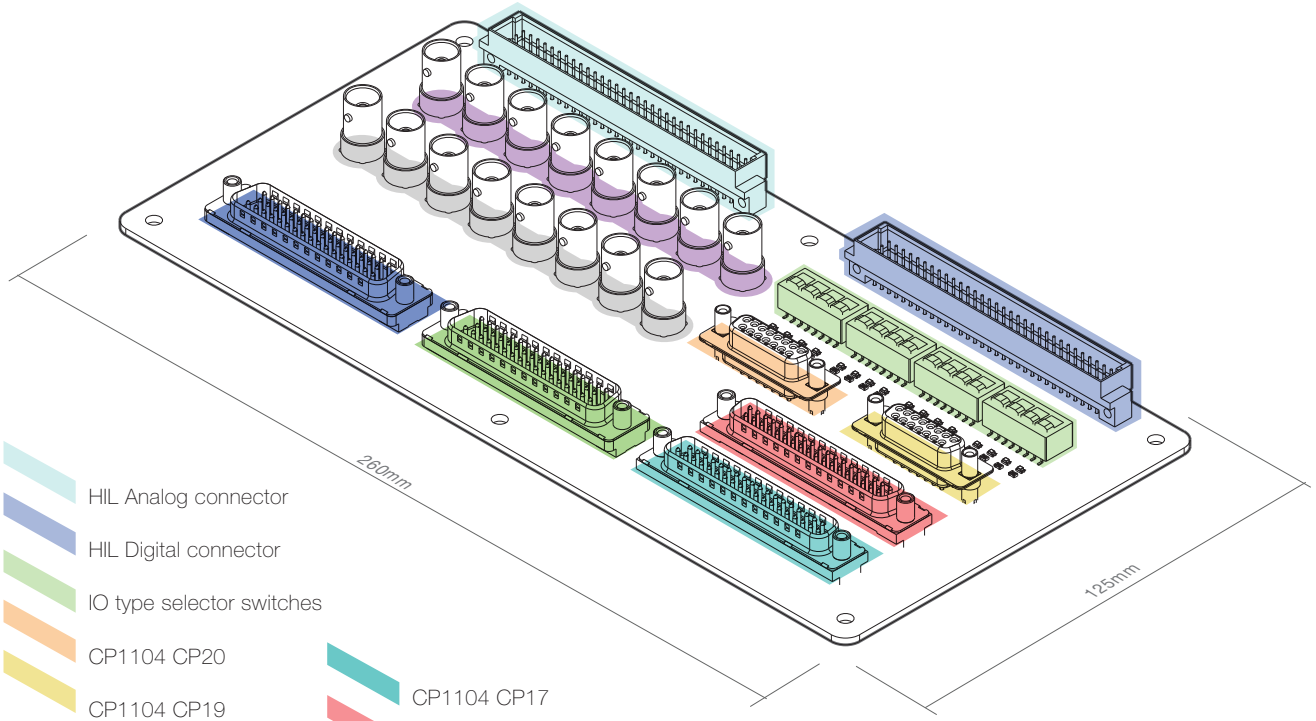
HIL dS Interface Type C

Plug-and-play interfaces for easy Rapid Control Prototyping



Application

The HIL dS Interface Type-C provides a ready-to-go interface between all Typhoon HIL emulators (4-Series and 6-Series) and the dSPACE's DS1104 controller with CP1104 control panel.

With a dSPACE 1104 as the controller, and any supported HIL device as the plant, you have a complete test bench for a multitude of applications: automotive, drives, or power electronics.

Features and Benefits

- Pinout 1-to-1 compatible with supported dSPACE hardware products
- Digital IO type settable via 32 SPDT switches
- LED indication of digital IO activity

Technical Details (short)

Compatibility - HIL devices	HIL402; HIL404 HIL602+; HIL604; HIL606
Designed for	dSPACE DS1104 with CP1104 connector panel
Supported connectors	CP17; CP18; CP19; CP20; P1A, P1B

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Pinout - tables

Connector CP1104 CP17

Pin	Signal (CP1104)	Signal (HIL)	Pin	Signal (dSpace)	Signal (HIL)
1	GND	GND	20	IO0	DI0 or DO0
2	IO1	DI1 or DO1	21	IO2	DI2 or DO2
3	IO3	DI3 or DO3	22	GND	GND
4	GND	GND	23	IO4	DI4 or DO4
5	IO5	DI5 or DO5	24	IO6	DI6 or DO6
6	IO7	DI7 or DO7	25	GND	GND
7	GND	GND	26	IO8	DI8 or DO8
8	IO9	DI9 or DO9	27	IO10	DI10 or DO10
9	IO11	DI11 or DO11	28	GND	GND
10	GND	GND	29	IO12	DI12 or DO12
11	IO13	DI13 or DO13	30	IO14	DI14 or DO14
12	IO15	DI15 or DO15	31	GND	GND
13	GND	GND	32	IO16	DI16 or DO16
14	NC	NC	33	NC	NC
15	NC	NC	34	GND	GND
16	GND	GND	35	GND	GND
17	GND	GND	36	NC	NC
18	GND	GND	37	NC	NC
19	GND	GND			

