RN0013
Release notes

ST Visual Develop (STVD) release 4.2.0

Introduction

These are the release notes for release 4.2.0 of the ST integrated development environment, which is now called **ST Visual Develop** and abbreviated to **STVD**. The name change from STVD7 to STVD reflects the extension of the development environment to support the new STM8 microcontroller families. These release notes are updated periodically in order to keep you abreast of evolutions of the software and any problems or limitations found in this release. Check the ST microcontroller support website at *www.st.com* to ensure that this is the latest version of these release notes.

Changes in the release notes for STVD release 4.2.0

New features

- Added a simplified graphical interface for advanced debug machine (ADM) on STice emulator. Trace activation is only possible through the ADM advanced interface.
- Rework of project settings inheritance between folders and files. In project tree, project files with settings different from their father folder are marked with a special icon.
- STice, STM8-ICD-SWIM and STM8 simulator support the following additional microcontrollers:
  STM8L151C8, STM8L151M8, STM8L151R8, STM8L151R6, STM8L152C8, STM8L152M8, STM8L152R8, STM8L152R6, STM8L162M8, STM8L162R8. STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA, STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA.

Corrections

- Displays warning message of externally modified source file when compiling through CTRL+F7 shortcut or Compile button.
- Does not delete the linker input section (entire row) if the Section Name cell is selected at the same time the ESC button is pressed.
- Fixed a possible data breakpoint inconsistency after setting/removing regular breakpoints.

Customer support

For more information or help concerning STVD, please contact the nearest sales office. For a complete list of ST offices and distributors, please refer to *www.st.com*.

Software updates

You can download software updates and all the latest documentation from the ST microcontroller support site at *www.st.com*.

Contents

1 Read me first

This section provides important information about STVD release 4.2.0.

1.1 Host PC system requirements

PC and compatibles running with Windows XP, and Vista® 32-bit operating systems.

Note: 1 Administrator privileges are required to install STVD and to connect emulators to the USB port for the first time. Power user or administrator privileges are required to run STVD.

*2 Under the Vista operating system, you must run STVD as administrator. You can either turn off the User Account Control feature (not recommended), or use the **Run as Administrator** command from the contextual menu, then **Allow** execution.*

1.2 Emulation hardware support

This version includes the ST7 simulator (no emulation hardware required) and supports certain ST7-EMU2 (HDS2) emulators with active probes, all generations of ST7-DVPx emulators, ST7-EMU3 series emulators and in-circuit debugging with the ST7-EMU3 with ICC Add-on, the ST7-DVP3 series emulators, the Raisonance RLink, ST7-STICK, ST-LINK, and the STice advanced emulation system.

Listings of supported ST7 and STM8 devices for each STVD debugging target (emulators, ICD and Simulator) are provided in *Section 2.2* on page 5.

1.3 About using the Cosmic C toolset

STVD release 4.2.0 was validated using the Cosmic C toolset versions 4.5.7 for ST7, and 4.3.3 for STM8. In order to use the Cosmic C toolset with STVD, the *cvdwarf.exe* Cosmic convertor is needed to generate the *.elf* debug information files required by STVD. The *cvdwarf.exe* Cosmic converter is included in the Cosmic C toolset versions 4.2a and later. You can download this or a later version from: **www.cosmic-software.com.**

1.4 About using the Metrowerks C toolset

STVD is no longer validated with Metrowerks C toolset.

*Note: 1 The industry standard ELF/Dwarf format is the default output format for the Metrowerks C toolset. When building, the **`-f2`** option for the C compiler and the **`lib.e20`** library are chosen by default.*

*2 For reasons of legacy compatibility, the Metrowerks C toolset and STVD continue to support the proprietary Hiware format. However, Hiware format users must use a script link file in the **Project Settings** interface when building their applications.*

3 Any references to “Metrowerks” and “Hiware” in STVD software, examples and documentation refer to the Metrowerks C toolset.

1.5 About using the Raisonance C toolset

STVD release 4.2.0 was validated using version 2.28 of the Raisonance C toolset. In order to use the Raisonance C toolset with STVD, the *omf2elf.exe* Raisonance convertor is needed to generate the *.elf* debug information files required by STVD. The *omf2elf.exe* Raisonance converter is included in the Raisonance C toolset.

2 What's new in STVD release 4.2.0?

2.1 Summary of changes in release 4.2.0

New features

- Added a simplified graphical interface for advanced debug machine (ADM) on STice emulator. Trace activation is only possible through the ADM advanced interface, not through the simplified one.
- Rework of project settings inheritance between folders and files. In project tree, project files with settings different from their father folder are marked with a special icon.
- STice, STM8-ICD-SWIM and STM8 simulator support the following additional microcontrollers:
  - STM8L151C8, STM8L151M8, STM8L151R8, STM8L151R6, STM8L152C8, STM8L152M8, STM8L152R8, STM8L152R6, STM8L162M8, STM8L162R8.
  - STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA, STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA.

Corrections

- Displays warning message of externally modified source file when compiling through CTRL+F7 shortcut or Compile button.
- Does not delete the linker input section (entire row) if the Section Name cell is selected at the same time the ESC button is pressed.
- Fixed a possible data breakpoint inconsistency after setting/removing regular breakpoints.

2.2 Hardware and targets supported by this release

The 'F' notation in MCU names denoting 'Flash' variants is only indicated for ICD. Debug instruments support emulation/simulation of Flash variants of the listed MCUs, unless otherwise indicated.

2.2.1 STice advanced emulation system

List of supported devices for emulation with STice:

STM8A(F/H)5168, STM8A(F/H)5169, STM8A(F/H)5178, STM8A(F/H)5179, STM8A(F/H)5188, STM8A(F/H)5189, STM8A(F/H)518A, STM8A(F/H)5198, STM8A(F/H)5199, STM8A(F/H)519A, STM8A(F/H)51A8, STM8A(F/H)51A9, STM8A(F/H)51AA

STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA

STM8A(F/H)6126, STM8A(F/H)6146, STM8A(F/H)6148, STM8A(F/H)6166, STM8A(F/H)6168, STM8A(F/H)6169, STM8A(F/H)6176, STM8A(F/H)6178, STM8A(F/H)6179, STM8A(F/H)6186, STM8A(F/H)6188, STM8A(F/H)6189, STM8A(F/H)618A, STM8A(F/H)6198, STM8A(F/H)6199, STM8A(F/H)619A, STM8A(F/H)61A8, STM8A(F/H)61A9, STM8A(F/H)61AA

STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA

STM8AF6226, STM8AF6246, STM8AF6248, STM8AF6266, STM8AF6268

STM8L101F2(P/U), STM8L101F3(P/U), STM8L101G2U, STM8L101G3U, STM8L101K3U

STM8L151C(4/6), STM8L151C8, STM8L151G(4/6), STM8L151K(4/6), STM8L151M8, STM8L151R6, STM8L151R8

STM8L152C(4/6), STM8L152C8, STM8L152K(4/6), STM8L152M8, STM8L152R6, STM8L152R8

STM8L162M8, STM8L162R8

STM8S103F2(P/U), STM8S103F3(P/U), STM8S103K3U

STM8S105C4, STM8S105C6, STM8S105K4, STM8S105K6, STM8S105S4, STM8S105S6

STM8S207CB, STM8S207MB, STM8S207RB, STM8S207SB, STM8S207C6, STM8S207K6, STM8S207R6, STM8S207S6, STM8S207C8, STM8S207M8, STM8S207R8, STM8S207S8

