*Intel Atom Base teaching pendant optimized for industrial robots.*

# DTP7H-P
# Remote Debugging
# User's Guide Manual

## (R1) Version

**DAINCUBE Corp.**
Intel Atom Base Windows System

**FORM 170703F – 2017.07.03**

# Preface

**Important information**
This documentation is intended for qualified audience only. The product described herein is not an end user product. It was developed and manufactured for further processing by trained personnel.

**Disclaimer**
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## Safety precautions

Be sure to observe all of the following safety precautions.

Strict observance of these warning and caution indications are a MUST for preventing accidents, which could result in bodily injury and substantial property damage. Make sure you fully understand all definitions of these terms and related symbols given below, before you proceed to the manual.

## Symbols

The following symbols may be used in this specification:

⚠ **Warning**

Warnings indicate conditions that, if not observed, can cause personal injury.

⚠ **Caution**

Cautions warn the user about how to prevent damage to hardware or loss of data.

✐ **Note**

Notes call attention to important information that should be observed.

# Revision history

| Revision | Data | Comment |
| --- | --- | --- |
| Version 1.0 | 2018.03.26 | Initial version |
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# Contents

# 1. Introduction

This document describes the remote debugging method of DTP7H-P and Host PC via Ethernet.
The DTP7H-P device platform is equipped with the Intel® Atom™ E3815, which allows applications to be developed quickly and easily the same as in an existing PC environment.

The DTP7H-P remote debugging method requires the following procedures.

Using DTP7H-P remote debugging summary.
A） Visual Studio 2008 install.
B） Visual Studio Remote Debugging execute.
C） Make sample project.
D） Host PC and DTP7H-P Ethernet connection.
E） How sample program debugging in Host PC.

 ※ **This document was executed in DTP7H-P Windows 10 IoT Enterprise 32bit environment.**

   **This document skips the installation for Visual Studio 2008.**

# 2. DTP7H-P Remote Debugging with Visual Studio 2008
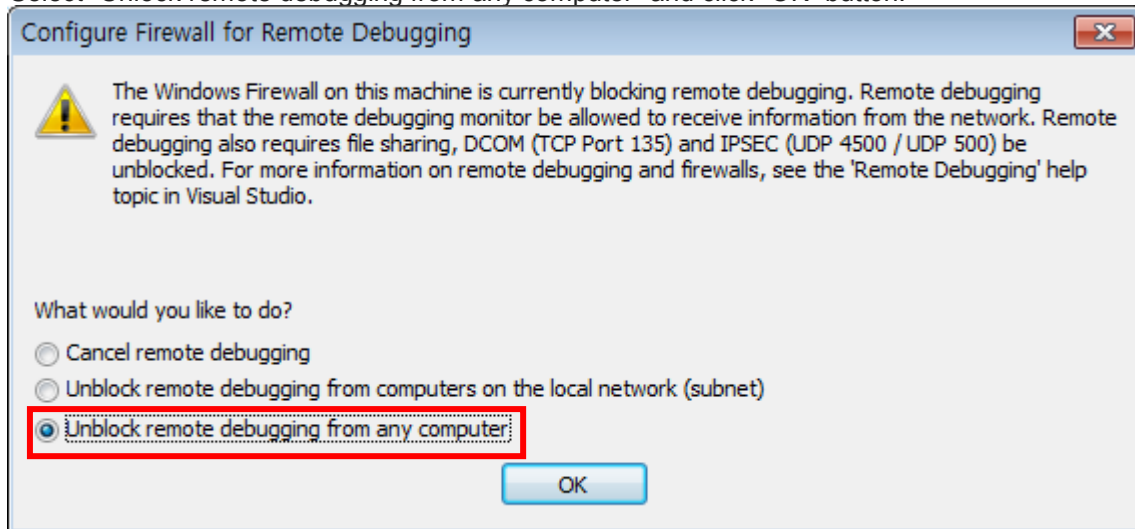## 2.1. Visual Studio Remote Debugging execute.

