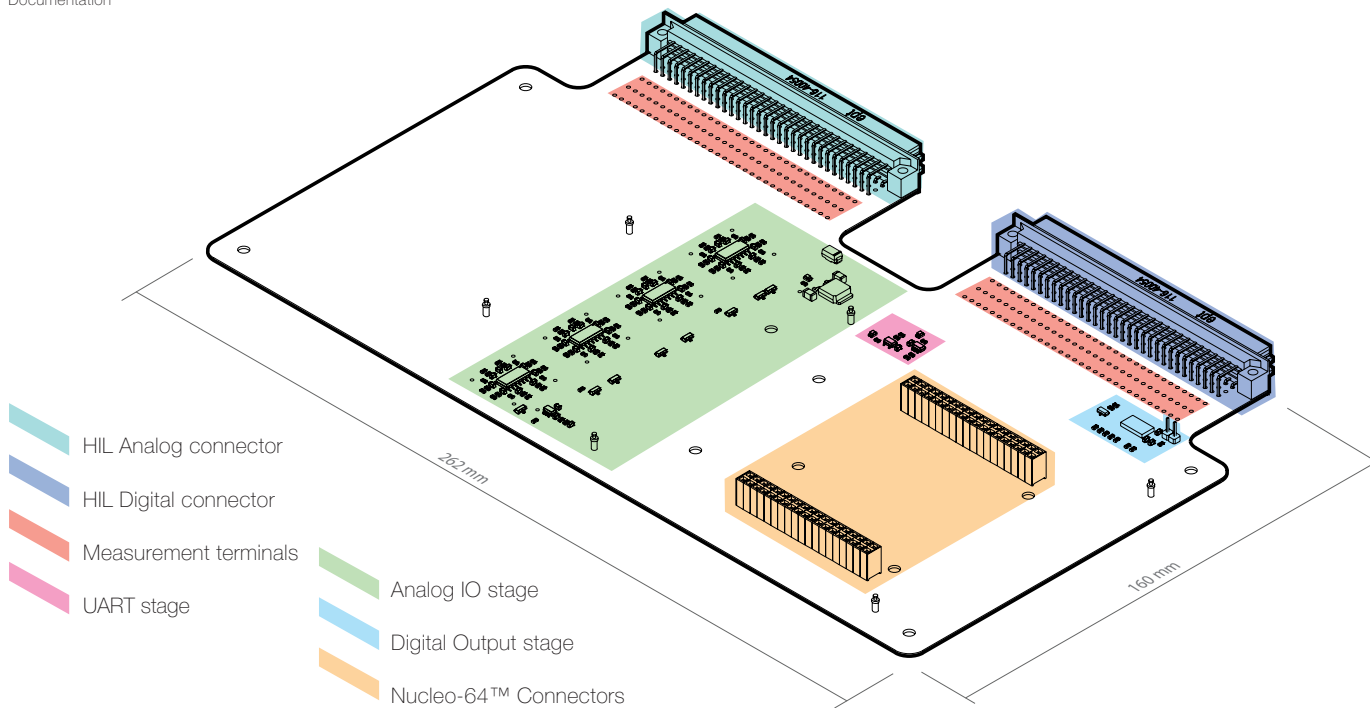




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HIL Nucleo-64 Interface

Effortlessly connect Nucleo-64™ boards to Typhoon HIL simulators for streamlined testing and rapid prototyping.



Applications

The HIL Nucleo-64 Interface is an interface board, designed to enable a seamless interface between Typhoon HIL simulator devices and Nucleo-64™ development kits from STMicroelectronics.

Technical Details shows signal routing for STM32F334 and STM32G474 Nucleo-64™ boards.

Other boards may be supported provided the header pins align and can be physically connected.

Features and Benefits

- Sockets for one Nucleo-64™ board
- All HIL signals available via measurement terminals
- 12V HIL power supply as Nucleo-64™ external power supply input (Nucleo-64™ JP5 selection)
- 18 HIL Digital Inputs (2 of which can be repurposed as HIL AI/AO)
- 9 HIL Digital Outputs (8 level shifted to 3.3V, 1 of which can be repurposed as HIL AO/AI and 1 Nucleo-64™ Open-Drain Reset)
- 16 HIL Analog Outputs (+/-10V scaled to 0-3.3V, 3 of which can be repurposed as HIL AI/DI)
- UART on a pair of HIL DI/DO pins with LED indication

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Technical Details

Table 1: Analog signal routing for STM32F334 and STM32G474 Nucleo-64™ boards

HIL Analog IO	Option	STM32F334	STM32G474
AO1	PC0	ADC12_IN6	ADC12_IN6
AO2	PC3	ADC12_IN9	ADC12_IN9
AO3	PC2	ADC12_IN8	ADC12_IN8
AO4	PC1	ADC12_IN7	ADC12_IN7
AO5	PA1	ADC1_IN2	ADC1_IN2
AO6 / AI3	PA4	ADC2_IN1 / DAC1_OUT1	ADC2_IN17 / DAC1_OUT1
AO7	PB0	ADC1_IN11	ADC1_IN15, ADC3_IN12
AO8	PA0	ADC1_IN1	ADC12_IN1, COMP1
AO9	PB2	ADC2_IN12	ADC2_IN12
AO10	PB1	ADC1_IN12	ADC1_IN12, ADC3_IN1
AO11	PC4	ADC2_IN5	ADC2_IN5
AO12	PB11	ADC1_IN12	ADC1_IN14
AO13 / AI2 / DI7	PA5	ADC2_IN2 / DAC1_OUT2	ADC2_IN13 / DAC1_OUT2
AO14 / AI1 / DI7	PA6	ADC2_IN3 / DAC2_OUT1	ADC2_IN3 / DAC2_OUT1
AO15 / DI8	PA7	ADC2_IN4	ADC2_IN4
AO16	PC5	ADC2_IN11	ADC2_IN11

