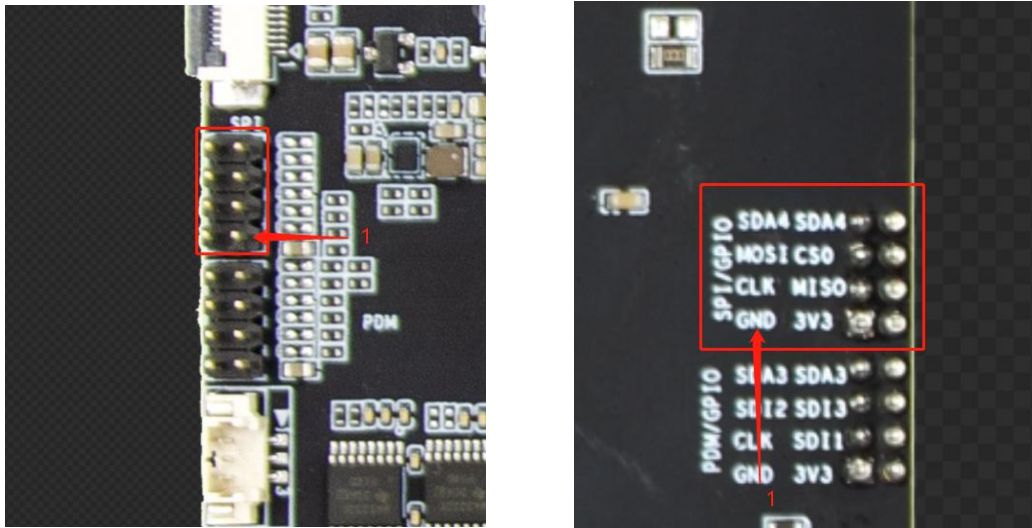
2	GND	To ground
3	VCC3V3_PMU	DC 3V3

2.2.10. SPI

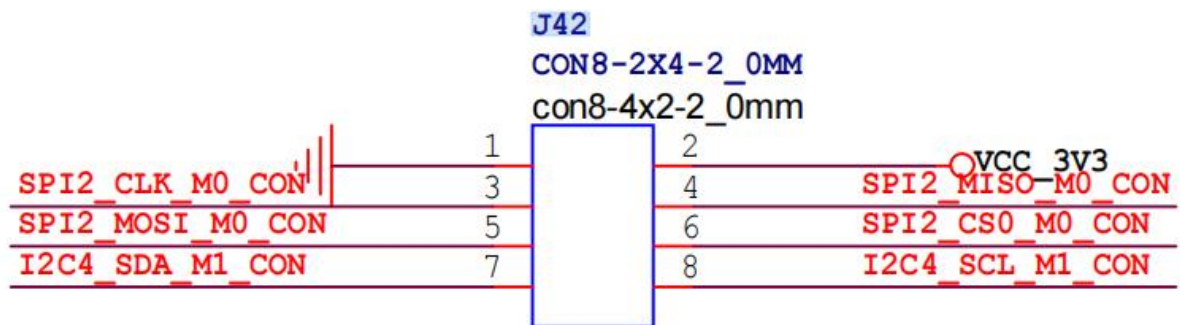
DEBIX R3566-01 provides **one SPI interface**: the refdes. is J42. The connector is a 2*4Pin/2.0mm pin header.



The PCBA physical pin sequence of **the SPI interface** is shown in the figures below:



The pin sequence of **the SPI interface** is shown as below:



The SPI interface is defined as follows:

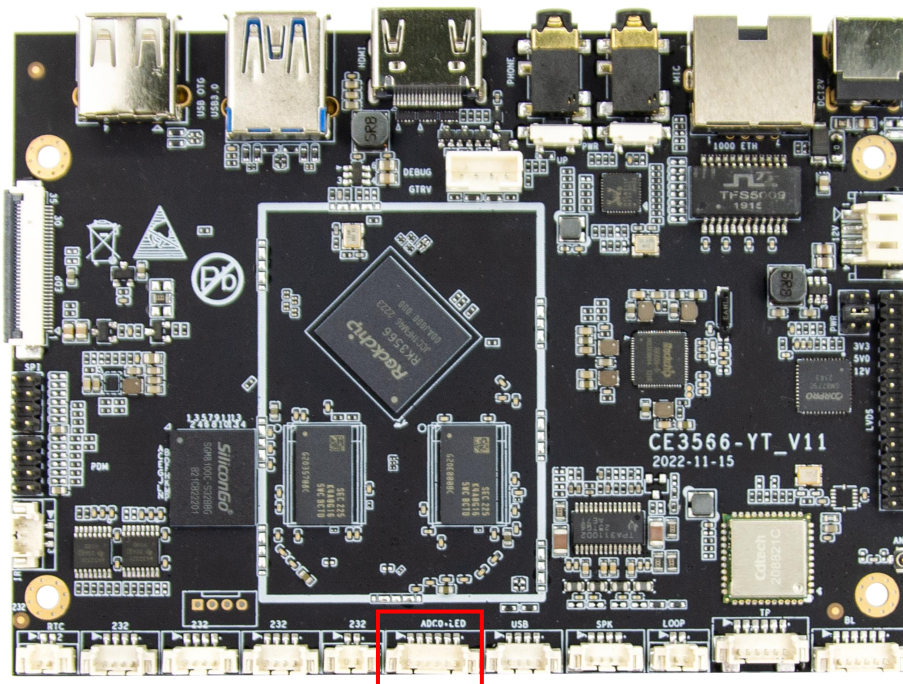
Table 20 The Pin Definition of the SPI Interface