Connector CP1104 CP18

Pin	Signal (CP1104)	Signal (HIL)	Pin	Signal (dSpace)	Signal (HIL)
1	GND	GND	20	GND	GND
2	SCAP1	DI19	21	SCAP2	DI30
3	SCAP3	DI31	22	SCAP4	DI32
4	GND	GND	23	ST1PWM	DI26
5	ST2PWM	DI27	24	ST3PWM	DI28
6	GND	GND	25	GND	GND
7	SPWM1	DI17	26	SPWM2	DI18
8	SPWM3	DI19	27	SPWM4	DI20
9	SPWM5	DI21	28	DISPWM6	DI22
10	SPWM7	DI23	29	SPWM8	DI24
11	SPWM9	DI25	30	GND	GND
12	GND	GND	31	GND	GND
13	GND	GND	32	GND	GND
14	GND	GND	33	GND	GND
15	GND	GND	34	SSOMI	NC
16	SSIMO	NC	35	SSTE	NC
17	SSCLK	NC	36	GND	GND
18	NC	NC	37	GND	GND
19	NC	NC			

Connector CP1104 CP19

Pin	Signal (CP1104)	Signal (HIL)	Pin	Signal (dSpace)	Signal (HIL)
1	NC	NC	9	NC	NC
2	PHI0(1)	DO17	10	GND	GND
3	nPHI0(1)	DO18	11	GND	GND
4	PHI90(1)	DO19	12	GND	GND
5	nPHI90(1)	DO20	13	GND	GND
6	IDX(1)	DO21	14	GND	GND
7	nIDX(1)	DO22	15	GND	GND
8	GND	GND			

Connector CP1104 CP20

Pin	Signal (CP1104)	Signal (HIL)	Pin	Signal (dSpace)	Signal (HIL)
1	NC	NC	9	NC	NC
2	PHI0(2)	DO23	10	GND	GND
3	nPHI0(2)	DO24	11	GND	GND
4	PHI90(2)	DO25	12	GND	GND
5	nPHI90(2)	DO26	13	GND	GND
6	IDX(2)	DO27	14	GND	GND
7	nIDX(2)	DO28	15	GND	GND
8	GND	GND			

Connector DS1104 P1A

Pin	Signal (DS1104)	Signal (HIL)	Pin	Signal (DS1104)	Signal (HIL)	Pin	Signal (DS1104)	Signal (HIL)
1	GND	GND	18	NC	NC	34	NC	NC
2	NC	NC	19	SCAP4	DI32	35	NC	NC
3	SCAP3	DI31	20	SCAP1	DI29	36	SCAP2	DI30
4	NC	NC	21	SPWM5	DI21	37	SPWM6	DI22
5	SPWM4	DI20	22	SPWM2	DI18	38	SPWM3	DI19
6	SPWM1	DI17	23	nIDX(1)	DO22	39	GND	GND
7	IDX(1)	DO21	24	PHI90(1)	DO19	40	nPHI90(1)	DO20
8	nPHI0(1)	DO18	25	GND	GND	41	PHI0(1)	DO17
9	NC	NC	26	IO14	DI14 or DO14	42	IO16	DI16 or DO16
10	IO12	DI12 or DO12	27	IO8	DI8 or DO8	43	IO10	DI10 or DO10
11	IO6	DI6 or DO6	28	IO2	DI2 or DO2	44	IO4	DI4 or DO4
12	NC	NC	29	DACH7	AI7	45	NC	NC
13	NC	NC	30	GND	GND	46	DACH5	AI5
14	DACH3	AO3	31	DACH1	AI1	47	GND	GND
15	GND	GND	32	GND	GND	48	ADCH7	AO7
16	ADCH5	AO5	33	ADCH3	AO3	49	GND	GND
17	GND	GND				50	ADCH1	AO1

Connector DS1104 P1B

Pin	Signal (DS1104)	Signal (HIL)	Pin	Signal (DS1104)	Signal (HIL)	Pin	Signal (DS1104)	Signal (HIL)
1	GND	GND	18	NC	NC	34	NC	NC
2	NC	NC	19	SSOMI	NC	35	NC	NC
3	SSIMO	NC	20	SSCLK	NC	36	SSTE	NC
4	NC	NC	21	ST2PWM	DI27	37	ST3PWM	DI28
5	ST1PWM	DI26	22	SPWM8	DI24	38	SPWM9	DI25
6	SPWM7	DI23	23	nIDX(2)	DO28	39	GND	GND
7	IDX(2)	DO27	24	PHI90(2)	DO25	40	nPHI90(2)	DO26
8	nPHI0(2)	DO24	25	GND	GND	41	PHI0(2)	DO23
9	NC	NC	26	IO15	DI15 or DO15	42	NC	NC
10	IO13	DI13 or DO13	27	IO9	DI9 or DO9	43	IO11	DI11 or DO11
11	IO7	DI7 or DO7	28	IO3	DI3 or DO3	44	IO5	DI5 or DO5
12	IO1	DI1 or DO1	29	DACH8	AI8	45	NC	NC
13	NC	NC	30	GND	GND	46	DACH6	AI6
14	DACH4	AI4	31	DACH2	AI2	47	GND	GND
15	GND	GND	32	GND	GND	48	ADCH8	AO8
16	ADCH6	AO6	33	ADCH4	AO4	49	GND	GND
17	GND	GND				50	ADCH2	AO2

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HIL dS Interface Type C

Interface for dSpaceTM devices.

- ☑ No additional tools required.
- ☑ Plug and Play.

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