STM8S208C6, STM8S208R6, STM8S208S6, STM8S208C8, STM8S208R8, STM8S208S8, STM8S208CB, STM8S208MB, STM8S208RB, STM8S208SB

STM8S903K3, STM8S903F3

2.2.2 STM8-ICD-SWIM

List of supported devices for in-circuit debugging from STVD with ST-Link, RLink, or STice:

STM8A(F/H)5168, STM8A(F/H)5169, STM8A(F/H)5178, STM8A(F/H)5179, STM8A(F/H)5188, STM8A(F/H)5189, STM8A(F/H)518A, STM8A(F/H)5198, STM8A(F/H)5199, STM8A(F/H)519A, STM8A(F/H)51A8, STM8A(F/H)51A9, STM8A(F/H)51AA

STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA

STM8A(F/H)6126, STM8A(F/H)6146, STM8A(F/H)6148, STM8A(F/H)6166, STM8A(F/H)6168, STM8A(F/H)6169, STM8A(F/H)6176, STM8A(F/H)6178, STM8A(F/H)6179, STM8A(F/H)6186, STM8A(F/H)6188, STM8A(F/H)6189, STM8A(F/H)618A, STM8A(F/H)6198, STM8A(F/H)6199, STM8A(F/H)619A, STM8A(F/H)61A8, STM8A(F/H)61A9, STM8A(F/H)61AA

STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA

STM8AF6226, STM8AF6246, STM8AF6248, STM8AF6266, STM8AF6268

STM8L101F2(P/U), STM8L101F3(P/U), STM8L101G2U, STM8L101G3U, STM8L101K3(U/T)

STM8L151C(4/6), STM8L151C8, STM8L151G(4/6), STM8L151K(4/6), STM8L151M8, STM8L151R6, STM8L151R8

STM8L152C(4/6), STM8L152C8, STM8L152K(4/6), STM8L152M8, STM8L152R6, STM8L152R8

STM8L162M8, STM8L162R8

STM8S103F2(P/U), STM8S103F3(P/U), STM8S103K3U

STM8S105C4, STM8S105C6, STM8S105K4, STM8S105K6, STM8S105S4, STM8S105S6

STM8S207CB, STM8S207MB, STM8S207RB, STM8S207SB, STM8S207K6, STM8S207R6, STM8S207C8, STM8S207M8, STM8S207R8, STM8S207S8

STM8S208C6, STM8S208R6, STM8S208S6, STM8S208C8, STM8S208R8, STM8S208S8, STM8S208CB, STM8S208MB, STM8S208RB, STM8S208SB

STM8S903K3, STM8S903F3

2.2.3 ST7-EMU3 emulators

List of supported devices by emulator:

ST7MDT10-EMU3	ST72260G1, ST72262G(1/2), ST72264G(1/2), ST7DALI, ST7LCD1, ST7LIT10BF(0/1), ST7LIT15BF(0/1), ST7LIT19BF(0/1), ST7LIT10BY(0/1), ST7LIT15BY(0/1), ST7LIT19BY(0/1), ST7LITE(02/05/09/10/15/19/20/25/29/30/35/39), ST7LITES(2/5), ST7LITEUS(2/5), ST7FLITEU0(2/5/9), ST7L(05/09/15/19/34/35/38/39)
ST7MDT20J-EMU3	ST72321BJ(6/7/9), ST72321J(7/9), ST72321BK6, ST72324BJ(2/4/6), ST72324BK(2/4/6), ST72324BLJ(2/4/6), ST72324BLK(2/4/6), ST72324J(2/4/6), ST72324K(2/4/6), ST72324LJ(2/4/6), ST72324LK(4/6), ST72325C(4/6), ST72325J(4/6/7/9), ST72325K(4/6), ST7232AJ(1/2), ST7232AK(1/2)
ST7MDT20M-EMU3	ST72321AR(6/7/9), ST72321BAR(6/7/9), ST72321BR(6/7/9), ST72321R(6/7/9), ST72325AR(6/7/9), ST72325R(6/7/9), ST72521AR(6/9), ST72521BAR(6/9), ST72521BR(6/9), ST72521BM9, ST72521M9, ST72521R(6/9)
ST7MDT50-EMU3	ST7MC1K(2/4/6), ST7MC2(N6/M9/R6/R7/S4/S6), ST7MC2(S7/R9/S9)
ST7MDT40-EMU3 (ST7MIDI-EMU3)	ST72340K(2/4), ST72340S(2/4), ST72344K(2/4), ST72344JS2/4), ST72345C4
ST7DVD3-EMU3	DVD3, L6315_10_RAM, L6315_10_ROM
ST7MDTH1-EMU3	ST7XGAM(J4T1/K4M1), ST7XGAM(J6T1/K6M1), ST7HUBAR4T1, ST7HUBAR6T1
ST7MDTU3-EMU3	ST7260E(1/2), ST7260K(1/2), ST7263BE(1/2/4/6), ST7263BH(2/6),ST7263BK(1/2/4/6)
ST7MDTU7-EMU3	ST7267
ST7FLCD-EMU3	ST7LCD1

2.2.4 ST7-DVP3 emulators

List of supported devices by emulator:

ST7MDT10-DVP3	ST72260G1, ST72262(G1/G2), ST72264(G1/G2), ST7DALI, ST7LIT10BF(0/1), ST7LIT15BF(0/1), ST7LIT19BF(0/1), ST7LIT10BY(0/1), ST7LIT15BY(0/1), ST7LIT19BY(0/1), ST7LITE(02/05/09/10/15/19/20/25/29/30/35/39), ST7LITES(2/5), ST7LITEUS(2/5), ST7L(05/09/15/19/34/35/38/39)
ST7MDT20-DVP3	ST72321AR(6/7/9), ST72321BAR(6/7/9), ST72321BJ(6/7/9), ST72321BK6, ST72321BR(6/7/9), ST72321J(7/9), ST72321M(6/9), ST72321R(6/7/9), ST72324BJ(2/4/6), ST72324BK(2/4/6), ST72324BLJ(2/4), ST72324BLK(2/4), ST72324J(2/4/6), ST72324K(2/4/6), ST72324LJ(2/4/6), ST72324LK(2/4/6), ST72325AR(6/7/9), ST72325C(4/6), ST72325J(4/6/7/9), ST72325K(4/6), ST72325R(6/7/9) ST72521AR(6/9), ST72521BAR(6/9), ST72521BM9, ST72521BR(6/9), ST72521M9, ST72521R(6/9), ST7232AJ(1/2), ST7232AK(1/2)
ST7MDT25-DVP3	ST72361AR(4/6/7/9), ST72361J(4/6/7/9), ST72361K(4/6/7/9), ST72361R(4/6/7/9), ST72561AR(4/6/7/9), ST72561J(4/6/7/9), ST72561K(4/6/7/9), ST72561R(4/6/7/9)

2.2.5 ST7-ICD-ICC

Applications can be in-circuit debugged on the microcontrollers listed below from STVD using any of the following development tools:

- **ST7MDT10-DVP3**, **ST7MDT20-DVP3**, **ST7MDT25-DVP3 series emulators:** they are all are accessed from STVD as *ICD (ST Micro Connect or DVP3).*
- **ST7-EMU3 series emulators** – ST Micro Connect with ICC add-on. They are all are accessed from STVD as *ICD (ST Micro Connect or DVP3).*
- **RLink** from Raisonance (accessed from STVD as *ICD RLink*).
- **ST7-STICK** (accessed from STVD as *ICD Stick*).

