General description

The PCE-1612 board is used to conditioning TTL/HC signals of the TEDIA DAQ PC card digital ports to external equipments with technological signal levels and contains eight output channels and one 8-bit DIO port without conditioning.

The output channels are solved by semiconductor switches protected by TVS diodes against induced overvoltage and polarity reversal.

All channels work as non-inverting; the presence of the "H" level at the PC card output activates the signal switch.

For eight pass-through signals (ie. one 8-bit DIO port), the PCE-1612 board performs the function of adapter the PC card connector to the D-Sub 9 connector located on the mounting bracket. The board does not provide any conditioning to these signals.

General instructions for use

The PCE-1612 may be used only according to the manufacturer's recommendations given in this manual or other general standards and only such a way, that its failure caused by any reason will not be dangerous to any person or property.

Installation

The PCE-1612 is designed to be placed into a free slot for expansion cards, the length of the ribbon cables requires a position adjacent to the control PC card.

The board can be used in an environment with operating temperature -10~60 °C and relative humidity up to 90%, noncondensing and normal levels of pollution.

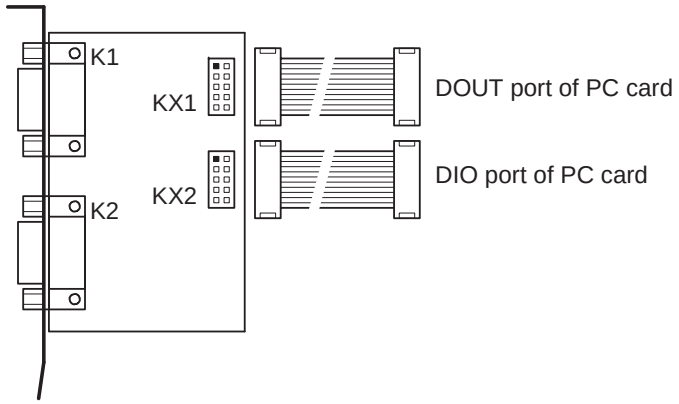
Specifications

Digital outputs:

switching voltage:	32 V_{DC} max.	
switching current:	500 mA max.	
switch overload:	1 A	(max. 100 ms; max. 1x in 10 s)
drop voltage:	< 1.5 V	(1.1~1.4 V typically)
signal delay:	< 0.2 ms	
isolation voltage:	1000 V_{DC}	(outputs against the PC card port)

General:

recommended cable length:	max. 10 m	(isolated outputs)
	max. 2 m	(nonisolated PC card port)
dimensions of board:	approx. 80 x 60 mm	
power supply:	5 V	(powered from PC card port)
current consumption:	max. 50 mA	



KX1/KX2 connectors pin assigment
identical to the pin assigment of DIO port connectors (refer to the PC card manual)

K1 connector pin assigment (D-Sub 9, male), controlled by KX1 signals			
DOUT00 (output signal, channel 0)	C1		
DOUT02 (output signal, channel 2)	C2	C6	DOUT01 (output signal, channel 1)
DOUT04 (output signal, channel 4)	C3	C7	DOUT03 (output signal, channel 3)
DOUT06 (output signal, channel 6)	C4	C8	DOUT05 (output signal, channel 5)
I_PWR0 (DOUT common signal)	C5	C9	DOUT07 (output signal, channel 7)
Note: The I_PWR0 signal is intended for the outputs supply voltage (typically +24 V).			

K2 connector pin assigment (D-Sub 9, male), connected to KX2 signals			
DIO0 (I/O signal of card DIO port)	C1		
DIO2 (I/O signal of card DIO port)	C2	C6	DIO1 (signal of card DIO port)
DIO4 (I/O signal of card DIO port)	C3	C7	DIO3 (I/O signal of card DIO port)
DIO6 (I/O signal of card DIO port)	C4	C8	DIO5 (I/O signal of card DIO port)
GND (computer GND)	C5	C9	DIO7 (I/O signal of card DIO port)

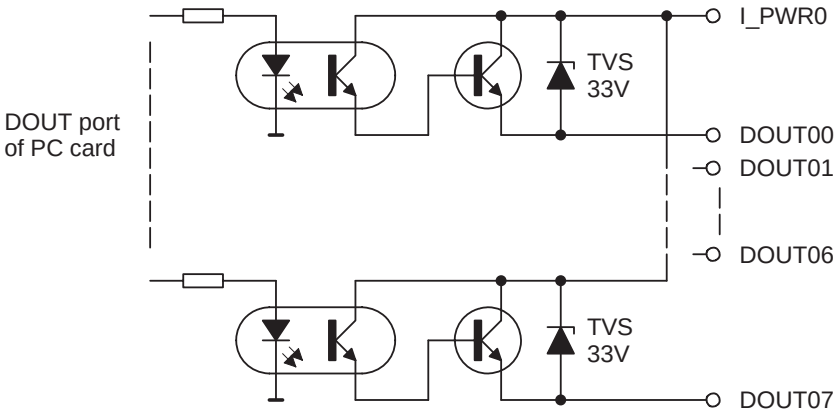


Fig. 1. Simplified schematic of isolated outputs.

PCE-1612

User Guide

(further information available at http://www.tedia.eu)

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