



## 1 Preface

### 1.1 About this document

This is Version 1.0 of the release notes for Release 2.8.0 of the **ST6 Windows Debugger**, also called "**WGDB6**".

### 1.2 Software installation

Your programming system comes with the "MCU on CD" CD-ROM which contains a number of ST6, ST7 and ST9 software tools. To install and setup ST6 WINDOWS DEBUGGER, follow these steps:

- 1 Insert the "MCU on CD" CD-ROM into your CD-ROM drive. The CD-ROM's autorun feature will open up a welcome screen on your PC. If this autorun feature does not work, use the Windows Explorer to browse to the CD-ROM's root folder, and double click on **Welcme.exe**.
- 2 Select **Install Your Development Tools** from the list of options. A new screen will appear listing the different families of STMicroelectronics Microcontrollers.
- 3 Use your mouse to place the cursor over the **ST6 Tools** option. Select **ST Tools** and **ST6 Toolchain** from the lists that appear.
- 4 The install wizard will be launched. Follow the instruction that appear on the screen.

**Note:** *Installing WGDB6 for HDS2 Emulators or Starter Kits on a Windows NT machine will trigger the installation of the NT Driver "STM Parallel Driver" if it has not yet been installed. In this case, administrator rights are required.*

### 1.3 Customer support

For more information on this tool or if you need more help, please contact the nearest sales office, see "Contact List" below.

#### 1.3.1 Software updates

You can get software updates from the ST Internet web site <http://mcu.st.com>. For information on firmware and hardware revisions, call your distributor or ST using the contact list given below.

#### 1.3.2 Contact list

##### U.S. /Canada

For technical support, the US/Canada is split into 3 territories. According to your area, contact the nearest sales office and ask to be transferred to an 8-bit microcontroller Field Applications Engineer (FAE).

**Canada and East coast**

STMicroelectronics  
Lexington Corporate Center  
10 Maguire Road, Building 1, 3rd floor  
Lexington, MA 02421  
Phone: (781) 402-2650

**Mid West**

STMicroelectronics  
1300 East Whitfield Road, Suite 410  
Schaumburg, IL 60173  
Phone: (847) 517-1890

**West coast**

STMicroelectronics, Inc.  
30101 Agoura Court  
Suite 118  
Agora Hills, CA 91301  
Phone: (818) 865-6850

**Europe**

France (33-1) 47407575  
Germany (49-89) 460060  
U.K. (44-1628) 890800

**Japan**

(81-3) 3280-4120

**Asia/Pacific Region**

Hong-Kong (852) 2861 5700  
Sydney (61-2) 9580 3811  
Taipei (886-2) 2378-8088

## 2 READ ME FIRST

This chapter describes important information about this release. Read it *before* you attempt to install the *ST6 Windows Debugger*.

### 2.1 Supported architectures

System Requirements: PC and compatibles running with Windows 95, Windows 98 or Windows NT 4.0 Operating Systems.

### 2.2 Release information of older releases

#### Release 2.8.0: July 2001

- 1 Bug fix on particular Memory read/write access error.

#### Release 2.7: November 2000

- 1 Minor bug fix in the Micro configuration dialog box.
- 1 Bug fix on spi of ST626x and ADC simulation.
- 1 Bug fix on input pin event file (\*.in file).

#### Release 2.6: May 2000

ST62-GP new Emulator Dedication board is supported. This emulator offers:

- 1 Software selection of emulated st6 device.
- 1 New set of software options,
- 1 Workspace management: For each application last selected micro name and options are recovered.
- 1 Raisonance's RC-ST6 C Compiler is fully supported.

#### Release 1.5: April 1999

- 1 Bug fix: conditional break on probe.
- 1 Bug fix: Dynamic page variable visualization.

#### Release 1.4: Jan. 1999

- 1 Fix finals adjustments for CST6 C source level debug.
- 1 WGDB6 1.4 supports debug at C source level for applications compiled with CST6 1.1 (or more advanced release).

#### Release 1.3: Nov. 1998

Provides fix of Dump window problem when attempting to examine the data space memory over 0xff.

#### Release 1.2: Sept. 1998

- 1 Uart 10-bit for ST6218/28 simulation:
  - To select 10 bit uart use gdb command: sim UART -10 bit
  - To select 11 bit uart use gdb command: sim UART -11 bit

**Warnings:** Simulator doesn't check if a ST6218/28 device has been previously selected.  
Default selected uart mode is uart 11 bits.