If Visual Studio 2008 is installed on the Host PC, the executable file is located in the following path.
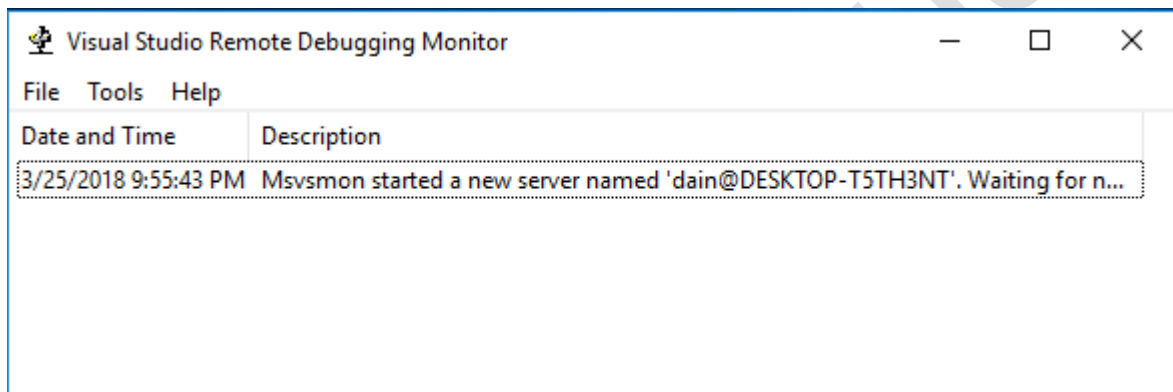**C:\Program Files\Microsoft Visual Studio 9.0\Common7\IDE\Remote Debugger\x86**

Copy the "msvsmon.exe" file to the DTP7H-P.

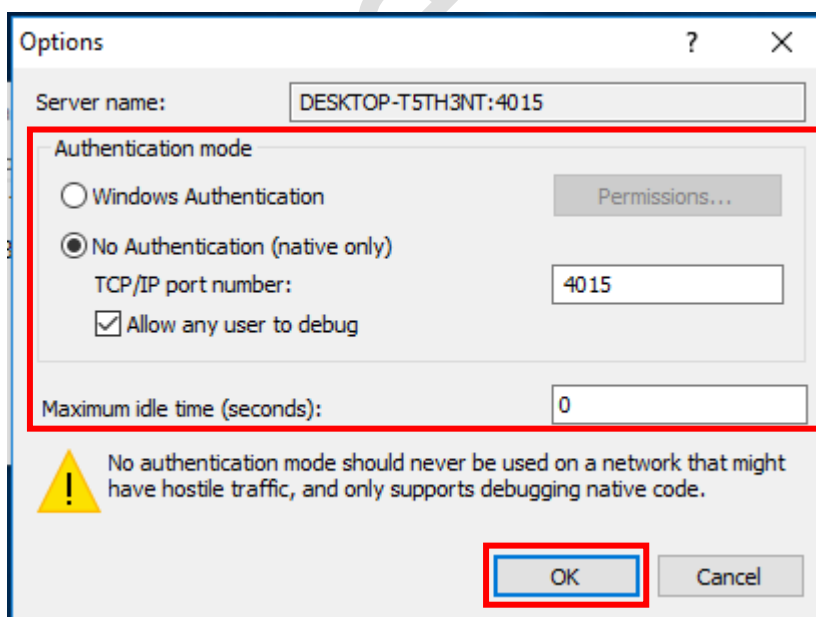| | | | |
|---|---|---|---|
| 📁 1033 | 2014-04-21 오후... | 파일 폴더 | |
| AvVsPkDH.dll | 2008-07-29 오후... | 응용 프로 | |
| dbghelp.dll | 2008-04-04 오후... | 응용 프로 | |
| iisresolver.dll | 2007-11-07 오전... | 응용 프로 | |
| mcee.dll | 2008-07-29 오후... | 응용 프로 | |
| mpishim.exe | 2008-07-29 오후... | 응용 프로 | |
| msvb7.dll | 2008-07-29 오후... | 응용 프로 | |
| msvsmon.exe | 2008-07-29 오후... | 응용 프로 | |
| msvsmon.exe.config | 2007-11-06 오후... | XML Con | |
| symsrv.dll | 2008-04-04 오후... | 응용 프로 | |
| symsrv.yes | 2007-12-13 오후... | YES 파일 | |

Execute "msvsmon.exe" file among the files copied from DTP7H-P.
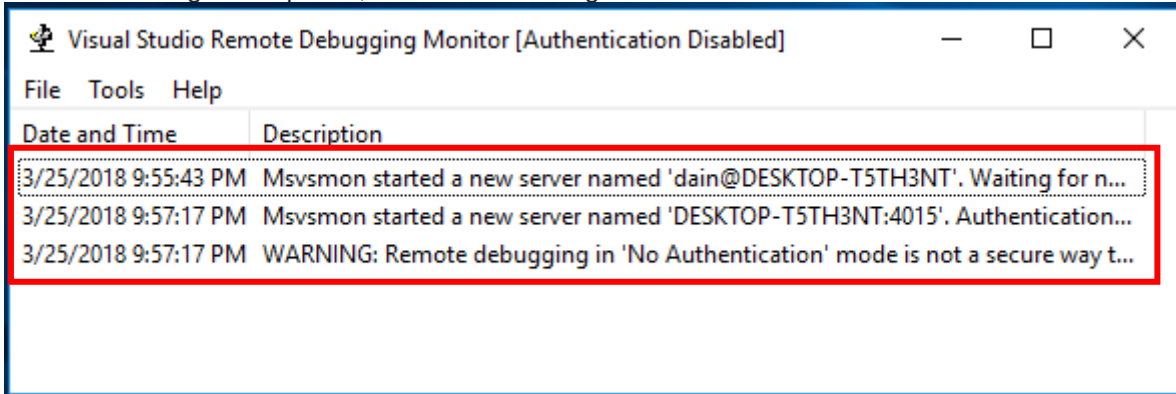Select "Unlock remote debugging from any computer" and click "OK" button.



"msvsmon.exe" is the execution screen.



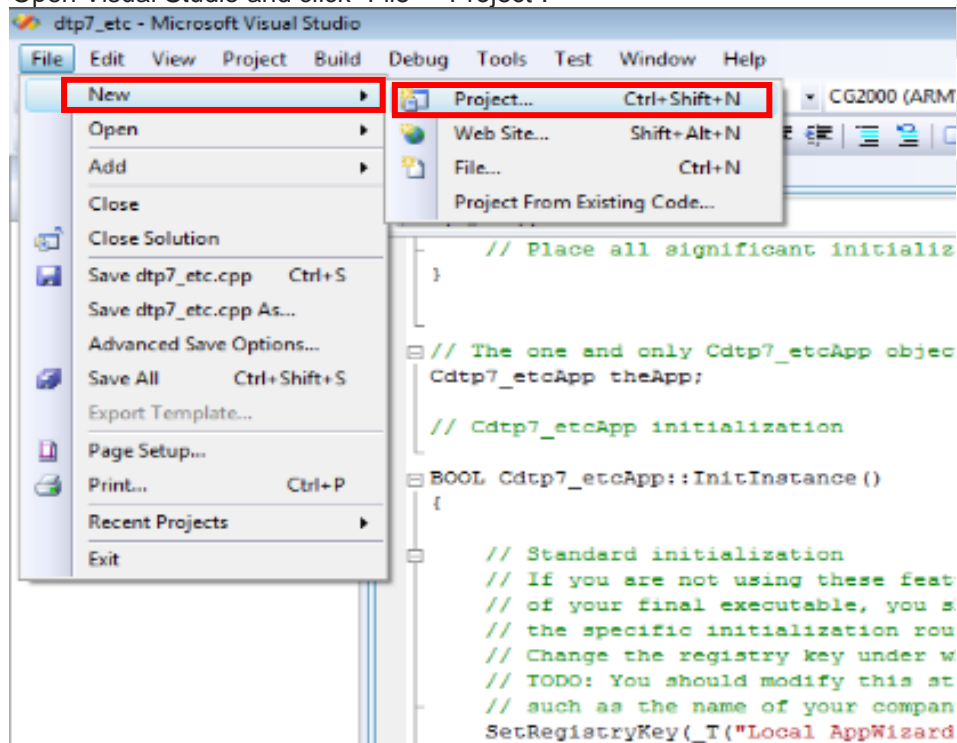Click "Tools -> Options", make the following settings and click "OK" button.

