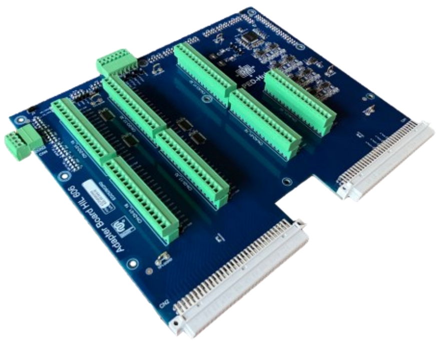
Adapter Board for Typhoon 606

PN: ED250602R0



Key Technical Features:

- Connects Analog and Digital Inputs/Outputs of Typhoon HIL and the PED-Board
- All signals with Test Points
- Extra 8 ADC's connected
- *LabVIEW Starting Project with all signals mapped!*

30 x PWM

- All PED-Board PWMs connected to Digital Inputs (DI) of Typhoon HIL

32 x ADC

- PED-Board ADC1, ADC2, ADC3 connected to the Analog Outputs (AO) of Typhoon HIL. Extra ADC4 with 8 inputs.

Resolver Break-Out (PED-Board)

- Direct passthrough of PED-Board resolver pins to external connector

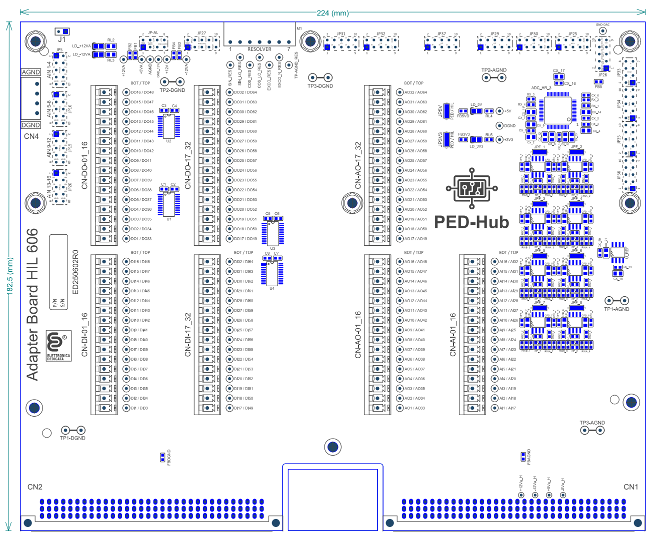
20 x I/Os

- PED-Board (3,3V) I/Os connected to Digital Outputs (DO) of Typhoon HIL (5V) through translating transceivers (74LVC4245AD)

Characteristics

Storage temperature (IEC 60068-2-1, IEC 60068-2-2)	-40 to 85 °C
Operating temperature	-25 to 60 °C
Operating humidity (IEC 60068-2-56)	10 to 90% RH, noncondensing
Storage humidity (IEC 60068-2-56)	5 to 95% RH, noncondensing
Maximum altitude	5000 m
Pollution Degree (IEC 60664)	2
Dimensions	224mm x 182.5mm

Layout



Mapping – Analog

PED-Board		Adapter Board		
		Test Point Label / **Typhoon HIL**	Break-out Connector	
IN	GROUP			Pin
AIN-32	ADC4 * -5V ↔ 5V (default) or 0V↔10V *Placed on adapter board*	AO1 / AO33	**CN-AO-1_16**	1
AIN-31		AO2 / AO34		2
AIN-30		AO3 / AO35		3
AIN-29		AO4 / AO36		4
AIN-28		AO5 / AO37		5
AIN-27		AO6 / AO38		6
AIN-26		AO7 / AO39		7
AIN-25		AO8 / AO40		8
AIN-24	ADC3 ** 0V ↔ 5V	AO9 / AO41		9
AIN-23		AO10 / AO42		10
AIN-22		AO11 / AO43		11
AIN-21		AO12 / AO44		12
AIN-20		AO13 / AO45		13
AIN-19		AO14 / AO46		14
AIN-18		AO15 / AO47		15
AIN-17		AO16 / AO48		16
AIN-16	ADC2 *** -5V ↔ 5V or 0V↔10V	AO17 / AO49	**CN-AO-17_32**	1
AIN-15		AO18 / AO50		2
AIN-14		AO19 / AO51		3
AIN-13		AO20 / AO52		4
AIN-12		AO21 / AO53		5
AIN-11		AO22 / AO54		6
AIN-10		AO23 / AO55		7
AIN-9		AO24 / AO56		8
AIN-8	ADC1 *** -5V ↔ 5V or 0V↔10V	AO25 / AO57		9
AIN-7		AO26 / AO58		10
AIN-6		AO27 / AO59		11
AIN-5		AO28 / AO60		12
AIN-4		AO29 / AO61		13
AIN-3		AO30 / AO62		14
AIN-2		AO31 / AO63		15
AIN-1		AO32 / AO64		16

* Expansion ADC channels placed on adapter board. Check specific drivers to use it in LabVIEW. Check *ADC4 input range selection* section.
** Unipolar channels. **Do not** operate outside **0V ↔ 5V**.
*** Check PED-Board User Manual for defaults.

