HIL TI DSP180 Interface

Start testing your control algorithm in no time.

Legend

- HIL Analog connector
- HIL Digital connector
- Measurement Terminals
- HIL PSU selector switch
- External PSU Connector
- CAN
- JTAG
- HSEC180 Control Card Connector

223.52mm

86.36mm
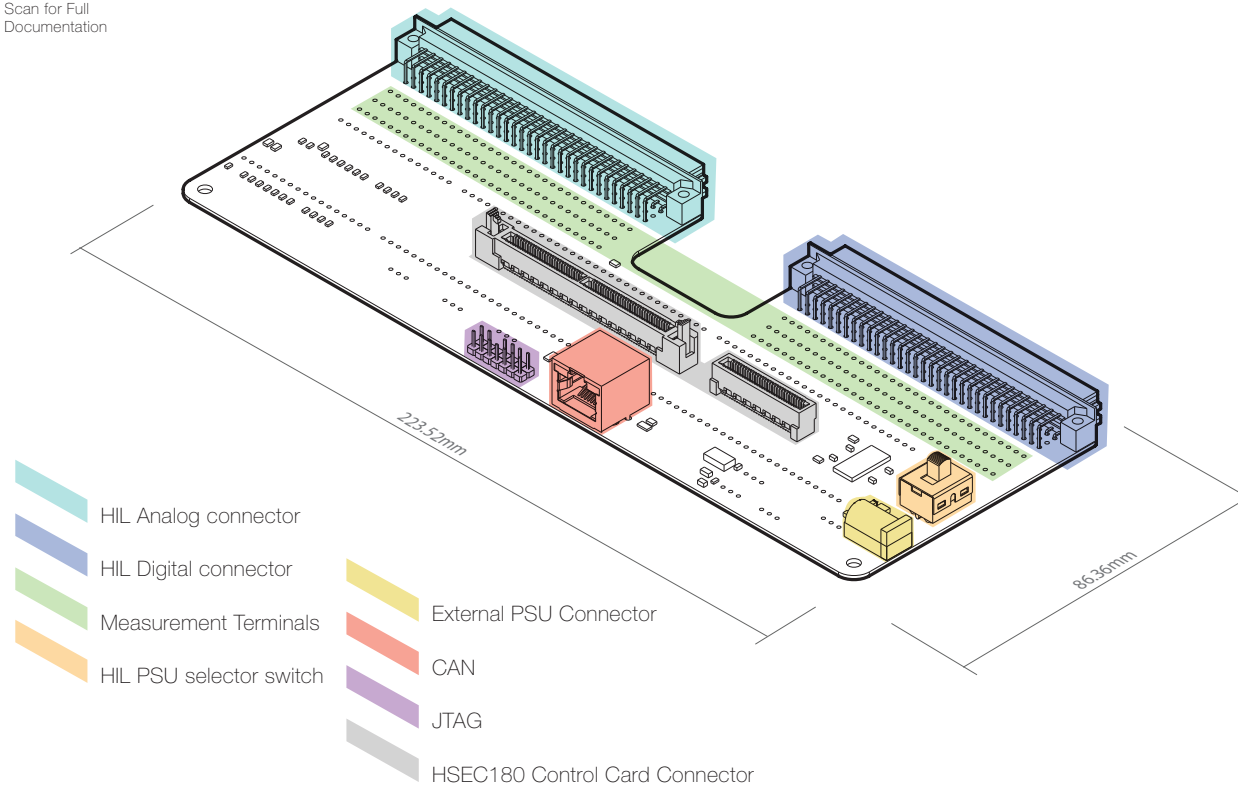
Applications

The HIL TI DSP180 Interface provides a pin-to-pin compatible interface between Typhoon HIL emulators and HSEC180 C2000 Control Cards. In less than 5 minutes you can plug an interface to a Typhoon HIL real-time emulator, map the signals, and run models with closed loop control.

Via the HIL TI DSP180 interface, any supported Control Card can be connected to any Typhoon HIL emulator, without cables or external power supplies. All required protocols, such as JTAG and UART, are available and accessible.

You can now focus on DSP control code development, instead of hardware interface development.

Features and Benefits

- A total of 64 TI control card pins connected to HIL
- Easily accessible measurement terminals, for monitoring all DSP and HIL signals
- Standard 13 pin 2.54 mm JTAG connector

- RJ45 connector for CAN bus
- DC jack connector, for board power in standalone use cases (without HIL device)

Technical Details

Table 1: Routing of Analog signals

Typhoon HIL Analog Stage	DSP Analog Stage
AO1/AI1*	ADC–A0/DAC-A
AO2/AI2*	ADC–A1/DAC-B
AO3	ADC–A2
AO4	ADC–A3
AO5	ADC–A4
AO6	ADC–A5
AO7	ADC–14
AO8	ADC–15
AO9	ADC–B0
AO10/AI3*	ADC-B1/DAC-C
AO11	ADC–B2
AO12	ADC–B3
AO13	ADC–B4
AO14	ADC–B5
AO15	ADC–D0
AO16	ADC–D1
AO17	ADC–C2
AO18	ADC–C3
AO19	ADC–C4
AO20	ADC–C5
AO21	ADC–D2
AO22	ADC–D3
AO23	ADC–D4
AO24	ADC–D5

* Depending on the position of R1, R2, and R3 jumpers, the HIL AO or HIL AI is connected to the DSP analog pin. Default settings are with the HIL AO connected to DSP ADC.

