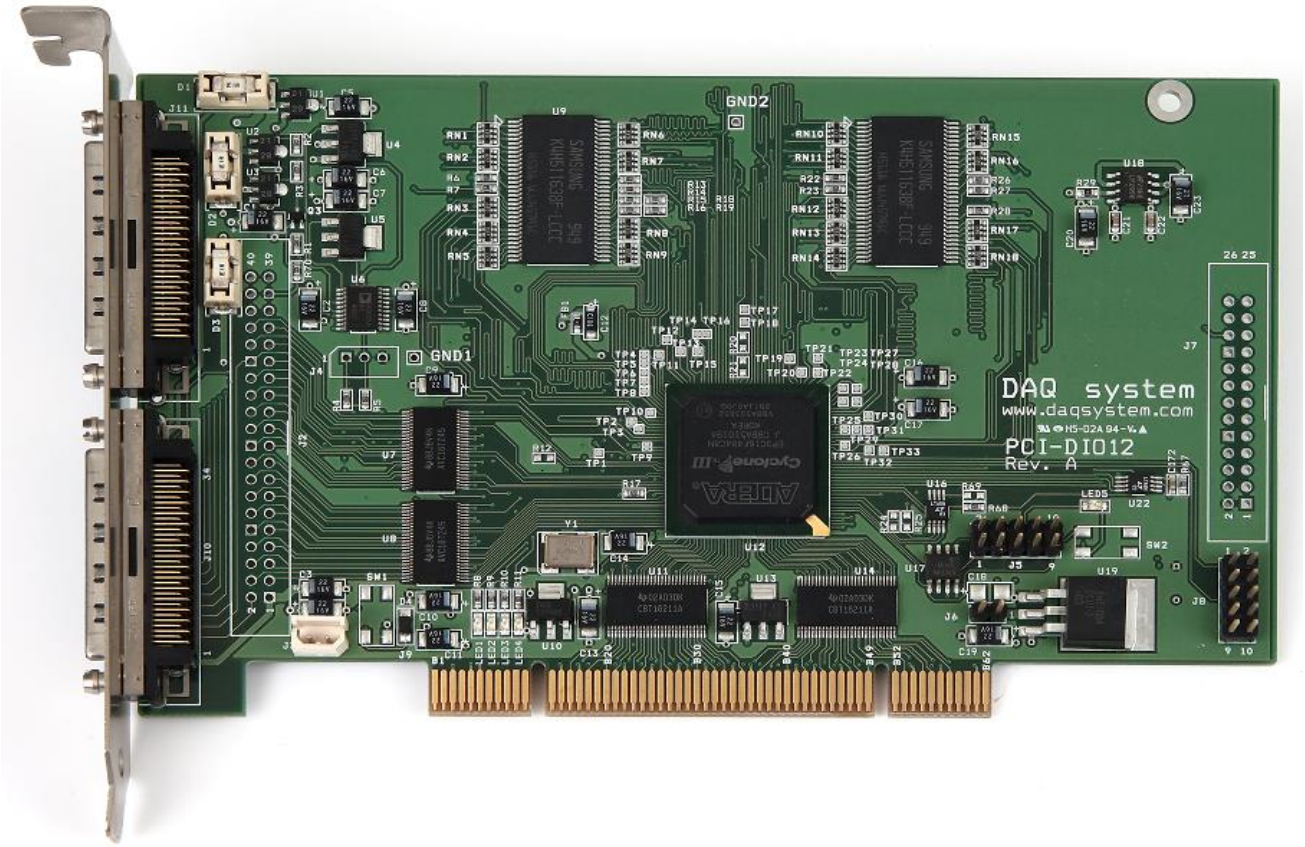
PCI-DIO12

API Manual

Version 1.0



DAQ SYSTEM
Measurement & Automation

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Board Level API Functions

Overview

BOOL **OpenDAQDevice (void)**
BOOL **ResetBoard (int nBoard)**
BOOL **CloseDAQDevice (void)**

OpenDAQDevice

This function opens the device. In the program using the PCI-DIO series board, the device must be opened by calling the function once at the beginning.

