



" "

1016  
+86 21 5108 6236

3 B 5  
[info@quectel.com](mailto:info@quectel.com)

200233

<http://www.quectel.com/cn/support/sales.htm>

<http://www.quectel.com/cn/support/technical.htm>

[support@quectel.com](mailto:support@quectel.com)

" "

|

|



1.0.0    2024-04-30    Bruce

---

	.....	<b>3</b>
	.....	<b>4</b>
	.....	<b>4</b>
	.....	<b>6</b>
<b>1</b>	.....	<b>7</b>
1.1.	.....	7
1.2.	.....	7
<b>2</b>	.....	<b>8</b>
<b>3</b>	.....	<b>9</b>
<b>4</b>	.....	<b>11</b>
4.1.	.....	11
4.2.	.....	13
4.2.1. USB	.....	13
4.2.2.	.....	13
4.2.3.	.....	13
4.2.4. GNSS	.....	13
4.2.5. SD SIM	.....	13
4.2.6. Flash	.....	13
4.2.7.	.....	13
4.2.8. ADC	.....	14
4.2.9.	.....	14
4.2.10. PSM	.....	14
<b>5</b>	.....	<b>15</b>
<b>6</b>	.....	<b>17</b>
6.1.	.....	17
6.2.	.....	18
<b>7</b>	.....	<b>19</b>
7.1.	.....	19
7.2.	.....	19
7.3.	.....	19
<b>8</b>	.....	<b>20</b>
8.1.	.....	20

1	.....	7
2	.....	7
3	.....	9

4	BOOT .....	10
5	.....	12
6	.....	17
7 I/O	.....	17
8	.....	18
9	..... !	
10	.....	20

图 1: PH-7(C4-P02)核心板渲染图 .....	8
图 10: 在核心板运行脚本 .....	23
图 11: 交互界面.....	23
图 2: 核心板引脚对应示意图 .....	11
图 3: 天线连接器尺寸 (单位: 毫米) .....	15
图 4: U.FL-LP 连接线系列.....	15
图 5: 安装尺寸 (单位: 毫米) .....	16
图 6: 固件对比.....	20
图 7: QPYcom 固件烧录.....	20
图 8: 下载脚本到核心板 .....	22
图 9: 核心板加载脚本 .....	22

# 1

PH-7                      2.54mm                      38PIN

**设计理念:** PH-7

Be water , My friend.

Python	Python	Open	Python
Python		<a href="https://python.quectel.com/download">https://python.quectel.com/download</a>	
Python	API	<a href="https://python.quectel.com/doc/API_reference/zh/index.html">https://python.quectel.com/doc/API_reference/zh/index.html</a>	

## 1.1.

1

QuecPython BG&EG

2

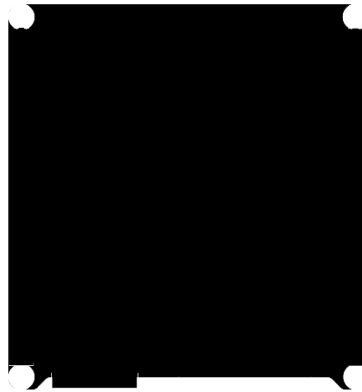
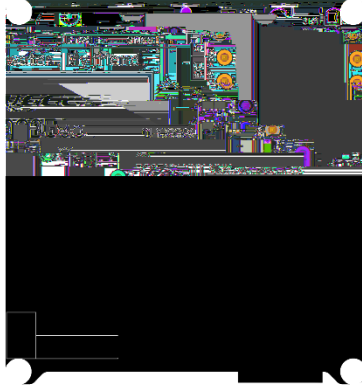
	BG95	BG96	EG915UEUAB	EG915ULAAB
QuecPython BG&EG	EG912UGLAA	EG		
	Python	API		QuecPython

## 1.2.

GPIO/UART/IIC/SPI/USB

EG  
Python                      Open C

# 2



1 PH-7(C4-P02)

# 3

PH-7

3

		-35 ~ 75	1
		-40 ~ 85	2
	2.54mm	Type-C (USB2.0/USB3.0)	
	USB	5. 1V: 3A	5V: 2A
		16V: 3A	5V: 2A
	BAT	3. 7V	
UART			(2.54mm)
SPI			(2.54mm)
IIC			(2.54mm)
USB*1	USB	Type-C	Python
	PWR		
	NET	P21	
LED*7	SK1	SIM1	SIM 1
		SIM 1	
	SK2	SIM2	SIM 2
		SIM 2	EG
	PSM	PSM	PSM