- 1 Wave Form Editor is now a separated software (grapher.exe is available in ST6TOOLS folder).
- 1 Help of grapher.exe is available but references to ST7 tools must be skipped.
- 1 Enhancements:
  - Pin event representation is now made in absolute time and no more in relative time.
  - Read a pin input file is done on Open menu of WGDB6. It can be also performed with gdb command: "pin -g <pin\_input\_file\_name>"
  - Pin out file name: by default file name is pin.out, Otherwise pin out file name is input file name with.out extension. Ex: ITPORT.IN --> ITPORT.OUT
  - C source level debug will be supported (when compliant compiler will be available)

### Release 1.1: August 1997

Supports of Starter-kit on Windows NT machine. Simulated interrupts are available when working with ST6 Starter-kits.

### Release 1.0: May 1997

First release.

## 2.3 Supported targets

- 1 ST6 Emulators HDS2 Series:
  - ST62GP-EMU2
  - ST626X-EMU2
  - ST6240B-EMU2, ST6242B-EMU2, ST6246B-EMU2
  - ST623X-EMU2
  - ST6280-EMU2, ST6285-EMU2
  - ST6373-EMU2
  - ST638X-EMU2
- 1 ST6 Starter Kits
  - ST622XC-KIT
  - ST623X-KIT
  - SK624XB-KIT
  - SK626XC-KIT

## 3 Known Limitations and Bugs

### 3.1 General limitations and bugs

The following is a list of known limitations and bugs in this release of WGDB6:

- 1 **WGDB6-EPROMER incompatibility.** WGDB6 and the Windows Epromer software cannot be run simultaneously, even on PCs with two parallel ports—attempts to do so will result in a PC crash. This is because of a conflict in the allocation of WDB6 and WINEE parallel port resources.
- 2 **Breakpoints at Macro calls.** It is not currently possible to set a breakpoint at a line in the source code where a Macro is called. Moreover, if a breakpoint is set in the Disassembly window at the location where a macro is expanded, WGDB6 will interpret the breakpoint as set in the macro declaration section of the source code. Thus the program will stop at each macro call even though while the user has only set a single breakpoint at one specific call.
- 3 **Conditional software breakpoints.** When placing a conditional software breakpoint, an error message sometimes occurs.

For example, if you set a breakpoint and add the condition 'Counter==5', when you run the program the following error message will appear:

'Error in testing breakpoint condition. Invalid type combination in equality test.'

The workaround to this problem is to type, in the condition field, the following:

```
((counter&0xff)==5)
```

instead of ((counter)==5).

- 4 **Displaying Trace with Waveform Editor.** When using the Waveform Editor to display Trace output information, the Waveform Editor displays erroneous information.
- 5 **CST6 (GCC9 compiler for ST6) is no longer supported.** The CST6 compiler is no longer supported — meaning that no bug fixes or patches will be provided. However, note that **Raisonance's RIDE-ST6 fully supports Raisonance's RC-ST6 C Compiler.**

### 3.2 Hardware-specific limitations and bugs

The following sections describe known limitations and problems that you may encounter when using WGDB6 with the listed emulation hardware.

#### 3.2.1 ST6 HDS2 Mainboard

To offer more flexibility to the user, the emulator does not check the the memory mapping of user software, then before ROMing a software it is strongly mandatory to verify that the mapping of the whole software is corresponding to the targetted device.

### 3.2.2 ST62GP-DBE

Discrepancy between ST62GP-DBE V2.04 features and device:

- in ST6228: using CLKSEL bit of A/D converter. This bit allows to divide by 2 the A/D conversion time. The A/D cell of emulator does not support a conversion time faster than 70uS. Therefore to prevent from erroneous conversion result, it is strongly recommended that you set this bit only if CPU clock frequency is lower or equal to 4Mhz.
- For the OSG and LFAO of all emulated devices, the frequency is not linearly depending on the VCC as in the device:  
If  $V_{applied} > 3.9$  Volts  $F_{osc} = 8\text{Mhz}$  and  $F_{lfo} = 800\text{kHz}$   
If  $V_{applied} < 3.9$  Volts  $F_{osc} = 2\text{Mhz}$  and  $F_{lfo} = 200\text{kHz}$

: