FINTEK

DLL Function Guide

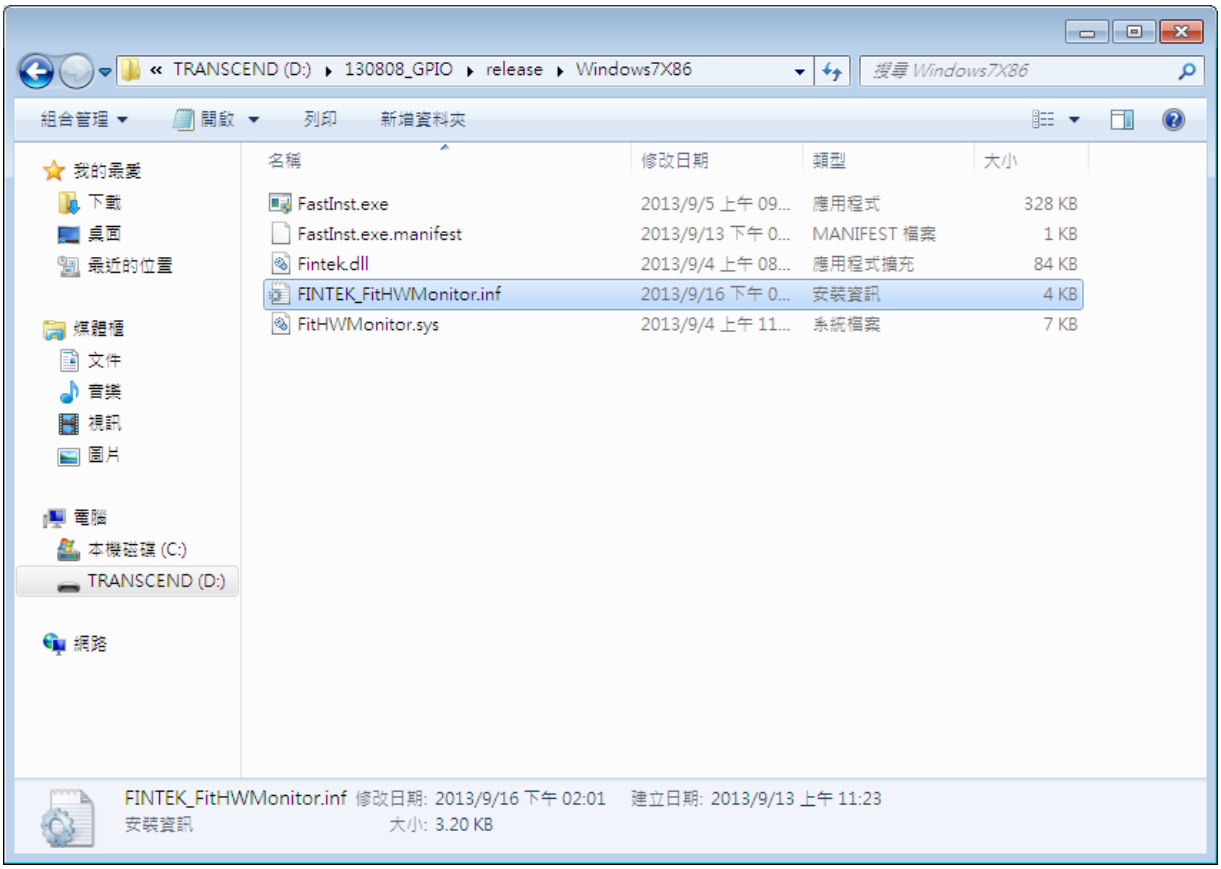
v1.00

September 24, 2014

1. Install：

See below for the driver installation steps:

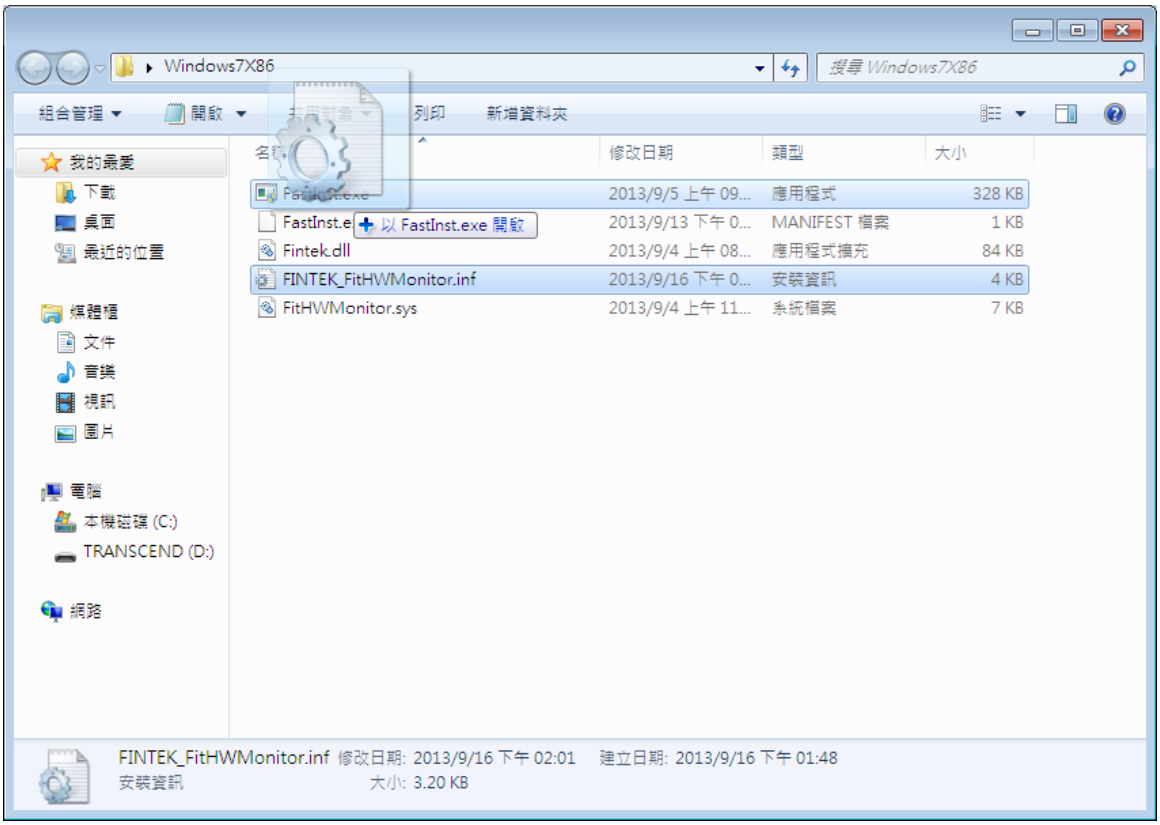
Step1: Open the release folder.



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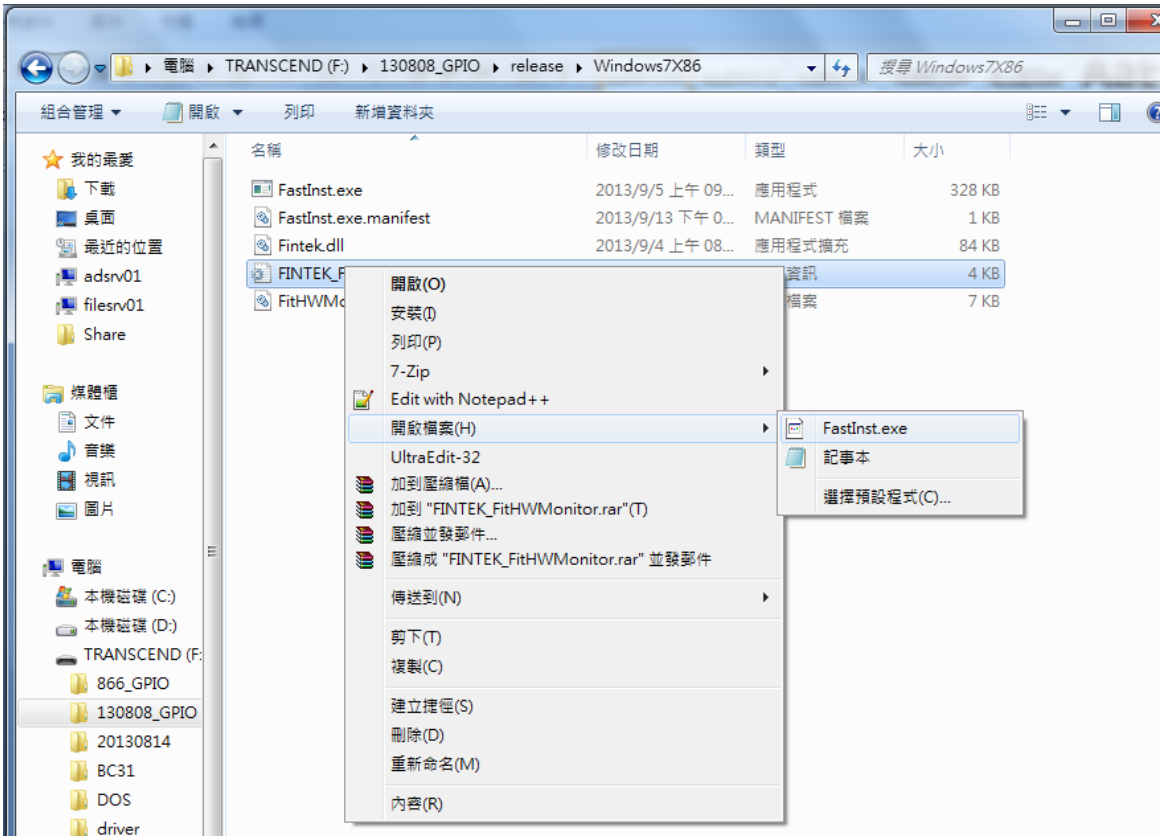
Step2: Use FastInst.exe to open the FINTEK_FitHWMonitor.inf file (drag FINTEK_FitHWMonitor.inf to Fastinst.exe, or right-click and select Open from FastInst.exe).

Figure 1. Drag the INF file to the FastInst.exe

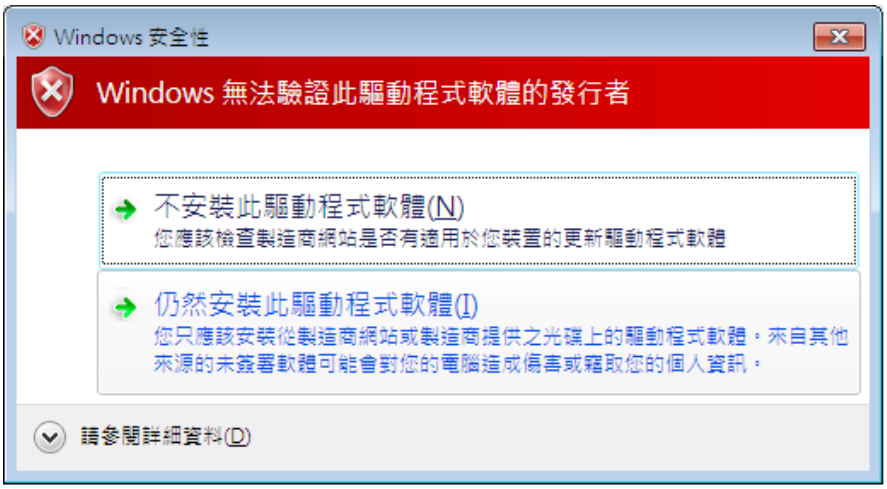


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Figure 2. Right-click and select Open from FastInst.exe