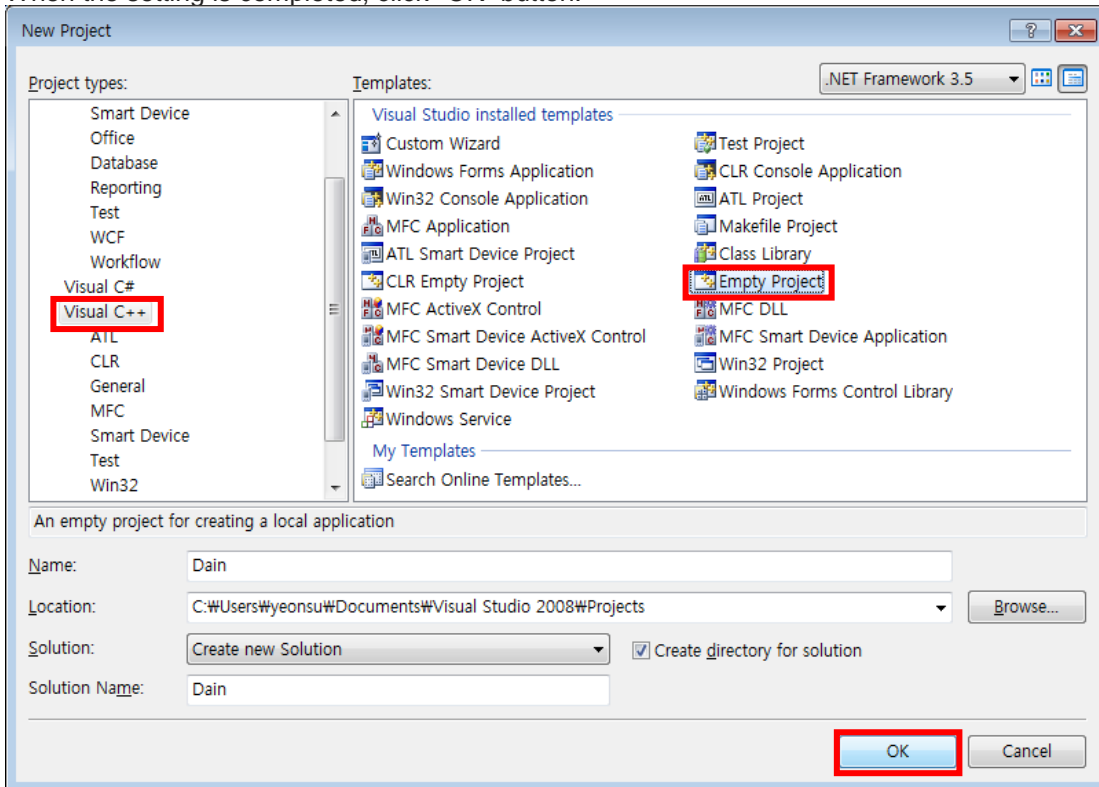When the setting is completed, check the following screen.



## 2.2. Make sample project.

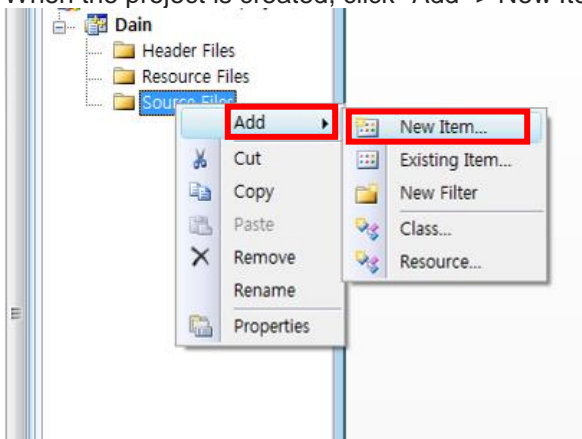Run Visual Studio 2008 to create a test project.

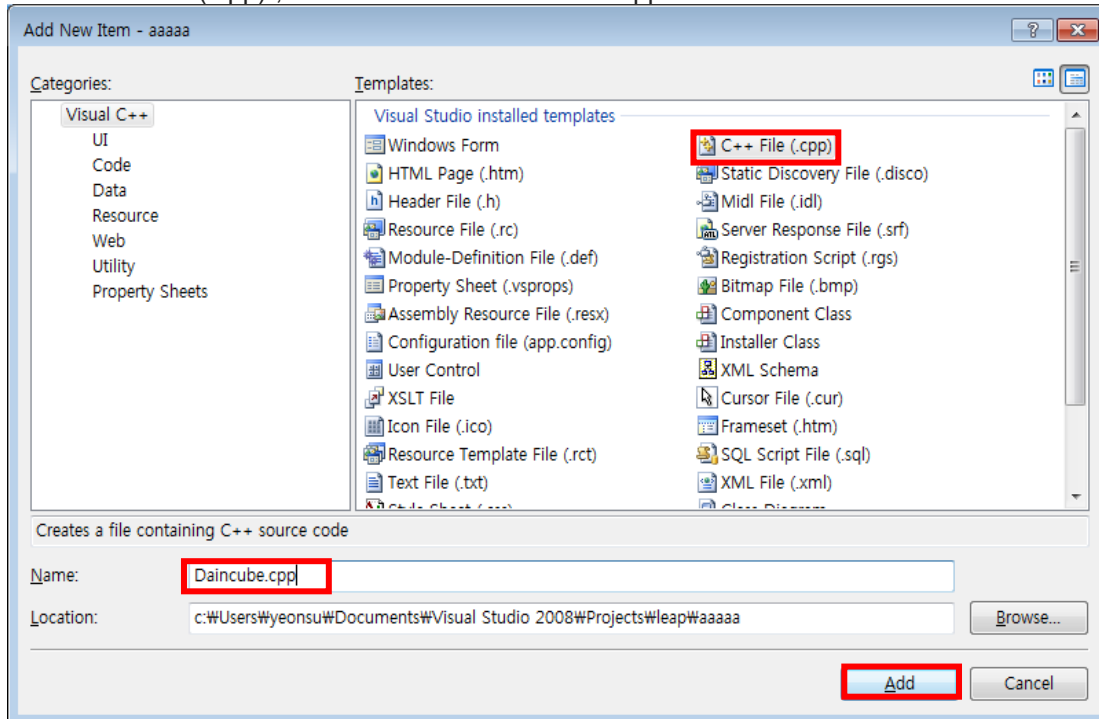Open Visual Studio and click "File -> Project".