Pin	Definition	Pin	Definition
1	GND	2	VCC_3V3
3	SPI2_CLK_M0_CON, 3V3 IO	4	SPI2_MISO_M0_CON, 3V3 IO
5	SPI2_MOSI_M0_CON, 3V3 IO	6	SPI2_CS0_M0_CON, 3V3 IO
7	I2C4_SDA_M1_CON, 3V3 IO	8	I2C4_SCL_M1_CON, 3V3 IO

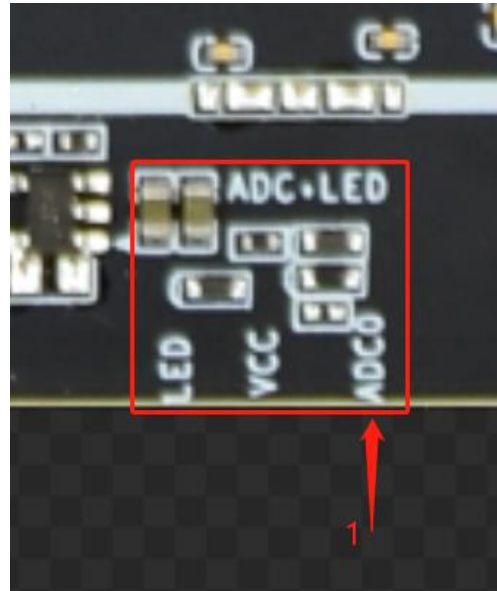
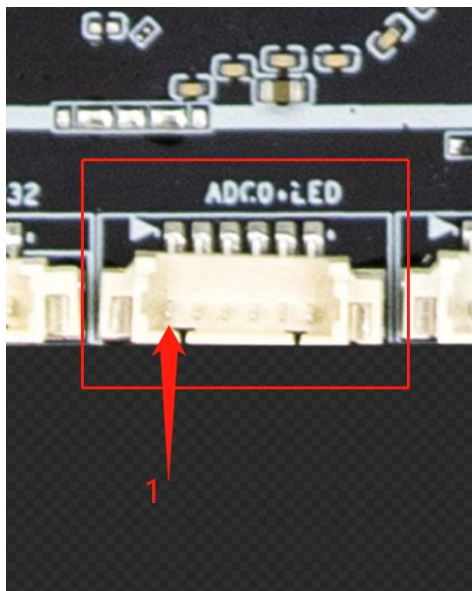
2.2.11. ADC+LED

