

S5U1C17001H Firmware Update Manual

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1. OVERVIEW

This manual is a reference to update the firmware of S5U1C17001H (hereafter, ICDmini) from version 1.0 to version 1.1. See this manual to update the firmware.

2. OPERATING ENVIRONMENT

The environment required to update the firmware is shown below.

- Personal computer (PC)
GNU17 (S5U1C17001C) development tool has been installed.
ICDmini USB driver has been installed.
- ICDmini (S5U1C17001H)
USB cable is required for connection with a PC.

3. PREPARATION

Make a preparation to update the firmware.
(It is assumed that you have this package.)

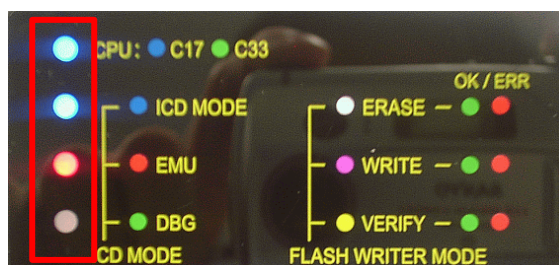
- 1) Turn on DSW7 of ICDmini.



- 2) Connect ICDmini to your PC with USB cable.



Note) Reset it if the following condition is not satisfied. LED1:blue, LED2:blue, LED3:red, LED4:light off
(When connected to the target device, LED3 must be Off but LED4 must be On.)



4. UPDATING THE FIRMWARE OF ICDmini

4. UPDATING THE FIRMWARE OF ICDmini

There are following two ways to update the firmware of ICDmini.
See the section corresponding to each update method.

* Normally, perform automatic execution by the batch file.

- a. Use the attached batch file (automatic execution). → See section 5.
- b. Execute a command from GDB(debugger) (Manual execution). → See section 6.

This package has the following file configuration.

ICDmini_update_history_v11_j.txt	Firmware updating history (in Japanese language)
ICDmini_update_history_v11_e.txt	Firmware updating history (in English)
ICDmini_update_manual_v11_j.pdf	Firmware updating manual (in Japanese language)
ICDmini_update_manual_v11_e.pdf	Firmware updating manual (in English)
update_mini17_v11.bat	Firmware updating batch file
update_mini17_v11.cmd	Firmware updating command file
update_mini17_v11.saf	The updating firmware
fwr	Firmware recovery folder

5. UPDATE THE FIRMWARE BY THE ATTACHED BATCH FILE

Use the batch file attached to the package and updates the firmware.

5.1 Updating the firmware

- 1) Execute “update_mini_v11.bat” attached to the package.

名前	サイズ	種類	更新日時
fwr		ファイル フォルダ	2008/03/
ICDmini_update_history_v11_e.txt	5 KB	TXT ファイル	2008/03/
ICDmini_update_history_v11_j.txt	5 KB	TXT ファイル	2008/03/
ICDmini_update_manual_v11_e.pdf	361 KB	Adobe Acrobat 7.0 ...	2008/03/
ICDmini_update_manual_v11_j.pdf	401 KB	Adobe Acrobat 7.0 ...	2008/03/
update_mini17_v11.bat	1 KB	MS-DOS バッチ ファ...	2007/10/
update_mini17_v11.cmd	1 KB	Windows NT コマンド...	2008/03/
update_mini17_v11.saf	221 KB	SAF ファイル	2008/03/

- 2) Enter a path when a command prompt starts and ask you to enter a path of GDB (debugger).
The default path is used if you do not specify the path. (C:\EPSON\GNU17)

(Command prompt screen)

```
=====
SEIKO EPSON S5U1C17701T(ICD Board) Firmware update program
=====
Please input GNU17 path (default c:\epson\gnu17): 
```

- 3) When you enter a path, the command automatically starts connection with the target and starts updating.

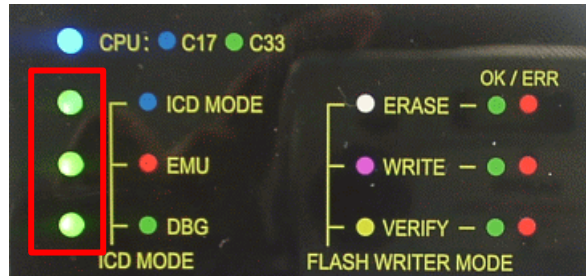
(Command prompt screen)

```
GNU gdb 5.1.1 (Ver 1.0 <2007/09/26>)
Copyright 2002 Free Software Foundation, Inc.
GDB is free software, covered by the GNU General Public License, and you are
welcome to change it and/or distribute copies of it under certain conditions.
Type "show copying" to see the conditions.
There is absolutely no warranty for GDB. Type "show warranty" for details.
This GDB was configured as "--host=i686-pc-cygwin --target=c17-epson-elf".
(gdb) target icd usb
Connecting with target (ID_OK) ..... done
ICD Initializing (ID_INITIALIZE) ... done
Read ICD Version (ID_VER_READ) ..... done
  ICDmini hardware version ..... 1.0
  ICDmini software version ..... 1.0
Debug base address (ID_DATA_READ) .. 0x000000
Boot address (ID_DATA_READ) ..... 0x000000
(gdb) c17 firmupdate ./update_mini17_v11.saf
Erase flash data ...done
Load flash data ...done
ICD firmware update ...done ... (1)
Please quit gdb, and power off ICD when LED2/LED3/LED4 is green
(LED is green in the case of SVT17701). ... (2)
```

5. UPDATE THE FIRMWARE BY THE ATTACHED BATCH FILE

When the message (1) above is displayed, LED2,3 and 4 go out and starts updating. Finally, when all LEDs of ICDmini get green, the firmware has been updated.