List of supported devices for in-circuit debugging.

ST72260G1, ST72262(G1/G2), ST72264(G1/G2), ST7267

ST7FDALI, ST7FLCD1

ST7FLIT10BF(0/1), ST7FLIT15BF(0/1), ST7FLIT19BF(0/1), ST7FLIT10BY(0/1), ST7FLIT15BY(0/1), ST7FLIT19BY(0/1)

ST7FLITE0(2/5/9), ST7FLITE1(0/5/9), ST7FLITE2(0/5/9), ST7FLITE3(0/5/9), ST7FLITES(2/5), ST7FLITEUS(2/5), ST7FLITEUSICD, ST7FLITEU0ICD

ST7FL1(5/9), ST7FL3(4/5/8/9)

ST7WIND11, ST7WIND21

ST7FMC1K(2/4/6), ST7FMC2(M9/N6/R6/R7/R9/S4/S6/S7/S9), ST7FMC2R9, ST7FMC2S9

ST72F321BAR(6/7/9), ST72F321BJ(6/7/9), ST72F321BK6, ST72F321BR(6/7/9), ST72F325AR(6/7/9), ST72F325C(4/6), ST72F325J(4/6/7/9), ST72F325K(4/6), ST72F325R(6/7/9), ST72F325S(4/6),ST72F340(K2/K4/S2/S4), ST72F344(K2/K4/S2/S4),ST72F345C4

ST7FLITE49M

ST7FOXK1, ST7FOXK2, ST7FOXF1, ST7FLITE49K2T6, ST7FLITE49K2B6

2.2.6 ST7-EMU2 (HDS2) emulators

List of supported devices by emulator:

ST7MDT00-EMU2B	ST7LITE0(5/9)
ST7MDT1-EMU2B	ST72104G(1/2), ST72215G2, ST72216G1, ST72254G(1/2)
ST7MDT2-EMU2A	ST72124J2, ST72311R(6/7/9)
ST7MDT2-EMU2B	ST72314J(2/4), ST72314N(2/4), ST72334J(2/4), ST72334N(2/4), ST72511R(6/7/9) ST72512R4, ST72532R4
ST7MDT5-EMU2B	ST72141
ST7MDT6-EMU2B	ST72171K2(B/M)6
ST7MDT7-EMU2B	ST72C411R1
ST7MDTS1-EMU2B	ST7SCR1(E/R)
ST7MDTU2-EMU2B	ST72611F1, ST72P611F4, ST72621J(2/4), ST72621K4, ST72621L4, ST72622(K/L)2, ST72623F2
ST7MDTU3-EMU2B	ST7263BK(1/2), ST7263BK4
ST7MDTU5-EMU2B	ST72651, ST72652
ST7263-EMU2B	ST72631, ST72632, ST72633
ST72774-EMU2B	ST72734J6, ST72754J(6/9), ST72774J(6/7/9)

(continued)

(ST7-EMU2 (HDS2) emulators continued)

ST7MDT1-EMU2	ST72101G(1/2), ST72212G2, ST72213G1, ST72251G(1/2)
ST7255B-EMU2	ST7255B
ST7285-EMU2	ST7285
ST7291-EMU2	ST7291L(2/3/4/5/5A/6)
ST72589B-EMU2	ST72389(B/C), ST72589(B/C)

2.2.7 ST7-DVP/DVP2 emulators (first and second generation)

ST7MDT1-DVP	ST72101G(1/2), ST72212G2, ST72213G1, ST72251G(1/2)
ST7MDT1-DVP2	ST72101G(1/2), ST72104G(1/2), ST72212G2, ST72213G1, ST72215G2, ST72216G1, ST72251G(1/2), ST72254G(1/2)
ST7MDT2-DVP	ST72121J(2/4), ST72311J(2/4), ST72311N(2/4), ST72331J(2/4), ST72331N(2/4)
ST7MDT2-DVP2	ST72124J2, ST72311R(6/7/9), ST72314J(2/4), ST72314N(2/4), ST72334J(2/4), ST72334N(2/4), ST72511R(6/7/9), ST72512R4, ST72532R4
ST7MDP-DVP2	ST7MDP

2.2.8 Simulators

ST7 baseline	ST72101G(1/2), ST72104G(1/2), ST72121J(2/4), ST72124J2, ST72212G2, ST72213G1, ST72215G2, ST72216G1, ST72251G(1/2), ST72254G(1/2), ST72311J(2/4), ST72311N(2/4), ST72311R(6/7/9), ST72314J(2/4), ST72314N(2/4), ST72331J(2/4), ST72331N(2/4), ST72334J(2/4), ST72334N(2/4)
ST7 lite	ST72260G1, ST72262G(1/2), ST72264G(1/2), ST7DALI, ST7LIT10BF(0/1), ST7LIT15BF(0/1), ST7LIT19BF(0/1), ST7LIT10BY(0/1), ST7LIT15BY(0/1), ST7LIT19BY(0/1), ST7LITE(02/05/09/10/15/19/20/25/29/30/35/39), ST7LITES(2/5), ST7L(05/09/35/39), ST7FLITEU0(2/5/9), ST7FLITE49M, ST7FOXK1, ST7FOXK2, ST7FOXF1, ST7FOXA0, ST7FLUS5, ST7FLU05, ST7FLU09, ST7FLI49K2T6, ST7FLI49K2B6
ST7 mid-range	ST7232AJ(1/2), ST7232AK(1/2), ST72321AR(6/9), ST72321BAR(6/7/9), ST72321BJ(6/7/9), ST72321BK6, ST72321BR(6/7/9), ST72321J(7/9), ST72321M(6/9), ST72321BM(6/9), ST72321R(6/7/9), ST72324BJ(2/4/6), ST72324BK(2/4/6), ST72324BLJ(2/4), ST72324BLK(2/4), ST72324J(2/4/6), ST72324K(2/4/6), ST72324LS(2/4), ST72324BLS(2/4), ST72325AR(6/7/9), ST72325C(6/7/9), ST72325S(6/7/9), ST72325J(4/6/7/9), ST72325K(4/6), ST72325R(7/9), ST72361AR(4/6/7/9), ST72361J(4/6/7/9), ST72361K(4/6/7/9), ST72361R(4/6/7/9), ST72340K(2/4), ST72340S(2/4), ST72344K(2/4), ST72344S(2/4), ST72345C4
ST7 CAN	ST72511R(6/7/9), ST72521AR(6/9), ST72521M9, ST72521R(6/9)
ST7 LCD	ST72389B, ST72589B
ST7 MC	ST72141
ST7 OP	ST72171