DEBIX R3566-01 provides **one ADC+LED interface**: the refdes. is J26. The

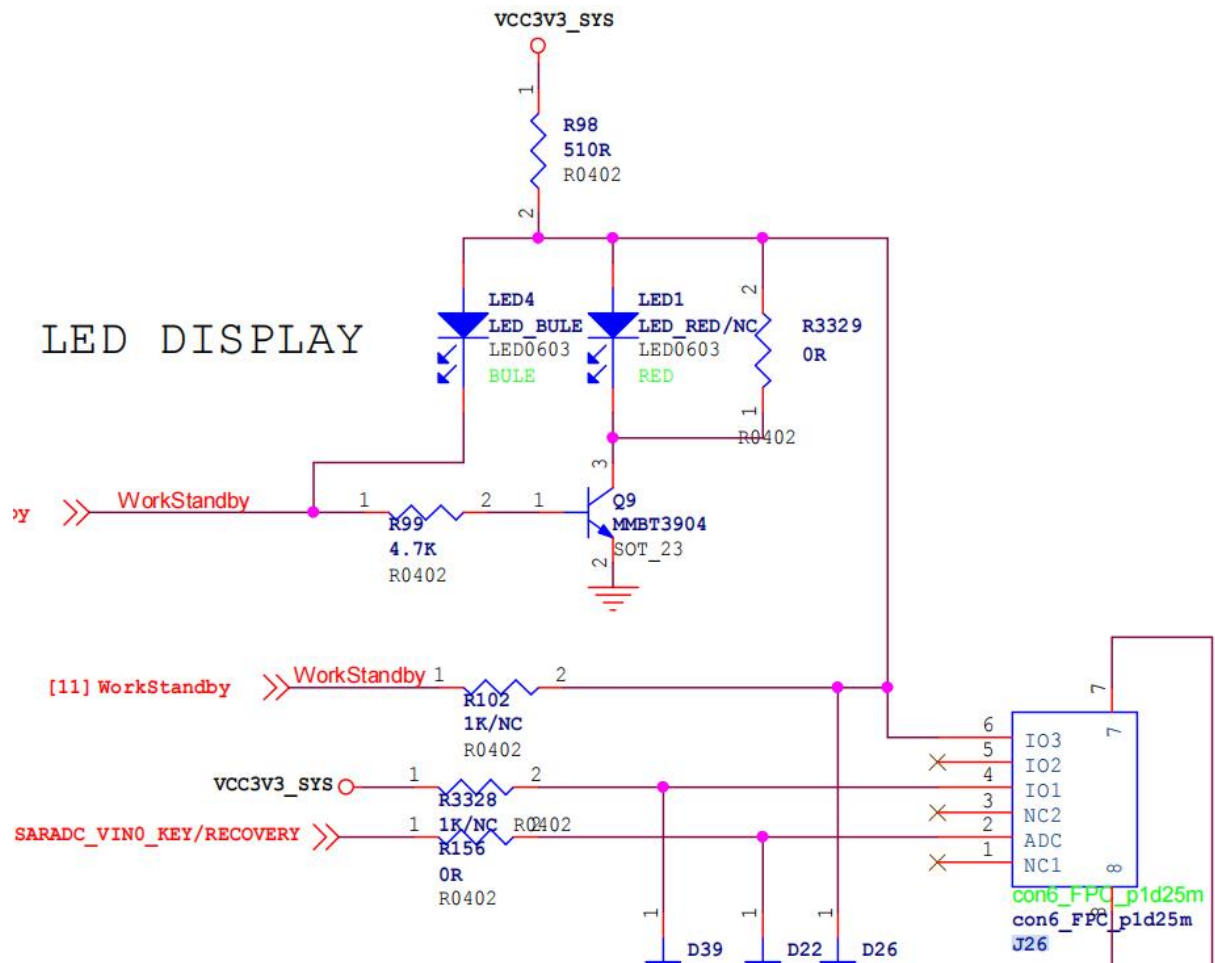
connector is a 1*6Pin/1.25mm Pitch wafer connector.



The PCBA physical pin sequence of **the ADC+LED interface** is shown in the figures below:



The pin sequence of **the ADC+LED interface** is shown as below:



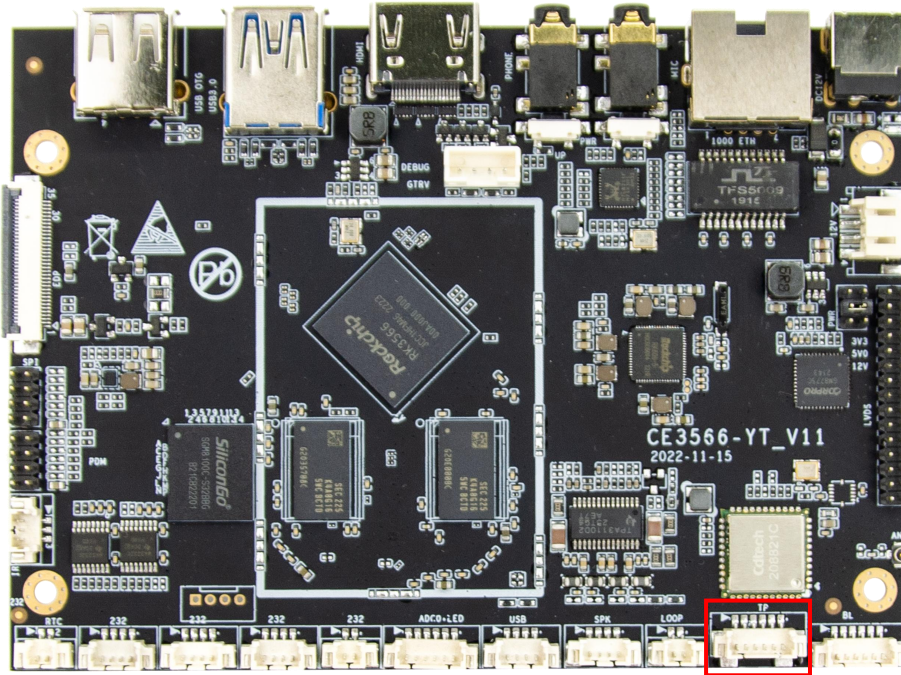
The ADC+LED interface is defined as follows:

Table 21 The Pin Definition of the ADC+LED Interface

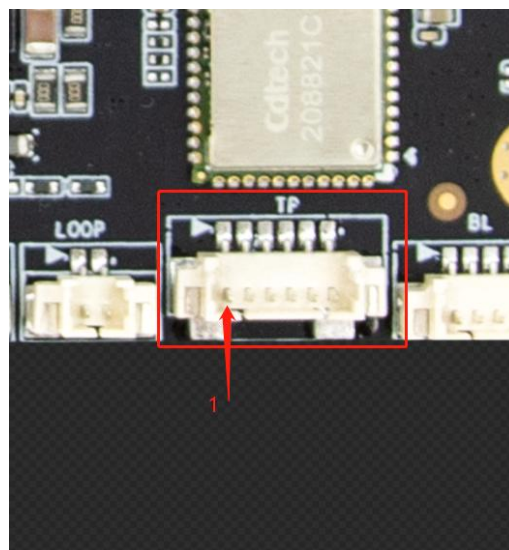
Pin	Definition	Description
1	NC	Not connected
2	SARADC_VIN0_KEY/RECOVERY	ADC input, 3V3 IO
3	NC	Not connected
4	VCC3V3_SYS	DC 3.3V
5	NC	Not connected
6	VCC3V3_SYS	DC 3.3V

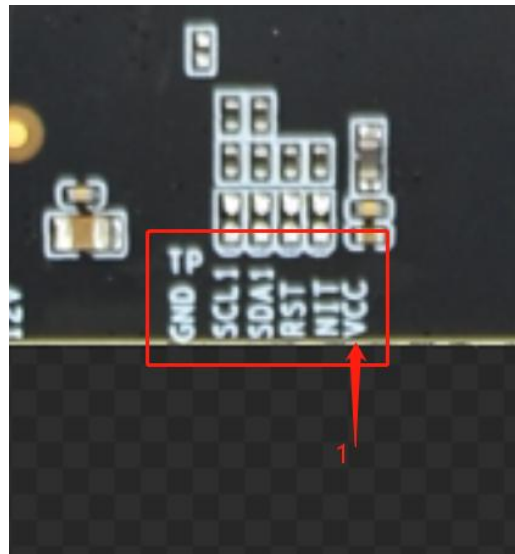
2.2.12. TP

DEBIX R3566-01 provides **one TP interface**: the refdes. is J13. The connector is a 1*6Pin/1.25mm Pitch wafer connector.

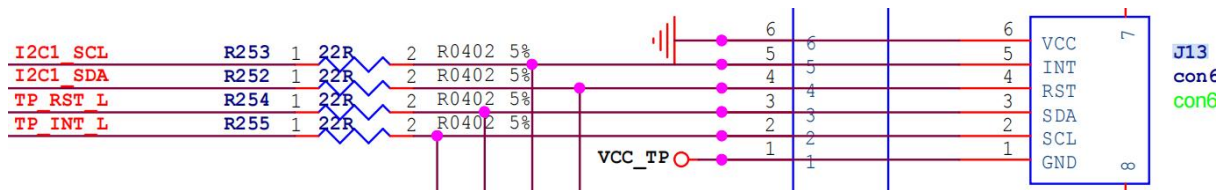


The PCBA physical pin sequence of **the TP interface** is shown in the figures below:





The pin sequence of **the TP interface** is shown as below:



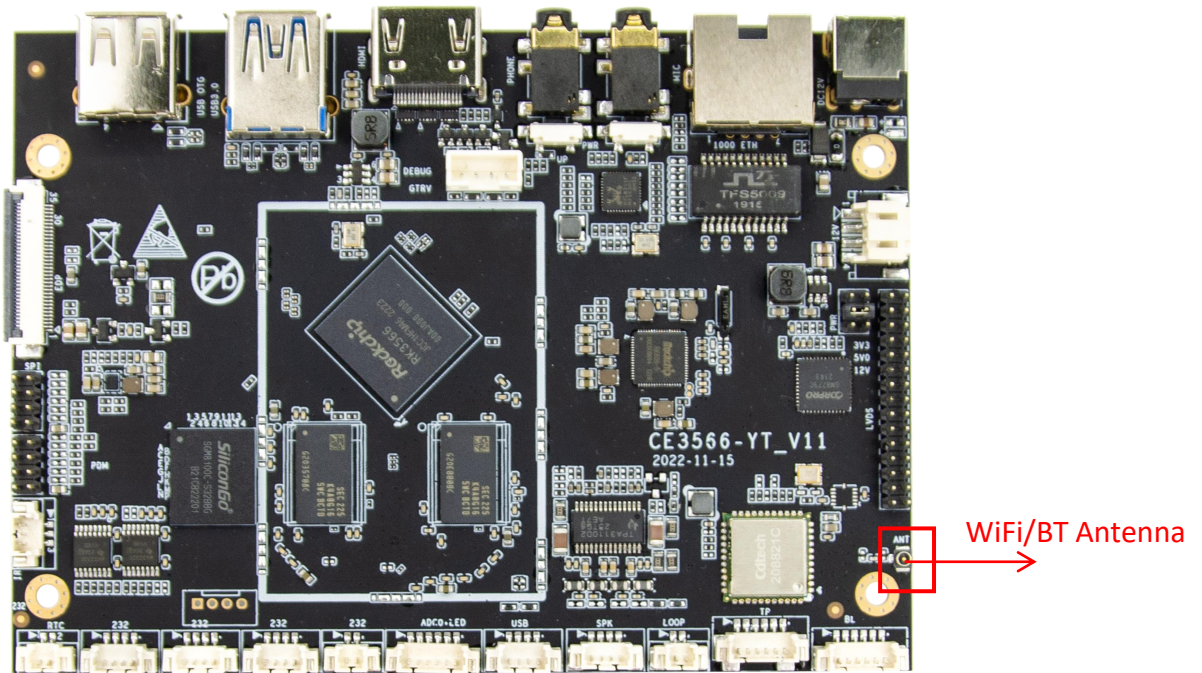
The TP interface is defined as follows:

Table 22 The Pin Definition of the TP Interface

Pin	Definition	Description
1	VCC_TP	Touch screen power supply, the voltage is 3.3V
2	TP_INT_L	Touch screen interrupt port, 3V3 IO
3	TP_RST_L	Touch screen reset, 3V3 IO
4	I2C1_SDA	The I2C data port of the touch screen, 3V3 IO
5	I2C1_SCL	The I2C clock port of the touch screen, 3V3 IO
6	GND	To ground, 3V3 IO

2.2.13. Antenna

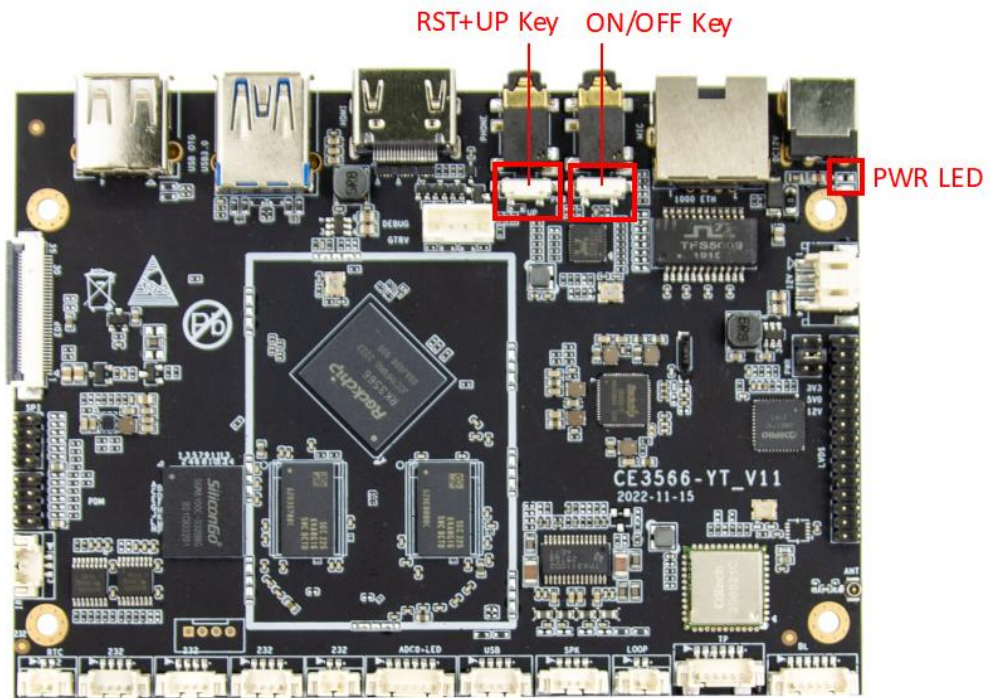
DEBIX R3566-01 provides **one WiFi/BT antenna interface**. As shown in the following figure:



2.2.14. LED & Key

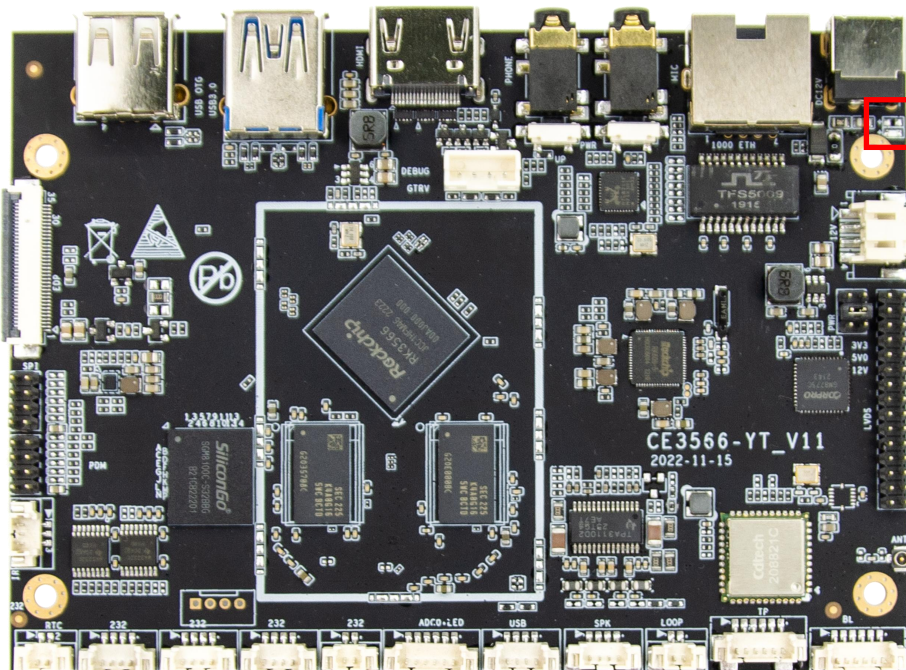
DEBIX R3566-01 provides **one LED indicator** and **two keys**:

- LED
 - 1 x PWR LED
- KEY
 - 1 x ON/OFF Key
 - 1 x RST+UP Key

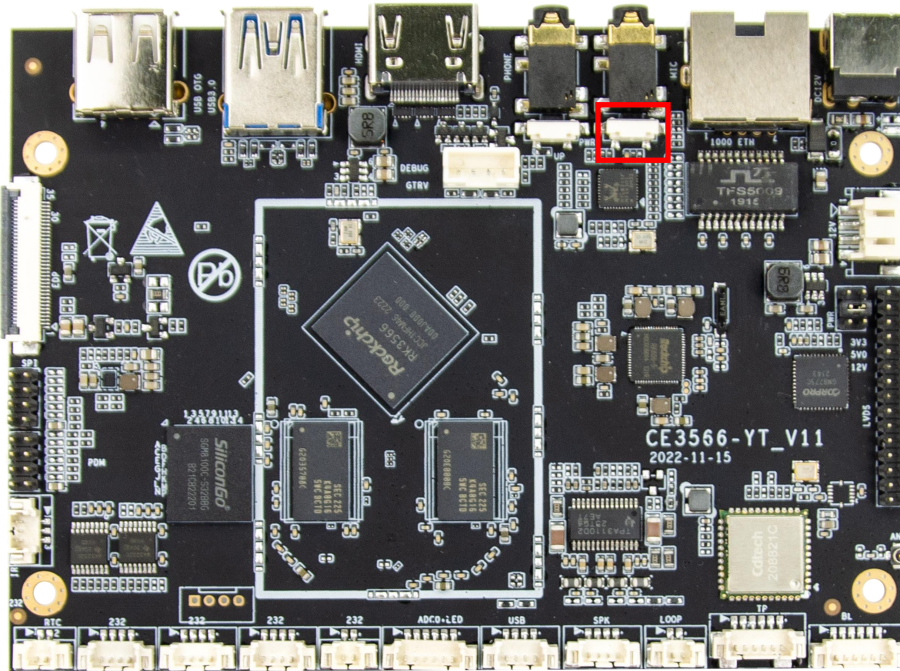


The layout of **the LEDs** and **keys** on the PCBA is shown in the following figures:

(1) 1 x PWR LED (Blue): the refdes. is LED4.



