I-8172 W

API Reference Manual

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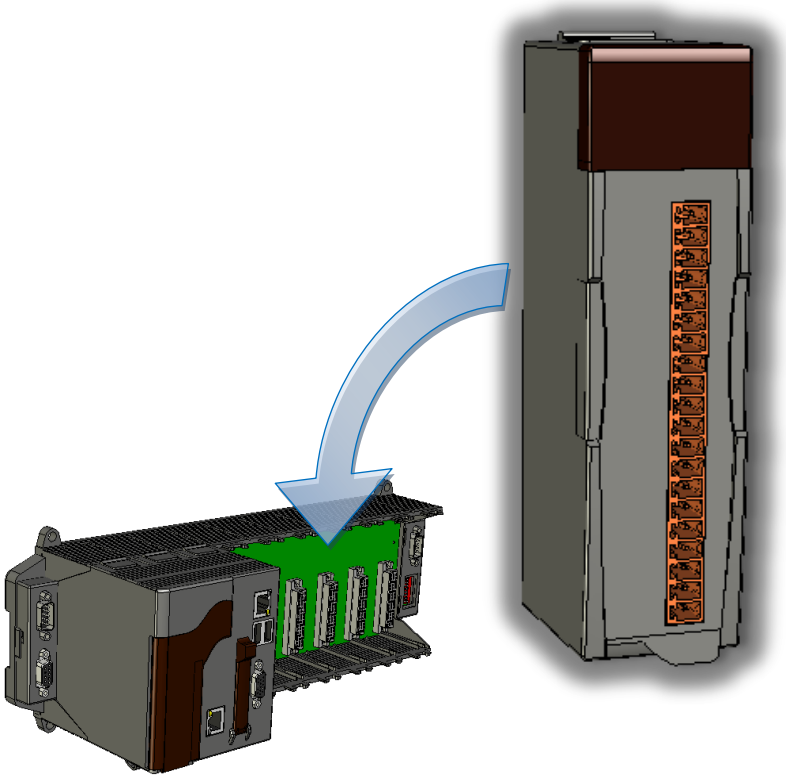
Service and usage information for XP-8000 series



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The following functions are part of I-8172W API:

1. PAC_I8172W_INIT

To initialize the I-8172W in the specified slot.

Syntax

```
int pac_i8172W_Init(int slot);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 0 to 7).

Return Values

This function return 1 if the call is OK; if not, this function returns 0.

Examples

[C++]

```
int slot=1;
int return_value;
return_value = pac_i8172W_Init (slot);
```

2. PAC_I8172W_WRITEDOGROUP

To write DO group value which represents a group of DOs to the FRnet DO module.

Syntax

```
void pac_i8172W_WriteDOGroup(int slot, int port, int group, unsigned int DOGroupValue);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DO to write (Range: 0 to 7).

(a group is corresponding to a FRnet module)

DOGroupValue [in]

Specifies the number whose binary form represents the DO value which is to be written to the specified group. For example, if DOGroupValue = 3, its binary form = 00000011, and the first and the second channel DO turn on, the others turn off.

Return Values

None

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
unsigned int DOGroupValue = 3;
```

```
pac_i8172W_Init(slot);
pac_i8172W_WriteDOGroup(slot, port, group, DOGroupValue);
```

3. PAC_I8172W_WRITEDOBIT

To write DO bit value which represents a channel of DO to the FRnet DO module.

Syntax

```
void pac_i8172W_WriteDOBit(int slot, int port, int group, int bit, int
DOBitValue);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DO to write (Range: 0 to 7).

(a group is corresponding to a FRnet module)

bit [in]

Specifies the channel of the FRnet DO module to write (Range: 0 or 15).

DOBitValue [in]

Specifies the number to be written to the specified channel. If the number =1, the DO of the channel turns on; otherwise the DO of the channel turns off. (Range: 0 or 1)

Return Values

None

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
```

```
unsigned int DOGroupValue = 3;

pac_i8172W_Init(slot);
pac_i8172W_WriteDOBit (slot, port, group, bit, DOBitValue);
```

4. PAC_I8172W_WRITEDOGROUPINDIO

To write DO group value which represents a group of DOs to the FRnet DIO module.

Syntax

```
void pac_i8172W_WriteDOGroupInDIO(int slot, int port, int group, unsigned int DOGroupValue);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DO of the DIO module to write (Range: 0 to 7).

(a group is corresponding to a FRnet module)

DOGroupValue [in]

Specifies the number whose binary form represents the DO value which is to be written to the specified group. For example, if DOGroupValue = 3, its binary form = 00000011, and the first and the second channel DO turn on, the others turn off.

Return Values

None

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
unsigned int DOGroupValue = 3;
```

```
pac_i8172W_Init(slot);
pac_i8172W_WriteDOGroupInDIO(slot, port, group, DOGroupValue);
```

5. PAC_I8172W_WRITEDOBITINDIO

To write DO bit value which represents a channel of DO to the FRnet DIO module.

Syntax

```
void pac_i8172W_WriteDOBitInDIO(int slot, int port, int group, int bit, int DOBitValue);
```

Parameter

slot [in]
Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).
port [in]
Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).
group [in]
Specifies the group of DO of the DIO module to write (Range: 0 to 7).
(a group is corresponding to a FRnet module)
bit [in]
Specifies the DO channel of the FRnet DIO module to write (Range: 0 or 15).
DOBitValue [in]
Specifies the number to be written to the specified channel. If the number =1, the DO of the channel turns on; otherwise the DO of the channel turns off. (Range: 0 or 1)

Return Values

None

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
```

```
unsigned int DOGroupValue = 3;

pac_i8172W_Init(slot);
pac_i8172W_WriteDOBitInDIO (slot, port, group, bit, DOBitValue);
```

6. PAC_I8172W_READDIGROUP

To read DI group value which represents a group of DIs from the FRnet DI module.