When the Ne project windows is displayed, click "Empty Project" in the Visual C++ list.
When the setting is completed, click "OK" button.



When the project is created, click "Add -> New Item".

Select "C++ File(.cpp)", make the extension name ".cpp" and click "Add" button.
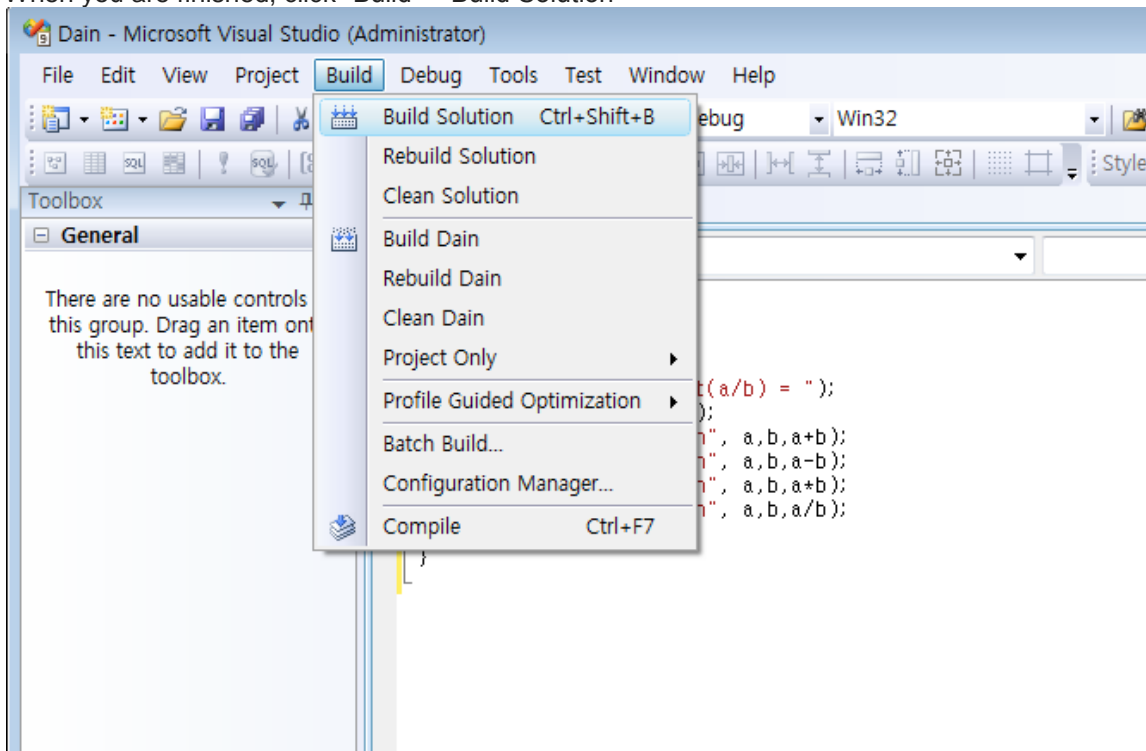


After creating the file, write the following example source code.
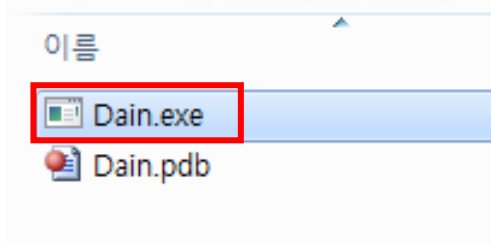
```
#include<stdio.h>

int main(void){
  int a=0, b=0;
  printf("Number input (a/b) = ");
  scanf("%d/%d",&a,&b);
  printf("%d+%d=%d\n\n", a,b,a+b);
  printf("%d-%d=%d\n\n", a,b,a-b);
  printf("%d*%d=%d\n\n", a,b,a*b);
  printf("%d/%d=%d\n\n", a,b,a/b);
return 0;
}
```

