Q. Why do I get uncertain or incorrect digital input data when digital input channels are unconnected?

A. When digital input channels are left unconnected or floating, the digital input data read is drifting and meaningless.

According to the definition in TTL/5V input signal, level "low" is between 0 V and 0.8 V with respect to the ground terminal, and "high" is between 2.0 V and 5 V.

The following boards of ICP DAS support "DI pull-high or pull-low jumper setting "for users to define the default state of digital input lines.

PIO-D48/D48U	PIO-DA4U/DA8U/DA16U
PEX-D48	PCI-1002LU/HU
PCI-1202LU/HU	PEX-1002L/H
PCI-1602U/1602FU	PCI-1800LU/HU
PCI-1802LU/HU	PCI-822LU/826LU

If the board doesn't support "DI pull high or low jumper setting", may be able to use a pull-high or pull-low resistor as shown in the image below.

Pull-High	Pull-Low
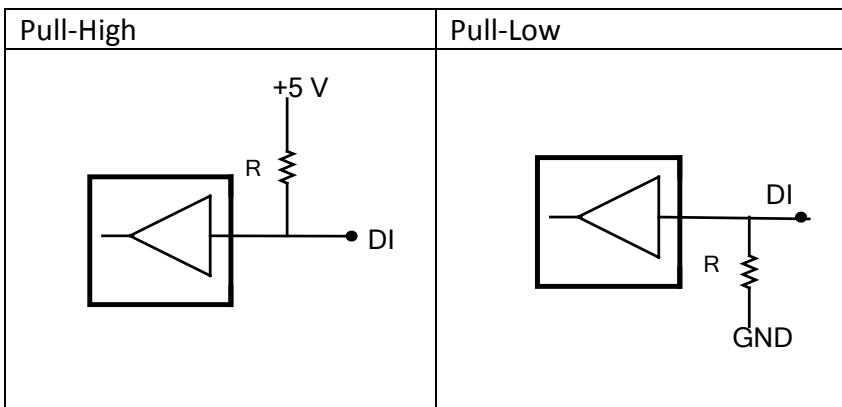
Note: R = 10 kΩ(typical)

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