Note) The firmware has not been update when messages (1) and (2) are displayed.
Check that all LEDs get green before exiting from the debugger.



Precautions)

Never reset the ICD board and turn off the power while you are updating the firmware.
The firmware may not start if it gets aborted halfway through.

6. UPDATING THE FIRMWARE BY EXECUTING A COMMAND FROM GDB(DEBUGGER)

Update the firmware by executing a command from GDB without using the attached batch file.

6.1 Updating the firmware

- 1) Start a command prompt.
- 2) Start GDB.

```
> gdb -nw  
(-nw : Do not use a window interface.)
```

GDB starts on the command prompt.

(Command prompt screen)

```
GNU gdb 5.1.1 (Ver 1.0 <2007/09/26>)  
Copyright 2002 Free Software Foundation, Inc.  
GDB is free software, covered by the GNU General Public License, and you are  
welcome to change it and/or distribute copies of it under certain conditions.  
Type "show copying" to see the conditions.  
There is absolutely no warranty for GDB. Type "show warranty" for details.  
This GDB was configured as "--host=i686-pc-cygwin --target=c17-epson-elf".  
(gdb)
```

Note) If GDB does not start, check if the path to GDB is correct.

- 3) Execute a firmware update command from the GDB console.

```
(gdb) target icd usb ... Connection with the target
```

(Command prompt screen)

```
Connecting with target (ID_OK) ..... done  
ICD Initializing (ID_INITIALIZE) ... done  
Read ICD Version (ID_VER_READ) ..... done  
  ICDmini hardware version ..... 1.0  
  ICDmini software version ..... 1.0  
Debug base address (ID_DATA_READ) .. 0x000FC0  
Boot address (ID_DATA_READ) ..... 0x008080
```

```
(gdb) c17 firmupdate folderpath¥filename.sa ... Firmware update
```

* Change the path and file name if necessary.

folderpath : The path to the folder in which the update firmware
filename.sa : File name of the update firmware

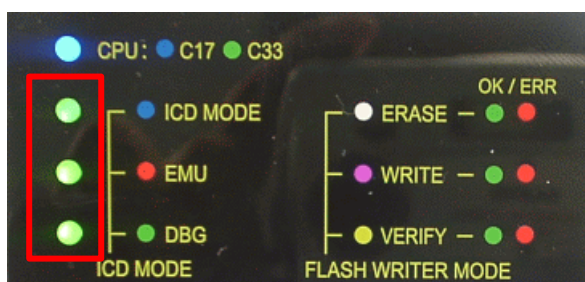
6. UPDATING THE FIRMWARE BY EXECUTING A COMMAND FROM GDB(DEBUGGER)

(Command prompt screen)

```
Erase flash data ...done
Load flash data ...done
ICD firmware update ...done ... (1)
Please quit gdb, and power off ICD when LED2/LED3/LED4 is green
(LED is green in the case of SVT17701). ... (2)
```

When the message (1) above is displayed, LED2,3 and 4 go out and starts updating.
Finally, when all LEDs of ICDmini get green, the firmware has been updated.

Note) The firmware has not been update when messages (1) and (2) are displayed.
Check that all LEDs get green before exiting from the debugger.



Precautions)

Never reset ICDmini and turn off the power while you are updating the firmware.
The firmware may not start if it gets aborted halfway through.

7. CHECKING THE FIRMWARE UPDATE

Check if the firmware has been properly updated according to the following procedure.

- 1) Start a command prompt.
- 2) Start GDB.

```
> gdb -nw  
(-nw : Do not use a window interface.)
```

GDB starts on the command prompt.

(Command prompt screen)

```
GNU gdb 5.1.1 (Ver 1.0 <2007/09/26>)  
Copyright 2002 Free Software Foundation, Inc.  
GDB is free software, covered by the GNU General Public License, and you are  
welcome to change it and/or distribute copies of it under certain conditions.  
Type "show copying" to see the conditions.  
There is absolutely no warranty for GDB. Type "show warranty" for details.  
This GDB was configured as "--host=i686-pc-cygwin --target=c17-epson-elf".  
(gdb)
```

Note) If GDB does not start, check if the path to GDB is correct.

- 3) Execute a target connection command from the console.

```
(gdb) target icd usb
```

(Command prompt screen)

```
Connecting with target (ID_OK) ..... done  
ICD Initializing (ID_INITIALIZE) ... done  
Read ICD Version (ID_VER_READ) ..... done  
ICDmini hardware version ..... 1.0  
ICDmini software version ..... 1.1  
Debug base address (ID_DATA_READ) .. 0x000FC0  
Boot address (ID_DATA_READ) ..... 0x008080
```

If the red frame described above has turned from 1.0 to 1.1, the firmware has been successfully updated.

8. IF THE FIRMWARE WON'T START

8. IF THE FIRMWARE WON'T START

If you failed to update the firmware for some reason and cannot start it (LED does not change from white), please contact our sales office.

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