(continued)

(Simulators continued)

ST7 USB	ST7260E(1/2), ST7260K(1/2), ST72631, ST72632, ST72633, ST7263BD6, ST7263BH(2/6), ST7263BE(1/2/4/6), ST7263BK(1/2/2U1/4/6)
STM8	STM8A(F/H)5168, STM8A(F/H)5169, STM8A(F/H)5178, STM8A(F/H)5179, STM8A(F/H)5188, STM8A(F/H)5189, STM8A(F/H)518A, STM8A(F/H)5198, STM8A(F/H)5199, STM8A(F/H)519A, STM8A(F/H)51A8, STM8A(F/H)51A9, STM8A(F/H)51AA STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA STM8A(F/H)6126, STM8A(F/H)6146, STM8A(F/H)6148, STM8A(F/H)6166, STM8A(F/H)6168, STM8A(F/H)6169, STM8A(F/H)6176, STM8A(F/H)6178, STM8A(F/H)6179, STM8A(F/H)6186, STM8A(F/H)6188, STM8A(F/H)6189, STM8A(F/H)618A, STM8A(F/H)6198, STM8A(F/H)6199, STM8A(F/H)619A, STM8A(F/H)61A8, STM8A(F/H)61A9, STM8A(F/H)61AA STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA STM8AF6226, STM8AF6246, STM8AF6248, STM8AF6266, STM8AF6268 STM8L101F2(P/U), STM8L101F3(P/U), STM8L101G2U, STM8L101G3U, STM8L101K3(U/T) STM8S103F2(P/U)STM8S103F3(P/U), STM8S103K3U, STM8S105C4, STM8S105C6, STM8S105K4, STM8S105K6, STM8S105S4, STM8S105S6 STM8L151C(4/6), STM8L151C8, STM8L151G(4/6), STM8L151K(4/6), STM8L151M8, STM8L151R6, STM8L151R8 STM8L152C(4/6), STM8L152C8, STM8L152K(4/6), STM8L152M8, STM8L152R8, STM8L152R6 STM8L162M8, STM8L162R8 STM8S207MB, STM8S207RB, STM8S207CB, STM8S207R8, STM8S207C6, STM8S207C8, STM8S207S8, STM8S207S6, STM8S207R6, STM8S207K6, STM8S207M8, STM8S207SB, STM8S208R6, STM8S208C6, STM8S208S6, STM8S208R8, STM8S208C8, STM8S208S8, STM8S208CB, STM8S208SB, STM8S208MB, STM8S208RB STM8S903K3, STM8S903F3

3 Known problems/limitations

3.1 Known problems/limitations for STVD installer

- You must install STVD prior to connecting a debug instrument to the host PC's USB port, in order to have the necessary driver.
- The USB driver for the Raisonance RLink is not installed upon installation of STVD. After installing STVD, RLink users must install the RLink USB driver by selecting ***Start>ST7 Toolset>Setup>Install RLink driver***.

3.2 Known problems/limitations for STVD interface

The include files provided upon installation of STVD are not the same as those required when using the ST7 Library or STM8 Library. ST7 and STM8 library users should refer to the appropriate ST7 or STM8 library documentation for information about the correct include files to use.

3.2.1 Cosmic C toolset

In the Cosmic Linker for STM8 microcontrollers, the `.const` segment must be located in the first 64 Kbyte segment. This is mandatory because the Cosmic toolset cannot link an interrupt handler that is not located in segment 1.

3.2.2 Metrowerks C toolset

Note: STVD is no longer validated with Metrowerks C toolset.

- The automatic generation of the linker PRM file can only be used when generating an executable in ELF/DWARF 2.0 format. For Hiware format, users must use a written PRM file.
- Using the `-StatF=` option with Hiware format may cause a failure during linking. The executable is not produced.
- When using the recommended ELF format and STVD include files, a link error L1818 may be generated due to paginated registers. You can add the option `-wmsgsi1818` as a user-defined option. This option converts the error to a warning message only.

3.3 Known problems/limitations for debug interface

- When the program is stopped on a breakpoint set on a function name, the displayed argument values may be false.
- When *.hex* or.*s19* files are loaded outside of any workspace, an error message is displayed, but it is meaningless.
- Double type" variables are referred as "float type" variables.
- The **`const`** variable qualifier is not displayed.
- Only one instance of STVD can run on your PC at any given time.
- Reduced user access rights to the database registry or to the STVD install directory can impede the normal use of STVD. A warning message occurs if a read/write access problem occurs.

3.4 Known problems/limitations for STice targets

3.4.1 Trace

Trace activation is only possible through the advanced debug machine (ADM) interface on STice emulator, not through the simplified one.

3.4.2 NEM breakpoints

NEM breakpoints on data access are limited to the memory area range [0-0x7FFF], NEM breakpoints on opcode fetch are limited to addresses higher than 0x7FFF.

3.4.3 Profiler

- Coverage and profiling functionality is limited to core running at up to 24 MHz.
- ***Code occurrence and time profiling*** limitations:
  - Whatever the ***time profiling*** mode, the profiler does not profile the first or the first two instructions after a breakpoint.
  - It also does not profile correctly the last or the last two instructions before a breakpoint.
  - The number of occurrences of an interrupted instruction may be false. In particular:

    The occurrence number of the WFE instruction is doubled.

    The occurrence number of an IRET instruction may be null if it is always executed in a shortened way. A shortened IRET is an IRET which is executed in one cycle only because of a pending interrupt being serviced immediately after.

    In some rare cases, the occurrence number of an interrupted instruction is doubled.
- Contrarily to what is said in the online help, the ***Subroutine*** mode (interrupt time excluded) is not available in this release. Only the ***Subroutine and Interrupt*** mode (interrupt time included) is available.
- Time profiling limitations in ***Instruction*** mode:

  Context saving time is added to the interrupted instruction time.
- Time profiling limitations in the ***Subroutine and Interrupt*** mode:
  - The time for recursive functions is not correct.
  - The longjmp C library routine should not be used otherwise the results will be erroneous.
  - The results may be incorrect with the Raisonance compiler if it calls a library routine which uses the stack in a nonstandard way.
  - For code written in assembly language, the subroutine modes work only if routines use the stack in a standard way. To be certain there is no problem, make sure that each routine is called by a call instruction and that it returns to its caller by a return instruction.
  - In the case of pending interrupts resulting in the occurrence of several immediately consecutive interrupts, the time of the interrupted instruction doesn't include all the time spent in the interrupts.
  - Similarly an IRET followed immediately by a pending interrupt is seen as interrupted and its time includes the time of the following interrupt.