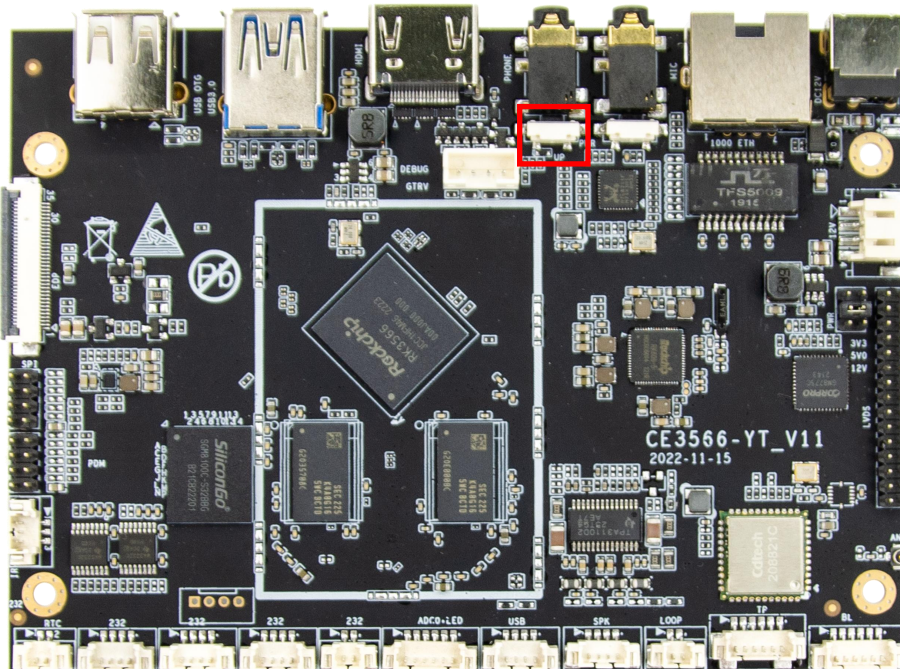
(2) 1 x ON/OFF Key: the refdes. is KEY1.



NOTE

Use a **pin tool** to access the key **through the MIC interface**.

(3) 1 x RST+UP Key: the refdes. is KEY2.



NOTE

Use a **pin tool** to access the key **through the HP interface**.

The specific states are described in the following table:

Table 23 Description of LED and Keys

Function Name		Status	Description
LED	Power LED (LED4)	Lighting	Power is on and the system is running
		off	Power is off
KEY	ON/OFF Key (KEY1)	Short press	Sleep/Wake up
		Long press	Power off/on
	RST+UP Key (KEY2)	Short press	System reset
		Long press	System upgrade

Chapter 3 Getting Started

3.1. Software Installation

- **Component Preparation**

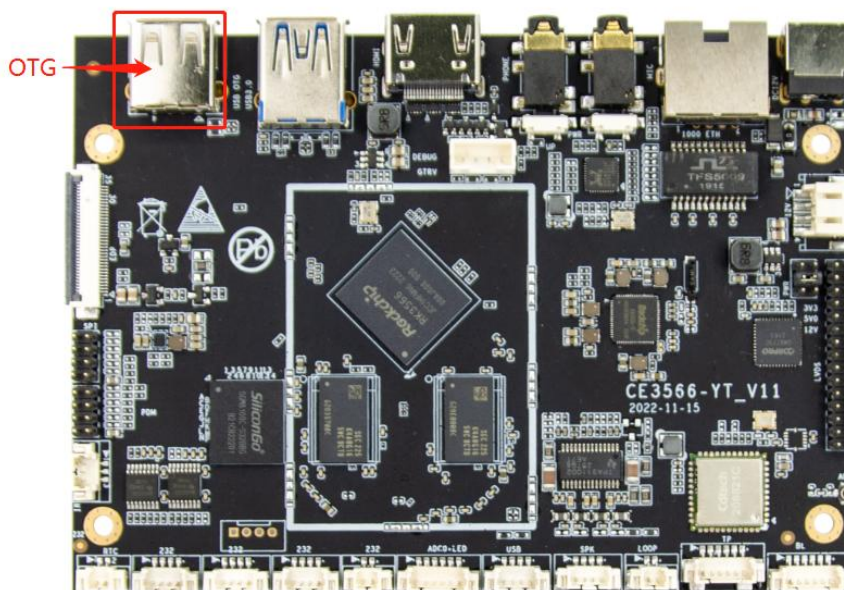
- ✓ DEBIX R3566-01 board
- ✓ USB Type-A data cable
- ✓ DC 12V-24V/2A power adapter
- ✓ PC (windows 10/11)