BOOL **OpenDAQDevice (void)**

Parameters:

Return Value:

If device open is successful, the number of devices currently installed in the system (PC) is returned. In case of failure, "-1" is returned.

ResetBoard

This function initializes the device currently installed in the system (PC).

BOOL **ResetBoard (int nBoard)**

Parameters:

nBoard : Shows the board number currently installed in the system.
The board number is set using the DIP switch of the board.

Return Value:

If the function call fails, "FALSE" is returned.
If the function call succeeds, "TRUE" is returned.

CloseDAQDevice

This function closes all open PCI-DIO series devices. When the use of the device is finished, be sure to close the device so that other programs can use it.

BOOL **CloseDAQDevice (void)**

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Power Level API Functions

Overview

BOOL **PowerEnable (int nPower, BOOL bEnable)**

PowerEnable

This function selects the power source.

BOOL **PowerEnable (int nPower, BOOL bEnable)**

Parameters:

nPower : ''0' is 5V, '1' is LCD power (2.8V), '2' is I/O power (1.8V)

bEnable : 'ON' : True, 'OFF' : False.

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Voltage Function Level APIs

Overview

BOOL **Init_Voltage (void)**

BOOL **Set_Voltage (int nNum, float fVal)**

BOOL **Get_Voltage (int nNum, float *fVal)**

BOOL **Set_VoltageHex (int nNum, BYTE byVal)**

Init_Voltage

This function initializes the voltage of the device currently installed in the system (PC).

BOOL **Init_Voltage (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Set_Voltage

This function specifies the voltage value of the device currently installed in the system (PC).

BOOL **Set_Voltage (int nNum, float fVal)**

Parameters:

nNum : If '0' is LCD voltage, '1' is I/O voltage.

fVal : Voltage value.

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Get_Voltage

This function reads the voltage value of the device currently installed in the system (PC).

BOOL **Get_Voltage (int nNum, float *fVal)**

Parameters:

nNum : If '0' is LCD voltage, '1' is I/O voltage.

fVal : A pointer to the voltage value.

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Set_VoltageHex

This function designates the device currently installed in the system (PC).

BOOL **Set_VoltageHex (int nNum, Byte byVal)**

Parameters:

nNum : If '0' is LCD voltage, '1' is I/O voltage.

byVal : Hex value of current system voltage

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic Level APIs

Overview

BOOL	**Logic_Init (void)**
BOOL	**Logic_Reset (void)**
BOOL	**Logic_Start (DWORD nGenerationSize, BOOL bRepeat)**
BOOL	**Logic_CheckEnd (void)**
BOOL	**Logic_GetRepeatSize (DWORD* nRepeatSize)**
BOOL	**Logic_Stop (void)**
BOOL	**Logic_SetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)**
BOOL	**Logic_GetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)**
BOOL	**Logic_SetPort (DWORD* nPort)**
BOOL	**Logic_GetPortData (DWORD* nCnt, unsigned char* buf)**
BOOL	**Logic_SetTrigger (BOOL bEnable)**
BOOL	**Logic_Update (DWORD nGenerationSize)**

Logic_Init

This function initializes the logic of PCI-DIO12 board.

BOOL **Logic_Init (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Reset

This function resets the logic of the current system (PC).

BOOL **Logic_Reset (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Start

This function starts outputting Data.

BOOL **Logic_Start (DWORD nGeneration, BOOL bRepeat)**

Parameters:

nGeneration : number of repetitions

bRepeat : "0" : false, "1" : true

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_CheckEnd

This function examines the logic of the current system (PC) after starting the logic.

BOOL **Logic_CheckEnd (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Get RepeatSize

This function starts outputting Data.

BOOL **Logic_GetRepeatSize (DWORD* nRepeatSize)**

Parameters:

bRepeatSize : number of repetitions

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Stop

This function stops data output.