3.4.4 USB

USB communications may sometimes be lost in ***full speed*** mode (12 Mbit/s), depending on the frame length. It is recommended to use the STice on a PC supporting USB high speed communications (480 Mbit/s).

3.5 Known problems for STM8-ICD-SWIM targets

- The debugger needs to unlock the Flash and data EEPROM memories each time the user application stops; in order to avoid conflict with the application, avoid stepping or stopping in the portion of code managing the MASS key sequences (if any).
- When starting a debug session in hotplug mode, a watchdog timeout reset may occur if the application previously activated the watchdog.

3.6 Known problems/limitations for ST7-EMU3 targets

- When the emulated MCU is executing a Halt or Wait for Interrupt instruction and application execution is stopped using ***Debug>Stop Program*** or an external trigger, upon continuation, certain counters like timers and watchdog will have increased or decreased by several pulses.
- The Time Stamp in the **Trace** window includes Discarded events, including those used by the emulator at a break in execution (breakpoint) and when stepping through the code. The time stamps that result from stepping through a section of code will differ from those that result if the same code is run normally. The time stamps are not recalculated when filtering is used to remove events from the Trace display.
- When the microcontroller is in a Halt state, it is not possible to reset it using the LVD RESET command from STVD's **Hardware Simulation** window.
- Writing to Flash program and EEPROM program non-volatile memory via the associated control registers are not emulated. The default memory mapping configuration for these areas is read only, however they can be changed to R/W (RAM) if necessary.
- Target MCUs, the Reset vector is not displayed in Trace Window.
- When using an I^2C or DDC peripheral, use a pull-up resistor of 1.5 kOhms or less.
- The Performance Analysis has the following limitations:
  - Performance Analysis does not work properly if the portion of code analyzed has entry/exit points not monitored by the Performance Analysis tool.
  - Timestamp discontinuity can occur when the required number of passes on a code fragment is too large.

*Note: The command **Debug Instrument>Debugging discrepancies** displays the differences between the emulation system and the target MCU.*

3.6.1 ST7MDT10-EMU3

- The following limitations are not included in the **Debugging discrepancies** window:
  - All ST7FLITE devices (except the ST7226x): When using PA4 and PA6 as input for VIL = 0.4V there is an IIL current of 200 µA.
  - All ST7FLITE1B devices: The analog comparator is not emulated. As a result these registers have been mapped as non-existent registers (NER), and a break in execution will occur if they are accessed by the application. If the users application uses these registers, they can be mapped to read/write in the Memory Mapping window so that a break will not occur when they are accessed.
- When emulating the ST72F26xx family with the ST7MDT10-EMU3 emulator, the memory area from 0xd760 to 0xDEDF is typically defined as non-existent memory (NEM). Do not change this, as the emulator cannot interpret instructions in this zone.
- AWU RC calibration is not supported because this RC is emulated by a fixed frequency from an oscillator.
- RC oscillator and the input capture are not connected for the auto-reload timer.

3.7 Known problems/limitations for ST7-DVP3 targets

- When the emulated MCU is executing a Halt or Wait for Interrupt instruction and application execution is stopped using ***Debug>Stop Program*** or an external trigger, upon continuation, certain counters like timers and watchdog will have increased or decreased by several pulses.
- Upon wake up from a Halt or Wait for interrupt state, if STVD stops execution on a breakpoint that has been set on the first instruction of an interrupt routine, the position of the program counter (PC) in relation to the last instruction executed is incorrect (PC stops one address prior to the address of the break point). To avoid this, users should not set breakpoints on the first instruction of the wake up interrupt routine.
- The minimum frequency for DVP3 emulators is 2 MHz, instead of 500 KHz.
- When using an I^2C or DDC peripheral, use a pull-up resistor of 1.5 kOhms or less.
- In the hardware event window if you change the event type the address of the hardware event is incremented automatically.

3.7.1 ST7MDT10-DVP3

- The following limitations are not included in the **Debugging discrepancies** window:
  - All ST7FLITE devices (except the ST7226x): When using PA4 and PA6 as input for VIL = 0.4 V there is an IIL current of 200 µA.
  - All ST7FLITE1B devices: The analog comparator is not emulated. As a result these registers have been mapped as non-existent registers (NER), and a break in execution will occur if they are accessed by the application. If the users application uses these registers, they can be mapped to read/write in the Memory Mapping window so that a break will not occur when they are accessed.
- AWU RC calibration is not supported because this RC is emulated by a fixed frequency from an oscillator.
- RC oscillator and the input capture are not connected for the auto-reload timer.

*Note: The command **Debug Instrument>Debugging discrepancies** displays the emulation limitations that are specific to the target MCU.*

3.8 Known problems/limitations for ST7-ICD targets

- The following apply when in-circuit debugging of applications on XFlash devices without a debug module (ST72FLITE0/S and ST72F26x):
  - Flash memory from FF12-FFDF is used for the debug monitor (ST7FLITE0/S).
  - Stop Program is not possible (error and loss of communication with the target).
  - Advanced Breakpoints are not possible (feature cannot be accessed in the GUI).
  - Instruction Breakpoints in the Flash sector 0 are not possible (error message).
  - Stepping in the Flash sector 0 is not possible (results in an error message).
- You must install STVD prior to connecting a debug instrument to the host PC's USB port, in order to have the necessary driver.
- Some changes made to the MCU memory mapping in STVD are not taken into account during in-circuit debugging as they are controlled by the device's option byte.
- The ***Step Over*** command does not work properly when timer interrupt frequency is too high. As a workaround, select ***Debug Instrument>Stepping Mode*** and change the mode to **Don't Enter Interrupts When Stepping Into**.
- The TRAP instruction generated by a software breakpoint can set off a hardware breakpoint when the hardware breakpoint points to an address in the stack. When this happens the application crashes. The program counter's (PC) real position is not the same as the position reported in the **Disassembly** window. Before continuing, reset the position of the PC:
  - by entering the desired position for the PC in the **Program Counter** field of the **ST7 Register** window, or
  - by highlighting the position in the **Disassembly** window and clicking on **Set PC**.

  Workaround: Do not set hardware breakpoints in the stack when using software breakpoints, or when the ***Stepping*** mode is set to **Don't Enter Interrupts When Stepping Into**.

*Note: The command **Debug Instrument>Debugging discrepancies** displays the emulation limitations that are specific to the target MCU.*

3.9 Known problems/limitations for ST7-EMU2 (HDS2) targets

- When using an I^2C or DDC peripheral, use a pull-up resistor of 1.5 KOhms or less.
- No time indication is recorded and displayed in the trace window.
- ***Clear Trace*** command does not work properly.

3.9.1 ST7263x-EMU2 emulator

- Timer A behaves incorrectly.