- **Burning to eMMC via USB**

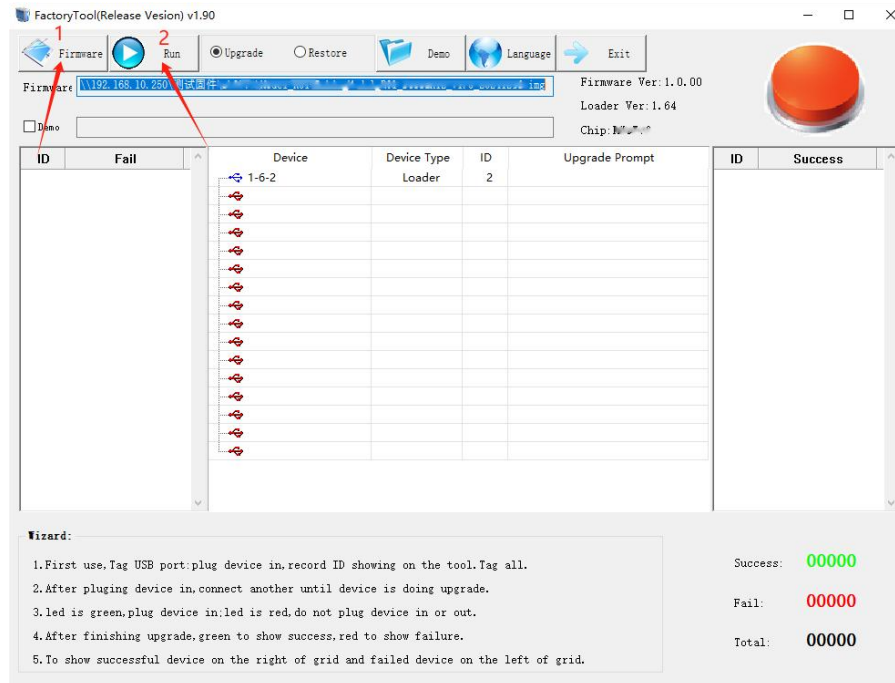
1. Download the corresponding **image** and the flashing tool **FactoryTool** from the [software download page of DEBIX official website](#) on your PC;
2. Power on the DEBIX R3566-01, open the **Terminal** on the DEBIX R3566-01, and then run the following command to enter **Loader Mode**.

reboot loader

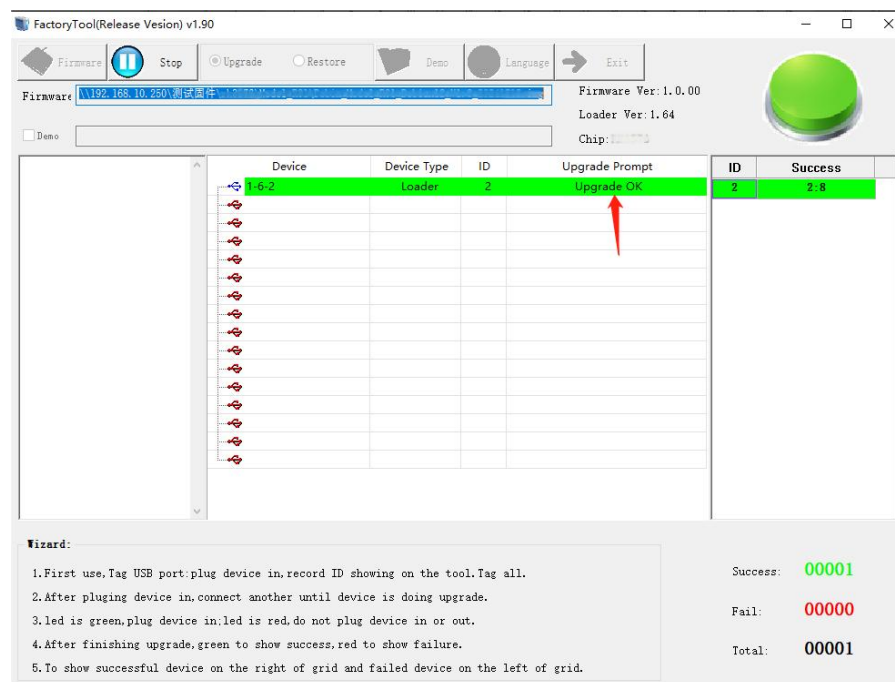
3. Use USB Type-A data cable to connect the OTG port of the DEBIX R3566-01 to the USB port of your PC;



- Run the flashing tool **FactoryTool**, click **Firmware** to load the system image you just downloaded from DEBIX official website, and then click **Run** to start the burning process. Please refer to the following figure.



- Wait for the system burning to finish. When it shows **"Upgrade OK"**, it means the burning is finished.



6. After burning, disconnect the power supply and OTG USB cable, make sure the DEBIX R3566-01 is completely powered off, and then connect the power supply again to start.