When you are finished, click "Build -> Build Solution"



When the build is completed, an executable file is created.
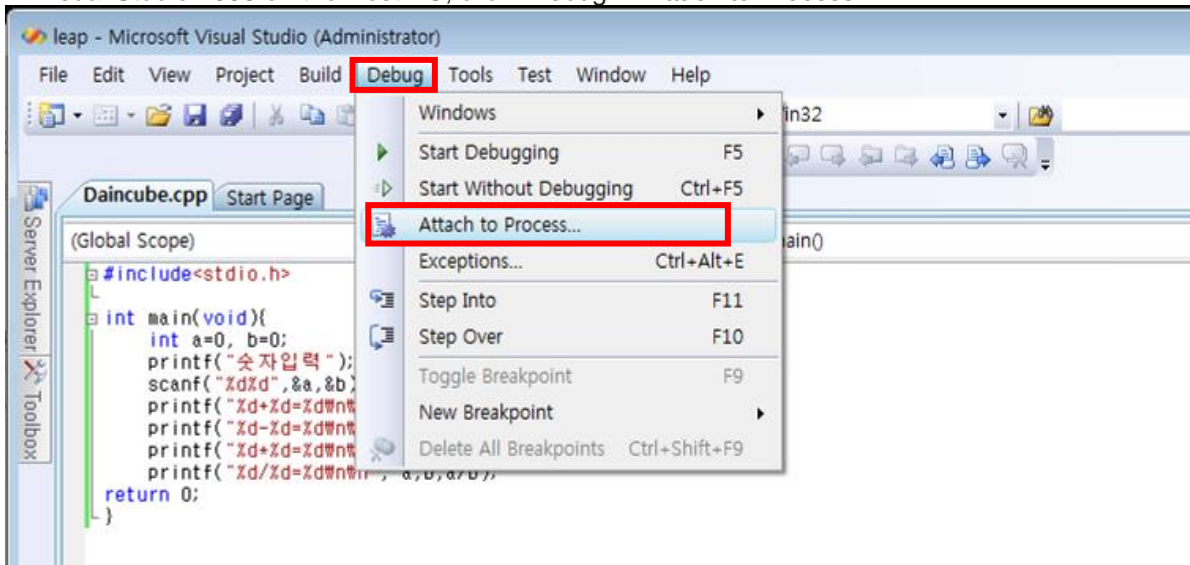Copy the executable file "Dain.exe" to the DTP7H-P.

