

[Issue No.] FA-A-0210

[Title] Corrective action when MELSOFT products cannot be installed on a personal computer on which the 6th Generation Intel Core Processor has been installed

[Date of Issue] June 2016

[Relevant Models] MELSOFT series

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Thank you for your continued support of Mitsubishi FA software MELSOFT series.

This bulletin explains the symptom that MELSOFT products cannot be installed on a personal computer on which the 6th Generation Intel® Core™ Processor has been installed, and its corrective action.

### 1. SYMPTOM

#### (1) The installation does not start.

The following screen that indicates the start of installation does not appear at the start of the installation.



#### (2) The installation stops during the installation.

The installation stops if the specific product is selected for installation during the installation.



**2. CONDITIONS**

**2.1 Specification of a Personal Computer**

The symptom occurs when the BIOS<sup>\*1</sup> or UEFI<sup>\*2</sup> has any problem (chapter 3) on a personal computer that meets following conditions:

- The 6th Generation Intel Core Processor is installed.
- The personal computer outputs videos using an on-board video (built into CPU).
- Microsoft® Windows® 7 32-bit edition is used.

\*1 Short for Basic Input/Output System.

The BIOS is located on the motherboard and it manages and controls peripheral devices connected to the personal computer.

\*2 Short for Unified Extensible Firmware Interface. UEFI replaces the BIOS.

**2.2 Occurrence Situation in MELSOFT Products**

Product name		Situation
iQ Works		The symptom occurs during installation in the following situation: <ul style="list-style-type: none"> <li>• Installation of GX Developer included in the product is selected on the installation screen.</li> </ul> The symptom does not occur in the products such as update version and trial version since GX Developer is not included in these products.
GX Works3		The symptom occurs during installation in any of the following situations: <ul style="list-style-type: none"> <li>• Installation of GX Developer included in the product is selected on the installation screen by following the installation procedure.</li> <li>• The setup.exe of GX Developer included in the product is executed.</li> </ul> The symptom does not occur in the products such as update version and trial version since GX Developer is not included in these products.
GX Works2	Ver. 1.519R or later	The symptom occurs during installation in the following situation: <ul style="list-style-type: none"> <li>• The setup.exe of GX Developer included in the product is executed.</li> </ul> The symptom does not occur in the products such as update version and trial version since GX Developer is not included in these products.
	Ver. 1.513K or earlier	The symptom occurs during installation in any of the following situations: <ul style="list-style-type: none"> <li>• Installation of GX Developer included in the product is selected on the installation screen by following the installation procedure.</li> <li>• The setup.exe of GX Developer included in the product is executed.</li> <li>• The setup.exe of Configurator-QP included in the product is executed.</li> </ul> The symptom does not occur in the products such as update version and trial version since GX Developer and Configurator-QP are not included in these products.
GT Works3		The symptom occurs in any of the following situations: <ul style="list-style-type: none"> <li>• The setup.exe of MES DB Connection Service (for GT Works3) included in the product is executed.</li> <li>• The setup.exe of the multimedia data link tool (for GT Works3) included in the product is executed.</li> </ul>
MT Works2		The symptom does not occur.
RT ToolBox2 / RT ToolBox2 mini		The symptom does not occur.
MR Configurator2		The symptom does not occur.
MR Configurator	C6	The symptom occurs if setup.exe is executed.
	C5 or earlier	The symptom does not occur.
PX Developer PX Developer Monitor Tool		The symptom occurs if setup.exe is executed.
MX Component		The symptom occurs if setup.exe is executed.

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Product name		Situation
MX Sheet		The symptom occurs if setup.exe is executed.
MX MESInterface-R		The symptom occurs in the following situation: <ul style="list-style-type: none"> <li>• The installation of DB Connection Service and DB Connection Service Setting Tool are executed.</li> </ul>
MX MESInterface		The symptom occurs in any of the following situations: <ul style="list-style-type: none"> <li>• The installation of MES Interface Function Configuration Tool is executed.</li> <li>• The installation of DB Connection Service and DB Connection Service Setting Tool are executed.</li> </ul>
GX LogViewer		The symptom does not occur.
CPU Module Logging Configuration Tool		The symptom does not occur.
MELSEC iQ-R series High Speed Data Logger Module Tool		The symptom does not occur.
High Speed Data Logger Module Tool		The symptom does not occur.
High Speed Data Communication Module Tool		The symptom does not occur.
BOX Data Logger Configuration Tool		The symptom does not occur.
QnH to QnU conversion support tool		The symptom does not occur.
GX Developer		The symptom occurs if setup.exe is executed.
A/QnA to Q conversion support tool		The symptom occurs if setup.exe is executed.
GX Configurator-AD GX Configurator-DA GX Configurator-CT GX Configurator-TC GX Configurator-TI GX Configurator-FL GX Configurator-PT GX Configurator-AS GX Configurator-SC GX Configurator-QP GX Configurator-AP		The symptom occurs if setup.exe is executed.
GX Simulator		The symptom occurs if setup.exe is executed.
GX Converter		The symptom occurs if setup.exe is executed.
CC-Link system master/local interface board software package	1.18U or later	The symptom does not occur.
	1.17T or earlier	The symptom occurs if setup.exe is executed.
CC-Link IE Controller Network interface board software package	1.20W or later	The symptom does not occur.
	1.19V or earlier	The symptom occurs if setup.exe is executed.
CC-Link IE Field Network interface board software package		The symptom does not occur.
MELSECNET/H interface board software package	29F or later	The symptom does not occur.
	28E or earlier	The symptom occurs if setup.exe is executed.