QuecPython PH-7(C4-P02)

	CHR			
	STD			
ADC		ADC0	VBAT	VBAT:ADC0=4:1
GPIO		GPIO		2.54mm
Level_Line		2.3V-5.5V 3.3V		IC host
PWM			2.54mm	
LT_EN				
PON	PSM	PSM_EINT	PSM	
MIC&SPK				
PA	PA		SPK PA	
4	BOOT			
	EG	EG		
	BG	BG		
BOOT	USB_BOOT			

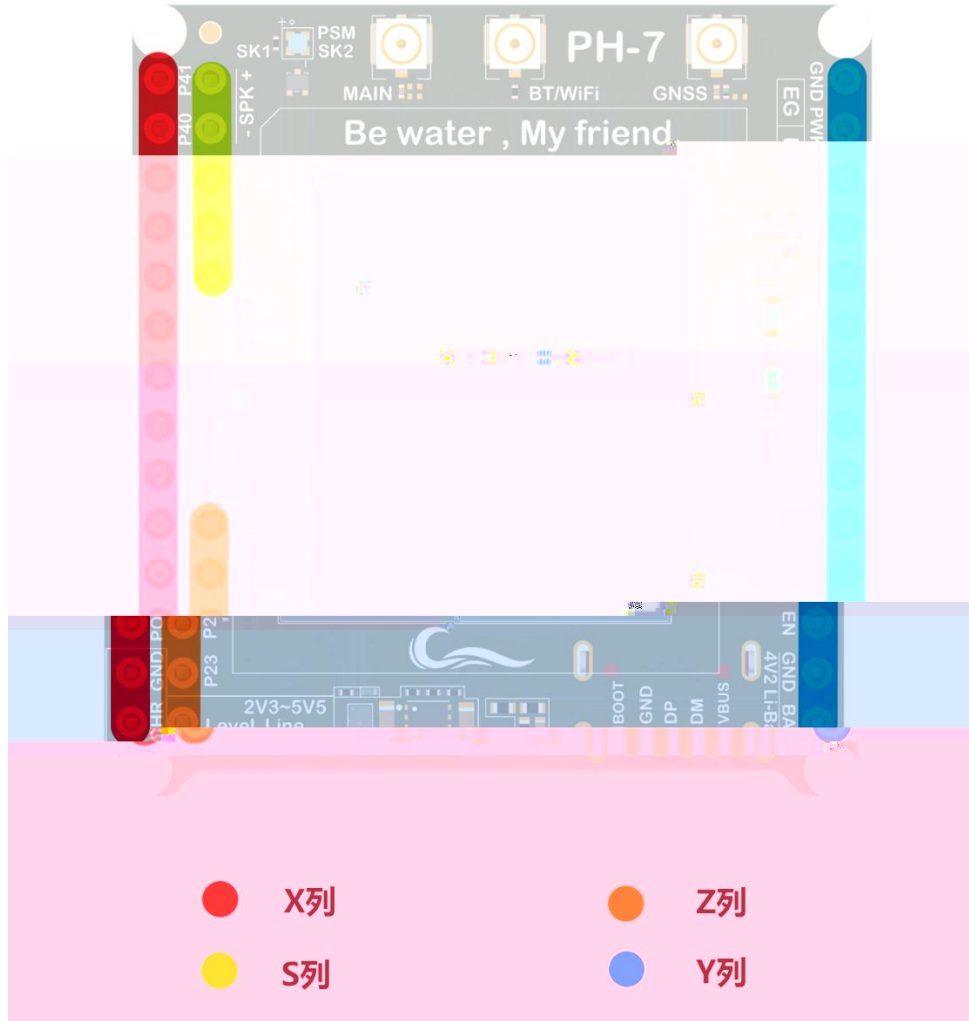
1.		3GPP	
2.			3GPP
	3GPP		

# 4

PH-7

## 4.1.

EG915U



5

GPIO14		BG_CS1		BG&EG_SDA1	<b>P41</b>	X1	S1	<b>SPK_N</b>	Y1	<b>GND</b>					
GPIO13		BG_CLK1		BG&EG_SCL1	<b>P40</b>	X2	S2	<b>SPK_P</b>	Y2	<b>POWERKEY</b>					
BG_GPIO16	BG_RX2	BG_MISO1			<b>P65</b>	X3	S3	<b>MIC_N</b>	Y3	<b>VDD_EXT</b>					
GPIO15	BG_TX2	BG_MOSI1		EG_MOSI0	<b>P64</b>	X4	S4	<b>MIC_P</b>	Y4	<b>P20</b>			EG_PWM0	BG_GPIO22	EG_GPIO16
GPIO21				EG_MISO0	<b>P88</b>	X5	S5	<b>PA</b>	Y5	<b>P85</b>		BG_PWM1		BG_GPIO18	EG_GPIO18
GPIO9		BG_SDA2	BG_CS0	EG_CS0	<b>P25</b>	X6									

