SIGNALYZER H2 - Pin Assignment

Introduction

Signalyzer H series products are multi protocol USB host adapters which are capable of emulating most popular serial protocols such as SPI, I2C, JTAG and SWD. It allows a developer to interface a Windows, Mac OS or Linux PC to an embedded system via USB and provide a developer an access to a serial bus and target devices it connects.

Signalyzer H2 provides two completely identical and independent ports allowing user to emulate two different protocols concurently. Both Signalyzer H2 ports utilize same 26pin IDC header with 0.1” pitch and share identical signal assigment.

Figure 1. Connector, Front view.

Connector A

Pin	Name	5V tolerant	SPI	I2C	JTAG	SWD	UART	-
1	GND	Common / GND						
2	VUSB	USB 5V						
Port 1								
3	GPIO00	YES	**SCK**	**SCL**	**TCK**	**SWDCLK**	TXD	
4	GPIO01	YES	**MOSI**	**SDA (1)**	**TDI**	**SWDIO (2)**	RXD	
5	GPIO02	YES	**MISO**	**SDA (1)**	**TDO**	**SWDIO (2)**	RTS	
6	GPIO03	YES	GPIO/CS	GPIO	**TMS**	GPIO	CTS	
7	GPIO04	YES	GPIO/CS	GPIO	GPIO	GPIO	DTR	
8	GPIO05	YES	GPIO/CS	GPIO	GPIO	GPIO	DSR	
9	GPIO06	YES	GPIO/CS	GPIO	GPIO	GPIO	DCD	
10	GPIO07	YES	GPIO/CS	GPIO	GPIO	GPIO	RI	
11	GPIO08	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
12	GPIO09	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
13	GPIO10	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
14	GPIO11	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
15	GPIO12	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
16	GPIO13	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
17	GPIO14	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
18	GPIO15	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
Auxiliary GPIO								
19	GPIO16	**NO**	Auxiliary GPIO					

20	GPIO17	**NO**	Auxiliary GPIO					
21	GPIO18	**NO**	Auxiliary GPIO					
22	GPIO19	**NO**	Auxiliary GPIO					
23	GPIO20	**NO**	Auxiliary GPIO					
24	GPIO21	**NO**	Auxiliary GPIO					
25	GND	Common / GND						
26	VUSB	USB 5V						

Notes:
(1) For correct I2C operation both SDA signals (pins 4 and 5) must be tied together. The Signalyzer H2 and H4 drives SCL and SDA line high during byte transfer.

(2) For correct SWD operation both SWDIO signals (pins 4 and 5) must be tied together.

Connector B

Pin	Name	5V tolerant	SPI	I2C	JTAG	SWD	UART	-
1	GND	Common / GND						
2	VUSB	USB 5V						
Port 2								
3	GPIO00	YES	**SCK**	**SCL**	**TCK**	**SWDCLK**	TXD	
4	GPIO01	YES	**MOSI**	**SDA (1)**	**TDI**	**SWDIO (2)**	RXD	
5	GPIO02	YES	**MISO**	**SDA (1)**	**TDO**	**SWDIO (2)**	RTS	
6	GPIO03	YES	GPIO/CS	GPIO	**TMS**	GPIO	CTS	
7	GPIO04	YES	GPIO/CS	GPIO	GPIO	GPIO	DTR	
8	GPIO05	YES	GPIO/CS	GPIO	GPIO	GPIO	DSR	
9	GPIO06	YES	GPIO/CS	GPIO	GPIO	GPIO	DCD	
10	GPIO07	YES	GPIO/CS	GPIO	GPIO	GPIO	RI	
11	GPIO08	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
12	GPIO09	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
13	GPIO10	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
14	GPIO11	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
15	GPIO12	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
16	GPIO13	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
17	GPIO14	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
18	GPIO15	YES	GPIO/CS	GPIO	GPIO	GPIO	*	
Auxiliary GPIO								
19	GPIO16	**NO**	Auxiliary GPIO					
20	GPIO17	**NO**	Auxiliary GPIO					
21	GPIO18	**NO**	Auxiliary GPIO					
22	GPIO19	**NO**	Auxiliary GPIO					
23	GPIO20	**NO**	Auxiliary GPIO					
24	GPIO21	**NO**	Auxiliary GPIO					
25	GND	Common / GND						

26	VUSB	USB 5V						

Notes:
(1) For correct I2C operation both SDA signals (pins 4 and 5) must be tied together. The Signalyzer H2 and H4 drives SCL and SDA line high during byte transfer.

(2) For correct SWD operation both SWDIO signals (pins 4 and 5) must be tied together.

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