BOOL **Logic_Stop (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_SetData

This function saves frame data.

BOOL **Logic_SetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)**

Parameters:

nCnt : Specify the memory address to write to

buf : buffer size

nOffset : write offset vakue

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_GetData

This function reads a frame.

BOOL **Logic_GetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)**

Parameters:

nCnt : Designate the memory address to read

buf : buffer size

nOffset : read offset value

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_SetPort

This function determines which Port Mode to select.

BOOL **Logic_SetPort (DWORD* nPort)**

Parameters:

nPort : A, B, C Port

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Get PortData

This function gets the Port Data output.

BOOL **Logic_GetPortData (DWORD* nCnt, unsigned char* buf)**

Parameters:

nCnt : Memory address of 8K byte buffer

buf : Value of 8K byte buffer

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_SetTrigger

This function enables the trigger.

BOOL **Logic_SetTrigger (BOOL bEnable)**

Parameters:

bEnable : "0" : false, "1" : true

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Logic_Update

This function updates the Logic.

BOOL **Logic_Update (DWORD nGenerationSize)**

Parameters:

nGenerationSize : number of repetitions

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Clock Level APIs

Overview

BOOL **Init_Clock (void)**

BOOL **Get_Clock (void)**

BOOL **Set_Clock (DWORD val)**

Init_Clock

This function initializes the clock value of Port A.

BOOL **Init_Clock (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Get_Clock

This function reads the clock value of Port A.

BOOL **Get_Clock (void)**

Parameters: 없음

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Set_Clock

This function specifies the clock value of Port A.

BOOL **Set_Clock (DWORD val)**

Parameters:

val : clock value. (initial value 20000000)

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC Level APIs

Overview

BOOL PortC_Init (void)
BOOL PortC_Reset (void)
BOOL PortC_Close (void)
BOOL PortC_Stop (void)
BOOL PortC_CheckEnd (void)
BOOL PortC_Start (DWORD nGeneration, BOOL bRepeat)
BOOL PortC_SetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)
BOOL PortC_SetTrigger (BOOL bEnable)

PortC_Init

This function initializes the clock value of Port c.

BOOL PortC_Init (void)

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_Reset

This function resets Port C.

BOOL PortC_Reset (void)

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_Close

This function closes Port C.

BOOL PortC_Close (void)

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_Stop

This function stops Port C.

BOOL PortC_Stop (void)

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_Check

This function checks Port C.

BOOL PortC_Check (void)

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_Start

This function executes Port C as many times as specified.

BOOL **PortC_Start (DWORD nGeneration, BOOL bRepeat)**

Parameters:

nGeneration : number of repetitions

bRepeat : "0" : false, "1" : true

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_SetData

This function reads Port C.

BOOL **PortC_SetData (DWORD* nCnt, unsigned char* buf, DWORD nOffset)**

Parameters:

nCnt : Designate the memory address to read

buf : buffer size

nOffset : read offset value

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC_SetTrigger

This function enables the trigger of Port C.

BOOL **PortC_SetTrigger (BOOL bEnable)**

Parameters:

bEnable : "0" : false, "1" : true

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

PortC Clock Level APIs

Overview

BOOL **Init_Clock2 (void)**

BOOL **Get_Clock2 (void)**

BOOL **Set_Clock2 (DWORD val)**

Init_Clock2

This function initializes the clock of Port C.

BOOL **Init_Clock2 (void)**

Parameters :

Return Value :

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Get_Clock2

This function reads the clock value of Port C. (initial value 10000000)

BOOL **Get_Clock2 (void)**

Parameters:

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Set_Clock2

This function specifies the clock value of Port C.

BOOL **Set_Clock2 (DWORD val)**

Parameters:

val : clock value.

Return Value:

If the function call fails, "FALSE" is returned.

If the function call succeeds, "TRUE" is returned.

Memo

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