
RTA-OS Z20K-M4-GHS

Release Note - Version 2.0.0 (16-08-2022)

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Safety Notice

This ETAS product fulfills standard quality management requirements. If requirements of specific safety standards (e.g. IEC 61508, ISO 26262) need to be fulfilled, these requirements must be explicitly defined and ordered by the customer. Before use of the product, customer must verify the compliance with specific safety standards.

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1 Introduction

RTA-OS is an AUTOSAR compliant Operating System and associated tooling. This document provides release information for the RTA-OS Z20K-M4-GHS port plug-in that customizes the RTA-OS development tools for the Zhexin Z20K14xM with the GreenHills compiler. It supplements the more general information you can find in the *Release Note*.

1.1 Version Information

This is Version 2.0.0 of the RTA-OS Z20K-M4-GHS plug-in.

1.2 Installation

The installation process is covered in detail in the *Z20K-M4-GHS Port Guide*.

2 **Open EHI Calls**

Open issues are referred to by their call number in the ETAS Helpdesk International (EHI) system.

No EHI calls are open.

3 Change History

3.1 Version 2.0.0

Additional Features

The following features have been added to this release:

- Fully-functional Release
- Support added for untrusted code
- Target option 'Handle FPU context' can be applied to preserve floating point register context during context switches

Modified Features

No features have been modified in this release.

Removed Features

No features have been removed from this release.

3.2 Version 1.99.0

Additional Features

The following features have been added to this release:

- Semi-Functional Preview Release
- Support for the Zhixin Z20K148M, Single Cortex-M4 Core
- Support for the Green Hills Software Compiler v2021.1.4

Modified Features

No features have been modified in this release.

Removed Features

No features have been removed from this release.

4 **Fixed EHI Calls**

Bugs that have been fixed are referred to by their call number in the ETAS Helpdesk International (EHI) system.

No EHI calls have been fixed in this release.

5 Limitations

5.1 Installer

There are the following limitations for the installer:

Limitation	None.
Workaround	None.

5.2 Z20K-M4-GHS DLL

There are the following limitations for this tool:

Limitation	Firmware untested on FLASH.
Workaround	None.

Limitation	The Z20K does not implement the Arm MPU. Instead it uses a SMPU, which fires a BusFault exception rather than a MemManage exception when a memory access violation happens. As a result, the RTA-OS detects a memory access violation as a BusFault violation. If the user requires the RTA-OS to detect a memory access violation as a MemFault violation, they are required to provide a method of determining the reason for the BusFault exception call. See the Z20K_M4_GHS Port User Guide for more information.
Workaround	None.

Limitation	When running code on a Cortex-M4F CPU to avoid the issue described in ARM Cortex-M4 Errata 752770 the stack must not be located in Device or Strongly-Ordered memory. For further details please refer to the ARM Errata documentation
Workaround	None.

Limitation	According to ARM Errata 838869 when running code on a Cortex-M4F CPU from memory with a high number of wait states in some circumstances a DSB instruction may be needed at the end of an interrupt handler code. For further details please refer to the ARM Errata documentation.
Workaround	None.

6 Contacting ETAS

6.1 Technical Support

Technical support is available to all users with a valid support contract. If you do not have a valid support contract, please contact your regional sales office (see below).

The best way to get technical support is by email. Any problems or questions about the use of the product should be sent to:

rta.hotline@etas.com

If you prefer to discuss your problem with the technical support team, you call the support hotline on:

+44 (0)1904 562624.

The hotline is available during normal office hours (0900-1730 GMT/BST).

In either case, it is helpful if you can provide technical support with the following information:

- Your support contract number
- The version of the ETAS tools you are using
- The version of the compiler tool chain you are using
- The command line (or reproduction of steps) that result in an error message
- The error messages or return codes you received (if any)
- Your .xml, .arxml and .rtaos files
- The file Diagnostic.dmp if it was generated

6.2 General Enquiries

6.2.1 ETAS Global Headquarters

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6.2.2 ETAS Local Sales & Support Offices

Contact details for your local sales office and local technical support team (where available) can be found on the ETAS web site:

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ETAS technical support www.etas.com/en/hotlines.php