PED-Board	Adapter Board		
	Test Point Label / **Typhoon HIL**	Break-out Connector	
OUT			Pin
DAC-A	AI1	**CN-AI-01_16**	1
DAC-B	AI2		2
DAC-C	AI3		3
DAC-D	AI4		4
--	AI5		5
--	AI6		6
--	AI7		7
--	AI8		8
--	AI9		9
--	AI10		10
--	AI11		11
--	AI12		12
--	AI13		13
--	AI14		14
--	AI15		15
--	AI16		16

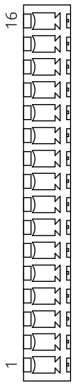
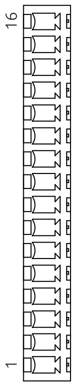
ADC4 Input range selection

Jumper selection mode:

- Pin 2 to Pin 1 (2-1): unipolar 0V↔+10V
- Pin 2 to Pin 3 (2-3): bipolar mode -5V↔5 V

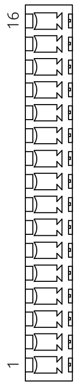
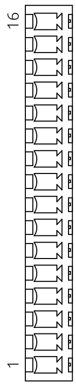
	Channel	Jumper	Default
ADC4	AIN-25	JPF_1	**(2-3)** 5V ↔ 5 V
	AIN-26	JPF_2	
	AIN-27	JPF_3	
	AIN-28	JPF_4	
	AIN-29	JPF_5	
	AIN-30	JPF_6	
	AIN-31	JPF_7	
	AIN-32	JPF_8	

Mapping – PWM

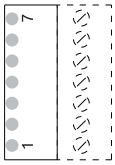
PED-Board	**Adapter Board**		
	Test Point Label/ **Typhoon HIL**	Break-out Connector	Pin
PWM-21	DI1 / DI33	**CN-DI-01_16** 	1
PWM-22	DI2 / DI34		2
PWM-23	DI3 / DI35		3
PWM-24	DI4 / DI36		4
PWM-25	DI5 / DI37		5
PWM-26	DI6 / DI38		6
PWM-27	DI7 / DI39		7
PWM-28	DI8 / DI40		8
PWM-29	DI9 / DI41		9
PWM-30	DI10 / DI42		10
PWM-11	DI11 / DI43		11
PWM-12	DI12 / DI44		12
PWM-13	DI13 / DI45		13
PWM-14	DI14 / DI46		14
PWM-15	DI15 / DI47		15
PWM-16	DI16 / DI48		16
PWM-17	DI17 / DI49	**CN-DI-17_32** 	1
PWM-18	DI18 / DI50		2
PWM-19	DI19 / DI51		3
PWM-20	DI20 / DI52		4
PWM-1	DI21 / DI53		5
PWM-2	DI22 / DI54		6
PWM-3	DI23 / DI55		7
PWM-4	DI24 / DI56		8
PWM-5	DI25 / DI57		9
PWM-6	DI26 / DI58		10
PWM-7	DI27 / DI59		11
PWM-8	DI28 / DI60		12
PWM-9	DI29 / DI61		13
PWM-10	DI30 / DI62		14
I/O_18*	DI31 / DI63		15
I/O_19*	DI32 / DI64		16

**Set as output. Translating transceivers 3V3→5V installed.*

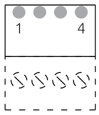
Translating transceivers 5V → 3V3 installed

PED-Board *(set I/O as input)*	**Adapter Board**		
	Test Point Label/ **Typhoon HIL**	Break-out Connector	Pin
I/O_20	DO1 / DO33	**CN-DO-01_16** 	1
I/O_21	DO2 / DO34		2
I/O_22	DO3 / DO35		3
I/O_23	DO4 / DO36		4
I/O_24	DO5 / DO37		5
I/O_25	DO6 / DO38		6
I/O_26	DO7 / DO39		7
I/O_27	DO8 / DO40		8
I/O_28	DO9 / DO41		9
I/O_29	DIO10 / DO42		10
I/O_30	DO11 / DO43		11
I/O_31	DO12 / DO44		12
I/O_32	DO13 / DO45		13
I/O_33	DO14 / DO46		14
I/O_34	DO15 / DO47		15
I/O_35	DO16 / DO48		16
I/O_36	DO17 / DO49	**CN-DO-17_32** 	1
I/O_37	DO18 / DO50		2
I/O_38	DO19 / DO51		3
I/O_39	DO20 / DO52		4
I/O_40	DO21 / DO53		5
	DO22 / DO54		6
	DO23 / DO55		7
	DO24 / DO56		8
	DO25 / DO57		9
	DO26 / DO58		10
	DO27 / DO59		11
	DO28 / DO60		12
	DO29 / DI61		13
	DO30 / DI62		14
	DO31 / DI63		15
	DO32 / DI64		16

Connector -Resolver

PED-Board	Adapter Board		
	Test Point Label	Break-out Connector	Pin
SIN_RESOLVER	SIN_RES	**M1** 	1
SINLO_RESOLVER	SIN_LO_RES		2
COS_RESOLVER	COS_RES		3
COSLO_RESOLVER	COS_LO_RES		4
EXCO_RESOLVER	EXCO_RES		5
EXCO_n_RESOLVER	EXCO_N_RES		6
AGND_RES	-		7

Connector -GNDs

Conn.	Pin	
CN4 	1	AGND
	2	
	3	DGND
	4	