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AP16060

Memtool Version 3

16- and 32-Bit Microcontrollers

Microcontrollers

Infineon technologies

Never stop thinking.

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Memtool Version 3

Revision History:	**2005-06**	V 1.1
Previous Version:	2002-06	V 1.0

Page	Subjects (major changes since last revision)
all	new Memtool version in exe-file
	Now 32-Bit Microcontrollers support added (TC1796)

Controller Area Network (CAN): License of Robert Bosch GmbH

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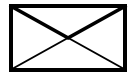

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1 Overview

Memtool Version 3 supports in-system programming of Infineon 16- and 32-Bit microcontrollers with programmable non-volatile on-chip memory (OTP, Flash, EEPROM).

The Infineon Memtool Version 3 is intended to be a programming tool for lab use only. For production, you can order a full-version from PLS (see www.pls-mc.com). In addition the drivers gives the user an application example how to implement the programming algorithm described in the Data Sheet.

Thanks to its modular structure Memtool Version 3 is easily expandable for future C16x, XC16x and TriCore devices. All driver sources are part of this tool. Along with each driver comes an info file, which contains latest informations about the driver.

System requirements on host-side:

Memtool 3 can be used on PC's running Microsoft Windows9x, WindowsNT 4.0, Windows2000 or WindowsXPPro.

- Suggested display resolution of at least 800x600

System requirements on target-side:

- BSL (bootstrap loader) and free ASC0 channel

File **AP16060xx.exe*** is a self-extracting ZIP-File which contains:

- Latest version of Memtool V3 (program installation via setup)

*Note: *index "xx" stands for a continuing revision number*

1.1 Differences between Version 2 and Version 3

Memtool Version 3 comes with new useful features (see feature list next page).

The new version is a pure 32-bit application which does not support Windows 3.x. The gain is a faster, more flexible and more reliable programming tool.

The driver conception has been changed: all communication tasks are now done by a seperate monitor kernel; the memory driver files themselves no longer contain any communication elements. Advantage: the drivers are independent of the communication channel requirements (RS232 or K-Line). Furthermore the new drivers are structured more compact.

Description files for the target as well as for the MCU allow individual configurations. With the new batch functionality all actions can also be automated.

1.2 Memtool Version 3 Features:

- Program Function: Programming the content of an Intel Hex-file completely or partly into on-chip memory. New options: automatic erase before program and automatic verify after program.
- Erase Function: Erasing of Flash/ EEPROM sectors.
- View Status Function: Viewing content of Flash Control Register (FCR) or Flash Status Register (FSR) as hex-words and also in clear text.
- Read Function: Selecting, uploading and storing of memory blocks, controlled by an editor.
- Verify Function: Comparing on-chip memory content with editor content. Indication of mismatches. Result storeable.
- Protection Function: All protection functions of the respective memory module are supported.
- Batch Function: All operations can be also performed by a script file (simple VB language)
- MCU Initialization: The MCU can be individually initialized by SFR manipulation according to the respective hardware environment. Execution of the EINIT command is optional.
- On-line Help Function: Comfortable on-line help.
- Serial Data Transmission: Transmission rates from 2400 Bd up to 57600 Bd selectable. Currently supported protocols: RS232 and K-Line.

2 Structure of Memtool Version 3

This chapter gives an overview of the Memtool Version 3 structure. The directory tructure is shown in Figure 1.