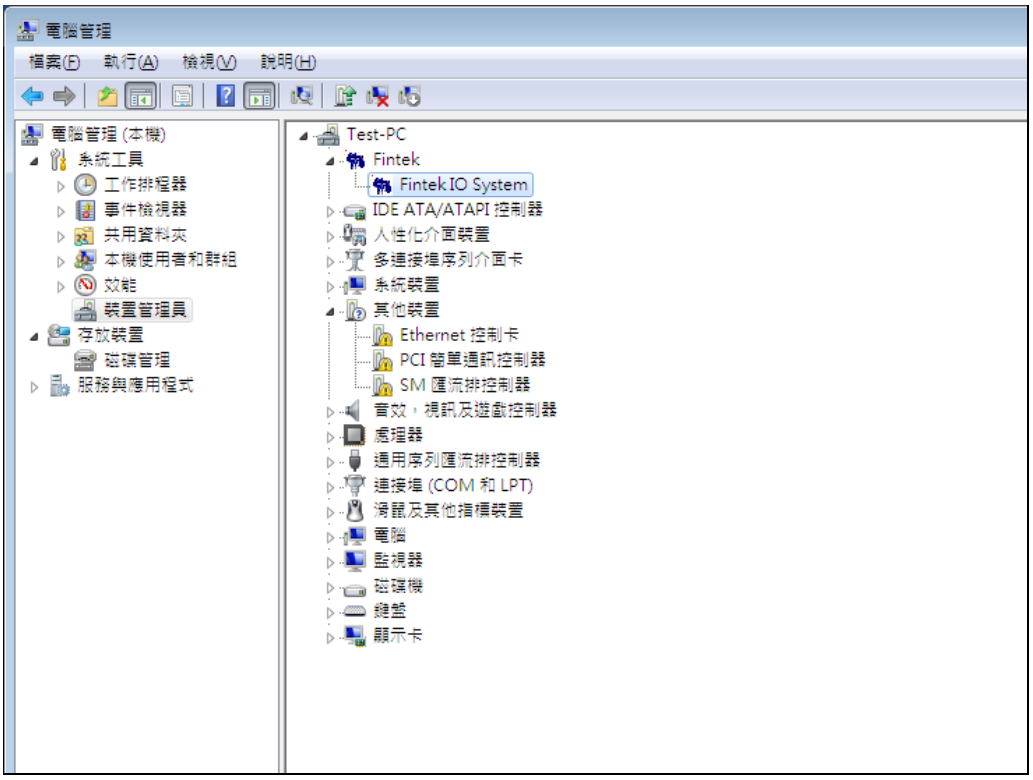


Step3: During installation, a "Windows can't verify the publisher of this driver software" is displayed. Click "Install this driver software anyway".



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Step4: When the installation is complete, the device manger would show up the Fintek IO System as below figure.



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2. DLL function

2.1 WDT AP:

2.1.1 LPC

Value: See 2.1.2 Value Description

- int SetWdtConfiguration(int iTimerCnt, int iClkSel, int iPulseMode, int iUnit, int iActive, int iPulseWidth)
  - Setting "iTimerCnt" to specify WDT timing range from 0 - 255. The "iUnit" is either second or minute programmed by the watchdog timer control register.
- int SetWdtEnable()
  - Setting SetWdtEnable() to enable WDT.
- int GetWdtTimeoutStatus(int *Status)
  - If watchdog timeout event occurred, " Status" will be set to 1.
- int SetWdtReSet()
  - Setting SetWdtReSet() to enable WDT time out output, function SetWdtEnable() will be disable it.

2.1.2 Value Description

Define	Value	Description
SetWdtConfiguration	iTimerCnt	0-255 (second or minute program by "iUnit")
SetWdtConfiguration	iClkSel	Watchdog timer clock. 0: 10Hz clock divided by CLKIN. 1: Internal 10Hz clock. -1: Load from IC.
SetWdtConfiguration	iPulseMode	0: Select level output mode. 1: Select pulse output mode. -1: Load from IC.
SetWdtConfiguration	iUnit	Watchdog unit select. 0: Select second. 1: Select minute. -1: Load from IC.

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SetWdtConfiguration	iActive	Watchdog output polarity of WDTRST. 0: low active. 1: high active. -1: Load from IC.
SetWdtConfiguration	iPulseWidth	0: Select pulse width of 1 ms. 1: Select pulse width of 25 ms. 2: Select pulse width of 125 ms. 3: Select pulse width of 5 sec. -1: Load from IC.
SetWdtEnable		Enable watchdog timer
GetWdtTimeoutStatus	Status	1: Timeout event occurred
SetWdtReSet		Enable watchdog time out output via WDTRST#

2.2 GPIO AP:

2.2.1 LPC

Value: See 2.2.2 Value Description

- int GPIO_LPC_R(int index, int *value)
  - Get GPIO pin value.

- int GPIO_LPC_W(int index, int value)
  - Set GPIO pin status.

2.2.2 Value Description

Define	Value	Description
GPIO_LPC_R	index	GPIO Output Register.
GPIO_LPC_R	value	Return GPIO group status.
GPIO_LPC_W	index	GPIO Output Register.
GPIO_LPC_W	value	Write GPIO group status.

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2 DLL Guide：

3.1 DLL Functions Description

3.1.1 Load DLL

```
HINSTANCE  hinstLib;
hinstLib = LoadLibrary("Fintek.dll");
if (hinstLib == NULL)
return false;
```

3.1.2 Unload DLL

```
if (hinstLib != NULL)
    FreeLibrary(hinstLib);
```

3.1.3 DLL Parameter：

```
// Get parameter type
typedef int (*GETINTPROC)(int*);
typedef int (*GETINT2PROC)(int, int*);

// Set parameter type
typedef int (*SETINT6PROC)(int, int, int, int, int, int);
typedef int (*SETPROC)();
typedef int (*SETINT2PROC)(int, int);
```

3 Example：

4.1 SetWdtConfiguration and SetWdtEnable Function

- **Example**： WDT parameter setting: 10 sec, others load from IC.

```
void XXXX(void)
{
```


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```
        SETINT6PROC ProcAdd;
        SETPROC ProcAdd1, ProcAdd2;
        char *endptr;

        ProcAdd = (SETINT6PROC) GetProcAddress(hinstLib, "SetWdtConfiguration");
        if (NULL != ProcAdd)
        {
              if (! (*ProcAdd)(10, -1, -1, 0, -1, -1))
             {
                      ShowMessage("Write Fail");
              }
        }
        ProcAdd1 = (SETPROC) GetProcAddress(hinstLib, "SetWdtEnable");
        if (NULL != ProcAdd1)
        {
              if (! (*ProcAdd1)())
             {
                      ShowMessage("Write Fail");
              }
        }
        ProcAdd2 = (SETPROC) GetProcAddress(hinstLib, "SetWdtReSet");
        if (NULL != ProcAdd2)
        {
              if (! (*ProcAdd2)())
             {
                      ShowMessage("Write Fail");
              }
        }
 }
```

4.2 GetWdtTimeoutStatus Function

- **Example**： Get WDT timeout event Status.

```
void XXXX(void)
{
    GETINTPROC ProcAdd;
    int data;
```


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```
    char *endptr;

    ProcAdd = (GETINTPROC) GetProcAddress(hinstLib, "GetWdtTimeoutStatus");
    if (NULL != ProcAdd)
    {
           if (! (*ProcAdd)(&data))
           {
                  ShowMessage("Read Fail");
           }
    }
}
```

4.3 GPIO_LPC_R Function

- **Example：** 0x02 GPIO0X mode control Register

```
void XXXX(void)
{
     int value = 0;
     GETINT2PROC ProcAdd;

     ProcAdd = (GETINT2PROC) GetProcAddress(hinstLib, " GPIO_LPC_R");
     if (NULL != ProcAdd)
     {
          if (! (*ProcAdd)( 0x02, &value))
          // Fail to get this value
     }
     else
     {
          // Fail to get this procedure address
     }
}
```

4.4 GPIO_LPC_W Function

- **Example：** 0x02 GPIO0X mode control Register

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```
void XXXX(void)
{
     int value = 0x03;
     SETINT2PROC ProcAdd;

     ProcAdd = (SETINT2PROC) GetProcAddress(hinstLib, "GPIO_LPC_W");
     if (NULL != ProcAdd)
     {
          if (! (*ProcAdd)( 0x02, value))
          // Fail to get this value
     }
     else
     {
          // Fail to get this procedure address
     }
}
```


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