Table 2: Digital signal routing for STM32F334 and STM32G474 Nucleo-64™ boards

HIL Digital IO	Option	STM32F334	STM32G474
DI7 / AO13 / AI2	PA5	-	-
DI8 / AO15	PA7	-	-
DI9	PC8	-	TIM8_CH3, HRTIM1_CHE1
DI10	PC9	-	TIM8_CH4, HRTIM1_CHE2
DI11	PC6	-	TIM8_CH1, HRTIM1_CHF1
DI12	PB9	-	TIM8_CH3, TIM1_CH3N
DI13	PA11	TIM1_CH1N	TIM1_CH1N, HRTIM1_CHB2
DI14	PB12	-	HRTIM1_CHC1, TIM8_CH3N, TIM1_CH3N
DI15	PC7	-	TIM8_CH2, HRTIM1_CHF2
DI16	PA9	TIM1_CH2	TIM1_CH2, HRTIM1_CHA2
DI17	PA8	TIM1_CH1	TIM1_CH1, HRTIM1_CHA1
DI18	PB15	TIM1_CH3N	TIM1_CH3N, HRTIM1_CHD2
DI19	PB14	TIM1_CH2N	TIM1_CH2N, HRTIM1_CHD1
DI20	PB13	TIM1_CH1N	TIM1_CH1N, HRTIM1_CHC2
DI21	PB5	-	TIM8_CH3N
DI22	PA10	TIM1_CH3	TIM1_CH3, HRTIM1_CHB1
DI23	PC11	-	TIM8_CH2N
DI24	PC13	USER BUTTON	USER BUTTON
DO1	PB8	-	HRTIM1_EEV8
DO2	PA12	TIM1_ETR	TIM1_ETR, HRTIM1_FLT1
DO3 / AO14 / AI1	PA6	-	-
DO4	PB6	-	TIM8_BKIN2, HRTIM1_EEV4, TIM8_ETR
DO5	PB10	TIM1_BKIN	TIM1_BKIN, HRTIM1_FLT3
DO6	PC10	-	HRTIM1_FLT6
DO7	PC12	-	HRTIM1_EEV1
DO8	PD2	-	TIM8_BKIN
DO9	RESET	CN7, pin 14	CN7, pin 14
DI32	UART-TX	CN10, pin 36 (N.C.)	CN10, pin 36 (N.C.)
DO32	UART-TX	CN10, pin 38 (N.C.)	CN10, pin 38 (N.C.)

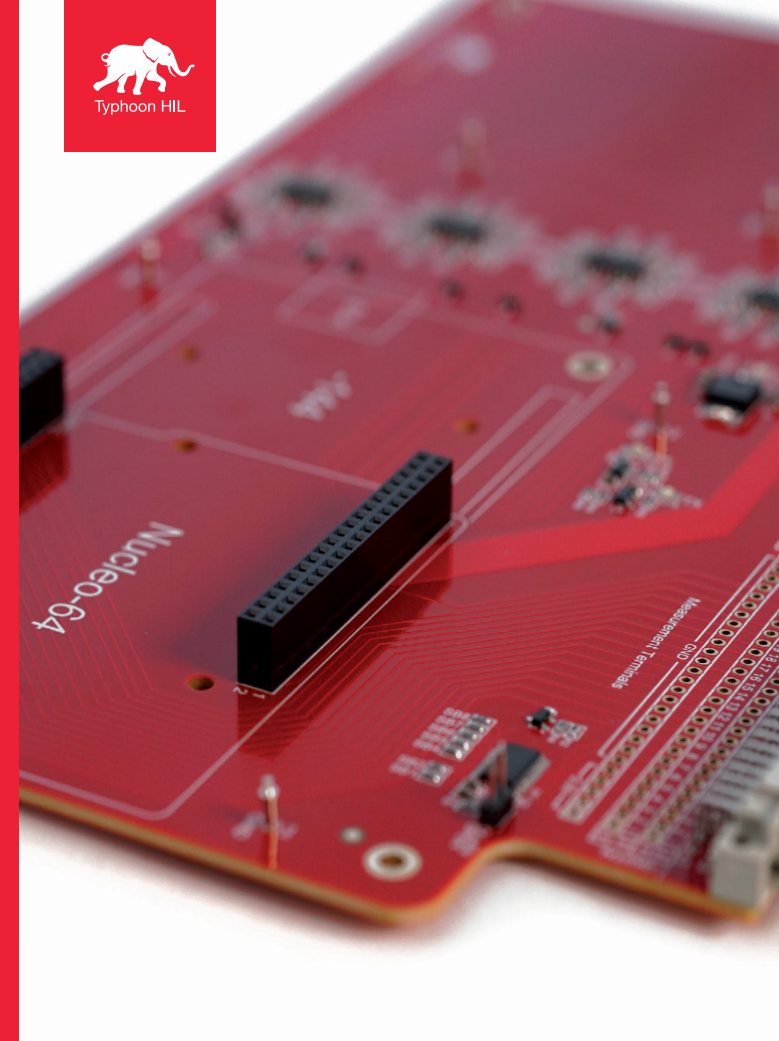
Thank you!

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



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HIL Nucleo-64 Interface

Interface for STMicroelectronics Nucleo-64™ boards.

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

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