PCI Express Interface Modules   Digital I/O

Base Specifications

Model type	PEX-H225020	PEX-H285011	PEX-H235002
Bus requirements	PCI Express ™ Base Specification Rev. 1.0a x1		
Number of slots	1 slot		
Memory size	8 KB + 32 bytes x2		
Data transfer method	I/O transfer (memory mapped I/O)		
Dimensions	165.00 (D) x 106.65 (H) [mm]		
Weight	115g	120g	125g
Power consumption	+3.3 Vdc (+/-0.3 V):		
All I/O and control signals inactive	0.25 A (typ.)	0.25 A (typ.)	0.25 A (typ.)
All I/O and control signals active	0.35 A (typ.)	0.7 A (typ.)	1.0 A (typ.)
Environmental conditions	Operating temperature: 0 deg C to 50 deg C Relative humidity: 20% to 90% (non-condensing)		
Connectors	CNA: 100-pin 0.8 mm-pitch female connector CNB: 100-pin 0.8 mm-pitch female connector		
On-board connector	HDRA-E100W1LFDT1EC-SL+ (Honda Tsushin Kogyo Co., Ltd.) or equivalent		
Acceptable cable connector	HDRA-E100MA1+ (Honda Tsushin Kogyo Co., Ltd.) or equivalent		
Isolation	Common isolation		
Interrupt sources	12 sources	8 sources	4 sources
External I/O Signals	RSTIN (external reset input signal) x 2		

Digital Input Specifications

Model type	PEX-H225020	PEX-H285011	PEX-H235002
Input signals	IN1 to IN128	IN1 to IN64	-
Input configurations	Photo-isolated input (source type)		-
Input logic	1 ← On (low, closed) 0 ← Off (high, open)		-
Maximum voltage rating	+30 Vdc		-
Supply voltage range to power supply pin	+12 Vdc to +24 Vdc		-
Input voltage range	0 Vdc to the supply voltage		-
Input impedance (protection function)	5.6 kΩ (Reverse bias protection diode and leakage current reduction shunt resistor: 1.5 kΩ)		-
Low-level input current	I_{IL} = -2 mA (+12 Vdc) to -4.1 mA (+24 Vdc) (typ.)		-
Threshold current (shut-off guaranteed)	-0.5 mA (max.)		-
Threshold current	-0.55 mA to -1.5 mA (voltage level conversion: +3.9 Vdc to +9.6 Vdc)		-
Input response time	T_{RON}: 30 µs (typ.) T_{ROFF}: 80µs (typ.)		-

Digital Output Specifications

Model type	PEX-H225020	PEX-H285011	PEX-H235002
Output signals	-	OUT1 to OUT64	OUT1 to OUT128
Output configurations	-	High-current drive open-collector output (sink type) (Darlington transistor)	
Output logic	-	$1 \rightarrow$ Low (on, closed) $0 \rightarrow$ High (off, open) (default value)	
Apply voltage range to power supply pin	-	+12 Vdc to +24 Vdc	
Current consumption per power supply pin	-	+1.7 mA (+12 Vdc) to +3.6 mA (+24 Vdc) per pin (typ.) +27.2 mA (+12 Vdc) to +57.6 mA (+24 Vdc) per COM pin(typ.)	
Maximum voltage rating	-	+30 Vdc	
Recommended voltage range	-	+12 Vdc to +24 Vdc	
Maximum output current per channel	-	I_{OL} = +100 mA	
Low-level output voltage	-	V_{OL} = +1.1 V (max.), +0.9 V (typ.) (I_{OL} = +100 mA) V_{OL} = +1.0 V (max.), +0.75 V (typ.) (I_{OL} = +50 mA (max.))	
Leakage current	-	I_{OH} = +100µA (max.)	
Output response time	-	T_{RON}: 5 µs (typ.) (with the maximum load) T_{ROFF}: 65µs (typ.) (with the maximum load) (Low-to-high transition time depends on the load impedance.)	