深 圳 金 亚 太 科 技 有 限 公 司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION

MODEL:XPI-iMX8MMini

APPROVED BY GENIATECH		
PREPARED BY 编写	**CHECKED BY 审核**	**APPROVED BY 批准**

Please return the origional copy after approved by your company with seal and signature.
请在贵公司盖章并签字后寄回正本一份。

APPROVED BY CUSTOMER		
COMMENTS 确认意见	**APPROVED BY 批准签字**	**COMPANY SEAL 盖章**

Website: www.geniatech.com
Address: 18th Floor, GDC Building, No 9th, Gaoxin Middle 3rd Road, Nanshan, Shenzhen, China

CONTENT

Revision History

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR

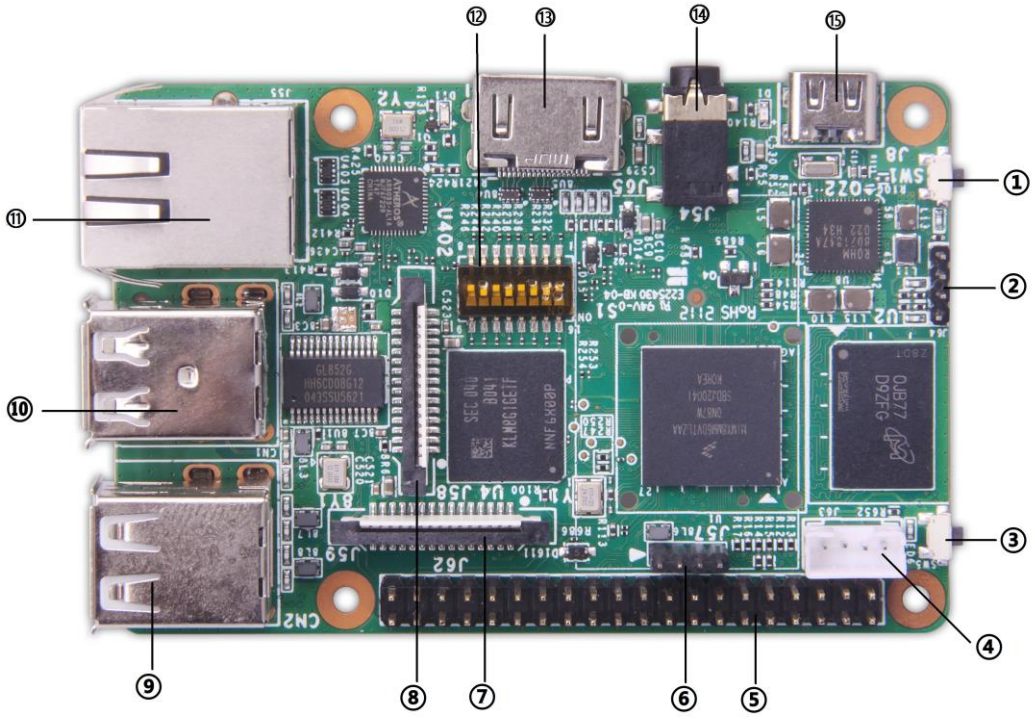
1. GENERAL DESCRIPTION

The XPI-iMX8M Mini is a microcomputer product of Raspberry Pi 4 Module B developed by Geniatech based on the NXP i.Mx 8M Mini platform. It can be used in wild rang of application scenario: Program education, software education and multimedia terminal and so on.

This product's key features including a NXP high-performance 64-bit quad-core processor, HDMI display support at resolutions up to 1080P , hardware video decode at up to 1080P, up to 4GB of RAM, dual-band 2.4/5.0 GHz wireless LAN, Bluetooth 4.0, Gigabit Ethernet, USB 2.0.

2. PRODUCT OVERVIEW

Below picture is for reference only, please prevail in kind.



No.	Name	Description
1	RESET Key	*1
2	M4 Core debug consloe	*1
3	POWER Key	*1
4	A53 Core debug consloe	*1
5	40 Pin GPIO header	*1
6	USB-WiFI/BT port	*1
7	MIPI CSI connector	*1
8	MIPI DSI connector	*1

9	USB2.0 double layer connector	*1(The upper USB2.0 interface of CN2 supports OTG function)
10	USB2.0 double layer connector	*1
11	RJ45	*1
12	BOOT DIP Switch	*1
13	HDMI Connector	*1(up to 1080P60)
14	3.5mm Headphone Jack	*1
15	DC IN	*1(5V/3A USB Type-C)

3.FEATURES

CHIPSET	NXP iMX8M Mini	
MARKET AREA	Global	
Processor	OS	Yocto(Linux)
	CPU	4xCortex-A53 core up to 1.8GHz per core 1x Cortex-M4 core up to 400MHz
	LPDDR4	1GB（1G-4G optional）
	EMMC FLASH	8GB eMMC5.1(8-128GB Optional)
NETWORK	Ethernet	RJ45, 10/100/1000M
	WiFi	WIFI Module 2.4G/5.8G (optional)
	Bluetooth	BT4.0(integrated in the WiFi module)
Interface	HDMI Out	*1
	USB 2.0	*4
	SD	*1
	Audio Out	*1（3.5mm Headphone Jack）
	DC IN	*1 (USB Type-C)
Connectivity	**1x Standard 40-pin GPIO header** • Can be expanded to UART, SPI, I2C ,PWM function **1x4 pin USB-Wifi connector** • Support USB-WiFi Module **1x MIPI DSI** • 2-lane MIPI DSI display port **1x MIPI CSI** • 2-lane MIPI CSI camera port	
Adapter	DC 5V / 3A	
Dimensions	85*56mm	

4.SUPPORT FORMATS

Audio

• S/PDIF input and output, including a new Raw Capture input mode

• Five synchronous audio interface (SAI) modules supporting I2S, AC97, TDM, codec/DSP, and DSD interfaces, including one SAI with 8 Tx and 8 Rx lanes, one SAI with 4 Tx and 4 Rx lanes, two SAI with 2 Tx and 2 Rx lanes, and one SAI with 1 Tx and 1Rx lane. Support over 20 channels of audio subject to I/O limitations.

• 8-Channel Pulse Density Modulation (PDM) input

Video

• 1080p60 VP9 Profile 0, 2 (10-bit)

• 1080p60 HEVC/H.265 Decoder

• 1080p60 AVC/H.264 Baseline, Main, High decoder

• 1080p60 VP8

• 1080p60 AVC/H.264 Encoder

• 1080p60 VP8

• Trust Zone support

5. Precautions for use

1. Relative humidity: ≤80% .
2. Operation temperature: Commercial field：0~ 50℃； Industrial field: -20~85℃.
3. Keep the Board away from static electricity.
4. Keep the Board away from water and other liquid.
5. Don’t use long connect wires which may affect performance and image quality.