3.9.2 ST7MDTU5-EMU2B emulator

ST72652 and ST72F652 are supported by this emulator, but with the following limitations due to problems/limitations with some versions of the target MCU:

- Normally ADC, I^2C and PWM are not available for these sale types, but they are still present when ST72652 is selected in the MCU Configuration window.
- Options bytes are not user-configurable at present. Refer to the *ST7MDTU5-EMU2B (HDS2) Emulator User Manual* for details.

3.10 Known problems/limitations for ST7-DVP/DVP2 targets

- A complete host PC crash may occur if you power off the development kit board during an STVD session. In particular, if you change from ***Debug*** mode to ***Build*** mode, then power off your development kit board, and then attempt to re-enter ***Debug*** mode (with your development kit board powered off), a total host system crash will occur.
- The CPU frequency (FCPU) of the emulated device must be set in a range from 500 KHz to 8 MHz even if ***Slow*** mode is selected.

  The link between FCPU and CLOCK is: *FCPU = (CLOCK / 2) / Slow mode* (e.g. If you use a 5MHz external clock it is possible to select ***Slow*** mode factor 8, but not factor 16).

3.11 Known problems/limitations for simulators

Known problems or limitations on all microcontrollers:

- When exporting graphed information from the Plotter window to VCD file, select an item with all its subitems, or all plotted items to ensure that no information is lost. Time information loss may occur when exporting selected subitems within an item.

Known problems or limitations on ST7 microcontrollers:

- The following is the list of peripherals that are supported during simulation:
  - ADC
  - Autoreload Timer (for ST7FLITEx)
  - Beep
  - EEPROM
  - I2C
  - I/O Ports
  - Lite Timer (for ST7FLITEx)
  - Main Clock Controller
  - PWM Autoreload Timer
  - Real Time Clock
  - SCI
  - SPI
  - Timer
  - Watchdog
- Known peripheral problems/limitations: there is a conflict between ports and peripherals for pin access. No arbitration is done by the Simulator. If you use a peripheral, do not use the pins which are connected to this peripheral as standard input/output pins.

Known problems or limitations on STM8 microcontrollers:

- The STM8 instruction simulator is not accurate in terms of number of cycles. The number of cycles given for an instruction is the minimum number of cycles found in the programming manual. It does not take into account possible slowdowns in the pipeline execution.
- STM8 peripherals are not supported. However, in addition to instruction set simulation, interrupts are supported through pseudo pins IRQ0 to IRQ29.

4 Information for major previous releases

4.1 Summary of changes in release 4.1.6

New features

Advanced debug machine (advanced breakpoints) available on STice for all STM8 microcontrollers.

STice, STM8-ICD-SWIM and the STM8 simulator support the following additional microcontrollers: STM8S903F3, STM8AF6226, STM8AF6246, STM8AF6248, STM8AF6266, STM8AF6268.

Improvements

Reduced duration of Start Debug on workspaces with lots of files and directories.

4.2 Summary of changes in release 4.1.5

New features

For Cosmic *lkf* file management:

- Non-automatic mode restored as Custom mode (this mode was removed in STVD release 4.1.4).
- Addition of Semi-automatic mode where STVD manages only parts of the linker file, delimited by reserved markers.

Corrections

ENUMTYPE(BYTE) can now be selected with the Raisonance compiler.

4.3 Summary of changes in release 4.1.4

New features

- Support for data watchpoints on STice.
- Support for write data watchpoints on Simulator.

Improvements

- For STM8 Raisonance toolset:
  - Manages EEPROMSTART and EEPROMSIZE directives (version 2.25 or later).
  - Uses OMF2HEX converter instead of OHST7.
- For Cosmic toolset:
  - Manages "+fast" directive.
  - Lkf file management enhancement: some lkf file sections are reserved for STVD and are updated even if Auto mode is disabled. Automatic management may be

disabled by removing section delimiters. Custom modifications are allowed in the lkf outside reserved sections and when the "auto" mode is disabled.

  - Symbolic disassembly works for peripheral registers defined in Cosmic include files.
- New method for list file generation with absolute addresses by ST Assembler-Linker list file post-processor named abslist.
- Regression fix on Simulator after renaming of periph.ini file in STVD-4.1.3.
- Regression fix on STice "unable to load workspace" when starting debug out of workspace.
- Bugfix: some "intrusive read" registers are now declared in stm8_periph.ini for STM820x and STM8L15x microcontrollers.

4.4 Summary of changes in release 4.1.3

New features

Support of STM8L15x microcontrollers on STVP and STVD STice, Simulator and SWIM debug instruments.

Improvements

Improvement in this release is that EEPROM data is emulated on STice for STM8L101x3 microcontrollers.

4.5 Summary of changes in release 4.1.2

New features

Support of ST7FMC2R9 and ST7FMC2S9 on EMU3

Improvements

- STM8 coverage/profiling on STice is functional up to 24 MHz.
- STM8 data EEPROM emulated on STice, except on STM8L101x microcontrollers.
- Peripherals can be frozen on the STice while the user application is stopped, according to the user's selected MCU option.
- User can now choose the debugger's behaviour on stop debug with a SWIM debug instrument:
  - either stop the application and leave the SWIM active on the microcontroller (only way to escape is a power on reset),
  - or restart the application with SWIM Off and software breakpoints removed (provided that the communication with the microcontroller is functional).
- Possibility to run the Raisonance code compressor (if available in the Raisonance toolset installed version).

Corrections

- STM8 coverage/profiling on STice is functional even when there are simultaneous read and write accesses.
- With the SWIM debugger, the Halted status has been replaced by the No Access status, reached when the microcontroller is executing `Halt`, `Wfi`, `Wfe` instructions or protected code.

4.6 Summary of changes in release 4.1.1

New features

Support of new STM8 microcontrollers by STice, ICD-SWIM and STM8 simulator:

- STM8S family: 8 K and 32 K Flash
- STM8L family: 8 K Flash

Improvements

- STM8 data EEPROM is now writeable (as a RAM) by the application on STice.

Corrections

- Bugfix unexpected NEM breaks on STice (RETF, IRET when crossing a 64 Kbyte boundary).
- Bugfix wrong location in disassembly window on STM8 when stopping on code deprived of debug information.
- Correction of bad option description for ST7FL3x microcontrollers on ST7-ICD-ICC target.

4.7 Summary of changes in release 4.1.0

New features

New features in this release include:

- STice: coverage/profiling on STM8A and STM8S microcontrollers, with core running up to 12MHz.
- ICD-SWIM: support of ST-Link board as SWIM dongle.

Improvements

Improvements in this release include:

- Up to 4 "memory" windows may be opened simultaneously.
- Management of global variables automatic relocation for Raisonance toolset.
- Added *.bit* section in Cosmic link script file.
- *Main.asm* and *mapping.inc* files automatic creation during creation of Assembler/Linker project.
- Enhanced performance of `find in files` function.
- SWIM communication enhancements on STice (SWIM dongle).
- SWIM debugger: Flash and data EEPROM RASS protections are restored to user's state before running user's application.
- Stack location adjusted to datasheet on STM8A and STM8S microcontrollers.
- On simulator CPU frequency is now entered by the user. Default value is 16 MHz.