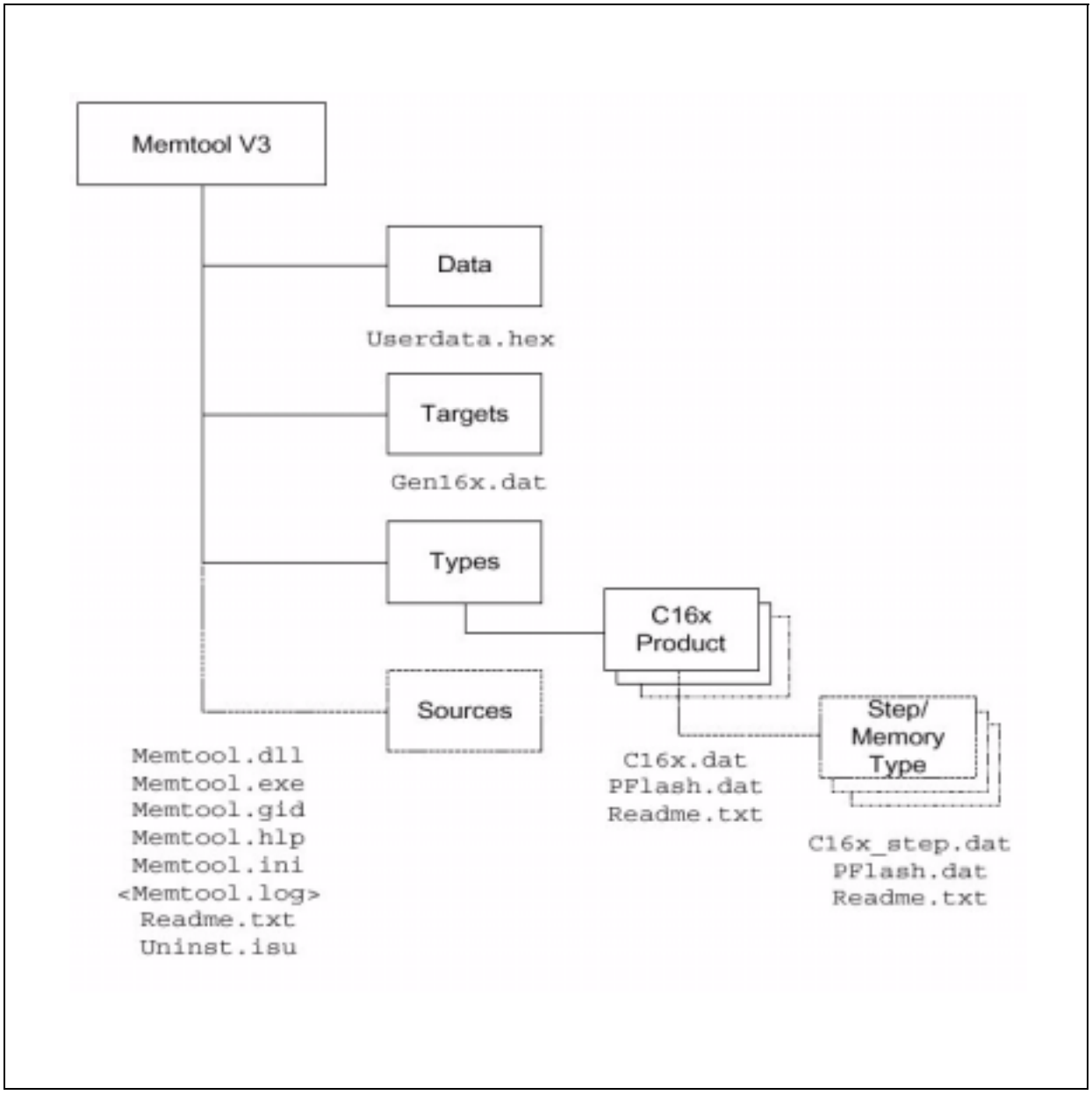

Figure 1 Directory Structure of Memtool Version 3

The root directory contains frontend-related files. User code and data should be stored in subdirectory **Data**.

In subdirectory Targets are stored the target description files (e.g. “gen164CH8F.dat”).

Subdirectory Types contains additional subdirectories with drivers for the respective products (C16x Product, e.g. “C164CH-8F”).

If there are different types of programmable non-volatile memory within one microcontroller device (e.g. Flash and EEPROM) and/ or if there are step-dependent deviations from the specification, additional subdirectories (Step/ Memory Type, e.g. “C164CH-8F_AB”) are intended.

Subdirectory Sources contains all (ZIPped) driver sources.

Each driver directory contains a MCU info file (C16x.dat, e.g. “C164CH-8F.dat”), the driver itself (e.g. “PFlash.dat”) and an info-file (readme.txt) with latest information about the driver.

Note: For further information please refer to appendix "Memtool Version 3 User’s Guide" in addition to the on-line help function.

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