Lineup

●PCI Bus / Low Profile PCI Bus

Name	Channels	Counting System				Max. Count (bit)	Input Circuit			Response Frequency			Interrupt Function		Other Function		Software		Page
		UP	DOWN	Single-phase	Two-phase		Opto-isolated input	TTL-level input	Line-receiver	Opto-isolated input	TTL-level input	Line-receiver	Count Coincidence	Time-up	Filter	Coincidence Output	API-PAC(W32)	DDE SERVER(W32)	
CNT24-4(PCI)	4	○	○	○	○	24	○	○	-	500KHz	1MHz	-	○	○	○	○	Attached	○	D-03
CNT24-4D(PCI)	4	○	○	○	○	24	-	○	○	-	1MHz	1MHz	○	○	○	○	Attached	-	D-03
CNT32-8M(PCI)	8	○	○	○	○	32	-	○	○	-	10MHz	10MHz	○	○	○	○	Attached	-	D-03

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		UP	DOWN	Single-phase	Two-phase		Opto-isolated input	TTL-level input	Line-receiver	Opto-isolated input	TTL-level input	Line-receiver	Count Coincidence	Time-up	Filter	Coincidence Output	API-PAC(W32)	DDE SERVER(W32)	
CNT24-2(USB)GY	2	○	○	○	○	24	○	-	-	500KHz	-	-	-	-	○	○	Attach	-	D-04

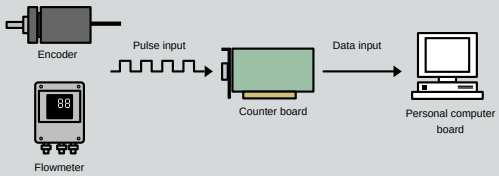
●ISA Bus

Name	Channels	Counting System				Max. Count (bit)	Input Circuit			Response Frequency			Interrupt Function		Other Function		Software		Page
		UP	DOWN	Single-phase	Two-phase		Opto-isolated input	TTL-level input	Line-receiver	Opto-isolated input	TTL-level input	Line-receiver	Count Coincidence	Time-up	Filter	Coincidence Output	API-PAC(W32)	DDE SERVER(W32)	
CNT24-4(PC)	4	○	○	○	○	24	○	○	-	500KHz	1MHz	-	○	○	○	○	○	○	D-04

Basic knowledge concerning "counter"

1. What is counter?

This type is capable of inputting the pulse string and counting the pulse number. It performs addition/subtraction of count value inside the board and reads out the current count value as necessary. It must be connected to incremental rotary encoder, linear gauge, pulse output type flow meter or wattmeter for use.



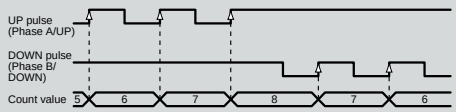
2. Counter function

Count system

It indicates the count direction which can be set and the input status of the signals.

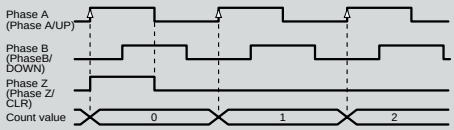
Up-count:
It indicates that "up-count"(addition) is possible.

Single-phase pulse input:
An input system in which two input terminals (UP pulse and DOWN pulse) are used. It will up-count when the input is made to UP pulse terminal and down-count when the input is made to DOWN pulse terminal.



Up-down count:
It indicates that both up-count (addition) and down-count (subtraction) are possible.

Double-phase pulse input:
An input system in which two input terminals – Phase A (lead signal) and Phase B (lag signal) – with their phases differing by 90 degrees are used. It uses the phase difference between A and B to determine the count direction and makes a count.



Maximum number of counts

The maximum number that can be counted is indicated by a bit number. For example, if it is a 24 bit type, 0 - 16, 777, 215 (0 – FFFFFFh) can be counted.

Input circuit

It indicates the pulse input circuit format.

Opto-coupler insulation circuit:
An electric current input circuit in which Opto-coupler (cathode side) serves as an input terminal. Since it is insulated from external circuits, electric disturbance can be prevented.

Differential input:
A level input circuit in which differential receiver serves as an input terminal. Although it is not insulated from external circuits, it is capable of high-speed pulse input and enables long distance transfer.

Non-insulation TTL level input:
A level input circuit in which TTL-IC(base) serves as an input terminal. Although it is not insulated from external circuits, it is capable of high-speed pulse input.

Response frequency

It indicates the maximum speed of the pulse which can be input in frequency. The response frequency will vary depending on the input circuit and the product.

Interrupt event function

It generates interrupt (IRQ) according to the preset conditions and notifies it to an application program as an event.

Count match
It automatically compares the randomly set value with the input pulse number and generates interrupt(IRQ) when they match. In this method, count value monitoring and event processing can be performed without applying additional load on PC.

Timer time up
It generates interrupt (IRQ) in a cycle preset in the timer inside the board. By using this function, count values can be easily read out in a specified cycle.

Additional functions

In addition to the basic input functions, other convenient functions are also provided as shown below.

Count match pulse output
It automatically compares the randomly set value with the input pulse number and outputs one-shot pulse when they match. The value used for comparison can be set for each channel. In this method, count value monitoring and trigger output to external devices can be performed without applying additional load on PC.

Filtering function
It delays the count processing for the preset duration and enables precise operation by preventing miscount caused by noise such as chattering.