Corrections

Corrections in this release include:

- User defined option in ST Assembler/Linker project.
- Project was not rebuilt after suppression of project source file(s).
- Bugfix with `+e` directive of Cosmic assembler (Assembler/Listing/Generate an Errors Log File).
- STM8 Raisonance Builder: CODESTART directive address includes Vectors area.
- Fixed issue with RLink SWIM when the microcontroller in ***Halt*** mode.
- Fixed potential issue in identification procedure of a microcontroller in ***SWIM hotplug*** mode.

4.8 Summary of changes in release 4.0.1

New features

This release provides support for the STM8S207x and STM8S208x families of microcontrollers.

Improvements

Improvements in this release include:

- Parallel port driver installation/de-installation is now subject to user's agreement.
- With the Cosmic C compiler:
  - Boolean variables are now properly initialized: the `.bit` section is automatically generated in the linker input file
  - Debug information for function parameters is improved for STM8 microcontrollers.
- With the Raisonance toolset, the number of optimization levels is reduced to 4 for greater ease of use.
- STM8A AFREMAP options are managed on STice.

Corrections

Corrections in this release include:

- When a source file is modified while in ***Debug*** mode, the debug session is now properly managed.
- STice trace timestamp overflow event is properly managed.
- When a debug session is stopped, SWIM communication is switched off on the microcontroller side.

4.9 Summary of changes in release 4.0

New features

STVD release 4.0 provides support for the following additional microcontrollers:

- Simulator
  - STM8AF5168, STM8AF5169, STM8AF5178, STM8AF5179, STM8AF5188, STM8AF5189, STM8AF5198, STM8AF5199, STM8AF519A, STM8AF51A8, STM8AF51A9, STM8AF51AA
  - STM8AF6166, STM8AF6168, STM8AF6169, STM8AF6176, STM8AF6178, STM8AF6179, STM8AF6186, STM8AF6188, STM8AF6189, STM8AF6198, STM8AF6199, STM8AF619A, STM8AF61A8, STM8AF61A9, STM8AF61AA
- In-circuit debugging through SWIM
  - STM8AF5168, STM8AF5169, STM8AF5178, STM8AF5179, STM8AF5188, STM8AF5189, STM8AF5198, STM8AF5199, STM8AF519A, STM8AF51A8, STM8AF51A9, STM8AF51AA,
  - STM8AF6166, STM8AF6168, STM8AF6169, STM8AF6176, STM8AF6178, STM8AF6179, STM8AF6186, STM8AF6188, STM8AF6189, STM8AF6198, STM8AF6199, STM8AF619A, STM8AF61A8, STM8AF61A9, STM8AF61AA
- STice
  - STM8AF5168, STM8AF5169, STM8AF5178, STM8AF5179, STM8AF5188, STM8AF5189, STM8AF5198, STM8AF5199, STM8AF519A, STM8AF51A8, STM8AF51A9, STM8AF51AA,
  - STM8AF6166, STM8AF6168, STM8AF6169, STM8AF6176, STM8AF6178, STM8AF6179, STM8AF6186, STM8AF6188, STM8AF6189, STM8AF6198, STM8AF6199, STM8AF619A, STM8AF61A8, STM8AF61A9, STM8AF61AA

STVD release 4.0 also provides support for:

- The Cosmic C toolset for STM8
- The Raisonance C toolset for STM8
- STice advanced emulation system

You can access the full set of configuration features from the **Project Settings** interface.

Improvements

Improvements in this release include:

- The Cosmic C compiler setting for the memory model is now consistent with the startup file. For example, in an ST7 project, selecting the **Long Stack** memory model will trigger `crtsx.st7` at startup.
- In the Cosmic Linker, for all toolsets, the **Default** button now sets correctly the default startup file according to the memory model. For example, in an STM8 project, if the current memory model is **Long Stack**, clicking on the **Default** button will set the startup file to `crtsi.sm8`, which is the default value for that model.

Corrections

This release includes a number of small corrections that occurred only in marginal configurations of use.

4.10 Summary of changes in release 3.5.0

New features

STVD7 release 3.5.0 provides support for the following additional microcontrollers:

- Simulator
  - ST7FOXK1, ST7FOXK2, ST7FOXF1, ST7FOXU0, ST7FLUS5, ST7FLU05, ST7FLU09, ST7FLI49K2T6, ST7FLI49K2B6
- In-circuit debugging
  - ST7FOXK1, ST7FOXK2, ST7FOXF1, ST7FLI49K2T6, ST7FLI49K2B6

STVD7 release 3.5.0 also provides support for the Raisonance C toolset. You can access the full set of configuration features from the **Project Settings** interface.

Improvements

Improvements in this release include:

- The **Find in Files** feature now proposes the path of the previous search, except if the current project has changed, in which case the path of the current project is proposed.
- The list of microcontrollers in the **MCU Selection** dialog box is dependent on the toolset: only the microcontrollers supported by the selected toolset are listed.
- Simulator provides full support for all new features of Lite1B auto-reload timer:
  - forcing of counter 1 and counter 2 overflow
  - separate break for counter 1 and counter 2
  - one pulse mode on PWM2 and PWM3
- For Lite49M auto-reload timer, Simulator supports distinct output compare interrupt and input capture interrupt.
- For Lite 49K auto-reload timer, Simulator supports the second break pin.

Corrections

With simulator, instructions performing a read access to a port data register with some of the port pins configured as inputs are now correctly executed.

This release also includes a number of small corrections that occurred only in marginal configurations of use.

4.11 Summary of changes in release 3.4.0

New features

STVD7 release 3.4.0 provides support for the following additional microcontrollers:

- ST7MDT40-EMU3 emulators
  - ST7FLITE54K4/S4,ST7FLITE55C4
- Simulator
  - ST7FLITE54K4/S4, ST7FLITE55C4, ST7FLITE49M
- In-circuit debugging
  - ST7FLITE54K4/S4, ST7FLITE55C4, ST7FLITE49M

Improvements

Improvements in this release include:

- A new option on the Edit/Debug tab allows you to select the behavior of the system before building a project or before starting a debug session. You can either request to be prompted to save your files (**Prompt before Saving Files** option), or select to save files automatically (**Automatic File Saving** option).
- In the project settings window, the Linker tab/general category options now show the list of linked standard libraries.
- In the project settings window, STVD7 prompts you for confirmation when you create a section in the linker/input that has the same name as an existing section. Previously this operation was not allowed.
- When you change the selected MCU, you get a message warning you that some of the build options might be replaced by the default settings for that type of circuit.
- The menu option and window title **Emulation Discrepancies** has been renamed and is now called **Debugging Discrepancies**.
- The debugging discrepancies feature has been extended to the simulator. For some circuits, the **Debugging Discrepancies** window lists the limitations pertaining to the simulated circuit.
- Support for booleans with the Cosmic C compiler. There is however, a limitation because boolean variables are not properly initialized.
- In the simulator, you can generate interrupt requests from the **I/O stimulation** window. This is done by changing the value of the IRQx pseudo pin. This feature is useful for debugging code that manages non-simulated peripherals.