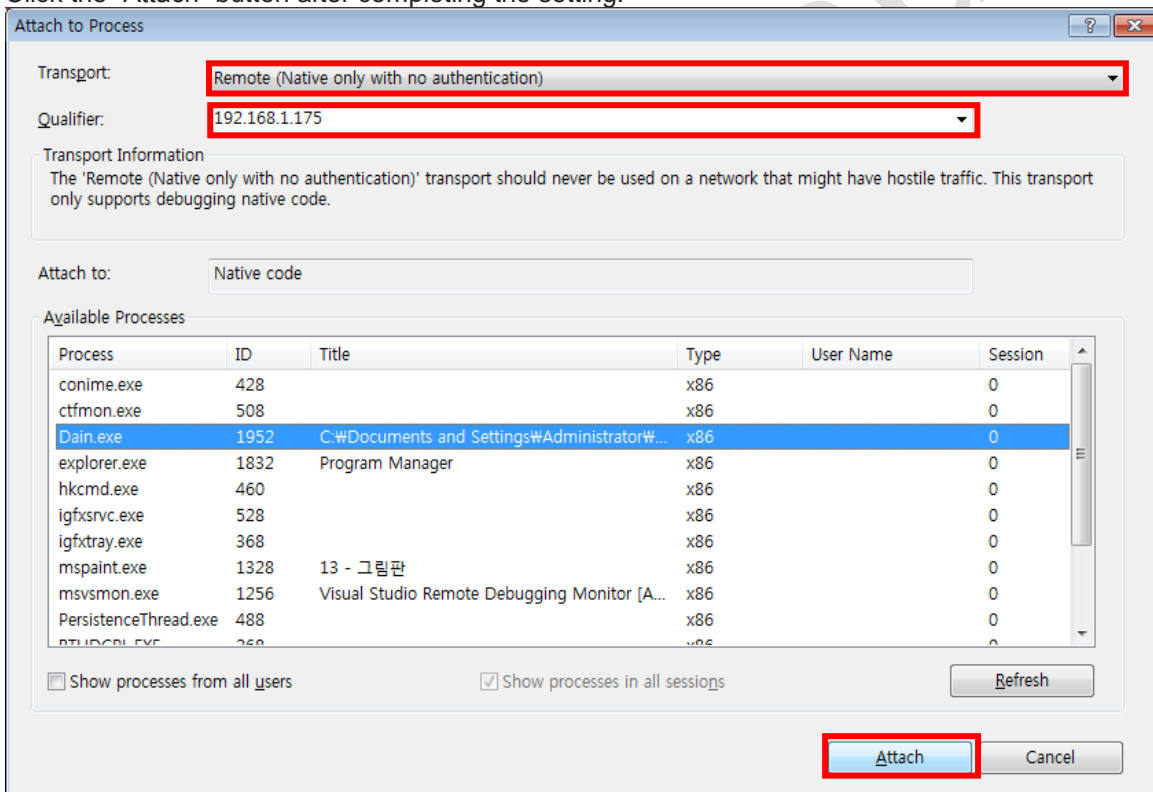

"Dain.exe" is the execution screen.

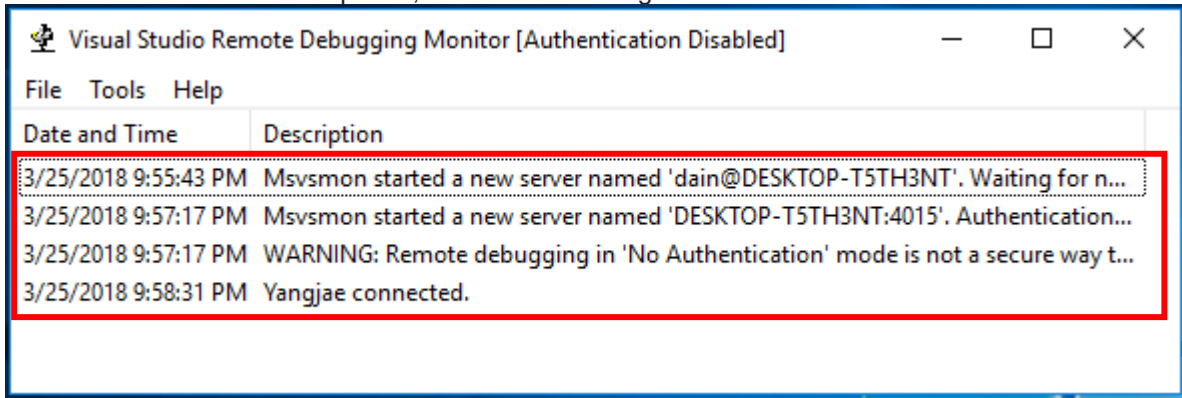## 2.3. Host PC and DTP7H-P Ethernet connection.

In Visual Studio 2008 on the Host PC, click "Debug -> Attach to Process".



Select "Remote (Native only with no authentication)" and enter the IP address of DTP7H-P
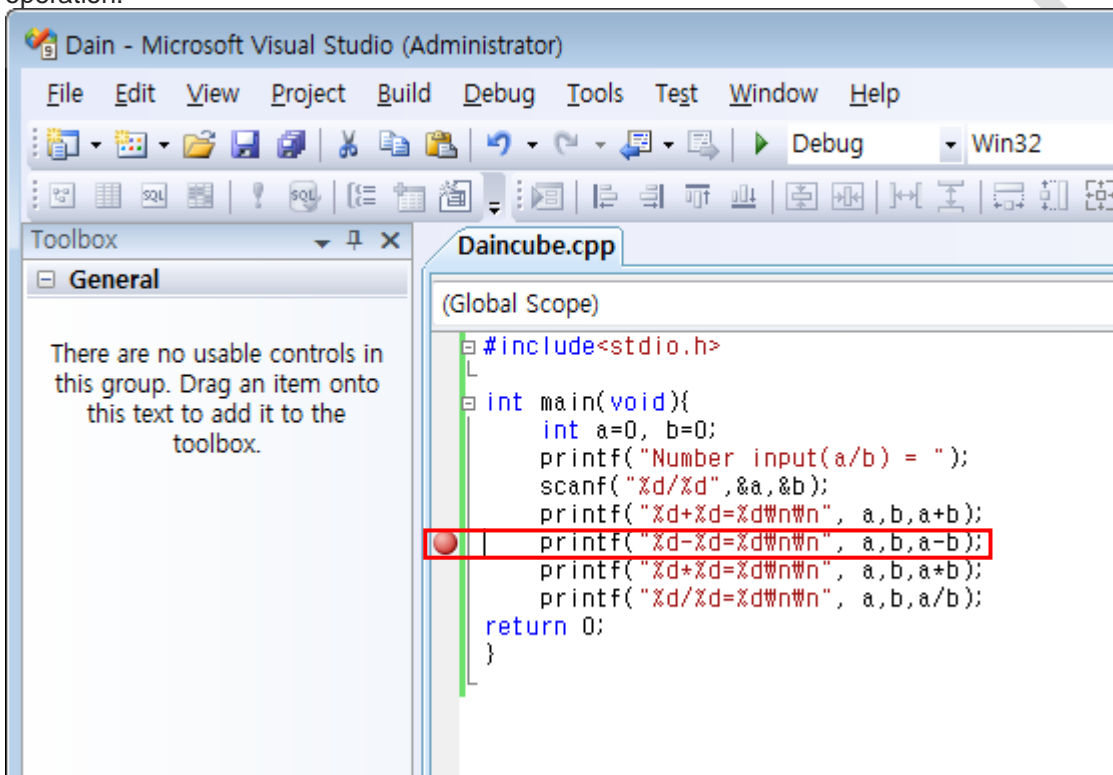Click the "Attach" button after completing the setting.

When the connection is completed, check the following screen in "msvsmon.exe".


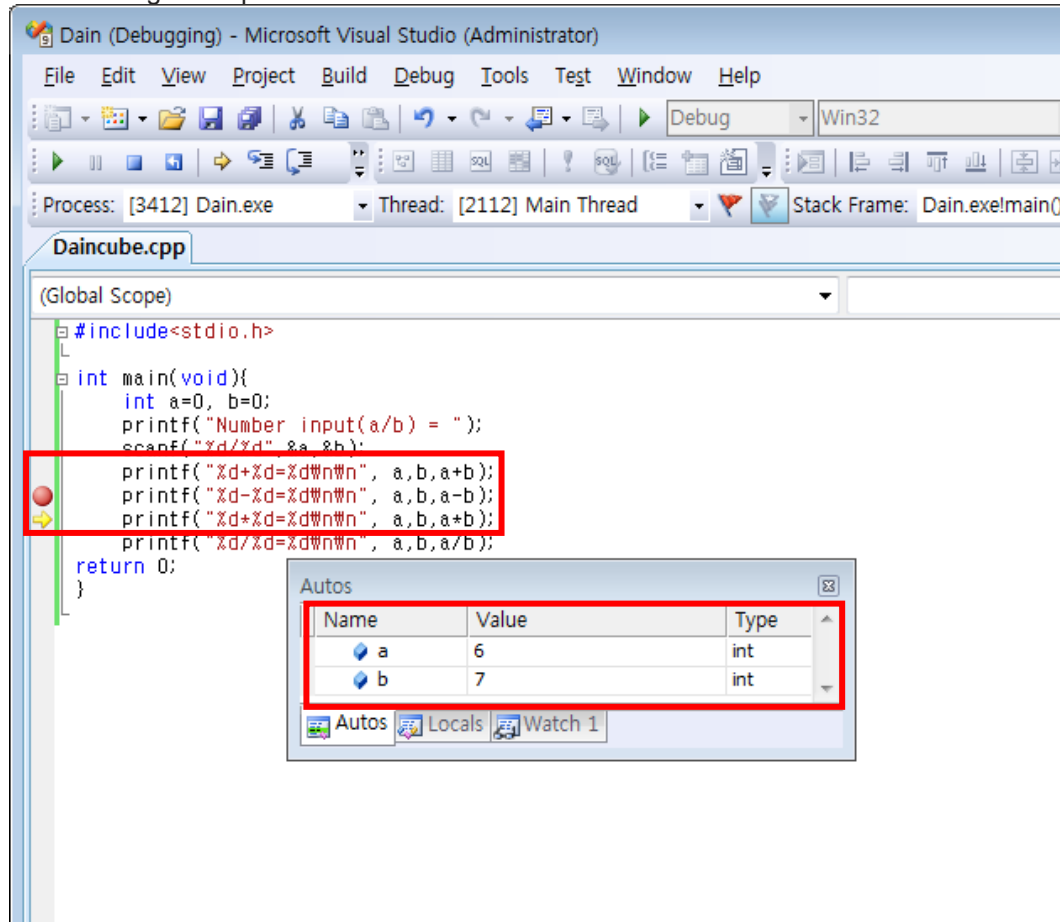
## 2.4. How sample program debugging in Host PC.

When you have finished writing the example source code, click Breakpoint in the "-" part of the arithmetic operation.



If you enter an arbitrary number and press Enter, execution is confirmed until the breakpoint is taken.

Click "Debug -> Step Into" to confirm next.



[Visual Studio and DTP7H-P debugging in Real time]