### 3. CAUSE

The symptom occurs due to the abnormal behavior of ntdm.exe, the Windows system module. We have found that this is caused by a defect in the BIOS or UEFI on the personal computer.

#### 3.1 Investigation Result

As a result of our investigation, we found that the ntdm.exe loops infinitely.

##### (1) Analysis result

The following explains the result of analysis. The addresses differ depending on the manufacturer of the personal computer.

##### Analysis result of ntdm.exe

```
0:000> r
eax=0004ffff ebx=00000200 ecx=00000000 edx=00000000 esi=00042000 edi=00000070
eip=0000f18e esp=000006cc ebp=000006dc iopl=0   vif nv up ei pl zr na pe nc
cs=c000  ss=0000  ds=0000  es=0070  fs=0000  gs=0000  efl=000a0246
c000:f18e ebfe          jmp     F18E
0:000> ub c000:f18e
c000:f177 66be00200400  mov     esi,42000h
c000:f17d e8ba7c       call    6E3A          ← Call the subroutine
c000:f180 66a900000004 test    eax,4000000h  ← Check the returned value
c000:f186 7502        jne     F18A          ← Jump if the flag of 0x4000000 is not set
c000:f188 eb03        jmp     F18D          ← Jump if the program above does not jump
c000:f18a f9          stc
c000:f18b eb03        jmp     F190          ↓
c000:f18d f8          clc          ← Reset the carry flag
c000:f18e ebfe          jmp     F18E          ← Infinite loop
```

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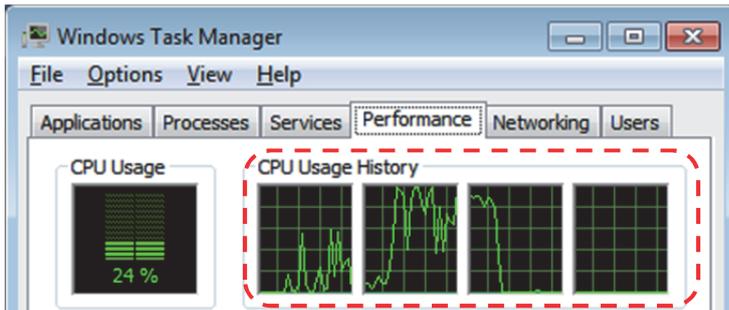
##### (2) Conclusion

The address that goes into the infinite loop may be processed by the BIOS or UEFI option. The problem may occur in the BIOS or UEFI of the graphic function.

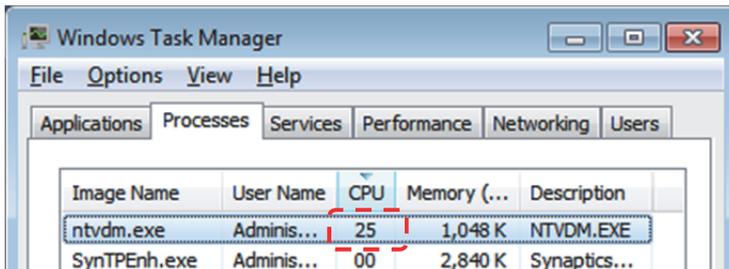
### 3.2 How to Check the Operation of "ntvdm.exe"

The operation can be checked by following the procedure below.

1. Right-click the taskbar of Windows, and then click [Start Task Manager].
2. Select the "Performance" tab in the Windows Task Manager.
3. Check the number of graphs (number of cores) in "CPU Usage History".  
Example) Number of cores is '4'



4. Select the "Processes" tab in the Windows Task Manager.
5. Check the value in "CPU" of "ntvdm.exe".  
Example) CPU usage of one core is '25'



6. Calculate the CPU usage by multiplying the values which have been obtained in Step 3 and Step 5.

If the CPU usage is around 100%, it indicates that the error is caused by a high-load processing of the ntvdm.exe.

## 4. CORRECTIVE ACTION

We have concluded that the MELSOFT products can be installed correctly by modifying the BIOS or UEFI. If the symptom occurred, please contact the manufacturer of the personal computer used with this bulletin attached. Obtain the appropriate BIOS or UEFI for your personal computer.

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