Corrections

Corrections in this release include the following major fixes:

- The update of the STM Parallel driver version 1.2 (a driver used by some third-party tools and installed with STVD7 prior to version 2.0) under Windows XP Service Pack 2, no longer causes a crash during installation.
- Initial project settings are properly restored when Cancel is done after selecting Default settings.
- Link file modifications are automatically taken into account in the list of build dependencies.
- When opening a project, a warning message is displayed when a file that was part of the project no longer exists. This message is no longer displayed each time the project is opened.
- The following problems related to wrap executable projects have been corrected:
  - The **Export Makefile** option is disabled, thus avoiding a system crash.
  - The pathname for the executable file is now relative to the projected path, which makes it easier to transfer projects from one computer to another.
  - When creating a wrap executable project, the interrupt vector file is no longer added.

When starting a debugging session, a message was displayed to indicate that the debugging information could not be found. This message is no longer displayed.

4.12 Summary of changes in release 3.3.4 (April 2007)

New features

STVD7 release 3.3.4 provides support for the following additional microcontrollers:

- ST7MDT10-EMU3 emulators
  - ST7FLITEU0(2/5/9)
- Simulator
  - ST7FLITEU0(2/5/9), ST72324LS(2/4), ST72324BLS(2/4)
- In-circuit debugging
  - ST7FMC2S7, ST7FLITEUSICD (ST7FLITEUS 16-pin package specially designed for in-circuit debugging), ST7FLITEU0ICD (ST7FLITEU0 16-pin package specially designed for in-circuit debugging))

Improvements

In this release, STVD7 checks whether a build is required before starting a debug session.

Corrections

Corrections in this release include the following major fixes:

- In the main configuration window the Modify Area did not work properly in STVD7 3.3.3. This regression compared with STVD7 3.3.2 is fixed in this release.
- The linker file is now included in the build dependencies list for non-automatic Cosmic projects.

4.13 Summary of changes in release 3.3.3 (December 2006)

New features

STVD7 release 3.3.3 provides support for the following additional microcontrollers:

- ST7MDT20M-EMU3 emulators
  - ST7321M(6/9)
- ST7MDT40-EMU3 emulators (previously called ST7MIDI-EMU3)
  - ST72340S(2/4), ST72344S(2/4), ST72345C4
- ST7MDT50-EMU3 emulators
  - ST7MC2S7
- ST7MDT20-DVP3 emulators
  - ST72321M(6/9), ST7FLITEUS(2/5)
- Simulator
  - ST72321M(6/9), ST72321BM(6/9), ST72325C(6/7/9), ST72325S(4/6), ST72340S(2/4), ST72344S(2/4), ST72345C4
- In-circuit debugging
  - ST7340S(2/4), ST72344S(2/4), ST72345C4

Improvements

Improvements in this release include:

- A template for the main source file (**`main.c`**) is provided when you create a new workspace and project.
- For Cosmic C compiler users, an additional column in the Linker Input table allows you to enter options for custom linker sections.
- For Cosmic C compiler users, the Linker Startup File selection list now offers the option **None**. When selected, the default startup routine is **not** used. You must create your own routine.
- Changes to vector file and microcontroller selection in Project Settings are now applied to all project configurations.

Corrections

Corrections in this release include the following major fixes:

- For Cosmic C compiler users, when the **`+split`** option is checked in the C Compiler Optimizations list in the Project Settings window, it is correctly added to the command line displayed at the bottom of the window.
- For Cosmic C compiler users, checking the verbose option (-v) in the C Compiler Listings options applies the option to listings and to optimizations, thus avoiding inconsistency in settings that could occur previously.
- Under certain conditions, icons disappeared from menus and menu bars in the main window. This problem is corrected.
- The vector file template (**`vector.c`**) is now generated only when the project is created. Its contents are no longer impacted by changes in the project settings.

5 Revision history

Table 1. Document revision history

Date	Revision	Changes
23-Nov-2006	1	Initial release for STVD7 3.3.3.
20-Apr-2007	2	Release for STVD7 3.3.4.
20-Aug-2007	3	Release for STVD7 3.4.0.
6-Dec-2007	4	Release for STVD7 3.5.0.
11-Dec-2007	5	Update for STVD7 3.5.0.
06-Mar-2008	6	Update for STVD 4.0.
13-May-2008	7	Update for STVD 4.0.1.
9-Jun-2008	8	Additional updates for STVD 4.0.1.
27-Nov-2008	9	Update for STVD 4.1.0.
11-Dec-2008	10	Additional updates for STVD 4.1.0.
26-Feb-2009	11	Update for STVD 4.1.1
11-May-2009	12	Update for STVD 4.1.2: added new MCUs in *STice advanced emulation system on page 6*, *ST7-EMU3 emulators on page 8*, *STM8-ICD-SWIM on page 7* and STM8 *Simulators on page 10*. Updated *Section 3.4: Known problems/limitations for STice targets*.
07-Sep-2009	13	Update for STVD 4.1.3: added new MCUs in *STice advanced emulation system on page 6*, *STM8-ICD-SWIM on page 7* and STM8 *Simulators on page 10*. Updated *Section 3.5: Known problems for STM8-ICD-SWIM targets*.
18-Dec-2009	14	Update for STVD 4.1.4: added new MCUs in – *STice advanced emulation system on page 6*, – *STM8-ICD-SWIM on page 7* and – STM8 *Simulators on page 10*. Modified *Section 1.3* and *Section 1.5*.
01-Apr-2010	15	Update for STVD 4.1.5: Modified *Section 2.1*.

Table 1. Document revision history (continued)

Date	Revision	Changes
01-Jul-2010	16	Update for STVD 4.1.6: Modified *Section 2.1*. Added STM8AF6226, STM8AF6246, STM8AF6248, STM8AF6266, STM8AF6268 and STM8S903F3 in: – *STice advanced emulation system on page 6*, – *STM8-ICD-SWIM on page 7* and – STM8 *Simulators on page 10*. Modified *Section 1.3*, *Section 1.4* and *Section 1.5*.
23-Sep-2010	17	Update for STVD 4.2.0: Modified *Section 2.1*. Added STM8L151C8, STM8L151M8, STM8L151R8, STM8L151R6, STM8L152C8, STM8L152M8, STM8L152R8, STM8L152R6, STM8L162M8, STM8L162R8, STM8A(F/H)5268, STM8A(F/H)5269, STM8A(F/H)5288, STM8A(F/H)5289, STM8A(F/H)528A, STM8A(F/H)52A8, STM8A(F/H)52A9, STM8A(F/H)52AA, STMA(F/H)6269, STMA(F/H)6286, STMA(F/H)6288, STMA(F/H)6289, STMA(F/H)628A, STMA(F/H)62A8, STMA(F/H)62A9, STMA(F/H)62AA in: – *STice advanced emulation system on page 6*, – *STM8-ICD-SWIM on page 7* and – STM8 *Simulators on page 10*.