Syntax

```
unsigned int pac_i8172W_ReadDIGroup(int slot, int port, int group);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DI to read (Range: 0 to 7).

(a group is corresponding to a FRnet module)

Return Values

This function returns an unsigned integer whose binary form represents the DI value of the specified group. For example, if return value = 3, its binary form = 00000011, which means that the first and the second channel of DI turn on, the others turn off.

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
int DIValue = 0;

pac_i8172W_Init(slot);
DIValue = pac_i8172W_ReadDIGroup (slot, port, group);
```

7. PAC_I8172W_READDIBIT

To read DI bit value which represents a channel of DI from the FRnet DI module.

Syntax

```
unsigned int pac_i8172W_ReadDIBit(int slot, int port, int group, int bit);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DI to read (Range: 0 to 7).

(a group is corresponding to a FRnet module)

bit [in]

Specifies the channel of the FRnet DI module to read (Range: 0 or 15).

Return Values

This function returns an integer to represent the status of a specified channel. If the integer =1, the DI of the channel is on; otherwise the DI of the channel is off.

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
int bit = 0;
int DIValue = 0;

pac_i8172W_Init(slot);
```

```
DIValue = pac_i8172W_ReadDIBit (slot, port, group, bit);
```

8. PAC_I8172W_READDIBITINDIO

To read DI bit value which represents a channel of DI from the FRnet DIO module.

Syntax

```
unsigned int pac_i8172W_ReadDIBitInDIO(int slot, int port, int group, int bit);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DI of the DIO module to read (Range: 0 to 7).

(a group is corresponding to a FRnet module)

bit [in]

Specifies the DI channel of the FRnet DIO module to read (Range: 0 or 15).

Return Values

This function returns an integer to represent the status of a specified channel. If the integer =1, the DI of the channel is on; otherwise the DI of the channel is off.

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
unsigned int DIBitValue = 0;

pac_i8172W_Init(slot);
DIBitValue = pac_i8172W_ReadDIBitInDIO (slot, port, group, bit);
```

9. PAC_I8172W_GETDICOMMUNICATIONSTATUS

To get DI communication status of certain port of I-8172W module.

Syntax

```
int pac_i8172W_GetDICommunicationStatus(int slot, int port);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

Return Values

This function returns an integer whose binary form represents the DI communication status of the specified port of the I-8172W. For example, if the return integer value = 3, its binary form = 00000011, which means that the communications between I-8172W and the first group, the second group of DI modules on FRnet are active.

Examples

[C++]

```
int slot=1;
int port = 0;
int status = 0;

pac_i8172W_Init(slot);
status = pac_i8172W_GetDICommunicationStatus(slot, port);
```

10. PAC_I8172W_READDIGROUPSTATUS

To get DI communication status of the specified group.

Syntax

```
int pac_i8172W_ReadDIGroupStatus(int slot, int port, int group);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

group [in]

Specifies the group of DI module to read status (Range: 0 to 7).

(a group is corresponding to a FRnet module)

Return Values

This function returns an integer to represent the communication status between I-8172W and the specified group of FRnet DI module. If the integer =1, the communication is active; otherwise the communication is inactive.

Examples

[C++]

```
int slot=1;
int port = 0;
int group = 0;
int status = 0;
pac_i8172W_Init(slot);
status = pac_i8172W_ReadDIGroupStatus (slot, port, group);
```

11. PAC_I8172W_RESETFRNET

To reset the FRnet through the specified port of I-8172W module.

Syntax

```
void pac_i8172W_ResetFRnet(int slot, int port);
```

Parameter

slot [in]

Specifies the slot of XP-8000 in which the I-8172W plugged (Range: 1 to 7).

port [in]

Specifies the port of I-8172W in which I-8172W connects to FRnet (Range: 0 or 1).

Return Values

None

Examples

[C++]

```
int slot=1;
int port = 0;

pac_i8172W_Init(slot);
pac_i8172W_ResetFRnet (slot, port);
```

12. PAC_I8172W_GETLIBVERSION

To get the library version of this DLL.

Syntax

```
int pac_i8172W_GetLibVersion();
```

Parameter

None

Return Values

This function returns the integer whose hexadecimal form represents version string. For example, if the return integer = 257, whose hexadecimal form = 101, represents the version “1.0.1”.

Examples

[C++]

```
int version = pac_i8172W_GetLibVersion();
```

13. PAC_I8172W_GETLIBDATE

To get the date of this DLL built.

Syntax

```
void pac_i8172W_GetLibDate(char *LibDate);
```

Parameter

LibDate [out]

An array of type char which specifies the library building date.

Return Values

None

Examples

[C++]

```
char LibDate[64];
pac_i8172W_GetLibDate (LibDate);
```