## 4.2.

### 4.2.1. USB

Type-C USB  
 5V-16V X13 X14 Y13 Y14  
 4.2V  
 USB CHRG X14

### 4.2.2.

1 VIN  
 2 EN Y12 DCDC 1

### 4.2.3.

3.3V IC  
 LT\_EN Y10 LT\_EN Y10 1V8 Y11

### 4.2.4. GNSS

GNSS BG95  
 1 AT AT+QPGS=1 GNSS  
 2 GNSS GNSS P37  
 P37 GNSS

### 4.2.5. SD SIM

EG912UGLAA SD SD P36 SD  
 SD SD SIM2 SD SIM2 SIM2 SD  
 SD

### 4.2.6. Flash

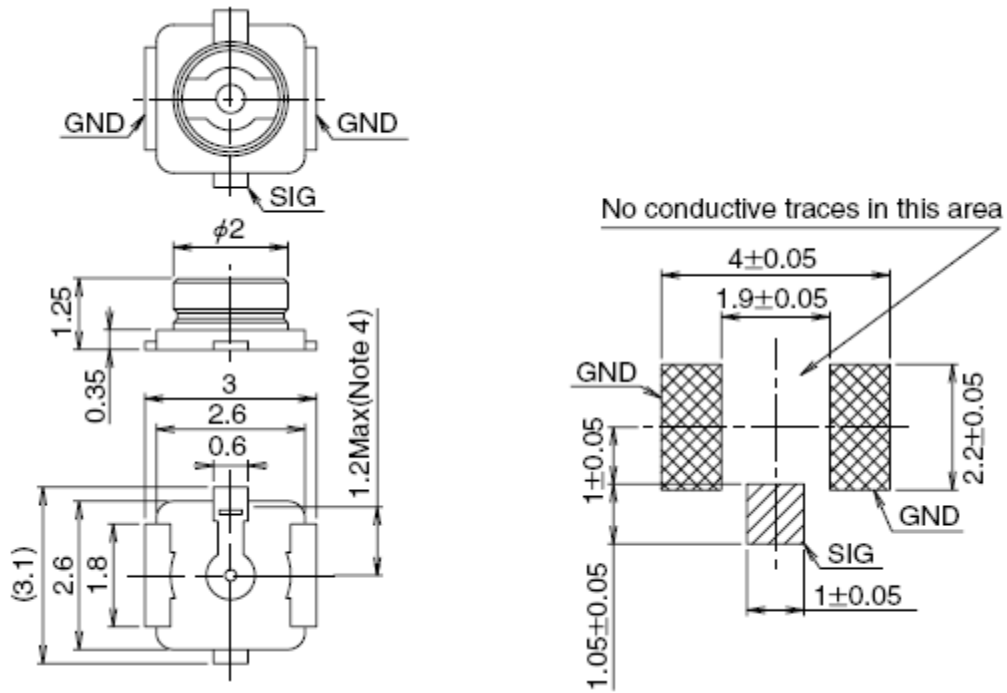
Flash Flash

### 4.2.7.

MIC SPK&PA EG912UGLAA  
 1 AT PA S5 PA  
 2 Python PA S5 P114 2



# 5

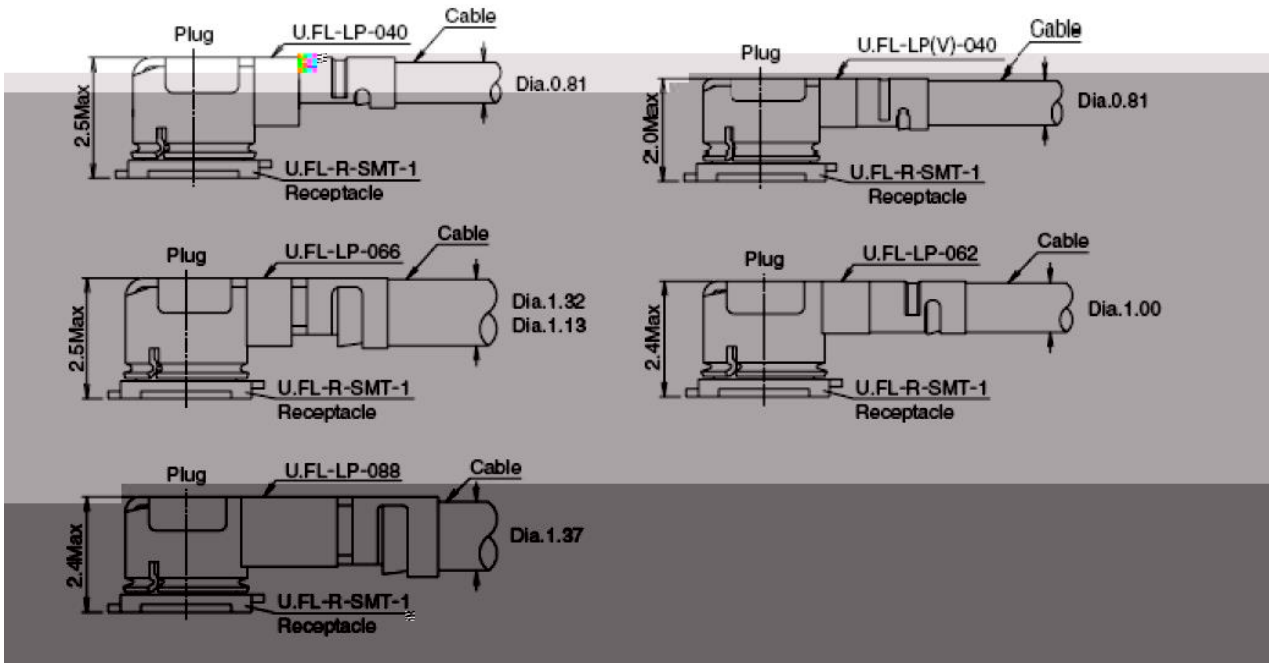


3

## U.FL-LP

	U.FL-LP-040	U.FL-LP-066	U.FL-LP(V)-040	U.FL-LP-062	U.FL-LP-088
Part No.					
Mated Height	2.5mm Max. (2.4mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.0mm Max. (1.9mm Nom.)	2.4mm Max. (2.3mm Nom.)	2.4mm Max. (2.3mm Nom.)
	34.8	46.6	71.7	63.7	62.1
	YES		Rel-S		

## 4 U.FL-LP



# 6

## 6.1.

USB                      5.0~5.1 V                      5V-16V                      DCDC                      3.8V

6

数

VBUS	USB	5	5.0	6	V
VIN		5	5.0	16	V

7 I/O

VIH		$0.7 \times VCC$	$VCC + 0.3$	V
VIL		-0.3	$0.3 \times VCC$	V
VOH		$VCC - 0.5$	VCC	V
VOL		0	0.4	V

\* VCC                      3.3V

6.2.

ESD

8

±4000	±8000	V
±4000	±8000	V
±500	±1000	V



# 8

## 8.1.

10

---

[1] [QuecPython-PH-7C4-P02 Core Board Specification and User Guide V1.0.0](#)

---

[2] [QuecPython-PH-7C4-P02 Schematic Diagram](#)

---

[3] [QuecPython-PH-7C4-P02 Silkscreen](#)