

holybro-mini-baseboard-ports.md

> For the complete documentation index, see llms.txt (<https://docs.holybro.com/llms.txt>). Markdown versions of documentation pages are available by appending `.md` to page URLs; this page is available as Markdown (<https://docs.holybro.com/autopilot/pixhawk-baseboards/pixhawk-mini-baseboard-ports.md>).

Pixhawk Mini Baseboard Ports

```
{% hint style="info" %}
This baseboard is compatible with both Pixhawk 5X & 6X, and any flight controller that follows the Pixhawk
{% endhint %}
```



```
{% hint style="info" %}

* FMU PWM OUT = AUX OUT
* I/O PWM OUT = MAIN OUT
* Refer to this diagram for location of pin1. All connectors are JST GH 1.25 mm Pitch unless noted otherwise


{% endhint %}
```

Power1 Port (2.00mm Pitch CLIK-Mate)

	Pin	Signal	Volt		
1	(red)	VDD5V_BRICK1/2	+5V		
2	(black)	VDD5V_BRICK1/2	+5V		
3	(black)	SCL1/2	+3.3V		
4	(black)	SDA1/2	+3.3V		
5	(black)	GND			
6	(black)	GND			

Telem1, Telem2 ports

	Pin	Signal	Volt		
1	(red)	VCC	+5V		
2	(black)	TX7/5/2			
3	(black)	RX7/5/2	+3.3V		
4	(black)	CTS7/5/2	+3.3V		
5	(black)	RTS7/5/2	+3.3V		
6	(black)	GND			

GPS 1 Port

	Pin	Signal	Volt		
1	(red)	VCC	+5V		
2	(black)	TX1(out)	+3.3V		
3	(black)	RX1(in)	+3.3V		
4	(black)	SCL1	+3.3V		
5	(black)	SDA1	+3.3V		
6	(black)	SAFETY_SWITCH	+3.3V		
7	(black)	SAFETY_SWITCH_LED	+3.3V		
8	(black)	VDD_3V3	+3.3V		
9	(black)	BUZZER-	0~5V		
10	(black)	GND			

GPS 2 Port

	Pin	Signal	Volt		
1	(red)	VCC	+5V		
2	(black)	TX8(out)	+3.3V		
3	(black)	RX8(in)	+3.3V		
4	(black)	SCL2	+3.3V		
5	(black)	SDA2	+3.3V		
6	(black)	GND			

CAN1 port

Pin	**Signal**	**Volt**
1(red)	VCC	+5V
2(black)	CANH1/2	+3.3V
3(black)	CANL1/2	+3.3V
4(black)	GND	GND

I2C Port

Pin	**Signal**	**Volt**
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1(red)	VCC	+5V
2(black)	SCL3	+3.3V
3(black)	SDA3	+3.3V
4(black)	GND	GND

Eth Port

Pin	**Signal**	**Volt**
1(red)	RXN	+3.3V
2(black)	RXP	+3.3V
3(black)	TXN	+3.3V
4(black)	TXP	+3.3V

DSM RC Port (JST-ZH 1.5mm Pitch)

Pin	**Signal**	**Volt**
1(yellow)	VDD_3V3_SPEKTRUM	+3.3V
2(black)	GND	GND
3(gray)	DSM/SPEKTRUM IN	+3.3V

SBUS RC port

Pin	**Signal**	**Volt**
1	VDD_5V _RC	+3.3V
2	SBUS/PPM in	+5V
3	NC	--
4	SBUS_OUT/RSSI_IN	+3.3V
5	GND	GND

IO Debug Port (JST-SH 1mm Pitch)

Pin	Signal	Volt
1(red)	IO_VDD_3V3	+3.3V
2 black	IO_USART1_TX	+3.3V
3(black)	NC	--
4(black)	IO_SWD_IO	+3.3V
5(black)	IO_SWD_CK	+3.3V
6(black)	IO_SWO	+3.3V
7(black)	IO_SPARE_GPIO1	+3.3V
8(black)	IO_SPARE_GPIO2	+3.3V
9(black)	IO_nRST	+3.3V
10(black)	GND	GND

FMU Debug Port (JST-SH 1mm Pitch)

Pin	Signal	Volt
1(red)	FMU_VDD_3V3	+3.3V
2 black	FMU_USART3_TX	+3.3V
3(black)	FMU_USART3_RX	+3.3V
4(black)	FMU_SWD_IO	+3.3V
5(black)	FMU_SWD_CK	+3.3V
6(black)	SPI6_SCK_EXTERNAL1	+3.3V
7(black)	NFC_GPIO	+3.3V
8(black)	PH11	+3.3V
9(black)	FMU_nRST	+3.3V
10(black)	GND	GND

FMU PWM OUT (AUX OUT)

Pin	Signal	Voltage
1 (Red)	VDD_Servo	
2 (Black)	FMU_CH1	+3.3V
3 (Black)	FMU_CH2	+3.3V
4 (Black)	FMU_CH3	+3.3V
5 (Black)	FMU_CH4	+3.3V
6 (Black)	FMU_CH5	+3.3V
7 (Black)	FMU_CH6	+3.3V
8 (Black)	FMU_CH7	+3.3V
9 (Black)	FMU_CH8	+3.3V
10 (Black)	GND	GND

I/O PWM OUT (MAIN OUT)

Pin	Signal	Voltage
1 (Red)	VDD_Servo	
2 (Black)	IO_CH1	+3.3V
3 (Black)	IO_CH2	+3.3V

```
(Black)</td><td>IO_CH3</td><td>+3.3V</td></tr><tr><td>5
(Black)</td><td>IO_CH4</td><td>+3.3V</td></tr><tr><td>6
(Black)</td><td>IO_CH5</td><td>+3.3V</td></tr><tr><td>7
(Black)</td><td>IO_CH6</td><td>+3.3V</td></tr><tr><td>8
(Black)</td><td>IO_CH7</td><td>+3.3V</td></tr><tr><td>9
(Black)</td><td>IO_CH8</td><td>+3.3V</td></tr><tr><td>10
(Black)</td><td>GND</td><td>GND</td></tr></tbody></table>
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# Agent Instructions
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```
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...
```

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`ask` is the immediate question: it should be specific, self-contained, and written in natural language.
`goal` is optional and describes the broader end goal you are ultimately trying to accomplish on behalf of t
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