Table 2: Routing of Digital signals

| Typhoon HIL Digital Output	DSP Digital Input	Typhoon HIL Digital Input	DSP Digital Output
DO1	GPIO-54/QEP-2A	DI1	GPIO-00/PWM-1A
DO2	GPIO-55/QEP-2B	DI2	GPIO-02/PWM-2A
DO3	GPIO-56/QEP-2S	DI3	GPIO-04/PWM-3A
DO4	GPIO-57/QEP-2I	DI4	GPIO-06/PWM-4A
DO5	GPIO-50	DI5	GPIO-08/PWM-5A
DO6	GPIO-51	DI6	GPIO-10/PWM-6A
DO7	GPIO-52	DI7	GPIO-01/PWM-1B
DO8	GPIO-53	DI8	GPIO-03/PWM-2B
DO9	GPIO-35	DI9	GPIO-05/PWM-3B
DO10	GPIO-36	DI10	GPIO-07/PWM-4B
DO11	GPIO-37	DI11	GPIO-09/PWM-5B
DO12	GPIO-38	DI12	GPIO-11/PWM-6B
DO13	GPIO-60	DI13	GPIO-14/PWM-8A
DO14	GPIO-61	DI14	GPIO-12/PWM-7A
DO15	GPIO-62	DI15	GPIO-15/PWM-8B
DO16	GPIO-63	DI16	GPIO-13/PWM-7B
		DI17	GPIO-34
		DI18	GPIO-39
		DI19	GPIO-40
		DI20	GPIO-41
		DI21	GPIO-44
		DI22	GPIO-45
		DI23	GPIO-48
		DI24	GPIO-49

Thank you!

Your order made our day, and we hope our package returns the same favor.

Typhoon HIL

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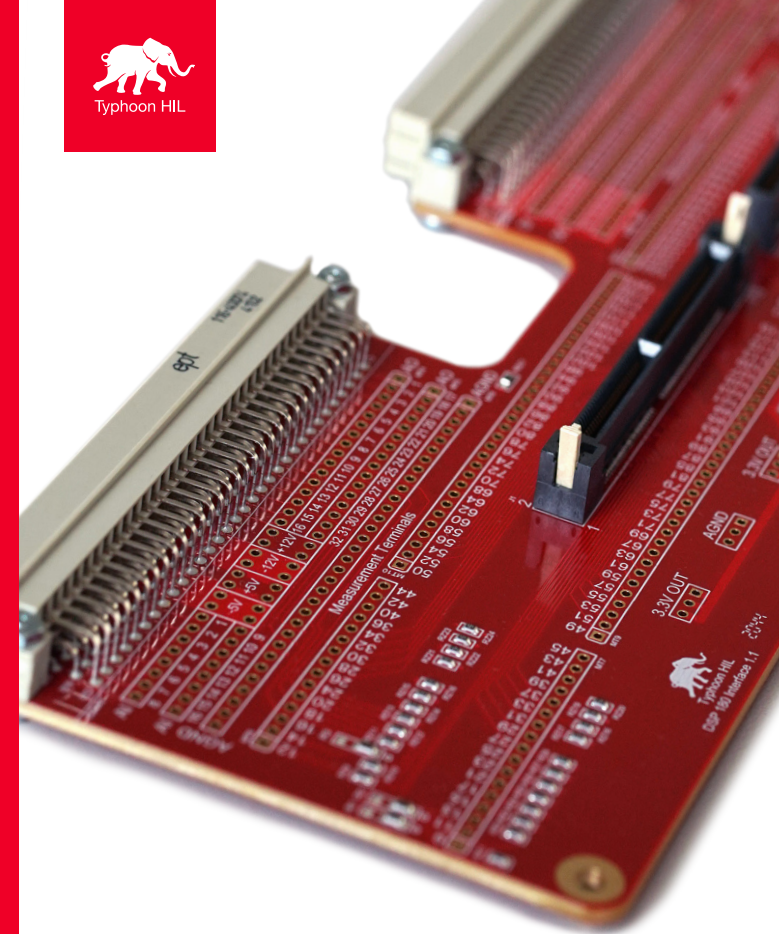
HIL TI DSP180 Interface

Interface for Texas Instruments 180-pin controlCARD.

☑ Easy-to-reach measurement terminals.
☑ No additional tools required.
☑ Plug and Play.

www.typhoon-hil.com